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A Statistical Review of Composition Data from DWPF's Process Samples for Macro-Batch 1

by

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ABSTRACT

The measurements derived from samples taken during the processing of macro-batch 1 (MB1) at the Defense Waste Processing Facility (DWPF) have been reviewed and compared in this report. Batches 22 through 93 were the focal point of this study.

Statistical control charts were developed for each analyte for each vessel to identify influential or exceptional results in the variation, central tendency, or both for the measurements. These charts should serve as a basis for observing the (expected) impact of some decisions made during the processing of this macro-batch.

Statistical comparisons were made between the two dissolution methods used to prepare these MB1 samples: mixed acid (MA) and peroxide fusion (PF), where both were available. Statistically significant differences (at the 5% significance level) are seen in the results from the two dissolution methods for several analytes. However, for all of the major cations (except that for silicon) the differences are less than 5%. For silicon, the MA values tend to be biased low while the PF values tend to be biased high. The average of the MA and PF values is used to represent this cation concentration in DWPF's Product Composition Control System (PCCS), which mitigates the differences in silicon measurements derived by the two dissolution methods.

A comparison of the results for the Slurry Mix Evaporator (SME) versus those of the Melter Feed Tank (MFT), shows a statistically significant difference (at the 5% level) for Total and Calcined Solids (SME value > MFT value for each with a Mean Difference = 2.3 wt%), for Insoluble Solids (SME value > MFT value with a Mean Difference = 2.5 wt%), and for density (SME value > MFT value with a Mean Difference = 0.02 g/mL). A higher Total Solids in the SME versus the MFT is not unexpected since the MFT is not sampled immediately following the transfer from the SME but is sampled somewhat later, potentially, after the melter feed pumps have been primed with water.

No cation concentrations (by either dissolution method) show a statistically significant difference between the SME and MFT (at the 5% significance level) including the ratios of iron to lithium (Fe/Li) and iron to aluminum (Fe/Al). In an earlier study, there was an indication of concern for differences in the aluminum, iron and copper concentrations between the two tanks. The analyses of this study show no indication of such differences between the two tanks for these cations over the complete set of results for MB1.

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CONTENTS

LIST OF TABLES

LIST OF EXHIBITS

1.0 INTRODUCTION

The Defense Waste Processing Facility (DWPF) began processing the first macro-batch of radioactive waste at the Savannah River Site (SRS) in 1996. This first macro-batch, designated Macro-Batch 1 or MB1, began with the first radioactive processing batch, Batch 19. The processing of MB1 ended with Batch 93, and Batch 94 began Macro-Batch 2, MB2. In the DWPF, samples are taken at the Sludge Receipt and Adjustment Tank (SRAT) upon receipt of the sludge into the SRAT and immediately prior to transfer of the sludge from the SRAT, at the Slurry Mix Evaporator (SME), and at the Melter Feed Tank (MFT) for each batch processed. The DWPF Analytical Facility (DWPF lab) analyzes these samples for various elemental concentrations as well as density, total solids, and calcined solids. The data from these composition measurements for batches 19 through 93, which were reported by the DWPF laboratory, are the subject of this report; specifically, this will include SRAT Receipt, SRAT Product, SME, and MFT results.

A statistical review of these reported, analytical data has been conducted with the objectives:

1. Perform a general review of the data in an attempt to identify outliers or anomalies.
2. Explore for possible trends in mean level or variation for each vessel over the available sample history.
3. Identify possible differences in SME versus MFT sample results.
4. Investigate the components of variation (batch-to-batch versus sample-to-sample) for each vessel.

2.0 BACKGROUND

The elemental concentrations of samples from the SRAT, SME, and MFT are measured by analytical procedures conducted by the DWPF laboratory (DWPF lab). The SME and MFT concentrations are measured on a vitrified basis; that is, the results provided by the DWPF lab are in terms of grams of element per 100 grams of vitrified material. Analyses of the SRAT material (both receipt and product) are reported as percentages of total dried solids; that is, the results are provided in grams of element per 100 grams of total solids. For all three vessels, the anions of interest are reported in parts per million (ppm).

Table 1 in the Appendix provides a listing of the results by vessel, batch, and sample for MB1. The unit of measure for each column of results is identified. Note that values are not provided for all analytes for all samples, for all batches, or for all vessels. However, the set of data in Table 1 is the starting place for this study, and this table represents all of the data considered in this report. Also, note that a value which was below the detection limit of the analytical method being used (indicated by a "<" in Table 1) was set to the detection limit in the analyses of this report.[1]

SME acceptability decisions conducted as part of the Product Composition Control System (PCCS) require measurements on at least 4 SME samples [1]. DWPF routinely acquires 4 or more samples of the SME as part of the acceptability process but frequently enters results from only 4 samples into PCCS. The results from these 4 samples then become part of the production record for the SME batch. However, Table 1 provides results from all of the available samples even results from samples that were subsequently re-analyzed or from SME batches that were subsequently remedied and re-sampled. In the discussion that follows, all of the data provided in Table 1 are reviewed regardless of whether or not they were used in the SME acceptability decision.

Another complexity, that must be addressed in the discussion that follows, involves DWPF's use of two dissolution methods (mixed acid microwave, MA, and peroxide fusion, PF) to conduct the analyses for all

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1 Also, note that the detection limit for a particular type of measurement varies over these MB1 process batches.

of the required cations. In general, concentrations for all relevant cations except for boron are available by the MA method and all except for sodium by the PF method. However, all of these data (even though available for each SME sample) are not entered into PCCS for acceptability decisions, and for the earlier SME batches of MB1, all of these data were not saved in the files accessed to compile the measurements being studied here.

During the processing of MB1, and even today, the concentrations for the cations of calcium (Ca), chromium (Cr), copper (Cu), iron (Fe), potassium (K), lithium (Li), magnesium (Mg), manganese (Mn), sodium (Na), nickel (Ni), titanium (Ti), uranium (U), zirconium (Zr) that are entered into PCCS as those determined using the MA method. The boron (B) concentrations are those derived via PF. Early during MB1, the aluminum (Al) measurements entered into PCCS were those determined using MA. As of process batch 46, the Al values determined using PF have been entered into PCCS. Also, as of that SME batch, the average of the PF and MA measurements for silicon (Si) for each sample has been entered into PCCS. For earlier SME batches, only the MA value for each sample was entered for Si.

Note that the "Sample" column of Table 1 indicates the dissolution method (along with the sample number) for the SME samples beginning with batch 44 and for the MFT samples beginning with batch 39. For the earlier samples from these tanks (where no dissolution method is indicated in Table 1), the dissolution method used to acquire the reported cation measurement is assumed to be as follows: the MA method for Al, Ca, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, Si, Ti, U, and Zr; and the PF method for B. In the discussion that follows, comparisons are made between the results from these two dissolution/preparation methods for the SME and MFT.

An earlier report [2] provided an analysis of batches 19 through 30 of MB1. An observation discussed in that report concerned the results for batches 19, 20, and 21 versus the remaining batches of that study. For some analytes, these earlier results differed from the latter results due to the composition of the initial heels of the four vessels being different from the actual waste composition received from the tank farm. These initial heel compositions were of the simulated slurry used during the Waste Qualification Runs prior to the beginning of radioactive operations. Some short-lived trends over the initial batches were seen as a consequence of the impact of these heels [2]. Accordingly, the MB1 analyses presented in this current report do not include batches 19 through 21. For a complete discussion of the results from batches 19 through 21, see reference [2].

3.0 DISCUSSION

In this section, the various statistical analyses conducted for these data are discussed. JMP® Version 3.2.2, a statistical software package from SAS Institute, Inc., was used to generate these statistical analyses [3].

3.1 INITIAL REVIEW OF DATA

A preliminary step in conducting any statistical analyses for a set of data is the investigation for possible outliers in the data. The investigation for outliers in Table 1 will be an on-going effort throughout this report. Summary statistics, including histograms, were prepared for the data from batches 22 through 93 to begin this process. These results are presented in Exhibits 1-4 in the Appendix. An additional overview of these data is provided by Exhibit 5 in the Appendix. In this exhibit, a chart is displayed for each analyte. This chart provides a look at the sample measurements for each batch for each of the four vessels considered in this study.

A review of these exhibits reveals several observations, including:

- the values of total solids and calcined solids for a few batches are lower than the values of these measurements for the other batches for each of the four vessels,
- one density value appears to stand out (higher than the others) for the SRAT Receipt and Product vessels.

- no values for MFT batch 54.
- several negative values for the potassium cation concentration measurements for the SRAT Product, SME, and MFT.

3.2 STATISTICAL CONTROL CHARTS

The next step in reviewing the measurements of Table 1 for possible outliers or anomalies takes the form of statistical control charts. Such charts utilize statistical principles and process knowledge to provide graphical records of a process. These graphics allow for visualization of the variation, trends, or other patterns in the process over time, or for these data, over the batches comprising MB1. Each control chart includes a line indicating the central tendency of the process statistic (either mean or moving range) for the measurement and upper and lower control limits that should bound a large portion (~ 99%) of the values of the process statistic if the process is statistically stable and the distribution of the measurement is approximately normal.

For these data, the control charts for each analyte of each vessel are constructed as follows.[2]

- the measurements of the analyte are averaged for each batch,
- a moving range chart looking at each sequential pair of batch averages for the analyte is developed, and
- an individuals chart (for the batch averages) is prepared for each analyte.

The exhibits providing these charts can be found in the Appendix. Exhibit 6 provides these charts for the SRAT Receipt analytes and Exhibit 7 the SRAT Product. Exhibit 8a gives the control charts for the SME anions; Exhibit 8b the SME cations determined using the MA dissolution method; and Exhibit 8c the SME cations determined using the PF method. Exhibits 9a, 9b, and 9c provide the anions, cations by MA, and cations by PF, respectively, for the MFT.

A review of these charts provides an opportunity for insights into the processing of MB1. It is expected that the impact of some decisions made during the processing of MB1 is directly visible in the behavior of the relevant measurements. This tempers the concern for some of the behavior demonstrated in these charts. There are some situations indicated in these charts where values fall outside the control limits for the moving range chart, the individuals charts, or both. In addition to these indicators, there are several other ways for detecting out-of-control situations on a control chart. These other techniques are not fully employed in this review, and the following table is provided in an attempt to highlight some situations of interest for the individuals charts by giving the batch number where they occur.

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2 These charts were prepared using JMP®. See [1] for details concerning the preparation of both the moving range and individuals charts.

Analyte	SRAT Receipt	SRAT Product	SME	MFT
Total Solids	92 and 93	92 and 93	32, 60 (1st), and 61	45, 61, and 93
Calcined Solids	93	62, 92, and 93	32, 60 (1st), 61, and 93	
Insoluble Solids				
Density			23 and 27	22, 32, 33, 40, and 60
Total Hydroxide	93			
Format	56 and 66	22, 81, 85, and 88-91	52	52
Chloride		26	38 (1st)	52
Fluoride		26	38 (1st)	48, 49 (higher limits)
Nitrate	22, 23, 26, and 34	23, 24, 36, and 57	22, 20, 92, and 93	24, 45
Nitrite	34 and 93	31 and 36	38 (1st)	
Phosphate		76 and 92	38 (1st), 78, 81, 91, 93 (1st)	
Sulfate		48	38 (1st)	42
Aluminum		89, 92, and 93	MA and PF: 60 (1st)	MA: 55; PF: 55
Boron				PF: 90
Calcium		89, 92, and 93		MA: 77
Chromium	34	92 and 93	MA: 57, 57; PF: 85, 86	MA: 30; PF: 84-86
Copper	34	Major shift at 37/38	MA: shift at 37/38; PF: 87, 92	MA: shift at 37/38; PF: 39,40,64
Iron		92 and 93	MA and PF: 60 (1st)	MA and PF: 55
Potassium	22	71 and 72	MA: 60 (1st); PF: 79	MA: 25, 93; PF: 4, 72
Lithium				MA: 26; FP: 42, 86
Magnesium		29, 89, and 93	MA: 35	MA: 82; PF: 75, 86
Manganese		92 and 93	MA and PF: 60 (1st)	MA and PF: 55
Sodium		29, 76, 92, and 93	MA: 92 and 93	MA: 93
Nickel		92 and 93	Ma: 55 and 57	MA: 30, 72; PF: 44, 72
Silicon	22	35, 36, 45, and 72	MA: 60 (1st); PF: 90	MA: 26; PF: 42
Titanium	30	24, 60, 71, and 72	MA: 22, 87; PF: 85, 87	MA: 40, 68, 70, 77; PF: 44, 72
Uranium		92 and 93		MA: 65
Zirconium	24	23, 24, and 44	MA: 49 and 59	MA: 59, 68 (outlier)
TIC	22 , 25, 42, and 70			
Mercury				
TOC			22	
Fe/Li			MA and PF: 60 (1st)	MA and PF: 55
Fe/Al		89	MA: 36, 93; PF: 92	MA: 76, 82; PF: 93

In preparing Exhibits 6 through 9c, the results from each sample set (for batches with multiple sample sets) were kept separate and are displayed as part of these charts. Also, results from each of the two dissolution methods (MA and PF) are presented where available for the SME and MFT.

3.3 DIFFERENCES BETWEEN DISSOLUTION METHODS

The data from MB1 provide an opportunity to conduct comparisons between the two different dissolution methods used by the DWPF lab: mixed acid (MA) and peroxide fusion (PF). Exhibit 10 in the Appendix provides paired (by processing batch for the SME, for the MFT, and for the two vessels combined) comparisons between the cation concentration measurements for the two methods. The averages of the sample measurements for each batch at each vessel are the basis for these comparisons.

The following analytes show a statistically significant difference between the two dissolution methods over the SME and MFT (at the 5% significance level):

Aluminum (wt%)	MA value > PF value	(Mean difference = 0.02 wt%; 0.8% of SME PF value)
Calcium (wt%)	MA value > PF value	(Mean difference = 0.07 wt%; 8.0% of SME MA value)
Chromium (wt%)	MA value < PF value	(Mean difference = -0.006 wt%; 8.7% of SME MA value)
Copper (wt%)	MA value < PF value	(Mean difference = -0.001 wt%; 1.4% of SME MA value)
Iron (wt%)	MA value > PF value	(Mean difference = 0.14 wt%; 1.7% of SME MA value)
Potassium (wt%)	MA value > PF value	(Mean difference = 0.02 wt%; .15.4% of SME MA value)
Lithium (wt%)	MA value > PF value	(Mean difference = 0.04 wt%; 2.4% of SME MA value)
Magnesium (wt%)	MA value > PF value	(Mean difference = 0.03 wt%; 2.4% of SME MA value)
Manganese (wt%)	MA value > PF value	(Mean difference = 0.02 wt%; 2.4% of SME MA value)
Nickel (wt%)	MA value > PF value	(Mean difference = 0.002 wt%; 2.0% of SME MA value)
Silicon (wt%)	MA value < PF value	(Mean difference = -1.70 wt%, 7.4% of SME MA value)
Fe/Al	MA value > PF value	(Mean difference = 0.03; 0.9% of the SME MA/PF value)

Thus, statistically significant differences are seen between the two dissolution methods in the results for several analytes. However, for all of the major cations (except for silicon) the differences are less than 5%. For silicon, the MA values tend to be biased low while the PF values tend to be biased high. The average of the MA and PF values is used to represent this cation concentration in PCCS, which mitigates the differences in Si measurements derived by the two dissolution methods.

3.4 Differences Between SME and MFT by Dissolution Method

Comparisons between the SME and MFT vessels are of primary interest, and several approaches are available to conduct these comparisons. Exhibit 11 in the Appendix provides paired (by processing batch) comparisons between the anion concentration measurements for the two tanks. The averages of the sample measurements for each method for each batch at each vessel are the basis for these comparisons.

The following analytes show a statistically significant difference between the SME and MFT (at the 5% significance level):

Total Solids (wt%)	SME value > MFT value	(Mean difference = 2.32 wt%)
Calcined Solids (wt%)	SME value > MFT value	(Mean difference = 2.33 wt%)
Insoluble Solids (wt%)	SME value > MFT value	(Mean difference = 2.54 wt%)
Density (g/mL)	SME value > MFT value	(Mean difference = 0.02 g/mL)

A higher Total Solids in the SME versus the MFT is not unexpected since the MFT is not sampled immediately following the transfer from the SME but is sampled somewhat later, potentially, after the melter feed pumps have been primed with water.

The next set of comparisons between these two tanks again focuses (in turn) on the two dissolution methods. Exhibit 12 in the Appendix provides comparisons between cation measurements for the SME and MFT derived using the MA method and comparisons between cation measurements for the SME and MFT derived using the PF method. The averages of the sample measurements by the MA for each batch at each vessel are the basis for the first set of comparisons and the averages of the sample measurements by the PF method for each batch at each vessel are the basis for the second set.

No cations (by either dissolution method) show a statistically significant difference between the SME and MFT (at the 5% significance level) including the ratios of Fe/Li and Fe/Al. In the earlier study [2], there was an indication of concern for differences in the aluminum, iron, and copper concentrations between the two tanks. This complete MB1 study shows no indication of differences between the two tanks for these cations.

3.5 SOURCES OF VARIATION BY VESSEL

The set of measurements on each analyte for each batch at each vessel provides an opportunity to explore the sources of variation in these values. For some of the analytes of the SME and MFT, there is also an opportunity to look at these sources of variations for each of the two dissolution methods. Specifically, for each analyte, dissolution method, and vessel, a random effects model such as the following can be fit to the available data:

$$y_{ij} = \mu + a_i + e_{j[i]} \qquad (1)$$

where

$i=1, 2, ..., n$, (the batch index, corresponding to batches 22, 20, ..., 93),

$j=1, 2, ..., m$ (the sample index, corresponding to sample 1, 2, 3, ...),

y_{ij} is the j^{th} measurement for the given analyte/vessel/dissolution method at batch i ,

μ is the true average analyte concentration value for the given vessel (by the given dissolution method, if appropriate) over these batches of MB1,

a_i is the random effect for batch i (this includes batch-to-batch differences as well as effects due to longer-term differences in the analytical procedures such as instrument calibrations), and

$e_{j[i]}$ is the residual random effect (due to sample-to-sample and analytical/measurement errors) attributable to the j^{th} sample for batch i.

For this model, each term present (except for μ) is considered as a random variable (i.e., both batch and residual effects are considered as random effects) with a zero mean and a constant variance. These random variables are assumed to be independent, and each is assumed to follow a normal probability distribution. Let σ_b^2 and σ^2 denote the variances due to batch and residual variation, respectively. The objective of this analysis is to estimate each of these variances: a measure of the variability from each of the identified sources. This will also lead to an understanding of the errors associated with estimating μ.

Model (1) was fit in turn to the SRAT Receipt, SRAT Product, SME, and MFT sample results for batches 22 through 93. For the SME and MFT, the cation measurements for both the MA and PF dissolution methods are considered separately. The results from these analyses are provided in Exhibits 13 through 20 in the Appendix. Information from these exhibits has been summarized in Tables 2 through 5 of the Appendix.[3]

The columns of these tables that are of primary interest are those showing the components of variation as percentages (batch versus residual) and those showing the percent coefficients of variation for the total, batch, and residual variations. The relative contributions of batch-to-batch versus residual, which includes analytical, are presented in these tables as well. For most of the analytes for each of the four vessels, the batch-to-batch variation is larger than the residual (or within-batch) variation. A feel for the consistency of MB1 at each vessel is provided for each analyte by the percent coefficient of variation for this batch-to-

3 Note that some analytes were below the detection limit of their analytical procedures and that in some instances the detection limits for some analytes (e.g., chloride, fluoride, and sulfate) were the same. Also, for some analytes there were not enough data to conduct some of the statistical procedures.

batch variability for the analyte, which expresses the variation in the measurements for this analyte as the standard deviation divided by the average.

3.6 COMPARISONS BETWEEN THE VARIABILITIES OF THESE DATA AND THOSE USED IN PCCS

Table 6 in the Appendix provides an opportunity for comparisons between the SME variabilities demonstrated in batches 22 through 93 and the variabilities currently being used in PCCS [1]. The current version of PCCS computes the standard deviation of the measurement error for each constraint two ways, both use the historical relative standard deviations (RSD's). These RSD's are multiplied by the historical means of the elemental concentrations to compute one standard deviation, and they are multiplied by the average concentrations of the current samples to compute the other.[4] The larger of the two is used by PCCS to determine the appropriate Measurement Acceptable Region.

In Table 6, the two approaches used in PCCS are applied only to the extent of computing standard deviations for the sample elemental concentrations. These values appear as the last two columns in the table.

How should the columns of this table be compared? The (historical) sample-to-sample standard deviations used in PCCS were based on prototypic studies, which involved samples taken at the same time being analyzed under different instrument calibrations. For the SME, the samples from each batch were usually analyzed under one instrument calibration. Thus, for the SME results, contributions are made to the between-batch variability from instrument calibrations, and thus are included in the "Batch" columns of Table 6. The "Residual" columns of the table are pooled estimates of variation that includes sampling methodology and equipment and analytical procedures. Thus, it would not be too surprising if the historical standard deviations are somewhat larger than the "Residual" portion of the SME results.

No anomalies are seen in the data of Table 6, and these standard deviations (SME "Residual" versus PCCS in Table 6) can be compared statistically using information from Table 6 and Exhibits 13 through 20. The value (21) for the degrees of freedom associated with each of the PCCS standard deviations is available from [1]. The hypothesis of equality between these two standard deviations for each cation relies on the following test statistic (assuming normality for the underlying distributions)

$$F = \frac{\mathrm{Max(SME\ "Residual", PCCS)}}{\mathrm{Min(SME\ "Residual", PCCS)}}.$$

The hypothesis is rejected (at a 5% significance level) if $F > F_{0.025,n_1,n_2}$ where n_1 is the degrees of freedom associated with the numerator of F and n_2 is the degrees of freedom associated with the denominator. The value for the degrees of freedom of the estimate of the SME "Residual" standard deviation is available from the appropriate exhibit in the Appendix. Using this approach, the following conclusions can be drawn regarding potential differences in the SME "Residual" and PCCS variabilities:

4 The historical correlations among the analyte measurements are also considered in these variance calculations of PCCS. They are not considered in this report, however.

Cation	Dissolution Method	Conclusion	Cation	Dissolution Method	Conclusion
Aluminum (wt%)	PF	Not Significant at 5%	Magnesium (wt%)	PF	Not Significant at 5%
	MA	Not Significant at 5%		MA	Not Significant at 5%
Boron (wt%)	PF	Not Significant at 5%	Manganese (wt%)	PF	PCCS > MB1
	MA	Not Available		MA	PCCS > MB1
Calcium (wt%)	PF	Not Significant at 5%	Sodium (wt%)	PF	Not Available
	MA	Not Significant at 5%		MA	Not Significant at 5%
Chromium (wt%)	PF	PCCS > MB1	Nickel (wt%)	PF	PCCS > MB1
	MA	Not Significant at 5%		MA	PCCS > MB1
Copper (wt%)	PF	PCCS > MB1	Silicon (wt%)	PF	Not Significant at 5%
	MA	PCCS > MB1		MA	Not Significant at 5%
Iron (wt%)	PF	Not Significant at 5%	Titanium (wt%)	PF	PCCS > MB1
	MA	Not Significant at 5%		MA	MB1 > PCCS
Potassium (wt%)	PF	PCCS > MB1	Uranium (wt%)	PF	Not Available
	MA	PCCS > MB1		MA	Not Available
Lithiumn (wt%)	PF	Not Significant at 5%	Zirconium (wt%)	PF	Not Available
	MA	Not Significant at 5%		MA	Not Significant at 5%

The conclusion "SME > PCCS" for titanium (MA) indicates the only analyte for which the variability in the SME "Residual" is statistically (at a 95% confidence level) larger than that of PCCS, and this conclusion is supported for only one dissolution method. The other dissolution method indicates that the variability in the PCCS is larger than that of MB1. Therefore, no problems of practical concern are seen in the results presented in Table 6.

4.0 CONCLUSIONS

The measurements derived from samples taken during the processing of DWPF's MB1 have been reviewed and compared in this report. Batch 22 through 93 were the focal point of this study; the earliest batches of MB1, which were heavily influenced by the heels remaining after the qualification runs and which were studied in [2], were not investigated in this report.

Statistical control charts were developed for each analyte for each vessel to identify influential or exceptional results in the variation, central tendency, or both for the measurements. These charts should serve as a basis for observing the (expected) impact of some decisions made during the processing of this macro-batch.

Statistical comparisons were made between the two dissolution methods (MA and PF), where both were utilized. Statistically significant differences (at the 5% significance level) are seen in the results for several analytes from the two dissolution methods. However, for all of the major cations (except for silicon) the differences are less than 5%. For silicon, the MA values tend to be biased low while the PF values tend to be biased high. The average of the MA and PF values is used to represent this cation concentration in PCCS, which mitigates the differences in Si measurements derived by the two dissolution methods.

A comparison of the results for the SME versus those of the MFT, shows a statistically significant difference (at the 5% level) for Total and Calcined Solids (SME value > MFT value for each with a Mean Difference = 2.3 wt%), for Insoluble Solids (SME value > MFT value with a Mean Difference = 2.5 wt%), and for density (SME value > MFT value with a Mean Difference = 0.02 g/mL). A higher Total Solids in the SME versus the MFT is not unexpected since the MFT is not sampled immediately following the transfer from the SME but is sampled somewhat later, potentially, after the melter feed pumps have been primed with water.

No cation concentrations (by either dissolution method) show a statistically significant difference between the SME and MFT (at the 5% significance level) including the ratios of Fe/Li and Fe/Al. In an earlier study [2], there was an indication of concern for differences in the aluminum, iron and copper concentrations between the two tanks. The analyses of this study show no indication of such differences between the two tanks for these cations over the complete set of results for MB1.

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[1] Brown, K. G. and R. L. Postles, "SME Acceptability Determination For DWPF Process Control (U)," WSRC-TR-95-0364, Rev. 3, February 21, 1996.

[2] Edwards, T. B., "Statistical Review of Data from DWPF's Process Samples for Batches 19 Through 30 (U)," WSRC-RP-97-207, Revision 0, March 18, 1997

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Appendix:

Tables and Exhibits

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Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)
SRAT Receipt-19	1	15.82	11.6	11.07	1.169	0.156	3640	163	<95.2	9510	6610		519	5.715	0.127	2.398
SRAT Receipt-19	2	14.09	12.12	11.19	1.105		3730	158	<96.4	10300	6780		521	6.006	0.106	2.568
SRAT Receipt-19	3	15.8	13.43	10.97	1.157		3940	133	<97.2	9640	6970		521	5.979	0.159	2.542
SRAT Receipt-19	4	16.08	13.58	11.09	1.121		3700	125	<91.9	9740	6550		477	6.115	0.123	2.677
SRAT Receipt-20	1	14.4	12.39	10.7	1.137	0.037	3240	< 105	< 105	13700	6080		621	5.991	0.066	2.332
SRAT Receipt-20	2	14.54	12.42	11.31	1.124		3240	< 108	< 108	12900	6050		591	5.954	0.073	2.311
SRAT Receipt-20	3	14.72	12.55	11.42	1.154		3260	< 102	< 102	13600	5970		603	5.246	0.065	2.071
SRAT Receipt-20	4	14.55	12.44	11.25	1.108		4920	< 107	< 107	12500	5800		604	6.275	0.077	2.459
SRAT Receipt-21	1	15.8	11.47	10.3	1.124	0.172706	4220	< 102	< 102	12400	7210		735	6.481		2.354
SRAT Receipt-21	2	15.7	11.27	10.4	1.141	0.179885	3640	< 99.1	< 99.1	11500	7110		713	6.789		2.523
SRAT Receipt-21	3	15.6	11.57	10.5	1.139		3520	< 101	< 101	11400	7850		731	6.743		2.63
SRAT Receipt-21	4	16.1	11.47	10.4	1.138		3830	< 120	< 120	10700	7550		721	6.162		2.239
SRAT Receipt-22	1	15.72	13.48	10.78	1.143	0.182024	2900	< 983	< 983	15300	7110		< 983	6.95		2.635
SRAT Receipt-22	2	15.74	13.35	12.69	1.144	0.187753	2800	< 1000	< 1000	14700	7070		< 1000	6.926		2.643
SRAT Receipt-22	3	15.85	13.54	12.84	1.153		3020	< 1140	< 1140	16000	7420		< 1140	6.785		2.573
SRAT Receipt-22	4	15.7	13.11	12.98	105		2880	< 1150	< 1150	15100	7240		< 1150	6.852		2.606
SRAT Receipt-23	1	15.69	13.51	12.41	1.082	0.175783	3080	1020	< 1020	16300	6770		< 1020	6.983		2.684
SRAT Receipt-23	2	15.74	13.86	12.29	107	0.141651	2830	< 1090	< 1090	15800	7150		< 1090	6.724		2.559
SRAT Receipt-23	3	15.94	13.73	12.36	1.1		2790	< 1080	< 1080	15700	6790		< 1080	6.906		2.624
SRAT Receipt-23	4	15.99		12.45	1.075		2640	< 1050	< 1050	15200	6890		< 1050	6.815		2.599
SRAT Receipt-24	1	15.42	13.24	11.31	104	0.164	3360	< 1090	< 1090	14400	6720		< 1090	6.921		2.505
SRAT Receipt-24	2	15.18	13.36	11.26	105		3120	< 1060	< 1060	13600	6910		< 1060	7.082		2.552
SRAT Receipt-24	3	15.16	13.23	11.83	1.056		3330	< 1070	< 1070	14100	6620		< 1070	7.09		2.633
SRAT Receipt-24	4	15.2	13.07	11.41	1.057		3090	< 1020	< 1020	13200	6550		< 1020	6.966		2.58
SRAT Receipt-25	1	15.93	13.73	12.31	1.102	0.151	3470	< 863	< 863	14500	6640		< 863	6.661		2.454
SRAT Receipt-25	2	16.15	13.95	12.25	1.084		3120	< 866	< 866	12900	6500		< 866	6.825		2.61
SRAT Receipt-25	3	16.06	14.1	12.33	1.117		3000	< 991	< 991	12500	6550		< 991	6.871		2.647
SRAT Receipt-25	4	16.08	14.1	12.3	1.091		3210	< 955	< 955	13800	6610		< 955	6.831		2.635
SRAT Receipt-26	1	16.51	13.7	13.06	1.102	0.171	3730	< 797	< 797	15000	7290		845	6.733		2.435
SRAT Receipt-26	2	16.66	13.56	13.07	1.123		3760	< 940	< 940	15900	7370		< 940	6.449		2.38
SRAT Receipt-26	3	16.44	14.27	13.1	1.123		3930	< 1130	< 1130	15400	7770		< 1130	6.509		2.193
SRAT Receipt-26	4	16.4	13.16	13.15	1.142		3830	< 1140	< 1140	15200	7240		< 1140	6.387		2.25
SRAT Receipt-27	1	15.49	13.58	11.07	1.093	0.146	3570	< 1080	< 1080	12600	7110		< 1080	6.726		2.497
SRAT Receipt-27	2	15.51	13.99	11.05	1.087		3520	< 1070	< 1070	12700	7130		< 1070	6.766		2.556
SRAT Receipt-27	3	16.9	13.9	11.05	1.089		3470	< 1090	< 1090	12500	6890		< 1090	6.853		2.597
SRAT Receipt-27	4	15.84	13.24	11.07	1.104		3500	< 1100	< 1100	12700	6870		< 1100	6.792		2.548
SRAT Receipt-28	1	15.93		12.41	1.111	0.193	2770	< 1120	< 1120	11000	7460		< 1120	6.775		2.525
SRAT Receipt-28	2	15.84		12.46	1.125		2700	< 995	< 995	11000	7290		< 995	7.078		2.683
SRAT Receipt-28	3	15.39		12.56	1.126		2690	< 994	< 994	11000	7330		< 994	6.879		2.616
SRAT Receipt-28	4	15.8		12.68	113		2840	< 985	< 985	11000	7340		< 985	6.984		2.665
SRAT Receipt-29	1	14.92	12.33	11.56	1.123	0.174	3180	< 1050	< 1050	11500	6610		< 1020	6.374		2.258
SRAT Receipt-29	2	14.93	12.39	11.76	1.081		3250	< 1110	< 1110	11100	6640		< 1050	6.236		2.273
SRAT Receipt-29	3	14.99	13.09	11.69	1.153		3250	< 1020	< 1020	11100	6640		< 1050	6.405		2.292
SRAT Receipt-29	4	14.99	12.54	11.65	1.051		3220	< 1050	< 1050	11300	6730		< 1110	6.582		2.37
SRAT Receipt-30	1	16.15	13.39	11.26	1.109	0.188	3110	< 676	< 676	12900	6780		770	6.564		2.335
SRAT Receipt-30	2	16.13	13.74	11.26	1.134		3240	< 949	< 949	13300	6980		< 892	6.272		2.304
SRAT Receipt-30	3	16.12	14.02	11.2	1.088		3390	< 1100	< 1100	13900	7340		< 949	6.607		2.406
SRAT Receipt-30	4	16.14	13.7	11.04	1.124		3280	< 892	< 892	13400	6920		< 1100	6.733		2.479
SRAT Receipt-31	1	15.52	13.4	12.09	1.118	0.186	3060	< 1100	< 1100	11700	7210		< 990	6.727		2.434
SRAT Receipt-31	2	15.54	12.96	12.11	1.091		3040	< 1080	< 1080	11800	7030		< 1100	7.177		2.52
SRAT Receipt-31	3	15.51	13.1	12.12	1.117		3010	< 990	< 990	11600	7010		< 1080	6.793		2.407
SRAT Receipt-31	4	15.55	13.54	12.18	1.125		3010	< 1130	< 1130	11500	7060		< 1130	6.466		2.329
SRAT Receipt-32	1	17.13			1.125	0.15	3370			14400	7800		< 1200			
SRAT Receipt-32	2	17.11			1.085		3210			14300	7930		< 1230			
SRAT Receipt-32	3	17.08			1.113		3360			14300	7820		< 1280			
SRAT Receipt-32	4	17.11			113		3170			14300	7700		< 1130			
SRAT Receipt-33	1	16.46	14.24		1.107	0.168	3760			13100	7400		< 1140	6.357		1.997
SRAT Receipt-33	2	16.52	13.95		1.163		3510			14500	8070		< 1130	7.339		2.269
SRAT Receipt-33	3	16.43	13.24		1.161		3960			11800	7460		< 1180	6.367		2.086
SRAT Receipt-33	4	17.97	15.73		1.108		3640			13000	6480		< 1130	6.773		2.106
SRAT Receipt-33	5													6.844		2.066
SRAT Receipt-33	6													6.24		2
SRAT Receipt-34	1	16.54	14.47		1.125	0.181	4110			17800	9300		< 1110	7.154		2.576
SRAT Receipt-34	2	16.72	14.31		1.1		3760			17500	9000		< 1140	7.079		2.553
SRAT Receipt-34	3	16.53	14.27		1.089		3400			15200	8180		< 1150	7.083		2.669
SRAT Receipt-34	4	16.54	13.97		1.113		3310			15500	7910		< 1130	7.097		2.625
SRAT Receipt-35	1	15.79	12.34		1.1	0.162	3970			15400	7080		< 1190	6.778		2.441
SRAT Receipt-35	2	15.09	12.71		1.115		4000			14400	7450		< 1040	7.185		2.557
SRAT Receipt-35	3	14.56	12.53		1.101		3860			14400	7380		< 1110	7.13		2.654
SRAT Receipt-35	4	15.02	12.95		111		3210			13900	7210		< 1160	6.958		2.385
SRAT Receipt-35	5													7.174		2.519
SRAT Receipt-35	6													6.917		2.49
SRAT Receipt-36	1	14.93	13.28		1.119	0.164	3280			11600	6460		< 1070	6.407		2.229
SRAT Receipt-36	2	14.93	13.28		111		3390			12400	6500		< 1160	6.743		2.404
SRAT Receipt-36	3	14.93	12.35		1.125		3430			12000	6660		< 1210	6.301		2.169
SRAT Receipt-36	4	14.92	12.36		1.109		3320			12300	6390		< 1170	6.277		2.116
SRAT Receipt-36	5													6.325		2.09

Tank_Batch	Sample	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Receipt-19	1	0.038	0.227	27.49	0.329		1.168	3.016	7.60	0.272	0.992	0.054	0.347	0.095		1130	< 100
SRAT Receipt-19	2	0.037	0.242	28.908	0.277		1.217	3.202	6.8	0.29	0.931	0.057	0.376	0.102			
SRAT Receipt-19	3	0.047	0.239	28.765	0.295		1.213	3.165	7.1	0.289	1.055	0.06	0.374	0.101			
SRAT Receipt-19	4	0.044	0.256	29.69	0.317		1.267	3.262	8.26	0.299	1.081	0.059	0.387	0.111			
SRAT Receipt-20	1	0.115	0.282	24.673	0.086		1.126	2.647	5.96	0.258	0.578	0.03	1.742	0.042		797	106
SRAT Receipt-20	2	0.113	0.281	24.542	0.112		1.143	2.647	7.43	0.26	0.76	0.029	1.749	0.038			
SRAT Receipt-20	3	0.1	0.248	21.835	0.076		1.016	2.344	5.0	0.231	0.548	0.025	1.55	0.035			
SRAT Receipt-20	4	0.115	0.3	26.765	0.094		1.218	2.806	6.45	0.276	0.682	0.03	1.849	0.04			
SRAT Receipt-21	1	0.154	0.273	25.18	0.03		1.279	2.666	5.84	0.283	0.848	0.029	2.494	0.024		1810	< 100
SRAT Receipt-21	2	0.158	0.294	26.303	0.041		1.343	2.829	5.37	0.306	1.132	0.031	2.628	0.023			
SRAT Receipt-21	3	0.161	0.286	26.58	0.029		1.353	2.805	5.76	0.3	1.02	0.022	2.636	0.025			
SRAT Receipt-21	4	0.149	0.284	24.123	0.025		1.193	2.568	5.69	0.284	0.985	0.02	2.318	0.024			
SRAT Receipt-22	1	0.174	0.279	26.766	0.052		1.345	2.832	5.70	0.311	1.79	0.018	2.858	0.02		1020	
SRAT Receipt-22	2	0.173	0.294	2678	0.147		1.328	2.846	5.25	0.339	1.882	0.033	2.818	0.022			
SRAT Receipt-22	3	0.172	0.282	26.95	0.102		1.319	2.776	6.03	0.32	1.801	0.026	2.779	0.024			
SRAT Receipt-22	4	0.174	0.275	26.19	0.061		1.326	2.784	5.56	0.301	1.748	0.018	2.83	0.02			
SRAT Receipt-23	1	0.171	0.29	27.034	0.043		1.282	2.863	5.08	0.288	0.744	0.014	2.984	0.021		896	
SRAT Receipt-23	2	0.178	0.278	2678	0.034		1.26	2.773	5.74	0.287	0.713	0.014	2.872	0.027			
SRAT Receipt-23	3	0.18	0.284	26.973	0.018		1.275	2.788	5.32	0.285	0.753	0.013	2.912	0.027			
SRAT Receipt-23	4	0.185	0.285	27.24	0.044		1.29	2.824	6.97	0.289	0.781	0.014	2.936	0.022			
SRAT Receipt-24	1	0.171	0.286	26.93	0.032		1.36	2.797	5.96	0.293	0.719	0.013	2.906	0.099		586	
SRAT Receipt-24	2	0.173	0.293	27.84	0.038		1.35	2.882	6.24	0.305	0.808	0.013	2.996	0.088			
SRAT Receipt-24	3	0.184	0.296	26.934	0.034		1.37	2.866	5.9	0.314	0.918	0.013	2.974	0.085			
SRAT Receipt-24	4	0.178	0.287	26.446	0.033		1.39	2.811	6.25	0.307	0.98	0.013	2.915	0.153			
SRAT Receipt-25	1	0.184	0.273	25.45	0.076		1.25	2.668	7.21	0.288	0.795	0.015	2.844	0.04		1010	
SRAT Receipt-25	2	0.175	0.279	25.779	0.055		1.275	2.733	6.56	0.292	0.875	0.023	2.896	0.035			
SRAT Receipt-25	3	0.181	0.293	2625	0.06		1.294	2.776	5.91	0.3	0.726	0.017	2.953	0.035			
SRAT Receipt-25	4	0.173	0.28	25.347	0.058		1.262	2.737	6.15	0.293	0.68	0.014	2.906	0.021			
SRAT Receipt-26	1	0.174	0.259	25.054	0.036		1.309	2.656	7.91	0.28	0.879	0.014	2.791	0.015		876	
SRAT Receipt-26	2	0.168	0.248	24.042	0.044		1.259	2.546	7.76	0.266	0.871	0.021	2.667	0.014			
SRAT Receipt-26	3	0.177	0.255	24.738	0.044		1.241	2.6	8.21	0.281	0.778	0.015	2.752	0.013			
SRAT Receipt-26	4	0.175	0.249	24.118	0.038		1.217	2.55	8.10	0.275	0.786	0.015	2.687	0.014			
SRAT Receipt-27	1	0.161	0.293	25.928	0.025		1.292	2.753	6.11	0.295	0.76	0.013	2.8	0.019		715	
SRAT Receipt-27	2	0.162	0.29	2581	0.023		1.314	2.737	6.36	0.292	0.696	0.012	2.804	0.016			
SRAT Receipt-27	3	0.178	0.296	26.161	0.015		1.325	2.794	5.61	0.297	0.674	0.012	2.855	0.015			
SRAT Receipt-27	4	0.169	0.289	25.125	0.015		1.323	2.733	5.97	0.29	0.512	0.012	2.816	0.016			
SRAT Receipt-28	1	0.169	0.228	26.15	0.015		1.288	2.762	6.0	0.298	0.693	0.014	2.88	0.023		903	
SRAT Receipt-28	2	0.196	0.239	27.63	0.012		1.322	2.847	6.14	0.309	0.924	0.017	2.957	0.018			
SRAT Receipt-28	3	0.179	0.231	26.97	0.012		1.321	2.797	5.65	0.301	0.637	0.015	2.924	0.015			
SRAT Receipt-28	4	0.176	0.238	2707	0.011		1.357	2.855	5.76	0.307	0.775	0.018	2.986	0.017			
SRAT Receipt-29	1	0.162	0.235	24.122	0.036		1.141	2.583	7.3	0.272	0.649	0.013	2.716	0.013		727	
SRAT Receipt-29	2	0.175	0.241	24.475	0.036		1.039	2.607	7.38	0.284	0.638	0.014	2.791	0.013			
SRAT Receipt-29	3	0.166	0.234	24.114	0.041		1.185	2.562	7.30	0.283	0.696	0.013	2.704	0.013			
SRAT Receipt-29	4	0.174	0.242	25.002	0.037		1.206	2.636	7.54	0.291	0.618	0.014	2.78	0.014			
SRAT Receipt-30	1	0.168	0.273	24.149	0.036		1.239	2.613	8.21	0.276	0.758	0.039	2.735	0.016		640	
SRAT Receipt-30	2	0.163	0.259	23.316	0.045		1.18	2.484	9.43	0.263	0.839	0.028	2.595	0.014			
SRAT Receipt-30	3	0.171	0.278	24.195	0.038		1.235	2.618	7.95	0.28	1.114	0.023	2.696	0.014			
SRAT Receipt-30	4	0.172	0.301	25.701	0.03		1.315	2.695	5.91	0.29	2.513	0.067	2.78	0.018			
SRAT Receipt-31	1	0.175	0.25	2644	0.038		1.136	2.784	6.40	0.301	0.919	0.016	2.882	0.016		< 941	
SRAT Receipt-31	2	0.184	0.257	2736	0.041		1.269	2.884	6.46	0.313	0.669	0.013	2.968	0.015			
SRAT Receipt-31	3	0.172	0.244	2589	0.035		1.151	2.719	5.96	0.29	0.644	0.013	2.81	0.015			
SRAT Receipt-31	4	0.188	0.252	26.006	0.038		0.947	2.749	6.00	0.347	0.684	0.013	2.899	0.017			
SRAT Receipt-32	1															< 891	
SRAT Receipt-32	2																
SRAT Receipt-32	3																
SRAT Receipt-32	4																
SRAT Receipt-33	1	0.165	0.608	24.014	0.023		0.953	2.545	5.69	0.276	0.706	0.012	2.646	0.021		733.8	513
SRAT Receipt-33	2	0.188	0.714	27.396	0.026		1.047	2.898	6.3	0.309	0.762	0.013	3.027	0.02		797.3	
SRAT Receipt-33	3	0.168	0.642	24.361	0.02		0.942	2.611	6.29	0.279	0.662	0.012	2.737	0.016		682.6	
SRAT Receipt-33	4	0.174	0.666	25.482	0.024		0.999	2.706	5.77	0.289	0.691	0.012	2.818	0.032		797.1	
SRAT Receipt-33	5	0.184	0.673	25.142	0.026		0.954	2.726	5.49	0.307	0.869	0.013	2.854	0.151			
SRAT Receipt-33	6	0.172	0.666	24.311	0.027		0.828	2.668	5.37	0.286	0.675	0.013	2.829	0.019			
SRAT Receipt-34	1	0.272	0.337	27.028	0.042		1.353	2.902	5.08	0.324	0.71	0.014	3.024	0.016		670.3	
SRAT Receipt-34	2	0.434	0.333	27.021	0.028		1.342	2.863	5.13	0.357	0.723	0.017	3	0.015		660	
SRAT Receipt-34	3	0.174	0.333	27.023	0.049		1.355	2.892	5.34	0.301	0.607	0.015	3.03	0.016		685.3	
SRAT Receipt-34	4	0.177	0.336	27.445	0.04		1.375	2.906	5.412	0.305	0.659	0.014	3.034	0.016		666.2	
SRAT Receipt-35	1	0.175	0.374	27.063	0.038		1.181	2.85	5.35	0.306	0.733	0.014	3.044	0.016		552.2	
SRAT Receipt-35	2	0.178	0.38	27.745	0.04		1.322	2.924	5.19	0.352	0.77	0.014	3.1	0.016		572.6	
SRAT Receipt-35	3	0.177	0.371	27.057	0.043		1.317	2.853	5.43	0.302	0.714	0.014	3.032	0.029		565.7	
SRAT Receipt-35	4	0.17	0.361	26.126	0.048		1.316	2.775	5.58	0.297	0.723	0.015	2.96	0.016		555.3	
SRAT Receipt-35	5	0.175	0.374	27.023	0.055		1.357	2.875	5.78	0.308	0.754	0.016	3.08	0.016			
SRAT Receipt-35	6	0.17	0.364	26.464	0.053		1.3	2.787	5.39	0.301	0.716	0.015	2.968	0.021			
SRAT Receipt-36	1	0.162	0.323	24.146	0.037		1.153	2.536	8.44	0.273	0.693	0.012	2.696	0.015		675.9	
SRAT Receipt-36	2	0.171	0.404	25.564	0.024		1.192	2.668	7.38	0.291	0.736	0.013	2.843	0.018		647.6	
SRAT Receipt-36	3	0.167	0.315	24.754	0.032		1.112	2.596	7.92	0.283	0.721	0.012	2.776	0.018		707.5	
SRAT Receipt-36	4	0.169	0.305	24.4	0.03		1.072	2.547	8.13	0.29	0.663	0.012	2.728	0.017		745.2	
SRAT Receipt-36	5	0.166	0.3	23.351	0.032		1.136	2.5	8.95	0.271	0.682	0.012	2.653	0.015			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Receipt-37	1	15.22	12.85		1.072	0.193	3290			12900	7250		< 563																		< 825.5	
SRAT Receipt-37	2	15.26	13.01		1.1		3300			13200	7530		< 1050																		< 825.5	
SRAT Receipt-37	3	15.31	12.59		1.096		3270			13200	7210		< 1150																		< 896.1	
SRAT Receipt-37	4	15.37	12.78		1.045		3200			13000	7220		< 1030																		< 896.1	
SRAT Receipt-38	1																															
SRAT Receipt-38	2																															
SRAT Receipt-38	3																															
SRAT Receipt-38	4																															
SRAT Receipt-39	1	15.6	13.51		1.082	0.161	3850			12400	7110		< 1040																		520.1	
SRAT Receipt-39	2	16.09	13.85		1.059		3680			12300	6920		< 594																		< 504.6	
SRAT Receipt-39	3	15.68	13.38		1.077		3750			12500	7120		< 1140																		< 468.0	
SRAT Receipt-39	4	15.76	13.51		1.08		3700			12900	7060		1220																		< 468.0	
SRAT Receipt-40	1	15.43	12.46		1.059	0.183	4290			12900	6430		< 980																		< 458.8	203
SRAT Receipt-40	2	15.36	12.54		1.066		4260			12700	6510		< 1000																		< 458.8	
SRAT Receipt-40	3	15.37	12.56		1.04		4210			12900	6450		< 1030																		< 449.7	
SRAT Receipt-40	4	15.36	12.18		1.06		4180			12800	6510		1060																		< 449.7	
SRAT Receipt-41	1	15.42			1.083	0.151	3870			13200	7040		< 514																		< 499.0	
SRAT Receipt-41	2	15.56			1.118		3930			12900	7100		< 1140																		< 499.0	
SRAT Receipt-41	3	15.62			1.102		3780			12900	6730		< 1120																		< 453.6	
SRAT Receipt-41	4	15.48			1.115		3640			12300	6870		1010																		< 445.6	
SRAT Receipt-42	1	16.21			1.054	0.136	4460			13700	7870		< 1030																		< 1052.0	
SRAT Receipt-42	2	16.17			1.05		4400			13600	7730		< 1050																		< 1052.0	
SRAT Receipt-42	3	16.27			1.05		4640			13800	7880		< 1130																		< 1040.0	
SRAT Receipt-42	4	16.37			1.056		4410			13600	7910		1180																		< 1040.0	
SRAT Receipt-43	1	15	12.78		1.066	0.168	3440			12100	7130		< 1030																		< 494.1	
SRAT Receipt-43	2	14.84	12.31		1.062		3400			11700	7130		< 1010																		< 494.1	
SRAT Receipt-43	3	14.85	12.37		1.067		3270			11800	7130		< 536																		< 451.0	
SRAT Receipt-43	4	14.98	13		1.055		3380			10700	6730		1060																		< 448.3	
SRAT Receipt-44	1	15.28	13.05		1.056	0.152	4150			11400	6790		< 1120																		478.2	
SRAT Receipt-44	2	15.22	13.14		1.083		4140			11300	6550		< 1100																		498.0	
SRAT Receipt-44	3	15.26	13.07		1.068		4130			11000	6620		< 1080																		< 466.4	
SRAT Receipt-44	4	15.21	12.89		1.056		4090			10900	6690		1130																		< 466.4	
SRAT Receipt-45	1	15.35	12.36		1.061	0.167	3520			12500	7180		< 1040																		< 458.9	
SRAT Receipt-45	2	15.42	13.51		1.085		3330			12100	6940		< 1140																		< 458.9	
SRAT Receipt-45	3	15.51	13.12		1.059		3290			11700	6650		< 1180																		497.2	
SRAT Receipt-45	4	15.52	12.79		1.074		3160			11500	6600		1130																		< 474.6	
SRAT Receipt-46	1	15.09	13.25		1.063	0.183	3260			13000	7330		< 1170																		< 481.0	
SRAT Receipt-46	2	15.03	12.31		1.072		3340			11700	6750		< 1130																		< 481.0	
SRAT Receipt-46	3	15.05	13.01		1.074		2980			11100	6500		< 1100																		< 518.6	
SRAT Receipt-46	4	15.19	12.78		1.054		3020			11200	6420		1150																		< 518.6	
SRAT Receipt-47	1	15.98	13.44		1.055	0.183	4660			10800	6520		< 982																		451.7	
SRAT Receipt-47	2	15.94	13.43		1.082		4870			11200	6630		< 1030																		520.4	
SRAT Receipt-47	3	15.97	13.21		1.073		4560			10700	6330		< 1060																		476.5	
SRAT Receipt-47	4	15.93	13.23		1.092		4360			11000	6510		1060																		451.2	
SRAT Receipt-48	1	15.15	14.34		1.064	0.149	3430			11400	6230		< 1100																		517	
SRAT Receipt-48	2	15.15	14.63		1.055		3400			11500	6230		< 1170																		465	
SRAT Receipt-48	3	15.14	12.33		1.054		3320			11200	6330		< 1140																		516.9	
SRAT Receipt-48	4	15.17	13.16		1.063		3330			11000	6350		1130																		< 486.1	
SRAT Receipt-49	1	15.31	12.57		1.11	0.193	3340			11700	6220		< 1070																		568.8	
SRAT Receipt-49	2	15.2	12.59		1.108		3330			11400	6330		< 1070																		508.4	
SRAT Receipt-49	3	15.14	12.06		1.105		3280			11400	6330		< 1090																		558.4	
SRAT Receipt-49	4	15.21	12.66		1.1		3250			11400	6200		1100																		< 514.7	
SRAT Receipt-50	1				1.07	0.193	5650			11400	6620		< 1250																		525.4	
SRAT Receipt-50	2				1.066		5730			10700	6700		< 1210																		514.9	
SRAT Receipt-50	3				1.072		5720			10600	6430		< 1290																		530.5	
SRAT Receipt-50	4				1.065		5530			10400	6440		1280																		536.4	
SRAT Receipt-51	1	15.93	13.97		1.068	0.206	3730			12000	7330		< 522																		589	
SRAT Receipt-51	2	15.92	13.18		1.073		3830			12800	7430		< 1030																		592.7	
SRAT Receipt-51	3	15.91	13.72		1.075		3740			12100	7530		< 1110																		541.5	
SRAT Receipt-51	4	15.94	13.44		1.071		3810			12100	7510		1170																		568.7	
SRAT Receipt-52	1	15.34	13.09		1.102	0.200	4920			11900	7770		1030																		499.8	
SRAT Receipt-52	2	15.34	12.79		1.098		4180			12200	7080		< 1110																		424.6	
SRAT Receipt-52	3	15.34	13.42		1.097		4380			12200	7220		< 1110																		529.9	
SRAT Receipt-52	4	15.38	12.56		1.103		4040			11900	7210		1060																		< 462.8	
SRAT Receipt-53	1	15.4	12.71		1.067	0.162	4160			12000	6890		< 866																		512.5	
SRAT Receipt-53	2	15.47	12.56		1.072		4540			12000	6950		< 596																		486.5	
SRAT Receipt-53	3	15.44	12.56		1.074		4570			12000	7150		< 1050																		553.1	
SRAT Receipt-53	4	15.42	12.54		1.074		4650			12000	6990		1100																		502.7	
SRAT Receipt-54	1	15.75	13.76		1.021	0.164	4360			12400	7150		< 1060																		< 486.0	
SRAT Receipt-54	2	15.74	13.51		1.03		4280			12500	7230		< 1080																		< 486.0	
SRAT Receipt-54	3	15.81	13.5		1.036		4160			12300	7210		< 1090																		< 472.1	
SRAT Receipt-54	4	15.79			1.027		4130			12200	7250		1100																		472.8	
SRAT Receipt-55	1	15.62	13.6		1.146	0.167	6690			13200	7120		1150																		526.8	222
SRAT Receipt-55	2	15.66	13.14		1.052		5720			12700	7230		< 1010																		519.6	
SRAT Receipt-55	3	15.58	13.19		1.125		4630			12400	7150		< 1170																		517.4	
SRAT Receipt-55	4	15.49	12.8		1.091		5990			13200	7510		1180																		511.6	
SRAT Receipt-56	1	14.27	12.12		1.054	0.148	4610			11800	6550		< 563																		< 456.6	

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Receipt-56	2	14.3	12.06		1.06		4410			11600	6410		< 1070																		< 456.6	
SRAT Receipt-56	3	14.28	11.65		1.06		4530			11500	6410		< 1140																		< 453.1	
SRAT Receipt-56	4	14.39	11.79		1.063		4470			11600	6510		1110																		< 453.1	
SRAT Receipt-57	1	16.5	14.05		1.084	0.176	3930			12500	6890		< 1050																		< 524.3	
SRAT Receipt-57	2	16.42	13.53		1.082		3770			12500	6910		< 1070																		< 524.3	
SRAT Receipt-57	3	16.48	13.37		1.085		3820			12400	6810		< 1070																		< 540.4	
SRAT Receipt-57	4	16.49	14.13		1.082		3810			12400	6880		< 1110																		< 540.4	
SRAT Receipt-58	1	16.36	14.18		1.07	0.179	3650			12100	6740		< 1000																		< 527.4	
SRAT Receipt-58	2	16.42	13.6		1.07		3630			11700	6610		< 974																		< 527.4	
SRAT Receipt-58	3	16.47	14.13		1.078		3610			12000	6600		< 1020																		< 476.8	
SRAT Receipt-58	4	16.38	13.42		1.075		3380			11800	6510		< 1020																		483.8	
SRAT Receipt-59	1	17.4	14.49		1.06	0.166	4150			13100	7510		< 1010																		773.6	
SRAT Receipt-59	2	17.35	14.8		1.078		4240			13100	7640		< 1190																		752	
SRAT Receipt-59	3	17.36	14.63		1.096		4280			12900	7510		< 1300																		817.3	
SRAT Receipt-59	4	17.44	14.94		1.114		4220			13400	7780		< 1250																		838.1	
SRAT Receipt-60	1	16.74	14.3		1.06	0.19	4440			12500	7770		< 871																		522.5	306
SRAT Receipt-60	2	16.71	14.16		1.05		4750			12700	7930		< 1040																		464.1	
SRAT Receipt-60	3	16.73	14.39		1.061		4650			12400	7880		< 1070																		480.6	
SRAT Receipt-60	4	16.91	14.29		1.062		4660			12500	7860		< 1130																		< 451.7	
SRAT Receipt-61	1	16.87	14.07		1.067	0.174	5310			13100	7830		< 896																		628.2	
SRAT Receipt-61	2	16.86	14.34		1.062		5270			13300	7710		< 906																		523	
SRAT Receipt-61	3	16.85	14.1		1.067		5200			13000	7620		< 944																		< 501.0	
SRAT Receipt-61	4	16.9	14.45		1.067		5370			13100	7640		< 1030																		510.7	
SRAT Receipt-62	1	16.48			1.084	0.17	4760			13100	7610		< 1080																		542.7	
SRAT Receipt-62	2	16.48			1.067		4590			12800	7490		< 1060																		< 493.7	
SRAT Receipt-62	3	16.58			1.069		4390			12900	7490		< 1070																		549.6	
SRAT Receipt-62	4	16.58			1.076		4060			12800	7470		< 1080																		530.3	
SRAT Receipt-63	1	16.33	13.37		1.092	0.172	4650			13200	7530		< 1080																			
SRAT Receipt-63	2	16.33	13.51		1.087		4210			12900	7430		< 1110																			
SRAT Receipt-63	3	16.36	13.63		1.096		4120			12900	7440		< 1080																			
SRAT Receipt-63	4	16.41	13.11		1.101		4050			12500	7260		< 1180																			
SRAT Receipt-64	1	17.15	14.02		1.033	0.169	4340			12800	7680		< 1030																		836.9	
SRAT Receipt-64	2	17.1	14.18		1.048		4270			12700	7480		< 1080																		819.8	
SRAT Receipt-64	3	17.04	13.55		1.04		4260			12700	7490		< 1080																		< 906.4	
SRAT Receipt-64	4	17.1	14.17		1.036		4180			12700	7430		< 1080																		< 906.4	
SRAT Receipt-65	1	16.48	13.49		1.011	0.195	4210			13100	7380		< 1090																		549.4	275
SRAT Receipt-65	2	16.46	13.63		1.018		4140			13100	7330		< 1090																		< 503.4	
SRAT Receipt-65	3	16.44	13.34		1.017		4110			12800	7210		< 1100																		529.2	
SRAT Receipt-65	4	16.46	13.4		1.019		4000			12700	7190		< 1100																		< 494.4	
SRAT Receipt-66	1	17.4	14.52		1.091	0.194	5990			15300	8430		< 1090																		556.3	
SRAT Receipt-66	2	17.34	14.67		1.107		5960			14900	8230		< 1100																		475.7	
SRAT Receipt-66	3	17.46	14.54		1.1		6050			14700	8330		< 1130																		550.4	
SRAT Receipt-66	4	17.48	14.35		1.118		5790			14800	7930		< 1090																		468.3	
SRAT Receipt-67	1	17.18	14.11		1.065	0.202	5110			14200	7590		< 932																		565	
SRAT Receipt-67	2	17.2	13.82		1.061		4870			13500	7210		< 950																		501.2	
SRAT Receipt-67	3	17.18	14.2		1.068		5150			14000	6710		< 1020																		556.5	
SRAT Receipt-67	4	17.24	13.34		1.066		4490			12800	7300		< 943																		487.3	
SRAT Receipt-68	1	16.93	13.37		1.04	0.196	4660			13400	7650		< 1010																		552.5	
SRAT Receipt-68	2	16.93	14.25		1.028		4630			13200	7500		< 1040																		500.9	
SRAT Receipt-68	3	16.94	13.41		1.039		4660			12900	7680		< 1040																		513.8	
SRAT Receipt-68	4	16.92	13.76		1.03		4480			13200	7400		< 1070																		< 493.3	
SRAT Receipt-69	1	16.55	14.4		1.031	0.189	4550			12800	7430		< 843																		665.7	
SRAT Receipt-69	2	16.56	14.1		1.071		4500			13000	7280		< 880																		591.2	
SRAT Receipt-69	3	16.54	14.54		1.039		4450			12600	7280		< 917																		617	
SRAT Receipt-69	4	16.61	14.4		1.069		4650			12900	7340		< 975																		569.8	
SRAT Receipt-70	1	16.94	14.7		1.08	0.176	5130			13700	7750		< 1120																		< 1083.0	
SRAT Receipt-70	2	16.88	14.31		1.077		4770			14500	7690		< 1190																		< 1083.0	
SRAT Receipt-70	3	17	14.85		1.067		4890			14000	8000		< 1060																		< 1032.0	
SRAT Receipt-70	4	16.95	14.58		1.068		4550			13200	7500		< 1150																		< 1032.0	
SRAT Receipt-71	1	16.65	14.48		1.061	0.187	4600			12600	7290		< 1060																		708.7	
SRAT Receipt-71	2	16.81	13.55		1.068		4270			12800	7210		< 1100																		604.6	
SRAT Receipt-71	3	16.57	14.49		1.077		4360			12500	7160		< 1110																		640.4	
SRAT Receipt-71	4	16.66	14.79		1.093		4250			12700	7250		< 1100																		589.4	
SRAT Receipt-72	1	16.52			1.075	0.214	4020			12500	7830		< 913																		< 462.3	
SRAT Receipt-72	2	16.52			1.059		4220			12500	7650		< 978																		< 462.3	
SRAT Receipt-72	3	16.52			1.064		4040			12600	7650		< 1000																		< 447.2	
SRAT Receipt-72	4	16.59			1.05		4030			12500	7450		< 1060																		< 447.2	
SRAT Receipt-73	1	16.87			1.069	0.169	4500			11600	7420		< 1020																		< 482.9	
SRAT Receipt-73	2	16.82			1.051		4450			11500	7180		< 1030																		< 482.9	
SRAT Receipt-73	3	16.78			1.062		4530			11600	7280		< 1070																		< 425.3	
SRAT Receipt-73	4	16.72			1.055		4450			11300	7220		< 1060																		< 425.3	
SRAT Receipt-74	1	17.13	14.58		1.071	0.156	4210			11800	7560		< 1130																		594.8	
SRAT Receipt-74	2	17.23	14.98		1.054		4310			11600	7530		< 1120																		< 476.0	
SRAT Receipt-74	3	16.21	13.53		1.053		4190			11700	7550		< 1190																		501.9	
SRAT Receipt-74	4	16.75	14.41		1.066		4310			11800	7620		< 1240																		< 501.9	
SRAT Receipt-75	1	16.85	14.63		1.058	0.193	4770			12400	7660		< 1010																		558.8	
SRAT Receipt-75	2	16.86	14.44		1.054		4800			12800	7830		< 1050																		< 514.3	

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Receipt-75	3	16.86	14.56		1.151		4840			12800	7680		< 1160																		615.5	
SRAT Receipt-75	4	16.84	14.27		1.151		4250			12700	7470		< 1170																		< 538.9	
SRAT Receipt-76	1	16.69			1.08	0.189	5070			12100	7310		< 1120																		< 462.3	
SRAT Receipt-76	2	16.64			1.093		5050			12700	7250		< 560																		< 462.3	
SRAT Receipt-76	3	16.62			1.091		4880			12200	7180		< 1110																		534.8	
SRAT Receipt-76	4	16.6			1.089		4870			12000	7190		< 1130																		< 479.0	
SRAT Receipt-77	1	16.69	14.38		1.158	0.164	5640			13100	7130		< 1210																		603.5	
SRAT Receipt-77	2	16.73	14.54		1.162		5980			13700	7440		< 1120																		483.6	
SRAT Receipt-77	3	16.82	13.83		1.157		5250			12300	6620		< 1170																		534.2	
SRAT Receipt-77	4	16.83	14.21		1.153		4870			11500	6280		< 1120																		< 482.3	
SRAT Receipt-78	1	16.96			1.054	0.169	5610			13400	7550		< 1190																		572.2	
SRAT Receipt-78	2	16.53			1.071		5600			13400	7550		< 1190																		493	
SRAT Receipt-78	3	16.96			1.06		5410			13400	7600		< 1160																		555	
SRAT Receipt-78	4	17			1.067		5470			13300	7570		< 1170																		455.2	
SRAT Receipt-79	1	14.34	11.9		1.065	0.157	4850			11200	6210		< 1080																		< 442.2	
SRAT Receipt-79	2	14.35	12.06		1.057		4840			11200	6270		< 1170																		< 442.2	
SRAT Receipt-79	3	14.36	12.11		1.092		4820			11100	6230		< 1080																		495.2	
SRAT Receipt-79	4	14.38	12.24		1.068		4800			11200	6270		< 1100																		< 468.7	
SRAT Receipt-80	1	15.02	11.03		1.064	0.219	2980			9670	7530		< 859																		712.2	
SRAT Receipt-80	2	14.93	11.45		1.064		2960			9390	7410		< 1070																		751.4	
SRAT Receipt-80	3	15.03	11.58		1.065		3100			9770	7720		< 1070																		889.3	
SRAT Receipt-80	4	15.04	11.16		1.046		3060			9740	7710		< 999																		905.9	
SRAT Receipt-81	1	16.79	13.37		1.105	0.19	4020			17300	7730		< 1100																		543.8	
SRAT Receipt-81	2	16.79	13.97		1.111		4000			12600	7730		< 1130																		< 485.9	
SRAT Receipt-81	3	16.76	13.91		1.119		3940			11900	7760		< 1150																		513.8	
SRAT Receipt-81	4	16.8	13.94		1.115		3800			11700	7670		< 1160																		< 498.4	
SRAT Receipt-82	1	16.54	13.33		1.123	0.192	3230			11000	7640		< 1010																		679.6	
SRAT Receipt-82	2	16.63	13.67		1.119		3480			9980	8330		< 1110																		< 653.3	
SRAT Receipt-82	3	16.86	14.05		1.14		3400			10400	8040		< 1110																		660.2	
SRAT Receipt-82	4	16.59	13.83		1.124		3040			9530	7230		< 1060																		608.7	
SRAT Receipt-83	1	16.84	13.86		1.058	0.203	3050			9090	7570		< 1070																		677	
SRAT Receipt-83	2	16.72	14.21		1.05		2980			9050	7510		< 1060																		635.4	
SRAT Receipt-83	3	16.62	14.16		1.017		2950			9060	7570		< 1090																		609.6	
SRAT Receipt-83	4	16.59	14.18		1.018		2970			9060	7570		< 1120																		589.5	
SRAT Receipt-84	1	16.71	13.68		1.114	0.206	4240			11300	7960		< 1080																		798.9	
SRAT Receipt-84	2	16.78	13.77		1.111		4160			10900	7710		< 1060																		786.4	
SRAT Receipt-84	3	16.79	14.03		1.134		4100			10900	7750		< 1080																		852.7	
SRAT Receipt-84	4	16.79	14		1.111		4090			10900	7710		< 1080																		769.8	
SRAT Receipt-85	1	16.42	13.48		1.073	0.209	4290			11200	7630		< 1220																		573.6	
SRAT Receipt-85	2	16.38	13.42		1.075		4390			11400	7750		< 1220																		550.6	
SRAT Receipt-85	3	16.31	14.1		1.093		4320			11400	7660		< 1190																		581.6	
SRAT Receipt-85	4	16.46	14.11		1.077		4350			11100	7740		< 1210																		579.4	
SRAT Receipt-86	1	16.29			1.067	0.201	4880			10600	7530		< 1090																		611.2	
SRAT Receipt-86	2	16.29			1.075		4460			10700	7560		< 1110																		< 560.4	
SRAT Receipt-86	3	16.65			1.102		4480			10700	7540		< 1110																		< 573.6	
SRAT Receipt-86	4	15.87			1.063		4450			10700	7530		< 1090																		< 573.6	
SRAT Receipt-87	1	15.82	13.9		1.08	0.18	5230			11900	7260		< 1080																		< 544.1	
SRAT Receipt-87	2	15.8	13.95		1.075		5290			11800	7240		< 1040																		< 544.1	
SRAT Receipt-87	3	15.79	13.55		1.065		5170			12100	7170		< 1050																		< 520.6	
SRAT Receipt-87	4	15.79	13.62		1.059		5240			11600	73 0		< 986																		< 520.6	
SRAT Receipt-88	1	15.16			1.108	0.199	3620			10700	7230		< 1080																		548.6	
SRAT Receipt-88	2	15.15			1.083		3860			11300	6940		< 1010																		< 494.7	
SRAT Receipt-88	3	15.16			1.106		3500			10200	7230		< 944																		515.7	
SRAT Receipt-88	4	15.13			1.106		3690			10800	7400		< 939																		< 512.9	
SRAT Receipt-89	1	15.86	13.19		1.072	0.188	5180			11200	75 0		< 1090																		< 515.0	
SRAT Receipt-89	2	16.01	13.58		1.091		5250			11000	7360		< 1070																		< 515.0	
SRAT Receipt-89	3	15.71	13.02		1.094		5080			11000	7380		< 1090																		< 494.8	
SRAT Receipt-89	4	15.86	13.12		1.083		5210			11200	7580		< 1120																		< 494.8	
SRAT Receipt-90	1	15.93			1.076	0.194	5610			12600	75 0		< 944																		637.1	257
SRAT Receipt-90	2	16.01			1.066		4930			11000	7480		< 1000																		572.5	
SRAT Receipt-90	3	15.95			1.076		5560			11300	7450		< 1060																		625.7	
SRAT Receipt-90	4	15.95			1.076		4910			10900	7390		< 1090																		551.9	
SRAT Receipt-91	1	14.44	12.78		1.094	0.167	4920			11500	8040		< 1040																		478.7	
SRAT Receipt-91	2	14.37	12.16		1.115		4920			11500	8050		< 1180																		< 467.5	
SRAT Receipt-91	3	14.52	12.65		1.115		4950			11500	8050		< 1130																		529.4	
SRAT Receipt-91	4	14.44	12.46		1.1		4950			11300	8070		< 1120																		476.1	
SRAT Receipt-92	1	11.05			1.075	0.163	4890			11700	8190		< 1050																		554.1	
SRAT Receipt-92	2	11.05			1.075		5030			11700	8260		< 1090																		516.8	
SRAT Receipt-92	3	10.97			1.069		4940			11700	8250		< 1130																		532.1	
SRAT Receipt-92	4	11.05			1.08		4960			11800	8260		< 1110																		512	
SRAT Receipt-92	5				1.075																											
SRAT Receipt-92	6				1.084																											
SRAT Receipt-93	1	10.01	8.55		1.073	0.109	5280			13200	8410		< 1050																		< 498.7	
SRAT Receipt-93	2	10	8.33		1.06		5300			13200	8410		< 1040																		< 498.7	
SRAT Receipt-93	3	10.12	8.47		1.069		5370			13300	8440		< 1080																		< 479.3	
SRAT Receipt-93	4	10.07	8.38		1.08		5300			13300	8450		< 1070																		< 479.3	
SRAT Receipt-93	5	10.06																														
SRAT Receipt-93	6	10.08																														

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Receipt-93	7	10.1																														
SRAT Receipt-93	8	10.12																														
SRAT Prod-19	1	23.71	19.28	15.33	1.195		27700	115	<96.1	40500	687	<96.1	379	5.558	0.156	1.806	0.106	0.878	26.369	0.27		0.871	2.883	6.2	0.307	0.912	0.058		0.103			< 100
SRAT Prod-19	2	23.72	19.22	14.1	1.65		27800	114	<99.3	44100	697	<99.3	367	5.281	0.104	1.945	0.1	0.838	25.007	0.274		0.9	2.755	6.526	0.249	0.933	0.051		0.094			
SRAT Prod-19	3	23.72	19.09	14.84	1.175		25300	117	<95.0	41400	717	<95.0	366	5.655	0.075	1.782	0.117	0.891	26.476	0.249		0.857	2.89	5.95	0.269	0.976	0.063		0.107			
SRAT Prod-19	4	22.92	21.51	15.19	1.167		27900	118	<115	36700	704	<115	409	5.257	0.09	2.035	0.089	0.832	24.448	0.304		0.935	2.743	7.045	0.259	0.812	0.052		0.096			
SRAT Prod-20	1	18.9	13.61		1		15800	< 82.8	<82.8	34600	< 82.8	< 82.8	658	5.537	0.059	2.046	0.111	1.039	22.735	0.136		0.995	2.404	7.626	0.247	1.258	0.027	1.615	0.04			
SRAT Prod-20	2	18.35	12.63		1.52		15200	< 105	< 105	34900	< 105	< 105	658	5.545	0.107	2.034	0.111	1.042	22.443	0.129		0.997	2.409	7.571	0.242	1.123	0.027	1.634	0.039			
SRAT Prod-20	3	21.59	16.55		1.43		15400	< 101	< 101	33900	< 101	< 101	657	5.57	0.054	2.001	0.118	1.044	22.932	0.126		0.978	2.404	7.37	0.244	0.995	0.027	1.629	0.038			
SRAT Prod-20	4	24.75	19.19		1.49		19200	< 126	< 126	31400	< 126	< 126	735	5.79	0.103	1.884	0.12	1.086	23.126	0.118		0.964	2.459	7.139	0.254	1.099	0.027	1.697	0.042			
SRAT Prod-21	1	22.68	18.02	11.84	1.57		15000	1090	1090	61900	1090	1320	1530	5.534		1.786	0.136	0.901	21.393	0.053		0.905	2.1	6.7	0.24	0.808	0.043	2.194	0.019			
SRAT Prod-21	2	22.61	17.02	12.63	1.66		14400	1110	1110	55300	1110	1090	1730	5.331		1.737	0.137	0.899	21.343	0.049		0.837	2.07	6.408	0.239	0.764	0.044	2.192	0.019			
SRAT Prod-21	3	22.57	17.36	12.63	1.84		14300	1090	1090	62100	1090	1090	1210	5.472		1.814	0.134	0.88	2107	0.058		0.934	2.106	6.75	0.234	0.788	0.03	2.13	0.02			
SRAT Prod-21	4	22.65	17.43	12.74	1.57		14500	1200	1200	57200	1200	1200	1110	5.439		1.789	0.132	0.885	21.086	0.049		0.915	2.096	6.686	0.239	0.696	0.026	2.142	0.019			
SRAT Prod-21	5						15800	8700	8700	54300	8700	8700	8700																			
SRAT Prod-22	1	23.55	19	15.5	1.24		13200	1060	1060	54700	1060	1060	1060	6.096		1.898	0.156	0.916	2271	0.036		0.918	2.259	6.741	0.257	1.011	0.014	2.435	0.02			
SRAT Prod-22	2	23.64	19.26	14.96	1.47		12800	1070	1070	53400	1070	1070	1070	6.094		1.898	0.154	0.919	22.711	0.042		0.91	2.247	6.712	0.252	0.933	0.013	2.424	0.02			
SRAT Prod-22	3	23.5	18.94	16.19	1.72		12900	1080	1080	55800	1080	1080	1080	6.125		1.886	0.158	0.927	23.124	0.063		0.905	2.271	6.75	0.247	0.807	0.013	2.492	0.025			
SRAT Prod-22	4	23.49	19.18	15.01	1.68		12900	1050	1050	53400	1050	1050	1050	6.137		1.871	0.155	0.92	2313	0.043		0.937	2.257	6.64	0.248	0.839	0.013	2.534	0.023			
SRAT Prod-23	1	23.31	18.82	16.75	1.71		14600	946	946	46900	946	946	946	6.441		1.864	0.167	1.004	24.103	0.025		0.833	2.527	6.191	0.272	0.828	0.012	2.676	0.079			
SRAT Prod-23	2	23.33	18.69	21.41	1.53		13900	1020	1020	50600	1020	1020	1020	6.286		1.943	0.165	0.967	23.624	0.031		0.923	2.455	6.471	0.263	0.945	0.013	2.567	0.083			
SRAT Prod-23	3	24.04	19.77	17.22	1.306		15100	1180	1180	45700	1180	1180	1180	6.135		1.917	0.162	0.991	24.022	0.031		0.831	2.499	6.421	0.271	0.873	0.013	2.634	0.073			
SRAT Prod-23	4	23.5	19.02	17.27	1.81		14200	1290	1290	46900	1290	1290	1290	6.431		1.943	0.162	0.997	24.347	0.035		0.912	2.524	6.646	0.275	0.825	0.013	2.652	0.086			
SRAT Prod-24	1	22.69	18.15	14.53	1.15		14000	1020	1020	38000	1020	1020	1020	6.379		2.009	0.168	0.964	23.353	0.028		0.954	2.501	6.615	0.27	0.822	0.11	2.591	0.05			
SRAT Prod-24	2	22.59	18.62	14.78	1.69		13800	1020	1020	38600	1020	1020	1020	6.257		2.011	0.169	0.904	23.118	0.026		0.992	2.48	6.43	0.264	1.085	0.11	2.58	0.053			
SRAT Prod-24	3	22.74	18.69	14.77	1.66		14200	1110	1110	37700	1110	1110	1110	6.259		2.015	0.171	0.94	23.49	0.022		0.994	2.468	6.87	0.294	0.874	0.12	2.562	0.056			
SRAT Prod-24	4	22.69	18.56	15.19	1.16		13900	1050	1050	37600	1050	1050	1050	6.213		1.983	0.166	0.939	23.417	0.04		0.961	2.457	6.835	0.267	1.074	0.17	2.548	0.107			
SRAT Prod-25	1	25.13	20.97	15.58	1.48		14600	979	979	42500	979		1220	6.397		1.803	0.168	0.879	23.521	0.033		0.844	2.539	5.983	0.266	0.976	0.012	2.755	0.022			
SRAT Prod-25	2	22.69	18.84	14.97	1.53		14200	1090	1090	41500	1090		1180	6.405		1.919	0.164	0.854	23.58	0.032		0.939	2.512	6.498	0.265	1.037	0.011	2.667	0.027			
SRAT Prod-25	3	22.63	18.53	14.79	1.72		13900	1060	1060	46500	1060		1190	5.42		1.772	0.166	0.811	22.385	0.033		0.812	2.36	6.592	0.246	0.992	0.011	2.52	0.022			
SRAT Prod-25	4	22.69	18.41	14.82	1.64		13400	1060	1060	42600	1060		1100	6.048		2.058	0.156	0.817	22.332	0.021		0.935	2.417	6.958	0.251	0.858	0.012	2.537	0.019			
SRAT Prod-26	1	23.45	17.29	14.08	1.56		15700	1110	1110	39100	1110	1110	1110																			
SRAT Prod-26	2	23.2	18.01	13.94	1.53		15900	1370	1370	39900	1370	1370	1370																			
SRAT Prod-26	3	21.52	15.04	14.15	1.54		15200	1230	1230	38000	1230	1230	1230																			
SRAT Prod-26	4	21.5	15.62	14.01	1.32		15700	1480	1480	38800	1480	1480	1480																			
SRAT Prod-27	1	22.83	18.33	12.67	1.34		17400	1120	1120	40300	1120	1120	1170																			
SRAT Prod-27	2	18.66	14.95	11.56	1.41		18000	1090	1090	40700	1090	1090	1150																			
SRAT Prod-27	3	22.78	18.68	12.99	1.18		17400	1070	1070	40000	1070	1070	1160																			
SRAT Prod-27	4	22.82	18.07	12.53	1.59		17800	1170	1170	39400	1170	1170	1170																			
SRAT Prod-28	1	20.61	16.78	14.82	1.08		14600	< 745	< 745	35300	< 745		894																			< 100
SRAT Prod-28	2	20.58	16.47	14.06	1.15		14800	< 873	< 873	37800	< 873		969																			
SRAT Prod-28	3	20.59	16.38	14.28	1.23		14600	< 1060	<1060	34600	< 1060		1000																			
SRAT Prod-28	4	20.67	16.38	14.24	1.13		14600	< 945	< 945	33000	< 945		1060																			
SRAT Prod-29	1	21.59	17.51	14.07	1.18		13800	1040	1040	34700	1040	1040	1040	5.751		1.77	0.17	0.989	23.303	0.063		0.709	2.452	5.445	0.266	0.625	0.018	2.709	0.015			
SRAT Prod-29	2	21.75	17.87	14.08	1.39		14000	972	972	35200	972	972	972	6.193		1.713	0.165	0.952	22.528	0.07		0.787	2.388	4.839	0.268	0.656	0.016	2.606	0.015			
SRAT Prod-29	3	21.61	18.12	14.05	1.28		13700	1090	1090	34500	1090	1090	1090	5.866		1.821	0.169	0.986	23.178	0.082		0.74	2.452	5.836	0.265	0.708	0.016	2.713	0.015			
SRAT Prod-29	4	21.7	17.1	14.06	1.65		13900	1450	1450	33400	1450	1450	1450	5.979		1.723	0.175	1.014	23.578	0.059		0.631	2.51	5.295	0.28	0.675	0.015	2.726	0.015			
SRAT Prod-30	1	22.66	18.4	18.27	1.47		14100	1010	1010	36400	2410	1010	1010	6.622		2.165	0.167	0.88	23.308	0.062		1.035	2.615	7.091	0.273	0.769	0.012	2.785	0.014			
SRAT Prod-30	2	22.71	18.35	17.51	1.42		14500	1270	1270	35900	2460	1270	1270	6.604		2.168	0.168	0.878	23.343	0.051		1.033	2.609	7.177	0.274	0.8	0.012	2.769	0.014			
SRAT Prod-30	3	22.69	18.61	18.32	1.14		14300	1200	1200	35400	2410	1200	1200	6.814		2.119	0.167	0.906	24.125	0.044		0.989	2.666	6.353	0.281	0.735	0.012	2.856	0.014			
SRAT Prod-30	4	22.73	18.48	17.82	1.39		14500	1180	1180	35100	2390	1180	1180	6.713		2.16	0.169	0.893	24.327	0.049		1.024	2.65	6.843	0.277	0.777	0.012	2.819	0.014			
SRAT Prod-33	1	22.71	17.9		1.24		16400		<1100																							
SRAT Prod-33	2	22.66	17.46		1.35		16700		<1150																							
SRAT Prod-33	3	22.69	17.82		1.12		16400		<1150																							
SRAT Prod-33	4	22.68	17.96		1.088		16400		1140																							
SRAT Prod-34	1	21.05	16.08		1.1		17100	< 1060	<1060	39700	< 1060	< 1060	1090	6.243		1.955	0.163	1.103	23.476	0.034		0.974	2.405	7.1	0.26	0.901	0.017	2.646	0.02			< 100
SRAT Prod-34	2	21.02	16.7		1.08		16700	< 1040	<1040	40000	< 1040	< 1040	< 1040	6.35		2.062	0.161	1.121	23.865	0.037		0.982	2.462	6.851	0.262	0.516	0.026	2.687	0.017			
SRAT Prod-34	3	20.97	15.64		1.1		15500	< 1080	<1080	39100	< 1080	< 1080	< 1030	6.336		1.979	0.165	1.129	23.964	0.031		0.953	2.455	6.919	0.266	0.666	0.031	2.695	0.014			
SRAT Prod-34	4	21.01	16.64		1.02		14800	< 1030	<1030	37400	< 1030	< 1030	< 1060	5.96		2.029	0.17	1.035	22.452	0.027		1.08	2.32	7.858	0.255	1.319	0.014	2.487	0.013			
SRAT Prod-34	5													6.215		1.98	0.165	1.13	23.919	0.031		0.922	2.442	6.899	0.267	0.732	0.026	2.695	0.013			
SRAT Prod-34	6													6.551		2.232	0.192	1.185	24.882	0.032		1.113	2.586	8.428	0.274	1.41	0.018	2.761	0.014			
SRAT Prod-35	1	19.86	16.56		1.48		16000	< 1080	<1170	36800	< 1080	< 1080	1070	6.622		2.021	0.167	1.132	24.158	0.035		0.854	2.404	6.586	0.269	1.227	0.012	2.693	0.019			< 100
SRAT Prod-35	2	19.74	16.19		1.47		16200	< 1060	<1080	34900	< 1060	< 1060	< 1080	6.402		1.923	0.172	1.136	24.184	0.03		0.885	2.414	6.554	0.296	1.01	0.012	2.702	0.018			
SRAT Prod-35	3	19.79	13.17		1.52		17000	< 1170	<1060	34200	< 1170	< 1170	< 1170	6.415		1.913	0.167	1.142	24.288	0.023		0.892	2.424	6.604	0.275	0.936	0.012	2.709	0.016			
SRAT Prod-35	4	17.9	11.24		1.34		15700	1160	1160	33400	1160	1160	1160	6.407		1.941	0.167	1.142	24.375	0.028		0.881	2.426	6.617	0.274	1.265	0.012	2.714	0.015			
SRAT Prod-36	1	23.23	18.93		1.12		16200	< 1100	<1100	48400	1760	< 1100	1290	6.226		2.082	0.156	0.865	23.258	0.036		0.985	2.483	6.87	0.259	1.071	0.012	2.632	0.012			< 100
SRAT Prod-36	2	23.21	18.35		1.17		15300	< 1070	<1070	46000	1690	< 1070	1250	6.107		2.069	0.158	0.873	23.611	0.021		0.899	2.502	6.76	0.269	1.005	0.012	2.645	0.012			
SRAT Prod-36	3	23.17	18.85		1.17		16700	< 1130	<1130	46800	1840	< 1130	1270	5.738		1.857	0.148	0.828	22.393	0.023		0.818	2.365	6.426	0.258	1.137	0.011	2.486	0.012			
SRAT Prod-36	4	23.18	18.79		1.21		15300	< 1200	<1200	43400	1670	< 1200	1310	5.726		1.934	0.209	0.797	21.539	0.026		0.919	2.279	6.3	0.489	0.833	0.011	2.408	0.011			
SRAT Prod-36	5													6.459		2.049	0.168	0.877	23.266	0.031		0.964	2.503	6.381	0.28	1.211	0.011	2.696	0.013			
SRAT Prod-36	6													6.075		2.126	0.16	0.858	23.048	0.021		1.011	2.451	6.766	0.272	0.763	0.011	2.585	0.012			
SRAT Prod-37	1	21.23	16.09		1.22		18800	< 1020	<1080	38100	< 1080	< 1080	1110	6.546		1.892	0.169	0.273	24.667	0.041		0.924	2.439	6.858	0.279	0.6	0.012	2.754	0.022			< 100

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Prod-37	2	21.21	16.28		1.23		18300	< 1080	< 1020	38300	< 1020	< 1020	1140	6.471		1.88	0.174	0.27	24.93	0.037		0.907	2.398	6.831	0.277	1.248	0.013	2.724	0.026			
SRAT Prod-37	3	21.2	15.63		1.06		18900	< 1140	< 1140	39400	< 1140	< 1140	1150	6.616		1.859	0.168	0.275	24.418	0.045		0.882	2.424	6.68	0.279	0.698	0.012	2.757	0.015			
SRAT Prod-37	4	21.25	16		1.11		18500	< 1170	< 1170	39300	< 1170	< 1170	< 1170	6.594		1.837	0.169	0.274	24.431	0.043		0.863	2.413	6.38	0.279	0.802	0.013	2.763	0.016			
SRAT Prod-38	1	22.75	18.24		1.12		21600	< 1070	< 1070	39300	< 1070	< 1070	1230	6.376		1.986	0.171	0.082	23.69	0.05		0.934	2.452	7.035	0.277	0.749	0.013	2.724	0.018			
SRAT Prod-38	2	22.88	17.88		1.094		21300	< 1050	< 1050	39200	< 1050	< 1050	1210	6.572		2.029	0.174	0.093	24.724	0.071		0.933	2.533	6.785	0.283	0.97	0.013	2.803	0.017			
SRAT Prod-38	3	23	18.29		1.1		19500	< 1160	< 1160	39000	< 1160	< 1160	1270	6.536		2.03	0.174	0.087	24.69	0.073		0.967	2.528	7.215	0.287	1.053	0.014	2.828	0.023			
SRAT Prod-38	4	22.92	17.73		1.14		19700	< 1150	< 1150	38600	< 1150	< 1150	1230	6.616		2.027	0.174	0.087	24.392	0.05		0.94	2.544	6.669	0.286	0.857	0.013	2.84	0.017			
SRAT Prod-38	5													6.493		2.009	0.17	0.085	24.328	0.052		0.949	2.506	7.099	0.28	0.659	0.013	2.813	0.024			
SRAT Prod-39	1	23.13	18.32		1.08		21300	< 1110	< 1110	42300	< 1110	< 1110	1310	5.531		2.051	0.146	0.034	21.308	0.03		0.976	2.294	7.625	0.243	0.775	0.011	2.496	0.02			
SRAT Prod-39	2	23.19	18.26		1.08		21500	< 1110	< 1110	43000	< 1110	< 1110	1330	5.767		2.19	0.151	0.034	21.62	0.028		1.079	2.29	8.275	0.278	0.925	0.011	2.426	0.019			
SRAT Prod-39	3	23.18	18.07		1.28		21200	< 1030	< 1030	43000	< 1030	< 1030	1290	6.196		2.077	0.16	0.036	23.384	0.033		0.96	2.427	7.148	0.259	0.967	0.012	2.62	0.026			
SRAT Prod-39	4	23.25	18.18		1.28		19900	< 1130	< 1130	42900	< 1130	< 1130	< 1260	5.94		1.938	0.164	0.035	22.83	0.031		0.897	2.395	6.835	0.263	0.755	0.012	2.623	0.018			
SRAT Prod-40	1	22.08	16.89		1.31		21200	< 1100	< 1100	40800	< 1100	< 1100	1170	6.124		1.842	0.165	0.028	23.637	0.033		0.798	2.361	6.476	0.275	0.717	0.012	2.678	0.017			
SRAT Prod-40	2	21.98	16.76		1.51		20700	< 973	< 973	39800	< 973	< 973	1140	6.266		1.895	0.16	0.03	23.307	0.032		0.864	2.345	6.716	0.265	0.785	0.013	2.653	0.014			
SRAT Prod-40	3	22.05	16.94		1.65		21000	< 1060	< 1060	43000	< 1060	< 1060	1160	5.743		1.816	0.185	0.032	22.392	0.032		0.746	2.315	6.671	0.269	0.669	0.012	2.633	0.016			
SRAT Prod-40	4	22.05	16.8		1.62		18700	< 1070	< 1070	42100	< 1070	< 1070	1150	6.592		2.007	0.173	0.03	24.462	0.037		0.915	2.462	6.858	0.277	0.669	0.013	2.779	0.041			
SRAT Prod-40	5													5.729		1.73	0.167	0.028	23.416	0.038		0.686	2.364	6.247	0.269	0.668	0.012	2.705	0.014			
SRAT Prod-40	6													6.041		1.878	0.168	0.029	24.033	0.041		0.777	2.415	6.609	0.277	0.672	0.014	2.76	0.015			
SRAT Prod-41	1	22.52	17.21		1.71		23200	< 991	< 991	38500	< 991	< 991	1240	6.399		2.066	0.162	0.023	23.354	0.027		1.01	2.496	7.406	0.267	0.585	0.012	2.67	0.03			
SRAT Prod-41	2	22.57	17.85		1.67		22700	< 1050	< 1050	38100	< 1050	< 1050	1250	5.979		2.045	0.155	0.023	22.362	0.054		0.981	2.409	6.909	0.266	0.574	0.024	2.566	0.021			
SRAT Prod-41	3	22.58	17.36		1.59		20800	< 1080	< 1080	38000	< 1080	< 1080	1220	6.324		2.044	0.161	0.024	24.044	0.032		0.976	2.502	6.939	0.258	0.672	0.012	2.673	0.018			
SRAT Prod-41	4	22.57	17.93		1.56		19800	< 1040	< 1040	38400	< 1040	< 1040	< 1200	6.553		2.02	0.176	0.024	24.784	0.041		0.945	2.571	6.682	0.287	0.725	0.014	2.76	0.016			
SRAT Prod-42	1	24.21	20.33		1.16		19700	< 1090	< 1090	36800	< 1100	< 1090	1130	6.438		1.793	0.215	0.028	25.17	0.037		0.771	2.61	5.928	0.356	0.666	0.017	2.839	0.017			
SRAT Prod-42	2	20.92	17.45		1.69		19400	< 1120	< 1120	36500	< 1090	< 1120	1150	6.756		1.98	0.173	0.025	25.69	0.039		0.93	2.695	6.822	0.288	0.552	0.013	2.913	0.015			
SRAT Prod-42	3	21.25	17.3		1.59		19700	< 1100	< 1100	34600	< 1120	< 1100	1130	6.536		1.992	0.171	0.024	25.145	0.037		0.907	2.646	6.891	0.287	0.586	0.013	2.85	0.015			
SRAT Prod-42	4	21.98	17.9		1.17		19500	< 1130	< 1130	31300	< 1130	< 1130	1140	6.572		1.926	0.172	0.025	25.391	0.045		0.875	2.67	6.811	0.289	0.612	0.015	2.883	0.014			
SRAT Prod-42	5													6.574		1.839	0.174	0.025	25.621	0.038		0.812	2.697	6.608	0.289	0.693	0.013	2.909	0.014			
SRAT Prod-42	6													5.833		1.769	0.168	0.025	24.437	0.037		0.659	2.588	6.289	0.276	0.654	0.013	2.829	0.014			
SRAT Prod-43	1	21.46	16.86		1.152		21300	< 1100	< 1100	33800	< 1100	< 1100	1180	6.254		2.041	0.163	0.022	23.482	0.043		1.013	2.474	7.428	0.269	0.737	0.012	2.65	0.015			
SRAT Prod-43	2	21.72	17.22		1.135		21200	< 1020	< 1020	35100	< 1020	< 1020	1140	6.221		2.074	0.159	0.022	23.465	0.047		1.031	2.466	7.52	0.259	0.538	0.012	2.629	0.015			
SRAT Prod-43	3	21.62	17.19		1.155		21000	< 1340	< 1340	34400	< 1340	< 1340	1170	6.277		2.123	0.161	0.023	23.769	0.036		1.036	2.5	7.708	0.261	0.704	0.012	2.681	0.015			
SRAT Prod-43	4	22.03	17.19		1.139		22400	< 1200	< 1200	32900	< 1200	< 1200	< 1140	6.185		2.071	0.159	0.022	23.42	0.036		1.007	2.458	7.472	0.259	0.598	0.012	2.632	0.014			
SRAT Prod-44	1	22.2	17.66		1.163		20000	< 959	< 959	35200	< 959	1070	1200	6.239		2.079	0.18	0.025	24.007	0.065		0.979	2.508	7.12	0.339	0.624	0.013	2.684	0.156			
SRAT Prod-44	2	22.4	17.7		1.164		21200	< 1070	< 1070	29100	< 1070	< 1230	1170	6.039		2.054	0.168	0.023	23.561	0.059		0.932	2.501	7.147	0.272	0.639	0.012	2.68	0.027			
SRAT Prod-44	3	22.39	17.64		1.171		20000	< 1230	< 1230	27300	< 1230	< 1230	< 1130	6.368		2.067	0.172	0.023	24.012	0.07		0.966	2.5	7.047	0.279	0.561	0.012	2.66	0.066			
SRAT Prod-44	4	22.47	18.24		1.172		22200	< 1230	< 1230	32000	< 1230	< 1070	< 1230	6.517		2.083	0.169	0.023	24.585	0.041		0.98	2.566	6.88	0.274	0.498	0.012	2.725	0.09			
SRAT Prod-45	1	22.12	17.5		1.153		18700	< 1110	< 1110	32000	< 1110	< 1110	< 1070	6.39		2.003	0.157	0.022	23.373	0.01		0.973	2.484	7.289	0.265	0.452	0.011	2.67	0.013			
SRAT Prod-45	2	22.22	17.47		1.14		19000	< 1090	< 1090	31100	< 1070	< 1090	< 1100	6.274		2.064	0.163	0.023	23.362	0.01		0.995	2.418	7.534	0.284	0.443	0.011	2.614	0.013			
SRAT Prod-45	3	22.25	17.73		1.152		18600	< 1070	< 1070	30700	< 1090	< 1070	< 1090	6.643		1.985	0.171	0.024	24.446	-0.001		0.949	2.578	6.568	0.295	0.542	0.012	2.792	0.014			
SRAT Prod-45	4	22.26	17.21		1.166		18500	< 1100	< 1100	31100	< 1100	< 1100	< 1110	6.204		2.02	0.155	0.021	23.317	0.005		0.986	2.43	7.306	0.261	0.346	0.011	2.605	0.013			
SRAT Prod-45	5													6.182		1.987	0.154	0.022	22.974	0.013		0.974	2.409	7.221	0.261	0.328	0.011	2.617	0.013			
SRAT Prod-45	6													6.457		2.013	0.163	0.024	24.32	0.03		0.961	2.523	6.857	0.276	0.45	0.012	2.772	0.014			
SRAT Prod-46	1	23.44	18.88		1.106		20000	< 1080	< 1080	32300	< 1080	< 1080	< 1080	6.414		2.048	0.163	0.024	24.396	0.058		0.971	2.522	6.708	0.273	0.896	0.012	2.738	0.014			
SRAT Prod-46	2	23.36	18.6		1.119		20100	< 1090	< 1090	32000	< 1090	< 1090	< 1080	6.607		2.058	0.168	0.025	24.74	0.057		0.979	2.579	6.579	0.279	0.816	0.013	2.833	0.017			
SRAT Prod-46	3	23.46	18.81		1.125		19900	< 1100	< 1100	32200	< 1100	< 1100	< 1100	6.7		2.046	0.178	0.026	25.344	0.082		0.974	2.632	6.515	0.294	0.768	0.014	2.924	0.017			
SRAT Prod-46	4	23.47	18.95		1.142		20500	< 1080	< 1080	32300	< 1080	< 1080	< 1090	6.833		2.018	0.176	0.026	25.76	0.063		0.949	2.671	6.34	0.297	0.674	0.014	2.956	0.016			
SRAT Prod-46	5													6.529		2.082	0.168	0.025	24.125	0.076		1.006	2.575	6.969	0.279	0.646	0.013	2.841	0.016			
SRAT Prod-46	6													6.602		2.051	0.181	0.025	24.342	0.062		0.977	2.59	6.672	0.292	0.658	0.013	2.84	0.015			
SRAT Prod-47	1	21.27	15.99		1.13		19400	< 1030	< 1030	32700	< 1030	< 1030	1040	6.034		2.086	0.155	0.022	22.667	0.039		1.035	2.371	7.611	0.257	0.524	0.011	2.526	0.027			
SRAT Prod-47	2	21.26	15.95		1.348		19600	< 1100	< 1100	32200	< 1100	< 1100	1040	6.494		1.964	0.168	0.023	24.527	0.034		0.947	2.545	6.698	0.276	0.625	0.012	2.744	0.024			
SRAT Prod-47	3	21.26	16.44		1.17		18800	< 995	< 995	30900	< 995	< 995	< 1100	6.918		1.886	0.174	0.025	25.122	0.032		0.913	2.654	6.116	0.29	0.571	0.012	2.907	0.025			
SRAT Prod-47	4	21.29	16.11		1.137		19400	< 1100	< 1100	33100	< 1100	1100	< 1100	5.997		2.148	0.152	0.021	22.615	0.037		1.087	2.372	7.94	0.251	0.473	0.011	2.52	0.024			
SRAT Prod-47	5													6.078		2.049	0.153	0.021	22.497	0.032		1.026	2.384	7.494	0.255	0.464	0.011	2.535	0.025			
SRAT Prod-47	6													6.024		2.001	0.154	0.021	22.391	0.026		0.947	2.394	7.409	0.252	0.536	0.011	2.545	0.025			
SRAT Prod-48	1	22.05	17.74		1.096		19900	< 874	< 874	35000	< 874	< 874	1100	6.067		2.028	0.158	0.023	23.95	0.043		0.894	2.433	7.199	0.264	0.627	0.014	2.647	0.014			
SRAT Prod-48	2	21.99	17.87		1.123		19700	< 1030	< 1030	33300	< 1030	< 1030	1360	5.93		2.097	0.151	0.022	22.82	0.05		1.019	2.33	7.787	0.253	0.577	0.012	2.533	0.013			
SRAT Prod-48	3	21.86	17.79		1.109		19300	< 1060	< 1060	32400	< 1060	< 1060	1700	6.429		2.024	0.164	0.024	24.116	0.045		0.966	2.531	6.955	0.271	0.561	0.013	2.742	0.014			
SRAT Prod-48	4	22.06	17.38		1.132		17000	< 1120	< 1120	31400	< 1120	< 1120	1310	6.626		2.048	0.181	0.025	25.416	0.056		0.938	2.598	6.615	0.285	0.672	0.013	2.842	0.016			
SRAT Prod-48	5													6.388		2.006	0.163	0.023	23.94	0.044		0.941	2.491	6.78	0.269	0.626	0.013	2.723	0.015			
SRAT Prod-49	1	22.31	17.48		1.155		20500	< 1080	< 1080	31600	< 1080	< 1080	< 1080	6.605		1.976	0.167	0.023	24.66	0.025		0.969	2.553	6.855	0.278	0.668	0.012	2.777	0.016			
SRAT Prod-49	2	22.26	17.33		1.155		19600	< 1070	< 1070	31300	< 1070	< 1070	< 1070	6.249		2.097	0.162	0.022	23.194	0.049		1.045	2.437	7.443	0.262	0.607	0.013	2.62	0.015			
SRAT Prod-49	3	22.28	16.52		1.145		19300	< 1070	< 1070	31000	< 1070	< 1070	< 1080	6.569		2.005	0.169	0.023	24.412	0.028		0.966	2.554	6.738	0.277	0.707	0.013	2.768	0.016			
SRAT Prod-49	4	22.3	16.46		1.155		18200	< 1080	< 1080	29300	< 1080	< 1080	< 1070	6.775		2.004	0.178	0.024	25.308	0.024		0.97	2.628	6.54	0.294	0.67	0.013	2.867	0.015			
SRAT Prod-49	5													7.175		1.971	0.182	0.025	26.402	0.029		0.949	2.754	6.151	0.303	0.686	0.021	3.018	0.015			
SRAT Prod-49	6													6.512		1.974	0.164	0.024	24.375	0.028		0.982	2.519	6.976	0.269	0.673	0.012	2.739	0.013			
SRAT Prod-50	1	20.94	16.41		1.094		19200	< 1210	< 1210	32800	< 1210	< 1210	< 1130	5.86		2.092	0.154	0.022	22.429	0.043		1.017	2.368	7.667	0.253	0.678	0.012	2.552	0.013			
SRAT Prod-50	2	20.96	16.74		1.091		19500	< 1220	< 1220	31000	< 1220	< 1220	< 1120	5.998		2.144	0.155	0.022	22.42	0.043		1.085	2.371	7.989	0.257	0.735	0.011	2.559	0.014			
SRAT Prod-50	3	20.91	16.32		1.095		17500	< 1340	< 1340	31200	< 1340	< 1340	< 1210	5.894		2.172	0.151	0.023	22.181	0.05		1.076	2.335	8.171	0.243	0.69	0.011	2.525	0.013			
SRAT Prod-50	4	20.9	16.6		1.094		18700	< 1130	< 1130	32600	< 1130	< 1130	< 1340	5.927		2.17	0.156	0.022	22.158	0.044		1.013	2.394	8.082	0.258	0.738	0.012	2.59	0.013			
SRAT Prod-50	5													5.782		2.141	0.15	0.023	22.255	0.042		1.021	2.34	8.004	0.25	0.634	0.011	2.521	0.013			
SRAT Prod-50	6													6.07		2.144	0.155	0.023	22.356	0.054		1.047	2.405	7.967	0.258	0.671	0.012	2.601	0.013			
SRAT Prod-51	1	22.84	17.49		1.092		25200	< 932	< 932	38700	< 932	< 932	1190	5.271		2.098	0.147	0.021	21.328	0.037		1.001	2.327	7.364	0.25	0.661	0.012	2.482	0.012			
SRAT Prod-51	2	22.82	18.1		1.112		24300	< 935	< 935	38000	< 935	< 935	1280	6.043		2.1	0.158	0.024	23.279	0.034		1.034	2.442	7.284	0.27	0.633	0.013	2.61	0.013			
SRAT Prod-51	3	22.57	17.57		1.119		24000	< 942	< 942	37900	< 938	< 942	1250	5.916		2.19	0.155	0.023	22.76	0.052		1.1	2.396	7.805	0.264	0.633	0.013	2.58	0.013			
SRAT Prod-51	4	22.84	17.38		1.106		24500	< 948	< 948	38000	< 942	< 948	1260	6.018		2.209	0.153	0.022	22.77	0.045		1.115	2.399	7.943	0.256	0.656	0.012	2.564	0.013			
SRAT Prod-51	5													5.401		2.139	0.141	0.027	20.364	0.038		1.078	2.238	7.599	0.236	0.577	0.017	2.39	0.014			
SRAT Prod-52	1	22.81	16.93		1.162		19300	< 678	< 678	38900	< 678	< 678	1190	6.843		1.925	0.172	0.024	25.37	0.009		0.889	2.704	6.142	0.292	0.812	0.013	2.998	0.012			
SRAT Prod-52	2	22.83	17.23		1.164		19400	< 1040	< 1040	39400	< 1080	< 1040	1120	6.711		1.954	0.167	0.024	25.21	0.01		0.941	2.612	6.267	0.277	0.753	0.012	2.823	0.012			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)
SRAT Prod-52	3	23.39	17.03		1.131		15700	< 1050	< 1050	39400	< 1050	< 1050	1200	6.639	
SRAT Prod-52	4	22.9	16.93		1.159		22800	< 1100	< 1100	40300	1100	< 1100	1210	6.911	
SRAT Prod-52	5													6.374	
SRAT Prod-52	6													6.221	
SRAT Prod-53	1	21.77	17.59		1.17		17900	< 975	< 975	37300	< 975	< 975	1140	6.294	
SRAT Prod-53	2	21.74	16.69		1.173		15700	< 1100	< 1100	35000	< 1100	< 1100	1280	5.744	
SRAT Prod-53	3	21.74	16.99		1.165		15700	< 1260	< 1260	40300	< 1260	< 1260	< 1260	6.015	
SRAT Prod-53	4	21.84	17.77		1.172		17900	< 1190	< 1190	37700	< 1190	< 1190	< 1190	6.327	
SRAT Prod-53	5													6.147	
SRAT Prod-53	6													5.96	
SRAT Prod-54	1	22.95	18.49		1.124		20200	< 945	< 1170	41700	< 945	< 945	1490	6.121	
SRAT Prod-54	2	22.93	17.46		1.112		21400	< 1090	< 945	41600	< 1090	< 1090	1660	6.483	
SRAT Prod-54	3	22.94	18.44		1.117		21000	< 1170	< 1090	36900	< 1170	< 1170	1450	5.866	
SRAT Prod-54	4	23.96	18.09		1.116		27900	< 1170	< 1170	27900	< 1170	< 1170	1440	6.975	
SRAT Prod-54	5													6.229	
SRAT Prod-54	6													6.481	
SRAT Prod-55	1	22.19	17.33		1.122		18500	< 1120	< 1120	37700	< 1120	< 1120	1260	6.9	
SRAT Prod-55	2	22.18	16.56		1.11		18800	< 1040	< 1040	37500	< 1040	< 1040	1180	6.854	
SRAT Prod-55	3	22.14	17.11		1.114		18800	< 939	< 939	37700	< 939	< 939	1150	6.781	
SRAT Prod-55	4	22.12	16.49		1.103		21500	< 1080	< 1080	35500	< 1080	< 1080	1130	6.632	
SRAT Prod-55	5													6.718	
SRAT Prod-55	6													6.725	
SRAT Prod-56	1	21.03	16.25		1.117		17300	< 1080	< 1080	36300	< 1080	< 1080	1520	6.9	
SRAT Prod-56	2	20.97	16.03		1.166		17200	< 1070	< 1070	35800	< 1070	< 1070	1520	6.707	
SRAT Prod-56	3	21.05	15.8		1.159		17400	< 1040	< 1040	36400	< 1040	< 1040	1160	6.518	
SRAT Prod-56	4	21.12	15.91		1.159		19000	< 1040	< 1040	36700	< 1040	< 1040	1140	6.745	
SRAT Prod-56	5													6.708	
SRAT Prod-56	6													6.982	
SRAT Prod-57	1	18.91	14.75		1.115		14000	< 1050	< 1050	29700	< 1050	< 1050	< 1040	5.739	
SRAT Prod-57	2	18.9	15.25		1.119		14100	< 1070	< 1070	27600	< 1070	< 1070	< 1020	6.225	
SRAT Prod-57	3	18.72	15.22		1.119		14200	< 1020	< 1020	25400	< 1020	< 1020	< 1050	5.801	
SRAT Prod-57	4	18.93	15.04		1.144		13900	< 1040	< 1040	24600	< 1040	< 1040	< 1070	6.603	
SRAT Prod-57	5													5.244	
SRAT Prod-57	6													5.928	
SRAT Prod-58	1	24.16	19.54		1.114		17700	< 1080	< 1080	36100	< 1040	< 1080	1100	6.251	
SRAT Prod-58	2	23.54	18.46		1.162		17900	< 1070	< 1070	36100	< 1070	< 1070	1100	6.654	
SRAT Prod-58	3	23.95	19.13		1.173		17900	< 1040	< 1040	36200	< 1080	< 1040	1150	6.191	
SRAT Prod-58	4	23.62	18.26		1.14		18000	< 1130	< 1130	33700	< 1130	< 1130	1090	6.556	
SRAT Prod-58	5													6.355	
SRAT Prod-58	6													6.385	
SRAT Prod-59	1	21.71	17.34		1.246		15200	< 1060	< 1060	35500	< 1060	< 1110	1130	6.394	
SRAT Prod-59	2	21.75	17.43		1.165		15500	< 1110	< 1110	34500	< 1110	< 1060	1160	6.456	
SRAT Prod-59	3	21.74	17.17		1.2		15100	< 1180	< 1180	32900	< 1120	< 1180	1150	6.619	
SRAT Prod-59	4	21.74	17.34		1.171		15300	< 1120	< 1120	34400	< 1180	< 1120	< 1180	6.47	
SRAT Prod-59	5													5.997	
SRAT Prod-60	1	22.85	17.95		1.116		25500	< 1080	< 1080	37100	< 1080	< 1080	1220	6.248	
SRAT Prod-60	2	22.86	17.42		1.113		25800	< 1030	< 1030	37000	< 1030	< 1030	1270	6.014	
SRAT Prod-60	3	22.92	17.64		1.144		24600	< 1060	< 1060	36500	< 1060	< 1060	1230	6.083	
SRAT Prod-60	4	22.9	17.34		1.118		24800	< 1060	< 1060	36300	< 1060	< 1060	1340	5.979	
SRAT Prod-60	5													5.91	
SRAT Prod-60	6													5.739	
SRAT Prod-61	1	24.03	19.09		1.161		21400	< 1050	< 1050	38700	1170	< 1050	1420	6.021	
SRAT Prod-61	2	24.08	18.82		1.166		28400	< 1060	< 1060	38200	1150	< 1060	1400	5.921	
SRAT Prod-61	3	24.05	19.32		1.193		27900	< 1080	< 1080	38400	1130	< 1080	1350	6.3	
SRAT Prod-61	4	23.99	18.81		1.165		28100	< 1070	< 1070	39000	1100	< 1070	1320	6.439	
SRAT Prod-61	5													6.136	
SRAT Prod-61	6													5.804	
SRAT Prod-62	1	22.57	21.62	15.81	1.125		21000	< 1210	< 1210	35600	< 1210	< 1210	< 1200	5.967	
SRAT Prod-62	2	22.61	21.32	14.59	1.148		22200	< 1200	< 1200	37000	< 1200	< 1200	< 1170	6.451	
SRAT Prod-62	3	22.68	22.63	14.38	1.127		22300	< 1170	< 1170	34200	< 1170	< 1170	< 1140	6.473	
SRAT Prod-62	4	22.64	22.77	14.8	1.117		21400	< 1140	< 1140	34400	< 1140	< 1140	< 1210	6.779	
SRAT Prod-62	5													6.775	
SRAT Prod-62	6													6.008	
SRAT Prod-63	1	23.41	20.01		1.173		21200	< 1060	< 1060	37600	< 1060	< 1060	1300	6.081	
SRAT Prod-63	2	23.74	20.41		1.169		22700	< 1050	< 1050	38800	< 1050	< 1050	1270	6.065	
SRAT Prod-63	3	23.65	206		1.178		23200	< 1070	< 1070	37700	< 1060	< 1070	1250	6.323	
SRAT Prod-63	4	23.7	20.64		1.175		22900	< 1060	< 1060	35900	< 1070	< 1060	1210	5.925	
SRAT Prod-63	5													5.946	
SRAT Prod-63	6													6.397	
SRAT Prod-64	1	23.02	18.57		1.158		21600	< 1070	< 1070	39800	< 1070	< 1070	< 1170	6.799	
SRAT Prod-64	2	23.04	18.39		1.112		21200	< 1220	< 1220	37100	< 1220	< 1220	< 1220	6.68	
SRAT Prod-64	3	23.02	18.77		1.18		20600	< 1190	< 1190	38000	< 1190	< 1190	< 1190	6.76	
SRAT Prod-64	4	22.67	17.59		1.2		23000	< 1210	< 1210	34500	< 1210	< 1210	< 1210	6.947	
SRAT Prod-64	5													6.67	
SRAT Prod-65	1	25.13	19.63	13.58	1.137		26400	< 1070	< 1070	43500	< 985	< 1070	1480	5.902	
SRAT Prod-65	2	25.09	19.14	13.52	1.157		26400	< 985	< 985	40600	< 1070	< 985	1400	6.025	
SRAT Prod-65	3	25.08	19.78	13.75	1.213		24800	< 1220	< 1220	40800	< 1160	< 1220	1350	6.072	
SRAT Prod-65	4	25.08	18.36	13.19	1.136		24600	< 1160	< 1160	35700	< 1220	< 1160	1360	6.075	

Tank_Batch	Sample	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Prod-52	3	2.016	0.164	0.023	24.871	0.018		0.98	2.6	6.842	0.275	0.642	0.012	2.799	0.012			
SRAT Prod-52	4	1.981	0.174	0.025	26.214	0.029		0.944	2.714	6.181	0.291	0.686	0.013	2.967	0.012			
SRAT Prod-52	5	2.35	0.161	0.023	24.241	0.037		1.172	2.568	8.772	0.266	0.595	0.012	2.751	0.011			
SRAT Prod-52	6	2.178	0.156	0.023	23.539	0.027		1.087	2.49	7.846	0.261	0.746	0.012	2.652	0.01			
SRAT Prod-53	1	2.046	0.158	0.022	23.607	0.009		0.979	2.449	7.261	0.266	0.644	0.011	2.609	0.013			
SRAT Prod-53	2	1.897	0.147	0.021	21.632	0.015		0.914	2.234	6.635	0.243	0.576	0.011	2.376	0.012			
SRAT Prod-53	3	1.964	0.149	0.02	22.534	0.008		0.939	2.338	6.974	0.248	0.579	0.011	2.486	0.012			
SRAT Prod-53	4	2.058	0.16	0.022	23.876	0.012		0.976	2.473	7.3	0.269	0.59	0.012	2.644	0.013			
SRAT Prod-53	5	2.016	0.156	0.021	23.196	0.01		0.95	2.398	7.195	0.261	0.63	0.011	2.554	0.013			
SRAT Prod-53	6	1.948	0.155	0.021	22.348	0.019		0.942	2.315	6.928	0.265	0.616	0.01	2.459	0.012			
SRAT Prod-54	1	1.993	0.158	0.022	23.168	0.131		0.941	2.399	6.698	0.264	0.665	0.012	2.579	0.013			
SRAT Prod-54	2	1.965	0.168	0.023	24.467	0.052		0.898	2.498	6.124	0.274	0.693	0.012	2.726	0.014			
SRAT Prod-54	3	2.11	0.153	0.021	2232	0.05		1.02	2.338	7.293	0.254	0.69	0.011	2.486	0.013			
SRAT Prod-54	4	1.937	0.176	0.025	26.075	0.039		0.855	2.644	5.588	0.295	0.765	0.013	2.924	0.015			
SRAT Prod-54	5	1.958	0.164	0.023	23.415	0.042		0.873	2.441	6.138	0.274	0.726	0.013	2.68	0.013			
SRAT Prod-54	6	2.044	0.165	0.023	24.289	0.045		0.928	2.495	6.63	0.275	0.683	0.017	2.712	0.013			
SRAT Prod-55	1	2.047	0.176	0.025	25.95	0.037		0.959	2.655	6.642	0.285	0.67	0.013	2.899	0.015			
SRAT Prod-55	2	2.054	0.174	0.024	25.737	0.05		0.957	2.639	6.645	0.288	0.734	0.014	2.862	0.014			
SRAT Prod-55	3	2.045	0.173	0.025	25.616	0.053		0.956	2.628	6.627	0.28	0.595	0.013	2.875	0.015			
SRAT Prod-55	4	2.011	0.168	0.025	25.006	0.052		0.925	2.564	6.516	0.274	0.606	0.013	2.812	0.015			
SRAT Prod-55	5	2.041	0.176	0.025	25.425	0.051		0.945	2.606	6.577	0.28	0.627	0.013	2.858	0.015			
SRAT Prod-55	6	2.039	0.177	0.026	25.402	0.06		0.955	2.6	6.601	0.286	0.65	0.013	2.851	0.015			
SRAT Prod-56	1	1.86	0.174	0.024	25.925	0.046		0.854	2.607	5.86	0.289	0.699	0.013	2.894	0.015			
SRAT Prod-56	2	1.871	0.171	0.024	25.163	0.032		0.886	2.556	6.435	0.278	0.817	0.012	2.813	0.014			
SRAT Prod-56	3	1.76	0.172	0.023	24.329	0.037		0.823	2.505	5.845	0.281	0.891	0.012	2.876	0.015			
SRAT Prod-56	4	1.895	0.173	0.025	25.5	0.041		0.89	2.565	6.337	0.287	0.744	0.013	2.844	0.02			
SRAT Prod-56	5	1.945	0.172	0.024	25.616	0.045		0.873	2.567	6.346	0.283	0.7	0.013	2.862	0.014			
SRAT Prod-56	6	1.867	0.179	0.026	26.513	0.049		0.826	2.65	5.859	0.297	0.763	0.013	2.978	0.015			
SRAT Prod-57	1	2.03	0.148	0.022	22.089	0.044		0.976	2.333	7.091	0.251	0.683	0.011	2.542	0.013			
SRAT Prod-57	2	2.077	0.156	0.023	23.509	0.038		1.019	2.452	7.053	0.267	0.572	0.012	2.663	0.013			
SRAT Prod-57	3	1.904	0.158	0.023	23.195	0.04		0.825	2.473	6.025	0.266	0.699	0.012	2.762	0.013			
SRAT Prod-57	4	2.045	0.165	0.024	24.727	0.05		0.975	2.562	6.572	0.276	0.674	0.012	2.805	0.014			
SRAT Prod-57	5	1.791	0.153	0.022	21.818	0.037		0.764	2.413	5.885	0.267	0.743	0.011	2.735	0.013			
SRAT Prod-57	6	2.023	0.148	0.022	22.292	0.037		0.98	2.325	7.032	0.245	0.601	0.011	2.5	0.012			
SRAT Prod-58	1	2.101	0.157	0.021	23.391	0.035		1.021	2.488	6.832	0.264	0.697	0.015	2.627	0.013			
SRAT Prod-58	2	2.107	0.169	0.023	25.061	0.035		0.985	2.648	6.37	0.282	0.634	0.014	2.812	0.014			
SRAT Prod-58	3	2.116	0.159	0.021	23.396	0.046		1.03	2.484	6.971	0.267	0.616	0.015	2.635	0.013			
SRAT Prod-58	4	2.111	0.165	0.022	24.625	0.039		1.007	2.597	6.591	0.28	0.596	0.016	2.766	0.013			
SRAT Prod-58	5	2.061	0.162	0.022	24.205	0.035		1.007	2.556	6.795	0.275	0.534	0.014	2.718	0.013			
SRAT Prod-58	6	2.054	0.16	0.022	24.061	0.038		0.973	2.53	6.435	0.268	0.658	0.015	2.682	0.013			
SRAT Prod-59	1	2.116	0.165	0.024	24.353	0.017		0.958	2.582	6.774	0.281	0.682	0.024	2.74	0.013			
SRAT Prod-59	2	2.122	0.165	0.024	24.392	0.037		0.995	2.57	6.711	0.283	0.665	0.023	2.721	0.013			
SRAT Prod-59	3	2.107	0.169	0.024	24.77	0.042		0.986	2.619	6.455	0.291	0.67	0.026	2.771	0.013			
SRAT Prod-59	4	1.988	0.167	0.024	24.526	0.029		0.914	2.597	6.142	0.286	0.702	0.027	2.755	0.013			
SRAT Prod-59	5	1.894	0.157	0.023	23.069	0.034		0.887	2.449	6.327	0.268	0.637	0.021	2.62	0.012			
SRAT Prod-60	1	2.011	0.164	0.023	24.065	0.038		0.914	2.54	7.064	0.283	0.626	0.048	2.722	0.013			
SRAT Prod-60	2	2.325	0.151	0.021	22.479	0.037		1.103	2.388	8.34	0.263	0.658	0.05	2.504	0.012			
SRAT Prod-60	3	2.192	0.156	0.022	22.931	0.037		1.046	2.423	7.94	0.268	0.649	0.067	2.552	0.013			
SRAT Prod-60	4	2.263	0.151	0.025	22.476	0.041		1.075	2.386	8.252	0.256	0.577	0.032	2.506	0.012			
SRAT Prod-60	5	2.138	0.151	0.022	22.145	0.029		1.021	2.381	7.865	0.258	0.653	0.024	2.485	0.014			
SRAT Prod-60	6	2.091	0.148	0.02	21.578	0.027		0.994	2.332	7.564	0.252	0.674	0.041	2.422	0.012			
SRAT Prod-61	1	2.188	0.153	0.022	22.521	0.029		1.038	2.388	8.047	0.254	0.662	0.019	2.521	0.012			
SRAT Prod-61	2	2.227	0.151	0.021	22.174	0.041		1.062	2.35	8.435	0.249	0.679	0.014	2.482	0.012			
SRAT Prod-61	3	2.123	0.16	0.022	23.641	0.039		0.979	2.492	7.263	0.268	0.704	0.021	2.65	0.013			
SRAT Prod-61	4	2.061	0.164	0.023	24.158	0.034		0.953	2.545	7.116	0.277	0.673	0.016	2.708	0.013			
SRAT Prod-61	5	2.171	0.157	0.023	22.884	0.039		1.023	2.412	7.837	0.263	0.708	0.015	2.565	0.013			
SRAT Prod-61	6	2.173	0.15	0.021	21.856	0.038		1.053	2.313	8.409	0.244	0.608	0.024	2.439	0.012			
SRAT Prod-62	1	2.221	0.205	0.026	22.942	0.034		0.988	2.385	8.385	0.283	0.719	0.021	2.484	0.013			
SRAT Prod-62	2	2.102	0.18	0.024	24.534	0.038		0.912	2.541	7.42	0.285	0.561	0.016	2.689	0.014			
SRAT Prod-62	3	2.051	0.168	0.023	24.477	0.048		0.902	2.538	7.177	0.275	0.871	0.016	2.713	0.014			
SRAT Prod-62	4	2.009	0.177	0.024	25.5	0.05		0.857	2.632	6.71	0.29	0.677	0.018	2.834	0.014			
SRAT Prod-62	5	2	0.176	0.024	25.694	0.036		0.857	2.648	6.725	0.296	0.619	0.014	2.838	0.015			
SRAT Prod-62	6	2.2	0.181	0.024	23.152	0.048		0.995	2.401	8.23	0.268	0.622	0.019	2.515	0.013			
SRAT Prod-63	1	2.093	0.155	0.021	22.927	0.023		1.006	2.438	7.496	0.259	0.635	0.041	2.527	0.012			
SRAT Prod-63	2	1.974	0.159	0.027	23.402	0.024		0.91	2.506	6.766	0.269	0.704	0.018	2.645	0.012			
SRAT Prod-63	3	2.111	0.16	0.022	23.713	0.027		1.001	2.523	7.41	0.265	0.523	0.014	2.638	0.012			
SRAT Prod-63	4	1.857	0.166	0.022	2423	0.023		0.79	2.594	5.95	0.279	0.766	0.017	2.734	0.012			
SRAT Prod-63	5	1.93	0.157	0.021	22.982	0.022		0.874	2.499	6.5	0.261	0.717	0.028	2.666	0.012			
SRAT Prod-63	6	2.069	0.164	0.022	24.265	0.018		0.988	2.566	7.07	0.274	0.608	0.034	2.682	0.013			
SRAT Prod-64	1	2.012	0.174	0.026	25.528	0.038		0.923	2.633	6.615	0.283	0.799	0.013	2.799	0.014			
SRAT Prod-64	2	2.005	0.17	0.024	25.128	0.036		0.918	2.616	6.846	0.286	0.699	0.013	2.792	0.014			
SRAT Prod-64	3	2.155	0.17	0.024	25.382	0.034		1.001	2.524	6.659	0.275	0.785	0.013	2.552	0.014			
SRAT Prod-64	4	2.001	0.204	0.025	26.091	0.041		0.901	2.699	6.428	0.363	0.772	0.014	2.895	0.014			
SRAT Prod-64	5	2.15	0.171	0.024	24.616	0.034		1.053	2.536	6.848	0.274	0.974	0.013	2.689	0.014			
SRAT Prod-65	1	2.247	0.156	0.021	22.23	0.045		1.081	2.392	8.574	0.249	0.711	0.019	2.486	0.013			
SRAT Prod-65	2	2.125	0.16	0.022	22.734	0.048		1	2.437	8.393	0.257	0.568	0.024	2.543	0.012			
SRAT Prod-65	3	2.153	0.159	0.022	22.941	0.05		1.012	2.43	8.197	0.262	0.571	0.012	2.558	0.013			
SRAT Prod-65	4	2.224	0.158	0.022	22.889	0.048		1.039	2.418	8.307	0.257	0.551	0.013	2.557	0.013			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for latter SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/ml)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithum (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Prod-65	5													6.262		2.184	0.164	0.022	23.706	0.045		1.004	2.5	7.878	0.261	0.65	0.016	2.639	0.013			
SRAT Prod-65	6													5.989		2.241	0.156	0.021	22.611	0.05		1.049	2.396	8.571	0.255	0.577	0.012	2.518	0.013			
SRAT Prod-66	1	24.35	18.62		1.162		23300	< 1190	< 1190	38800	< 1190	< 1190	1170	6.268		2.126	0.163	0.022	23.415	0.043		1.031	2.491	8.185	0.266	0.682	0.015	2.657	0.013			
SRAT Prod-66	2	24.33	18.69		1.154		23200	< 1180	< 1180	39700	< 1180	< 1180	< 1190	6.435		2.109	0.168	0.023	24.113	0.043		0.992	2.525	7.524	0.28	0.658	0.016	2.745	0.013			
SRAT Prod-66	3	24.26	18.87		1.165		23300	< 1170	< 1170	40100	< 1170	< 1170	< 1180	6.292		2.113	0.164	0.023	23.643	0.039		1.008	2.478	7.741	0.269	0.677	0.021	2.683	0.013			
SRAT Prod-66	4	24.29	18.53		1.18		22800	< 1210	< 1210	39200	< 1210	< 1210	< 1210	6.441		2.165	0.168	0.023	24.12	0.039		1.029	2.533	7.821	0.27	0.648	0.021	2.741	0.014			
SRAT Prod-66	5													6.16		2.073	0.162	0.022	23.232	0.029		0.971	2.423	7.282	0.263	0.624	0.021	2.616	0.013			
SRAT Prod-66	6													6.391		2.11	0.165	0.023	23.933	0.033		0.991	2.501	7.177	0.27	0.568	0.022	2.695	0.013			
SRAT Prod-67	1	24.41	18.48		1.153		23000	< 1060	< 1060	42700	< 1060	< 1060	1080	6.231		2.153	0.161	0.023	23.158	0.064		1.031	2.467	7.839	0.26	0.648	0.017	2.639	0.013			
SRAT Prod-67	2	24.29	19.03		1.159		22300	< 1070	< 1070	37200	< 1060	< 1070	< 1060	6.157		2.145	0.159	0.022	22.917	0.062		1.051	2.447	8.09	0.266	0.663	0.018	2.636	0.013			
SRAT Prod-67	3	24.22	17.39		1.158		22100	< 1050	< 1050	38800	< 1070	< 1050	< 1060	5.993		2.227	0.155	0.022	22.308	0.05		1.133	2.369	8.425	0.253	0.689	0.037	2.525	0.013			
SRAT Prod-67	4	24.23	18.35		1.154		21600	< 1060	< 1060	37000	< 1050	< 1060	< 1060	5.897		2.141	0.153	0.021	22.062	0.044		1.066	2.353	8.096	0.248	0.578	0.014	2.515	0.013			
SRAT Prod-67	5													6.196		2.262	0.16	0.023	23.274	0.053		1.11	2.47	8.532	0.267	0.64	0.023	2.665	0.013			
SRAT Prod-68	1	22.77	17.53	14.7	1.153		23100	< 874	< 874	42700	< 874	< 874	1050	6.156		2.083	0.162	0.022	23.626	0.035		0.966	2.49	8.068	0.267	0.665	0.02	2.675	0.013			
SRAT Prod-68	2	22.84	17.57	14.71	1.163		23500	< 927	< 927	36900	< 927	< 927	1080	6.579		2.319	0.167	0.023	24.415	0.026		1.13	2.593	6.698	0.273	0.702	0.013	2.765	0.014			
SRAT Prod-68	3	22.65	17.51	14.7	1.159		22300	< 1060	< 1060	39000	< 1060	< 1060	< 976	6.047		1.917	0.155	0.021	22.505	0.036		0.923	2.364	7.053	0.253	0.567	0.019	2.564	0.013			
SRAT Prod-68	4	22.87	17.59	14.59	1.161		22500	< 976	< 976	38500	< 976	< 976	< 1050	6.049		1.81	0.157	0.021	22.54	0.039		0.809	2.388	5.792	0.255	0.668	0.027	2.634	0.013			
SRAT Prod-68	5													6.271		1.983	0.161	0.022	23.201	0.039		0.924	2.431	7.221	0.255	0.601	0.017	2.649	0.013			
SRAT Prod-69	1	23.71	18.34	16.04	1.112		23300	< 1110	< 1110	38700	< 1110	< 1110	< 1110	6.652		1.96	0.173	0.024	24.934	0.03		0.912	2.608	6.627	0.287	0.671	0.027	2.799	0.014			
SRAT Prod-69	2	23.7	19.26	16.47	1.119		22400	< 1110	< 1110	38000	< 1110	< 1110	< 1080	6.769		2.026	0.171	0.027	25.313	0.04		0.937	2.65	6.97	0.279	0.708	0.045	2.86	0.016			
SRAT Prod-69	3	23.63	18.53	15.67	1.114		22300	< 1080	< 1080	37800	< 1080	< 1080	< 1050	6.864		1.979	0.174	0.025	25.911	0.036		0.89	2.703	6.315	0.286	0.616	0.019	2.911	0.015			
SRAT Prod-69	4	23.51	18.76	15.58	1.114		21900	< 1060	< 1060	34900	< 1060	< 1060	< 1110	6.395		2.114	0.163	0.023	24.16	0.047		0.989	2.525	7.515	0.268	0.581	0.039	2.712	0.014			
SRAT Prod-69	5													6.524		2.163	0.167	0.024	24.686	0.052		1.013	2.582	7.676	0.276	0.615	0.041	2.775	0.014			
SRAT Prod-69	6																															
SRAT Prod-70	1	23.22	17.97	14.51	1.126		22800	< 996	< 996	34500	< 996	< 996	1050	6.748		2.098	0.171	0.024	25.008	0.047		0.996	2.643	6.759	0.28	0.837	0.018	2.825	0.015			
SRAT Prod-70	2	23.16	17.83	14.43	1.116		24000	< 995	< 995	35900	< 995	< 995	1020	6.816		2.107	0.173	0.025	25.325	0.043		1.002	2.667	6.689	0.287	0.838	0.015	2.855	0.014			
SRAT Prod-70	3	23.05	17.43	14.48	1.113		23200	< 980	< 980	36900	< 980	< 980	< 1050	6.4		2.131	0.163	0.023	23.796	0.043		1.046	2.518	7.56	0.267	0.765	0.027	2.683	0.014			
SRAT Prod-70	4	23.05	16.16	14.17	1.118		22300	< 1060	< 1060	35400	< 1060	< 1060	< 980	6.415		2.095	0.164	0.024	23.919	0.05		1.023	2.524	7.31	0.266	0.771	0.03	2.701	0.014			
SRAT Prod-70	5													6.695		2.083	0.17	0.024	24.879	0.043		0.995	2.621	6.729	0.281	0.823	0.018	2.808	0.014			
SRAT Prod-70	6													6.65		2.08	0.17	0.024	24.741	0.041		0.996	2.604	6.78	0.28	0.814	0.019	2.784	0.014			
SRAT Prod-71	1	20.97	17.77	12.74	1.136		21100	< 1060	< 1060	37300	< 1060	< 1060	1060	5.663		2.067	0.148	0.02	21.241	0.099		1.008	2.268	7.98	0.243	1.427	0.066	2.392	0.012			
SRAT Prod-71	2	21.05	17.92	12.09	1.159		21500	< 972	< 972	36700	< 972	< 972	1040	5.776		2.103	0.15	0.021	21.697	0.105		1.032	2.313	8.12	0.25	1.446	0.067	2.461	0.013			
SRAT Prod-71	3	21.11	16.84	12.63	1.14		21500	< 931	< 931	36700	< 931	< 931	< 1020	6.088		2.186	0.157	0.022	22.883	0.049		1.058	2.424	8.42	0.265	0.71	0.026	2.585	0.013			
SRAT Prod-71	4	21.11	17.22	18.39	1.147		21500	< 1020	< 1020	36200	< 1020	< 1020	< 1060	6.056		2.099	0.156	0.022	22.575	0.092		1.035	2.4	8.04	0.256	1.317	0.027	2.568	0.013			
SRAT Prod-71	5													6.303		2.186	0.169	0.024	23.478	0.096		1.075	2.492	8.37	0.284	1.378	0.028	2.659	0.014			
SRAT Prod-72	1	22.78	17.96	14.97	1.146		22400	< 944	< 944	36500	< 944	< 944	977	6.259		2.172	0.16	0.024	23.088	0.073		1.02	2.44	7.71	0.263	0.82	0.037	2.648	0.013			
SRAT Prod-72	2	22.75	17.86	14.87	1.122		22800	< 976	< 976	37200	< 976	< 976	1000	6.194		2.142	0.158	0.024	22.878	0.122		0.99	2.42	7.66	0.26	1.722	0.046	2.614	0.014			
SRAT Prod-72	3	22.75	18.14	14.9	1.14		22100	< 982	< 982	36500	< 982	< 982	1030	6.417		2.151	0.163	0.025	23.792	0.067		0.991	2.489	7.48	0.269	0.679	0.017	2.71	0.014			
SRAT Prod-72	4	22.8	17.9	14.91	1.123		22200	< 896	< 896	36200	< 896	< 896	< 982	6.348		2.165	0.163	0.024	23.525	0.077		1.013	2.478	7.56	0.273	0.774	0.034	2.704	0.014			
SRAT Prod-72	5													6.69		2.103	0.17	0.026	24.751	0.068		0.947	2.58	7.021	0.281	0.731	0.038	2.82	0.014			
SRAT Prod-72	6													6.566		2.113	0.17	0.026	24.479	0.078		0.969	2.547	7.404	0.276	0.614	0.097	2.778	0.014			
SRAT Prod-73	1	22.45	16.65		1.14		15900	< 1090	< 1090	32600	< 1090	< 1090	1200	6.394		2.206	0.164	0.023	23.556	0.056		1.078	2.527	7.911	0.283	0.686	0.053	2.703	0.014			
SRAT Prod-73	2	22.54	17.51		1.127		15700	< 1250	< 1250	31700	< 1170	< 1250	< 1250	6.319		2.233	0.157	0.023	23.781	0.067		1.102	2.51	8.076	0.265	0.687	0.071	2.68	0.014			
SRAT Prod-73	3	22.41	17.41		1.13		20000	< 1250	< 1250	37300	< 1250	< 1250	< 1170	6.224		2.263	0.157	0.023	23.336	0.065		1.113	2.461	8.427	0.259	0.693	0.047	2.629	0.014			
SRAT Prod-73	4	22.36	17.28		1.109		20000	< 1170	< 1170	31400	< 1250	< 1170	< 1250	5.976		2.28	0.149	0.055	22.165	0.067		1.14	2.357	8.581	0.248	0.526	0.014	2.544	0.013			
SRAT Prod-73	5													6.416		2.184	0.161	0.023	23.578	0.061		1.079	2.537	7.65	0.269	0.704	0.034	2.723	0.014			
SRAT Prod-73	6													6.527		2.155	0.165	0.023	24.632	0.068		1.062	2.591	7.408	0.275	0.637	0.022	2.788	0.014			
SRAT Prod-74	1	24.51	19.55	12.22	1.184		20900	< 1100	< 1100	39200	1370	< 1180	1270	6.457		1.936	0.162	0.024	2404	0.042		0.922	2.548	6.119	0.279	0.76	0.015	2.721	0.013			
SRAT Prod-74	2	24.34	19.14	12.16	1.15		20600	< 1100	< 1100	35700	1450	< 1100	1320	6.709		2.074	0.167	0.024	2499	0.046		0.988	2.652	6.665	0.281	0.58	0.014	2.83	0.014			
SRAT Prod-74	3	24.45	19.11	15.51	1.134		21700	< 1180	< 1180	35200	1340	< 1100	1330	6.715		2.065	0.167	0.024	24.373	0.054		0.985	2.646	6.744	0.281	0.954	0.013	2.813	0.014			
SRAT Prod-74	4	24.38	18.56	12.73	1.142		19800	< 1160	< 1160	35300	1380	< 1160	1360	6.557		2.095	0.164	0.024	24.519	0.055		0.992	2.582	7.15	0.278	0.462	0.021	2.767	0.014			
SRAT Prod-75	1	24.22	18.95		1.141		23100	< 1120	< 1120	37300	< 1120	< 1120	1320	6.425		1.905	0.162	0.025	23.929	0.057		0.895	2.534	6.802	0.277	0.639	0.012	2.79	0.013			
SRAT Prod-75	2	24.16	18.63		1.186		22600	< 1210	< 1210	36700	< 1210	< 1210	1450	5.829		1.81	0.158	0.025	23.417	0.044		0.606	2.477	6.804	0.273	0.812	0.012	2.721	0.012			
SRAT Prod-75	3	24.43	18.56		1.139		22200	< 1200	< 1200	36700	< 1200	< 1200	< 1120	6.428		1.921	0.159	0.03	23.451	0.055		0.892	2.469	6.752	0.27	0.615	0.012	2.706	0.013			
SRAT Prod-75	4	24.5	18.53		1.128		25500	< 1180	< 1180	37400	< 1180	< 1180	< 1210	6.427		1.949	0.162	0.024	23.323	0.049		0.904	2.517	6.848	0.277	0.63	0.012	2.731	0.013			
SRAT Prod-76	1	22.54	18.06		1.159		20200	< 865	1370	32800	< 865	< 865	1290	6.713		1.862	0.176	0.025	2593	0.012		0.808	2.662	5.539	0.305	0.684	0.023	2.875	0.014			
SRAT Prod-76	2	22.33	18.15		1.179		23000	< 822	1680	33100	< 822	< 822	1310	7.125		1.961	0.174	0.024	26.105	-0.004		0.888	2.683	5.756	0.292	0.707	0.05	2.878	0.014			
SRAT Prod-76	3	22.67	17.65		1.161		21300	< 739	1230	30800	< 739	< 739	1330	7.121		1.914	0.175	0.025	26.303	0.007		0.873	2.704	5.611	0.297	0.664	0.031	2.912	0.014			
SRAT Prod-76	4	22.49	17.38		1.154		21400	< 1010	< 865	32800	< 1010	< 1010	1350	5.735		1.45	0.178	0.025	26.147	0.006		0.53	2.721	3.961	0.305	0.758	0.026	3.071	0.014			
SRAT Prod-76	5													6.005		1.626	0.168	0.024	25.168	0.003		0.644	2.588	4.592	0.286	0.735	0.015	2.852	0.013			
SRAT Prod-76	6													6.656		1.714	0.173	0.025	25.884	0		0.742	2.662	4.994	0.292	0.712	0.018	2.931	0.014			
SRAT Prod-77	1	24.69	18.21		1.171		24800	< 822	< 822	36400	< 822	< 822	1410	6.661		2.068	0.165	0.025	24.754	0.046		0.956	2.597	6.828	0.277	0.694	0.027	2.758	0.014			
SRAT Prod-77	2	25.38	18.14		1.194		26700	< 939	< 939	39400	< 939	< 939	1410	6.568		2.02	0.165	0.025	24.429	0.046		0.939	2.585	6.775	0.276	0.691	0.019	2.752	0.014			
SRAT Prod-77	3	25.29	18.36		1.181		27300	< 965	< 965	39900	< 965	< 965	1290	6.548		2.022	0.17	0.026	24.179	0.043		0.928	2.611	6.788	0.281	0.71	0.027	2.798	0.014			
SRAT Prod-77	4	25.15	18.25		1.206		26800	< 1070	< 1070	39300	< 1070	< 1070	1440	6.325		1.94	0.162	0.025	24.116	0.042		0.878	2.542	6.636	0.275	0.696	0.022	2.734	0.014			
SRAT Prod-77	5													6.649		2.036	0.167	0.026	24.938	0.04		0.969	2.611	6.837	0.282	0.691	0.02	2.773	0.014			
SRAT Prod-77	6													6.504		1.994	0.166	0.025	24.473	0.039		0.951	2.571	6.727	0.278	0.723	0.02	2.729	0.014			
SRAT Prod-78	1	23.86	19.35		1.193		20900	< 1150	< 1150	38900	< 1150	< 1150	1170	6.687		2.035	0.172	0.027	24.759	0.042		0.943	2.582	6.463	0.291	0.694	0.014	2.785	0.014			
SRAT Prod-78	2	23.94	19.35		1.198		21000	< 1180	< 1180	36900	< 1180	< 1180	1230	6.546		1.911	0.169	0.025	24.114	0.039		0.869	2.562	6.162	0.283	0.666	0.013	2.809	0.014			
SRAT Prod-78	3	23.88	19.28		1.199		21100	< 1140	< 1140	36700	< 1140	< 1140	1190	5.945		1.828	0.161	0.025	22.517	0.04		0.828	2.415	6.506	0.271	0.647	0.012	2.664	0.013			
SRAT Prod-78	4	23.72	19.17		1.213		20700	< 1190	< 1190	36100	< 1190	< 1190	1230	6.247		1.988	0.162	0.026	23.181	0.05		0.945	2.437	6.752	0.276	0.618	0.013	2.662	0.014			
SRAT Prod-78	5													6.332		2.031	0.165	0.024	22.882	0.048		0.963	2.441	7.007	0.274	0.635	0.013	2.672	0.017			
SRAT Prod-79	1	20.49	14.31		1.136		18000	< 871	< 871	32100	< 871	< 871	1110	6.171		1.987	0.158	0.023	22.196	0.044		0.953	2.38	7.036	0.262	0.982	0.015	2.586	0.015			
SRAT Prod-79	2	20.83	14.35		1.137		18100	< 1030	< 1030	35700	< 1030	< 1030	1140	5.973		2.019	0.153	0.025	22.132	0.043		0.986	2.334	7.425	0.255	1.012	0.012	2.512	0.014			
SRAT Prod-79	3	20.66	14.7		1.135		18400	< 908	< 908	32600	< 908	< 908	1170	6.408		1.98	0.161	0.024	23.134	0.048		0.935	2.461	6.768	0.274	0.909	0.013	2.65	0.014			
SRAT Prod-79	4	20.18	14.37		1.15		21900	< 988	< 988	28600	< 988	< 988	1120	5.904		2.144	0.152	0.022	22.261	0.043		1.057	2.352	8.083	0.26	1.023	0.012	2.521	0.014			
SRAT Prod-79a	1	19.9	14.44				13200	< 858	< 858	34300	< 858	< 858	1150																			
SRAT Prod-79a	2	18.97	14.12				13100	< 849	< 849	32900	< 849	< 849	1100																			

Valuesat their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/ml)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
SRAT Prod-79a	3	19.84	15.55				23100	< 1100	< 100	31400	< 1100	< 1100	1180
SRAT Prod-79a	4	19.88	15.66				22100	< 967	<967	32200	< 967	< 967	1200
SRAT Prod-80	1	21.54	16.62		1.161		21200	< 1120	< 120	35400	< 1120	< 1120	1530
SRAT Prod-80	2	21.48	16.54		1.176		21500	< 1080	< 080	34400	< 1080	< 1080	1500
SRAT Prod-80	3	21.58	16.56		1.167		21500	< 1130	< 130	34800	< 1130	< 1130	1440
SRAT Prod-80	4	21.47	16.81		1.172		21300	< 1120	< 120	34000	< 1120	< 1120	1280
SRAT Prod-80	5												
SRAT Prod-80	6												
SRAT Prod-81	1	23.62	18.4		1.129		37500	< 1040	< 040	39800	< 1040	< 1040	1250
SRAT Prod-81	2	23.6	18.58		1.143		25500	< 1020	< 020	34500	< 1020	< 1020	1250
SRAT Prod-81	3	23.67	18.71		1.164		28000	< 1010	< 010	33900	< 1010	< 1010	1230
SRAT Prod-81	4	23.63	18.57		1.163		25800	< 1020	< 020	34900	< 1020	< 1020	1240
SRAT Prod-81	5												
SRAT Prod-82	1	21.3	16.81		1.129		18100	< 864	<864	29700	1210	< 864	1140
SRAT Prod-82	2	21.31	16.78		1.128		18100	< 974	<974	30300	1210	< 974	1150
SRAT Prod-82	3	21.38	15.55		1.115		18500	< 971	<971	29800	1210	< 971	1120
SRAT Prod-82	4	21.46	16.52		1.119		21800	< 998	<998	30100	1240	< 998	1110
SRAT Prod-82	5												
SRAT Prod-83	1	21.59	16.81		1.174		19400	< 1200	< 200	28700	< 1200	< 1200	1350
SRAT Prod-83	2	21.59	17.15		1.179		19500	< 1130	< 130	30400	< 1130	< 1130	1240
SRAT Prod-83	3	21.59	16.57		1.18		19500	< 1190	< 190	28900	< 1150	< 1190	1300
SRAT Prod-83	4	21.64	16.55		1.117		19600	< 1160	< 160	29500	< 1160	< 1160	1250
SRAT Prod-83	5												
SRAT Prod-84	1	22	16.54		1.178		22000	< 1110	< 110	38000	< 1110	1200	1250
SRAT Prod-84	2	22.18	17.13		1.133		27300	< 1060	< 060	36600	< 1060	1230	1250
SRAT Prod-84	3	22.68	17.57		1.161		27100	< 1100	< 100	34900	< 1100	1260	1250
SRAT Prod-84	4	22.18	17.39		1.166		26500	< 1080	< 080	34400	< 1080	< 1100	1220
SRAT Prod-84	5												
SRAT Prod-85	1	22.83	17.56		1.138		20600	< 1060	< 060	38400	< 1060	< 1060	1330
SRAT Prod-85	2	20.38	17.49		1.141		20400	< 1050	< 050	36100	< 1050	< 1050	1320
SRAT Prod-85	3	22.82	17.82		1.113		20500	< 1060	< 060	31900	< 1060	< 1060	1300
SRAT Prod-85	4	22.85	17.55		1.17		28000	< 1080	< 080	30400	< 1080	< 1080	1220
SRAT Prod-85	5												
SRAT Prod-85	6												
SRAT Prod-86	1	23.66	18.47		1.135		31400	< 1040	< 040	35100	< 1040	< 1040	1210
SRAT Prod-86	2	23.61	18.4		1.149		30800	< 999	<999	33900	< 999	< 999	1220
SRAT Prod-86	3	23.62	18.33		1.164		28600	< 971	<971	35000	< 971	< 971	1240
SRAT Prod-86	4	23.6	18.25		1.149		31800	< 1020	< 020	34800	< 1020	< 1020	1220
SRAT Prod-86	5												
SRAT Prod-86	6												
SRAT Prod-87	1	21.51	16.45		1.141		20800	< 1060	< 060	33000	< 1060	< 1060	1160
SRAT Prod-87	2	21.51	16.88		1.144		20500	< 1080	< 080	32600	< 1080	< 1070	1170
SRAT Prod-87	3	21.47	16.56		1.137		19800	< 1070	< 070	35800	< 1070	< 1160	1170
SRAT Prod-87	4	21.58	16.49		1.139		20200	< 1160	< 160	32100	< 1160	< 1080	< 1160
SRAT Prod-87	5												
SRAT Prod-87	6												
SRAT Prod-88	1	21.98	16.92		1.141		31000	< 995	<995	34600	< 995	< 995	1270
SRAT Prod-88	2	21.98	16.73		1.135		30800	< 1120	< 120	34700	< 1120	< 1120	1260
SRAT Prod-88	3	21.93	16.71		1.131		29300	< 1100	< 100	32600	< 1100	< 1100	1260
SRAT Prod-88	4	21.96	16.71		1.131		28200	< 1100	< 100	27200	< 1100	< 1100	1240
SRAT Prod-88	5												
SRAT Prod-88	6												
SRAT Prod-89	1	22.94	17.79		1.161		30600	< 1110	< 110	34900	< 1110	< 1120	1300
SRAT Prod-89	2	22.89	18.48		1.148		30000	< 983	<983	35100	< 983	< 983	1450
SRAT Prod-89	3	22.82	17.75		1.141		32900	< 1120	< 120	35100	< 1120	< 1110	1330
SRAT Prod-89	4	22.86	17.47		1.132		30200	< 1110	< 110	36200	< 1110	< 1110	1270
SRAT Prod-89	5												
SRAT Prod-90	1	23.33	18.14		1.172		36800	< 1100	< 100	40300	< 1100	< 1100	1750
SRAT Prod-90	2	23.24	18.36		1.176		34600	< 1050	< 050	37100	< 1050	< 1050	1400
SRAT Prod-90	3	23.2	17.23		1.15		32100	< 1070	< 070	33100	< 1070	< 1070	1280
SRAT Prod-90	4	23.25	17.99		1.168		30600	< 1050	< 050	33000	< 1050	< 1050	1150
SRAT Prod-90	5												
SRAT Prod-90	6												
SRAT Prod-91	1	21.19	16.65		1.161		29700	< 1070	< 070	39300	< 1050	1260	1410
SRAT Prod-91	2	21.21	16.96		1.171		30200	< 981	<981	38500	< 981	< 1020	1350
SRAT Prod-91	3	21.2	16.98		1.138		28300	< 1020	< 020	36300	< 1020	< 1100	1280
SRAT Prod-91	4	21.23	17.08		1.146		30700	< 1100	< 100	38900	< 1100	< 981	1380
SRAT Prod-92	1	17.29	13.63		1.134		21600	< 1090	< 090	41400	< 1090	1400	1460
SRAT Prod-92	2	17.41	13.82		1.132		21500	< 1090	< 090	40600	< 1090	1320	1450
SRAT Prod-92	3	17.39	13.1		1.17		29300	< 1030	< 030	40600	< 1030	1320	1450
SRAT Prod-92	4	17.49	13.31		1.127		29400	< 1030	< 030	38000	< 1030	1270	1410
SRAT Prod-92	5												
SRAT Prod-92	6												
SRAT Prod-93	1	15.65	11.87		1.106		20000	< 1100	< 100	42800	< 1100	< 1130	1570
SRAT Prod-93	2	15.7	11.92		1.109		19800	< 1100	< 100	43400	< 1100	< 1100	1440
SRAT Prod-93	3	15.68	11.95		1.088		19800	< 1110	< 110	40200	< 1130	< 1100	1440
SRAT Prod-93	4	15.52	11.97		1.114		19900	< 1130	< 130	38800	< 1130	< 1110	1450
SRAT Prod-93	5												

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Prod-79a	3																			
SRAT Prod-79a	4																			
SRAT Prod-80	1	6.648		2.058	0.168	0.025	24.814	0.055		0.959	2.541	7.043	0.288	0.711	0.013	2.804	0.021			
SRAT Prod-80	2	6.179		2.03	0.156	0.024	23.206	0.046		0.975	2.397	7.272	0.263	0.698	0.012	2.635	0.016			
SRAT Prod-80	3	6.026		2.127	0.163	0.023	22.19	0.057		1.022	2.342	7.731	0.303	0.665	0.012	2.564	0.015			
SRAT Prod-80	4	6.362		2.063	0.16	0.024	23.815	0.048		0.982	2.45	7.174	0.274	0.642	0.012	2.695	0.027			
SRAT Prod-80	5	6.366		1.98	0.159	0.025	23.754	0.052		0.938	2.421	6.776	0.271	0.701	0.013	2.705	0.022			
SRAT Prod-80	6	6.438		1.977	0.161	0.025	23.77	0.042		0.933	2.442	6.805	0.28	0.608	0.015	2.733	0.022			
SRAT Prod-81	1	6.434		2.141	0.161	0.025	23.914	0.058		1.005	2.535	6.73	0.281	0.729	0.021	2.719	0.015			
SRAT Prod-81	2	6.44		2.141	0.161	0.025	23.998	0.054		1.004	2.531	6.707	0.283	0.732	0.034	2.724	0.016			
SRAT Prod-81	3	6.473		2.17	0.163	0.025	24.105	0.061		1.016	2.558	6.795	0.277	0.753	0.019	2.748	0.015			
SRAT Prod-81	4	6.484		2.158	0.163	0.025	24.139	0.056		1.015	2.554	6.806	0.28	0.726	0.03	2.73	0.016			
SRAT Prod-81	5	6.559		2.205	0.163	0.025	24.485	0.057		1.024	2.573	6.854	0.282	0.718	0.02	2.754	0.016			
SRAT Prod-82	1	6.104		2.157	0.152	0.024	22.758	0.046		1.04	2.41	7.298	0.26	0.857	0.021	2.619	0.013			
SRAT Prod-82	2	5.777		2.014	0.144	0.023	21.613	0.039		1.019	2.294	7.062	0.244	1.507	0.034	2.485	0.016			
SRAT Prod-82	3	5.8		2.021	0.15	0.023	21.719	0.046		1.024	2.302	7.083	0.252	1.467	0.025	2.495	0.016			
SRAT Prod-82	4	6.1		2.126	0.153	0.086	22.824	0.049		1.011	2.416	7.114	0.261	0.554	0.024	2.608	0.015			
SRAT Prod-82	5	6.26		2.099	0.155	0.025	23.316	0.045		1.03	2.477	7.032	0.269	0.53	0.025	2.689	0.015			
SRAT Prod-83	1	6.938		1.879	0.169	0.024	25.811	0.016		0.861	2.706	5.45	0.294	0.688	0.016	2.84	0.014			
SRAT Prod-83	2	6.387		1.959	0.156	0.022	23.619	0.019		0.959	2.478	6.982	0.261	0.658	0.019	2.584	0.013			
SRAT Prod-83	3	7.39		1.925	0.168	0.024	25.402	0.021		0.913	2.69	5.866	0.291	0.664	0.027	2.842	0.016			
SRAT Prod-83	4	5.722		2.204	0.141	0.02	21.459	0.027		1.107	2.279	8.004	0.241	0.53	0.027	2.351	0.013			
SRAT Prod-83	5	6.373		2.154	0.156	0.022	23.645	0.025		1.041	2.505	7.133	0.268	0.618	0.017	2.611	0.013			
SRAT Prod-84	1	6.28		1.904	0.161	0.023	23.874	0.027		0.869	2.474	6.142	0.276	0.71	0.012	2.761	0.013			
SRAT Prod-84	2	5.908		2.161	0.146	0.021	22.087	0.032		1.057	2.331	7.779	0.25	0.578	0.011	2.474	0.012			
SRAT Prod-84	3	6.241		2.12	0.164	0.025	23.355	0.033		1.015	2.422	6.949	0.275	0.585	0.012	2.607	0.016			
SRAT Prod-84	4	5.326		2.347	0.133	0.019	19.911	0.045		1.185	2.192	9.219	0.23	0.701	0.01	2.227	0.011			
SRAT Prod-84	5	5.525		2.107	0.141	0.02	21.232	0.037		1.025	2.267	7.797	0.246	0.586	0.011	2.403	0.012			
SRAT Prod-85	1	5.377		2.015	0.148	0.022	21.32	0.044		0.776	2.298	6.998	0.254	0.71	0.015	2.553	0.012			< 100
SRAT Prod-85	2	5.632		2.044	0.147	0.022	21.529	0.05		0.973	2.275	7.578	0.25	0.594	0.015	2.48	0.012			
SRAT Prod-85	3	5.629		2.048	0.145	0.022	21.555	0.04		0.959	2.272	7.579	0.254	0.592	0.015	2.482	0.012			
SRAT Prod-85	4	6.118		2.097	0.154	0.023	22.752	0.053		0.975	2.368	7.212	0.258	0.68	0.016	2.616	0.013			
SRAT Prod-85	5	5.697		2.069	0.147	0.022	21.751	0.046		0.986	2.293	7.669	0.254	0.602	0.015	2.511	0.012			
SRAT Prod-85	6	5.559		2.072	0.154	0.024	22.625	0.052		0.8	2.368	7.251	0.267	0.719	0.016	2.645	0.012			
SRAT Prod-86	1	6.074		2.187	0.154	0.022	23.029	0.025		1.076	2.428	7.949	0.262	0.743	0.033	2.587	0.012			
SRAT Prod-86	2	6.098		2.115	0.151	0.022	22.675	0.024		1.062	2.378	7.658	0.26	0.634	0.017	2.552	0.012			
SRAT Prod-86	3	6.112		2.075	0.15	0.023	22.677	0.019		1.051	2.367	7.374	0.256	0.692	0.017	2.557	0.012			
SRAT Prod-86	4	5.914		2.063	0.146	0.022	22.062	0.03		1.072	2.321	7.684	0.254	0.734	0.022	2.506	0.012			
SRAT Prod-86	5	6.498		1.99	0.161	0.023	24.34	0.024		0.984	2.481	6.822	0.277	0.613	0.025	2.739	0.013			
SRAT Prod-86	6	5.382		1.736	0.132	0.02	20.087	0.016		0.875	2.068	6.27	0.231	0.584	0.016	2.248	0.01			
SRAT Prod-87	1	5.842		1.959	0.154	0.022	22.895	0.008		0.881	2.365	7.021	0.262	0.644	0.015	2.578	0.023			
SRAT Prod-87	2	6.037		2.127	0.149	0.021	22.412	0.012		1.033	2.357	7.799	0.256	0.57	0.013	2.52	0.012			
SRAT Prod-87	3	6.046		2.074	0.151	0.021	22.573	0.015		1.01	2.353	7.797	0.259	0.631	0.015	2.526	0.012			
SRAT Prod-87	4	6.067		2.005	0.173	0.023	23.085	0.016		0.965	2.377	7.643	0.267	0.611	0.012	2.566	0.012			
SRAT Prod-87	5	5.893		2.09	0.147	0.021	21.887	0.015		1.037	2.305	7.933	0.253	0.43	0.014	2.44	0.013			
SRAT Prod-87	6	5.144		1.736	0.13	0.019	19.29	0.006		0.862	2.012	6.684	0.219	0.505	0.01	2.156	0.01			
SRAT Prod-88	1	6.065		2.056	0.154	0.022	22.459	0.036		0.976	2.316	7.758	0.248	0.647	0.012	2.524	0.014			
SRAT Prod-88	2	5.898		2.088	0.151	0.022	22.315	0.038		0.964	2.317	7.898	0.249	0.621	0.013	2.475	0.012			
SRAT Prod-88	3	5.724		2.102	0.147	0.021	21.983	0.034		0.967	2.296	7.83	0.242	0.611	0.013	2.47	0.012			
SRAT Prod-88	4	5.749		2.057	0.147	0.021	21.726	0.033		0.979	2.257	7.995	0.24	0.69	0.013	2.45	0.012			
SRAT Prod-88	5	6.021		2.075	0.15	0.021	22.426	0.043		0.995	2.31	7.717	0.249	0.47	0.012	2.533	0.012			
SRAT Prod-88	6	5.683		1.916	0.144	0.021	21.231	0.055		0.926	2.175	7.137	0.231	0.518	0.013	2.414	0.012			
SRAT Prod-89	1	5.05		1.651	0.156	0.022	23.414	0.02		0.651	2.451	5.747	0.261	0.678	0.013	2.693	0.012			
SRAT Prod-89	2	5.685		1.847	0.158	0.023	23.874	0.024		0.755	2.471	6.403	0.264	0.603	0.014	2.712	0.012			
SRAT Prod-89	3	5.543		1.682	0.175	0.024	24.824	0.028		0.551	2.536	5.622	0.295	0.793	0.015	2.839	0.013			
SRAT Prod-89	4	4.685		1.544	0.155	0.022	23.156	0.018		0.443	2.365	5.763	0.259	0.691	0.012	2.653	0.012			
SRAT Prod-89	5	4.798		1.666	0.153	0.022	22.748	0.023		0.605	2.392	5.403	0.26	0.684	0.02	2.609	0.011			
SRAT Prod-90	1	6.753		1.862	0.166	0.022	24.757	0.009		0.913	2.592	6.338	0.276	0.752	0.012	2.744	0.013			
SRAT Prod-90	2	6.791		1.892	0.165	0.028	25.064	-0.001		0.903	2.601	6.09	0.274	0.685	0.012	2.74	0.012			
SRAT Prod-90	3	6.898		1.773	0.168	0.023	25.389	0.015		0.856	2.624	6.177	0.278	0.662	0.012	2.834	0.013			
SRAT Prod-90	4	6.946		1.892	0.168	0.023	25.39	0.01		0.892	2.642	5.819	0.281	0.662	0.012	2.851	0.013			
SRAT Prod-90	5	6.871		1.908	0.167	0.022	25.46	0.003		0.893	2.631	5.773	0.277	0.722	0.012	2.816	0.013			
SRAT Prod-90	6	6.714		1.851	0.163	0.022	24.929	0.011		0.912	2.579	6.302	0.271	0.726	0.012	2.75	0.012			
SRAT Prod-91	1	5.966		2.031	0.158	0.022	22.19	0.031		0.936	2.289	8.233	0.248	0.694	0.012	2.517	0.014			
SRAT Prod-91	2	5.529		2.135	0.14	0.02	20.551	0.045		1.037	2.18	9.181	0.222	0.554	0.011	2.363	0.012			
SRAT Prod-91	3	5.341		1.711	0.135	0.019	19.987	0.038		0.752	2.042	6.897	0.217	0.64	0.01	2.286	0.013			
SRAT Prod-91	4	6.489		1.838	0.163	0.023	24.1	0.025		0.824	2.419	6.851	0.264	0.688	0.012	2.718	0.015			
SRAT Prod-92	1	4.916		1.723	0.133	0.017	17.846	0.043		0.864	1.865	11.333	0.201	0.62	0.009	2.028	0.01			
SRAT Prod-92	2	4.857		1.785	0.131	0.018	17.666	0.051		0.889	1.9	11.383	0.194	0.572	0.011	2.014	0.011			
SRAT Prod-92	3	4.954		1.72	0.134	0.018	18.106	0.042		0.857	1.869	11.142	0.198	0.544	0.017	2.048	0.013			
SRAT Prod-92	4	4.877		1.711	0.133	0.017	17.915	0.043		0.836	1.859	11.295	0.197	0.546	0.017	2.036	0.01			
SRAT Prod-92	5	5.061		1.719	0.143	0.019	18.844	0.043		0.763	1.877	10.782	0.208	0.614	0.011	2.138	0.011			
SRAT Prod-92	6	4.947		1.742	0.135	0.018	18.121	0.042		0.88	1.892	11.493	0.202	0.471	0.016	2.064	0.01			
SRAT Prod-93	1	4.546		1.562	0.129	0.016	16.153	0.038		0.745	1.686	12.652	0.18	0.339	0.009	1.839	0.01			
SRAT Prod-93	2	4.569		1.577	0.131	0.016	16.372	0.034		0.738	1.696	12.439	0.184	0.473	0.025	1.854	0.015			
SRAT Prod-93	3	5.136		1.486	0.143	0.018	18.063	0.042		0.652	1.656	11.556	0.199	0.578	0.05	2.027	0.015			
SRAT Prod-93	4	4.612		1.578	0.132	0.016	16.602	0.031		0.707	1.684	12.184	0.182	0.557	0.013	1.869	0.028			
SRAT Prod-93	5	4.579		1.554	0.131	0.016	16.519	0.028		0.724	1.688	12.422	0.184	0.528	0.014	1.847	0.01			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SRAT Prod-93	6													5.196		1.539	0.145	0.017	18.136	0.022		0.657	1.622	11.164	0.204	0.712	0.025	2.013	0.035			
SME-19	1	55.48	5039		1.367		35700	267	106	22900	106	106	151	1.932	2382	0.76	0.075	0.316	8.636	0.449	1.691	1.115	1.067	8.017	0.164	23.241	0.052		0.115	9050		
SME-19	2	49.7	4735		1.341		37100	269	103	22300	103	103	168	2.192	2553	0.915	0.092	0.323	8.557	0.482	1.66	1.228	1.099	8.653	0.18	22.67	0.065		0.112			
SME-19	3	49.98	4304		1.396		33300	268	104	20800	104	104	766	2.246	2767	0.9	0.088	0.329	8.555	0.462	1.777	1.299	1.102	9.284	0.182	23.947	0.053		0.125			
SME-19	4	52.89	4704		1.397		33300	241	108	21700	108	108	703	2.038	2316	0.852	0.084	0.304	8.455	0.453	1.722	1.223	1.033	8.622	0.173	23.369	0.053		0.11			
SME-19	5													2.106	2479	0.884	0.076	0.317	858	0.488	1.742	1.246	1.051	8.694	0.167	23.829	0.055		0.109			
SME-19	6													2.022	2474	0.819	0.075	0.301	8.216	0.462	1.708	1.209	1.006	8.514	0.16	23.2	0.048		0.104			
SME-20	1	48.86	4326	38.08	1.389		31500	838	838	27000	838	2360	1150	2.264	2771	0.732	0.057	0.378	8.936	0.139	1.759	1.219	0.942	8.648	0.125	24.074	0.029	0.324	0.055	8540		
SME-20	2	47.83	4233	35.7	1.396		31600	971	971	28600	971	964	1250	2.227	2874	0.763	0.055	0.39	8.385	0.158	1.801	1.237	0.905	8.842	0.118	24.232	0.028	0.307	0.05			
SME-20	3	47.45	4175	36.91	1.405		33400	1120	1120	26300	1120	1120	971	2.154	2823	0.744	0.058	0.356	8.344	0.124	1.797	1.296	0.944	9.045	0.138	23.938	0.027	0.205	0.051			
SME-20	4	47.32	4169	36.51	1.417		31000	1190	1190	26300	1190	971	1190	2.242	2597	0.808	0.051	0.371	8.912	0.172	1.783	1.318	0.985	9.28	0.117	23.779	0.026	0.168	0.05			
SME-21	1	47.73	4255	39.55	1.407		33600	592	592	39200	592	592	592	2.131	2838	0.704	0.086	0.314	7.341	0.131	1.753	1.229	0.793	8.639	0.113	24.103	0.021	0.588	0.043	7610		
SME-21	2	48.31	4233	39.69	1.456		35100	808	808	40400	808	808	808	2.333	2835	0.856	0.064	0.354	8.374	0.095	1.713	1.307	0.92	8.835	0.104	23.436	0.017	0.781	0.038			
SME-21	3	48.99	4302	39.35	1.499		37200	948	948	42700	948	948	948	2.357	2701	0.861	0.072	0.355	8.713	0.097	1.833	1.376	0.927	9.237	0.106	25.001	0.019	0.745	0.037			
SME-21	4	48.14	4237	39.54	1.445		38200	1070	1070	42300	1070	1070	1070	2.297	2519	0.836	0.068	0.353	8.345	0.076	1.692	1.274	0.908	8.771	0.108	23.054	0.017	0.693	0.17			
SME-22	1	49.16	4343	43.98	1.436		32200	1120	1120	35000	1120	1120	1120	2.204	2872	0.775	0.057	0.322	7.742	0.128	1.788	1.33	0.792	8.901	0.093	24.207	0.045	0.888	0.017	12900		
SME-22	2	48.65	41.6	43.94	1.456		33900	1030	1030	36200	1030	1030	1030	2.274	2904	0.754	0.052	0.331	8.008	0.093	1.75	1.303	0.794	8.75	0.093	23.733	0.047	0.884	0.018			
SME-22	3	48.24	4295	43.94	1.453		33000	1060	1060	35100	1060	1060	1060	2.326	2861	0.831	0.06	0.342	8.251	0.081	1.711	1.332	0.86	8.75	0.102	23.278	0.111	0.92	0.015			
SME-22	4	47.81	4293	43.88	1.447		33800	1170	1170	35600	1170	1170	1170	2.176	2847	0.741	0.074	0.326	7.321	0.07	1.771	1.286	0.778	8.692	0.111	24.052	0.034	0.828	0.019			
SME-23	1	52.13	4621	44.95	1.379		33300	1010	1010	24700	1010	1010	1010	2.316	2732	0.765	0.076	0.299	8.129	0.118	1.828	1.229	0.744	8.79	0.089	24.815	0.014	1.022	0.038	9450		
SME-23	2	52	4642	43.72	1.329		30400	969	969	24200	969	969	969	2.44	2911	0.844	0.129	0.315	8.483	0.115	1.834	1.249	0.775	8.97	0.151	25.083	0.016	1.032	0.025			
SME-23	3	52.17	4617	43.73	1.312		35900	1130	1130	27000	1130	1130	1130	2.311	2924	0.836	0.077	0.298	8.125	0.114	1.763	1.217	0.738	8.647	0.114	24.169	0.015	0.936	0.05			
SME-23	4	52.34	4641	43.48	1.317		33400	1240	1240	26800	1240	1240	1240	2.384	2802	0.72	0.1	0.299	8.761	0.067	1.803	1.206	0.746	8.647	0.127	24.661	0.014	0.953	0.048			
SME-23	5													2.313	2894	0.8	0.081	0.301	8.469	0.055	1.761	1.202	0.748	8.676	0.105	24.523	0.015	0.942	0.023			
SME-24	1	49.37	4175	38.75	1.455		29800	102	102	26500	102	102	102	2.357	2763	0.737	0.083	0.31	8.345	0.092	1.856	1.251	0.732	8.738	0.107	25.74	0.016	1.182	0.01	7900		
SME-24	2	49.42	4214	39.03	1.428		32100	1070	1070	27000	1070	1070	1070	2.369	2.81	0.739	0.083	0.313	8.188	0.092	1.799	1.214	0.742	8.436	0.11	24.921	0.016	1.178	0.021			
SME-24	3	48.51	4203	39.39	1.426		30000	1080	1080	26600	1080	1080	1080	2.296	2821	0.754	0.081	0.331	8.44	0.106	1.733	1.197	0.792	8.551	0.107	24.053	0.018	1.198	0.01			
SME-24	4	49.68	4296	39.4	1.447		29900	966	966	23600	966	966	966	2.439	2779	0.824	0.101	0.331	8.633	0.086	1.775	1.255	0.802	8.758	0.125	24.676	0.02	1.19	0.02			
SME-25	1	48.23	4295	39.72	1.403		30800	975	975	28600	975	975	975	2.818	2944	1.046	0.084	0.376	10.081	0.031	1.84	1.44	1.029	9.803	0.127	25.125	0.018	1.278	0.019	9720		
SME-25	2	48.31	4278	39.67	1.396		33600	1070	1070	26200	1070	1070	1070	2.638	2849	1.011	0.113	0.353	9.194	0.051	1.744	1.369	0.97	9.444	0.13	23.521	0.016	1.234	0.016			
SME-25	3	46.82	4114	39.92	1.401		32500	1160	1160	26200	1160	1160	1160	2.56	2702	0.97	0.073	0.342	9.131	0.069	1.729	1.346	0.951	9.281	0.115	23.618	0.017	1.245	0.018			
SME-25	4	50.54	4106	39.95	1.407		32400	1140	1140	24100	1140	1140	1140	2.571	2656	0.968	0.104	0.337	9.163	0.065	1.883	1.429	0.937	9.813	0.119	25.293	0.016	1.228	0.02			
SME-26	1	50.59	4481	43.09	1.45		35100	1110	1110	27100	1110	1110	1110	2.405	2589	0.905	0.073	0.357	8.555	0.062	1.793	1.322	0.873	9.352	0.102	24.816	0.013	1.113	0.012	8980		
SME-26	2	51.12	4552	42.98	1.428		33700	1050	1050	27000	1050	1050	1050	2.496	2773	0.89	0.059	0.36	8.755	0.092	1.74	1.308	0.865	9.323	0.104	23.654	0.014	1.139	0.012			
SME-26	3	51.19	4417	42.8	1.451		33200	956	956	26100	956	956	956	2.423	2848	0.886	0.067	0.331	8.542	0.066	1.797	1.312	0.861	9.219	0.111	24.211	0.014	1.144	0.011			
SME-26	4	50.07	4438	42.94	1.43		30600	1080	1080	24200	1080	1080	1080	2.454	2692	0.947	0.082	0.376	8.763	0.109	1.843	1.394	0.908	9.736	0.111	25.671	0.015	1.239	0.013			
SME-27	1	53.09	4768	44.97	1.305		35700	1240	1240	28900	1240	1240	1240	2.202	2415	0.767	0.057	0.318	7.369	0.025	1.746	1.277	0.781	8.768	0.096	23.834	0.01	0.868	0.008	9370		
SME-27	2	51.95	4634	44.95	1.321		37200	1270	1270	26000	1270	1270	1270	2.241	1.74	0.795	0.062	0.324	8.105	0.159	1.778	1.291	0.789	9.065	0.101	24.833	0.01	0.915	0.006			
SME-27	3	53.11	4752	41.85	1.305		38200	1250	1250	26500	1250	1250	1250	1.98	2775	0.78	0.047	0.33	7.519	0.031	1.782	1.211	0.805	9.025	0.101	24.428	0.01	0.913	0.006			
SME-27	4	53.62	4859	45.31	1.345		38500	1180	1180	26100	1180	1180	1180	2.102	2581	0.764	0.049	0.311	7.304	0.045	1.836	1.241	0.787	8.728	0.092	24.323	0.011	0.95	0.005			
SME-28	1	49.56	4368	41.07	1.43		28800	894	894	30900	894	894	894	2.59	2582	0.865	0.075	0.364	9.202	0.023	1.782	1.378	0.942	9.353	0.108	23.951	0.013	1.104	0.001			
SME-28	2	50.26	4391	41.05	1.421		37800	1060	1060	34700	1060	1060	1060	2.458	2666	0.654	0.07	0.323	8.323	0.031	1.726	1.206	0.813	9.086	0.102	24.333	0.019	0.991	0.008			
SME-28	3	49.54	4361	40.04	1.419		38700	1080	1080	29400	1080	1080	1080	2.358	2529	0.774	0.067	0.352	8.86	0.051	1.714	1.226	0.919	9.097	0.106	23.74	0.017	1.115	0.009			
SME-28	4	50.67	4454	40.05	1.418		34500	954	954	27000	954	954	954	2.497	2692	0.814	0.067	0.328	8.723	0.024	1.722	1.314	0.876	9.172	0.103	23.658	0.029	1.084	0.008			
SME-29	1	45.88	4048	39.72	1.427		22200	< 1100	< 1100	22600	< 1100	< 1100	< 1100	2.291	2379	0.73	0.082	0.333	8.193	0.033	1.688	1.222	0.794	8.772	0.089	23.214	0.01	0.926	0.006	8180		
SME-29	2	48.33	4302	39.59	1.412		29800	< 1180	< 1180	19800	< 1180	< 1180	< 1180	2.102	2073	0.817	0.068	0.319	7.738	0.039	1.53	1.174	0.843	8.409	0.098	21.043	0.01	0.879	0.006			
SME-29	3	48.01	4339	39.61	1.441		28600	< 1130	< 1130	18500	< 1130	< 1130	< 1130	2.147	2579	0.812	0.067	0.332	7.599	0.036	1.737	1.304	0.812	9.015	0.091	24.109	0.01	0.834	0.006			
SME-29	4	46.4	41.1	39.52	1.398		26200	< 1130	< 1130	19300	< 1130	< 1130	< 1130	2.344	1.71	0.757	0.084	0.341	8.493	0.026	1.614	1.178	0.824	8.544	0.101	22.296	0.011	0.887	0.009			
SME-30	1	48.78	4367	38.46	1.461		23200	< 977	< 977	23100	< 977	< 977	< 977	2.279	2708	0.871	0.088	0.302	8.3	0.045	1.673	1.245	0.859	8.807	0.148	22.837	0.012	1.198	0.009	8010		
SME-30	2	47.36	4192	42.6	1.396		30000	< 1110	< 1110	23800	< 1110	< 1110	< 1110	2.216	2723	0.927	0.062	0.298	7.804	0.101	1.765	1.306	0.811	9.018	0.094	24.178	0.013	1.075	0.011			
SME-30	3	48.37	4017	41.7	1.399		28100	< 1130	< 1130	22300	< 1130	< 1130	< 1130	2.31	1.68	0.881	0.098	0.307	8.195	0.085	1.715	1.291	0.837	8.915	0.119	23.478	0.013	1.071	0.012			
SME-30	4	47.72	4237	41.59	1.398		27900	< 1160	< 1160	22800	< 1160	< 1160	< 1160	2.313	2696	1.063	0.098	0.342	8.339	0.078	1.506	1.177	0.869	8.434	0.152	20.6	0.012	1.087	0.01			
SME-30	5													2.259	2688	0.844	0.058	0.301	8.003	0.059	1.739	1.291	0.828	9.03	0.102	23.744	0.012	0.99	0.01			
SME-30	1						30700	< 1120	< 1120	28500	< 1120	< 1120	< 1050																			
SME-30	2						32900	< 1050	< 1050	30300	< 1050	< 1050	< 1100																			
SME-30	3						29500	< 1100	< 1100	30500	< 1100	< 1100	< 1120																			
SME-30	4						28600	< 1190	< 1190	26700	< 1190	< 1190	< 1190																			
SME-31	1	50.17	4411		1.439		36300	< 1070	< 1070	24100	< 1070	< 1070	< 1070	2.458	2.73	0.798	0.072	0.313	8.75	0.087	1.639	1.17	0.815	8.704	0.103	22.44	0.016	1.108	0.01	9160		
SME-31	2	49.06	4291		1.412		33600	< 1110	< 1110	24500	< 1110	< 1110	< 1110	2.216	2765	0.728	0.066	0.287	8191	0.102	1.742	1.153	0.754	8.668	0.099	24.209	0.022	1.046	0.01			
SME-31	3	47.28	4089		1.401		35000	< 1110	< 1110	24600	< 1110	< 1110	< 1110	2.37	2635	0.842	0.068	0.312	8515	0.104	1.715	1.236	0.821	8.811	0.104	22.872	0.019	1.082	0.009			
SME-31	4	50.35	4425		1.432		36200	< 1170	< 1170	24600	< 1170	< 1170	< 1170	2.358	2.74	0.792	0.071	0.294	8412	0.095	1.738	1.198	0.782	8.717	0.098	24.018	0.027	1.086	0.028			
SME-31	5													2.564		0.928	0.073	0.332	9096	0.095	1.663	1.23	0.869	9.005	0.113	23.046	0.026	1.154	0.009			
SME-31	6													2.322		0.754	0.066	0.288	8214	0.105	1.722	1.194	0.753	8.654	0.104	23.806	0.024	1.083	0.028			
SME-32	1	37.31	3299		1.383		20700	< 975	< 975	20300	< 975	2250	< 944	2.464	2556	0.86	0.064	0.343	8754	0.057	1.683	1.307	0.85	8.832	0.103	23.338	0.013	1.054	0.019	8970		
SME-32	2	37.58	3337		1.392		24700	< 981	< 981	20700	< 981	2120	< 1070	2.453	2647	0.871	0.064	0.344	8724	0.091	1.679	1.341	0.86	8.905	0.111	22.734	0.016	1.075	0.02			
SME-32	3	37.57	3329		1.312		23500	< 944	< 944	20200	< 944	2040	< 981	2.377	2672	0.89	0.065	0.337	8467	0.065	1.679	1.33	0.864	9.089	0.101	21.991	0.011	1.021	0.015			
SME-32	4	35.4	2663		1.368		24200	< 1080	< 1080	19500	< 1080	2140	< 1080	2.484	2666	0.829	0.069	0.338	8928	0.061	1.62	1.316	0.865	8.644	0.148	23.105	0.015	1.029	0.021			
SME-32	5						14200	< 1070	< 1070	26700	< 1070	2110	< 975	2.376	2293	0.811	0.066	0.33	8448	0.05	1.671	1.314	0.825	8.646	0.097	23.463	0.011	0.981	0.021			
SME-32	6						24200	< 1000	< 1000	14200	< 1000	2150	< 1000	2.372	2661	0.792	0.068	0.323	8484	0.078	1.587	1.256	0.811	81	0.112	22.252	0.013	1.021	0.017			
SME-32	7						24000	< 1030	< 1030	21800	< 1030	2290	< 1030																			
SME-32	8						22300	< 1180	< 1180	20800	< 1180	1910	< 1180																			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for latter SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-32	1	43.55	38.04	36.74	1.371		31000	< 719	< 719	25700	< 719	< 719	884																			
SME-32	2	47.19	41.52	36.26	1.358		28300	< 839	< 839	21300	< 839	< 839	829																			
SME-32	3	45.48	40	35.22	1.381		28900	< 805	< 805	23400	< 805	< 805	< 839																			
SME-32	4	44.96	39.07	34.72	1.379		29100	< 1100	< 1100	23200	< 1100	< 1100	< 1100																			
SME-33	1	47.18	41.4		1.416		34100	< 1030	< 1030	27900	< 1030	< 1030	< 1030	2.546	2.003	0.944	0.07	0.367	8.977	0.141	1648	1.365	0.906	9.102	0.112	20.836	0.041	1.325	0.011	12000		
SME-33	2	48.54	42.45		1.415		35900	< 1040	< 1040	29000	< 1040	< 1040	< 992	2.588	2.98	0.985	0.073	0.376	9.167	0.156	1651	1.368	0.95	9.065	0.12	22.289	0.021	1.478	0.013			
SME-33	3	47.47	41.2		1.399		34500	< 1040	< 1040	29100	< 1040	< 1040	< 1040	2.82	2.93	1.035	0.075	0.408	9.961	0.148	1769	1.446	1.011	9.838	0.127	24.369	0.025	1.517	0.013			
SME-33	4	48.17	41.39		1.405		33900	< 992	< 992	29000	< 992	< 992	< 1040	2.592	2.416	0.937	0.069	0.372	9.181	0.105	1637	1.336	0.925	9.036	0.118	22.602	0.018	1.328	0.01			
SME-33	5													2.547	2.306	0.967	0.068	0.368	9.1	0.118	1681	1.367	0.923	9.25	0.114	23.198	0.015	1.324	0.011			
SME-33	6													2.515	2.498	0.917	0.067	0.355	8.896	0.15	1625	1.363	0.899	9.024	0.11	22.672	0.015	1.288	0.01			
SME-34	1	50.48	44.8		1.424		36300	< 1050	< 1050	31800	< 1050	< 1050	< 1050	2.279	2.814	0.787	0.075	0.35	7.998	0.207	1727	1.267	0.758	8.656	0.118	23.741	0.017	1.332	0.011	12000		
SME-34	2	51.46	45.12		1.455		34300	< 1080	< 1080	24200	< 1080	< 1080	< 1080	2.424	2.728	0.952	0.09	0.395	8.608	0.191	1686	1.334	0.907	9.153	0.158	22.806	0.017	1.321	0.015			
SME-34	3	50.5	44.74		1.449		35400	< 1140	< 1140	26900	< 1140	< 1140	< 1170	2.291	2.801	0.931	0.075	0.375	7.996	0.25	1726	1.336	0.847	9.07	0.143	23.09	0.019	1.493	0.014			
SME-34	4	50.64	45.13		1.449		30500	< 1170	< 1170	27400	< 1170	< 1170	< 1140	2.381	2.773	0.939	0.078	0.395	8.397	0.176	1623	1.282	0.884	8.757	0.13	21.813	0.016	1.333	0.012			
SME-34	5														2.779																	
SME-35	1	51.7	46.37		1.475		33000	< 1000	< 1000	29700	< 1000	< 1000	< 1000	2.016	2.974	0.778	0.063	0.388	8.133	0.103	1678	1.05	0.834	8.675	0.089	23.448	0.018	1.082	0.009			
SME-35	2	52.15	46.72		1.497		33800	< 1200	< 1200	28000	< 1200	< 1200	< 1130	2.173	2.893	0.812	0.064	0.377	7.98	0.087	1.72	1.167	0.814	8.868	0.1	22.484	0.019	1.03	0.011			
SME-35	3	52.67	47.31		1.451		25800	< 1130	< 1130	26000	< 1130	< 1130	< 1170	1.835	2.848	0.693	0.061	0.378	7.798	0.099	1678	0.957	0.786	8.455	0.084	23.895	0.017	1.047	0.009			
SME-35	4	51.66	46.39		1.456		28700	< 1170	< 1170	24100	< 1170	< 1170	< 1200	2.034	3.228	0.816	0.067	0.418	8.386	0.071	1645	1.024	0.871	8.685	0.103	23.354	0.017	1.073	0.009			
SME-35	5													2.057	2.387	0.76	0.068	0.395	8.218	0.068	1649	1.046	0.838	8.634	0.096	23.561	0.017	0.969	0.01			
SME-35	6														2.804																	
SME-35	1	51.02	45.06		1.422		36900	< 1070	< 1070	30900	< 1070	< 1070	< 1070																	8020		
SME-35	2	50.2	44.5		1.428		35200	< 1070	< 1070	28600	< 1070	< 1070	< 1070																			
SME-35	3	50.26	44.09		1.432		33400	< 1070	< 1070	28300	< 1070	< 1070	< 1070																			
SME-35	4	52.12	46.53		1.416		25800	< 1070	< 1070	27700	< 1070	< 1070	< 1070																			
SME-36	1	51.12	44.93		1.433		43300	< 1050	< 1050	28000	< 1050	< 1050	1030	2.311	245	0.905	0.085	0.327	7.874	0.127	1561	1.226	0.827	8.077	0.116	21.709	0.027	1.234	0.019	11500		
SME-36	2	51.01	44.82		1.431		40200	< 1080	< 1080	28500	< 1080	< 1080	1090	2.584	2.746	1.09	0.079	0.351	8.777	0.14	1621	1.322	0.918	8.671	0.118	22.413	0.024	1.368	0.021			
SME-36	3	49.49	42.97		1.555		40800	< 1060	< 1060	25300	< 1060	< 1060	1080	2.347	2.653	0.9	0.075	0.315	8.081	0.108	1671	1.233	0.827	8.377	0.109	22.54	0.025	1.171	0.037			
SME-36	4	51.91	45.68		1.458		39600	< 982	< 982	26600	< 982	< 982	< 1080	2.559	2.409	1.068	0.079	0.35	8.678	0.109	1617	1.334	0.907	8.648	0.124	22.222	0.024	1.281	0.021			
SME-36	5				1.474									2.636	2.702	1.153	0.084	0.376	9.137	0.16	1573	1.328	0.957	8.64	0.135	21.911	0.026	1.481	0.024			
SME-36	6				1.455										2.551																	
SME-36	7				1.458																											
SME-36	8				1.521																											
SME-37	1	54.14	48.39		1.37		30900	< 992	< 1360	24900	< 992	< 992	< 992	2.296		0.88	0.063	0.179	7.955	0.101	1751	1.322	0.844	9.027	0.084	23.345	0.022	1.127	0.017	9720		
SME-37	2	52.08	45.7		1.464		30200	< 1040	< 1040	30300	< 1040	< 1040	< 1050	2.459		0.891	0.068	0.184	8.546	0.086	1725	1.303	0.865	8.983	0.105	21.128	0.023	1.202	0.016			
SME-37	3	52.49	44.67		1.404		34700	< 940	< 940	24900	< 940	< 940	< 940	2.247		0.869	0.062	0.175	7.876	0.07	1679	1.259	0.829	8.735	0.096	22.843	0.021	1.077	0.014			
SME-37	4	53.31	47.58		1.479		31100	< 1050	< 1050	25800	< 1050	< 1050	< 1040	2.249		0.847	0.061	0.171	7.844	0.096	1706	1.266	0.815	8.814	0.091	23.501	0.02	1.062	0.015			
SME-37	5													2.26		0.865	0.065	0.178	7.828	0.129	1782	1.298	0.816	8.873	0.092	24.092	0.023	1.177	0.016			
SME-37	6													2.227		0.854	0.06	0.174	773	0.105	1759	1.279	0.803	8.757	0.099	23.817	0.022	1.061	0.015			
SME-38	1	50.63	45.62		1.454		27400	< 1050	< 1050	27300	< 1050	< 1050	< 1050	1.962	2.799	0.658	0.055	0.054	6.585	0.082	1803	1.168	0.637	8.55	0.072	25.185	0.02	0.947	0.013	10700		
SME-38	2	50.44	45.09		1.465		28300	< 1040	< 1040	26900	< 1040	< 1040	< 1040	2.093	1.977	0.732	0.06	0.052	7.322	0.083	1795	1.151	0.709	8.562	0.078	24.727	0.02	1.056	0.012			
SME-38	3	51	45.87		1.443		27600	< 1050	< 1050	26900	< 1050	< 1050	< 1050	2.113	1.899	0.762	0.059	0.055	7.385	0.076	1763	1.201	0.749	8.945	0.079	24.461	0.021	1.028	0.015			
SME-38	4	52.07	45.52		1.471		28500	< 1090	< 1090	28100	< 1090	< 1090	< 1090	1.863	2.029	0.599	0.053	0.047	624	0.077	1848	1.141	0.607	8.436	0.074	25.513	0.02	0.84	0.011			
SME-38	5						27800	< 7060	< 7060	29400	< 7060	< 9870	< 7060	1.931	2.816	0.606	0.051	0.047	645	0.093	1.88	1.171	0.616	8.455	0.064	25.096	0.022	0.9	0.024			
SME-38	6						28700	< 8910	< 8910	27800	< 8910	< 7060	< 8910	2.165	2.993	0.772	0.07	0.061	7.744	0.091	1.72	1.165	0.788	8.514	0.084	23.39	0.022	1.114	0.045			
SME-38	7						27500	< 8300	< 8300	27800	< 8300	< 8910	< 8300																			
SME-38	8						27700	< 9430	< 9430	26800	< 9430	< 8300	< 9430																			
SME-38 (rem)	1	47.64	41.94		1.435		25900	< 1150	< 1150	25900	< 1150	< 1150	< 1020	2.216	402	0.807	0.07	0.053	7.751	0.113	1647	1.237	0.789	8.473	0.103	22.477	0.033	1.019	0.013	8080		
SME-38 (rem)	2	47.9	42.48		1.415		25200	< 1020	< 1020	26300	< 1020	< 1020	< 1050	2.243	2.413	0.799	0.065	0.05	7.673	0.075	1.71	1.27	0.772	8.75	0.089	23.211	0.023	0.934	0.013			
SME-38 (rem)	3	48.08	42.57		1.448		24800	< 1140	< 1140	25200	< 1140	< 1140	< 1150	2.139	2.774	0.737	0.098	0.057	7.458	0.078	1618	1.147	0.733	8.093	0.112	21.544	0.03	0.979	0.027			
SME-38 (rem)	4	47.06	41.68		1.415		25400	< 1050	< 1050	25100	< 1050	< 1050	< 1140	2.308	3.083	0.825	0.069	0.05	8.055	0.058	1.66	1.224	0.817	8.631	0.101	22.523	0.025	0.956	0.016			
SME-38 (rem)	5	47.44	42.07											2.235	2.595	0.836	0.064	0.054	7.787	0.07	1686	1.261	0.816	8.736	0.095	22.339	0.024	0.921	0.014			
SME-38 (rem)	6														2.438																	
SME-38 (rem)	1													2.152	2.457	0.766	0.085	0.059	7.413	0.076	1598	1.122	0.734	7.985	0.092	21.245	0.024	0.97	0.024			
SME-38 (rem)	2													2.25	2.519	0.822	0.061	0.05	7.733	0.059	1709	1.22	0.778	8.744	0.083	23.559	0.019	0.967	0.009			
SME-38 (rem)	3													2.331	255	0.848	0.065	0.053	8.238	0.054	1685	1.199	0.84	8.753	0.091	23.027	0.021	1.048	0.007			
SME-38 (rem)	4													2.234	2.556	0.822	0.066	0.054	7.877	0.064	1655	1.217	0.804	8.534	0.081	22.264	0.021	0.972	0.01			
SME-38 (rem)	5													2.488	2.388	0.818	0.058	0.069	783	0.086	1682	1.2	0.821	8.706	0.093	23.156	0.02	1.008	0.034			
SME-38 (rem)	6														286																	
SME-39	1	46.57	40.33		1.4		30900	< 956	< 956	25400	< 956	< 956	< 956	2.425	2.604	0.729	0.06	0.028	8.614	0.036	1722	1.208	0.785	8.712	0.094	23.624	0.042	0.87	0.018	11500		
SME-39	2	46.29	40.96		1.396		31600	< 1060	< 1060	26900	< 1080	< 1060	< 1020	2.244	312	0.743	0.059	0.026	8.003	0.025	1711	1.223	0.777	9.113	0.094	23.267	0.041	0.809	0.012			
SME-39	3	48.05	42.53		1.364		29300	< 1020	< 1020	25500	< 1020	< 1020	< 1060	2.058	2.043	0.694	0.056	0.027	7.286	0.101	1769	1.238	0.628	8.772	0.079	24.473	0.043	0.777	0.011			
SME-39	4	46.39	41.12		1.406		30200	< 1060	< 1060	26000	< 1060	< 1060	< 1060	2.229	2.986	0.714	0.06	0.024	791	0.071	1746	1.229	0.73	8.97	0.098	23.507	0.041	0.856	0.01			
SME-39	5													2.545	2.702	0.89	0.07	0.031	9.815	0.086	1589	1.166	0.965	9.112	0.111	22.114	0.041	1.129	0.014			
SME-39	6													2.108	2.994	0.689	0.057	0.027	8.014	0.092	1707	1.152	0.771	8.764	0.083	24.006	0.042	0.88	0.014			
SME-40	1	49.89	44.17		1.391		38100	< 1090	< 1090	34300	< 1050	< 1090	< 1090	2.455	2.717	0.897	0.079	0.016	8.615	0.043	1697	1.267	0.874	9.173	0.116	23.173	0.04	0.999	0.011	12100		
SME-40	2	50.22	44.35		1.4		30400	< 1010	< 1010	28100	< 1010	< 1010	< 1140	2.503	2.739	0.953	0.075	0.015	8.666	0.079	1683	1.324	0.902	9.255	0.125	23.054	0.04	0.999	0.011			
SME-40	3	49.57	43.46		1.377		30300	< 1050	< 1050	28100	< 1050	< 1050	< 1010	2.541	2.106	0.978	0.103	0.021	9.161	0.072	1631	1.278	0.943	9.188	0.159	22.351	0.04	1.081	0.01			
SME-40	4	50.03	43.66		1.38		29700	< 1140	< 1140	27600	< 1140	< 1140	< 1060	2.476	2.362	0.893	0.074	0.016	9.174	0.084	1673	1.279	0.855	9.008	0.115	23.002	0.04	0.98	0.009			
SME-40	5													2.518	277	0.946	0.073	0.017	8.801	0.038	1635	1.318	0.92	9.107	0.116	22.474	0.039	0.988	0.018			
SME-40	6														2.91																	
SME-41	1	53.16	47.22		1.509		34600	< 1170	< 1170	32100	< 1170	< 1170	< 1170	2.318	2.654	0.737	0.06	0.014	763	0.179	1723	1.187	0.702	8.168	0.09	23.77	0.026	0.987	0.024	10800		
SME-41	2	52.07	46.16		1.51		34000	< 1150	< 1150	32300	< 1150	< 1150	< 1150	2.391	2.647	0.779	0.063	0.011	8.158	0.19	1686	1.237	0.78	8.577	0.085	22.995	0.025	1.062	0.023			
SME-41	3	53.07	47.1		1.491		33900	< 1450	< 1450	30600	< 1450	< 1450	< 1450	2.274	268	0.822	0.064	0.013	7.765	0.155	1777	1.242	0.775	8.537	0.094	22.968	0.025	1.071	0.023			
SME-41	4	53.27	47		1.504		34700	< 1480	< 1480	32900	< 1480	< 1480	< 1480	2.44	2.729	0.842	0.066	0.013	8.293	0.146	1711	1.275	0.798	8.745	0.1	21.562	0.026	1.154	0.025			
SME-41	5													2.156		0.749	0.06	0.014	7.286	0.215	1776	1.262	0.694	8.336	0.088	23.694	0.026	1.073	0.025			
SME-41	6													2.34		0.744	0.065	0.011	7.958	0.213	1752	1.245	0.719	8.391	0.089	24.177	0.027	1.07	0.025			
SME-42	1	50.71	45.46		1.42		35000	< 991	< 991	24900	< 991	< 1340	1920	1.649	2.672	0.645	0.046	0.009	5.619	0.13	1125	0.894	0.59	5.99	0.067	12.925	0.014	0.772	0.029	9610		

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
SME-42	2	49.76	44.51		1.435		37800	< 975	< 975	27200	< 975	< 991	1770
SME-42	3	50.61	45.36		1.445		35600	< 894	< 894	24400	< 894	< 894	1520
SME-42	4	50.16	44.21		1.449		37800	< 1340	< 1340	26800	< 1340	< 975	1430
SME-42	5												
SME-42	6												
SME-43	1	49.55	43.15		1.381		23700	< 1140	< 1140	23600	< 1140	< 1080	< 1080
SME-43	2	49.11	43.31		1.422		26500	< 1140	< 1140	24200	< 1140	< 1160	< 1140
SME-43	3	48.05	42.03		1.396		26300	< 1160	< 1160	24400	< 1160	< 1140	< 1140
SME-43	4	49.28	44.03		1.426		24900	< 1160	< 1160	23100	< 1160	< 1140	< 1160
SME-44	1-MA	52.44	46.63		1.416		25400	< 872	< 872	23400	< 872	< 948	< 872
SME-44	2-MA	52.7	47.07		1.462		25800	< 1070	< 1070	23000	< 1070	< 872	< 948
SME-44	3-MA	52.55	46.66		1.443		26500	< 948	< 948	23500	< 948	< 1080	< 1070
SME-44	4-MA	52.65	46.75		1.438		25600	< 1080	< 1080	23500	< 1080	< 1070	< 1080
SME-45	1-MA	50.83	44.44		1.429		31900	< 1300	< 1300	20200	< 1300	< 1300	< 1460
SME-45	2-MA	50.58	44.21		1.429		32400	< 1350	< 1350	20100	< 1350	< 1350	< 1300
SME-45	3-MA	50.19	44.38		1.421		27000	< 1420	< 1420	21600	< 1420	< 1420	< 1350
SME-45	4-MA	50.26	44.5		1.424		27400	< 1460	< 1460	19800	< 1460	< 1460	< 1420
SME-46	1-MA	52.95	46.13		1.429		28100	< 1290	< 1290	24100	< 1290	< 1290	< 1270
SME-46	2-MA	52.26	46.2		1.36		27700	< 1340	< 1340	23200	< 1340	< 1270	< 1290
SME-46	3-MA	52.72	46.33		1.34		27100	< 1270	< 1270	23000	< 1270	< 1340	< 1300
SME-46	4-MA	52.34	45.99		1.451		27500	< 1300	< 1300	23200	< 1300	< 1300	< 1340
SME-47	1-MA	51.91	45.85		1.418		26800	< 916	< 916	21100	< 9.6	< 916	< 916
SME-47	2-MA	50.01	44.31		1.422		28400	< 998	< 998	20800	< 998	< 998	< 998
SME-47	3-MA	50.66	45.72		1.426		27200	< 1090	< 1090	21000	< 1090	< 1090	< 1090
SME-47	4-MA	49.61	42.86		1.418		27000	< 1100	< 1100	20700	< 1100	< 1100	< 1100
SME-48	1-MA	50.33	45.64		1.424		31100	< 1080	< 1080	20000	< 1080	< 1080	< 1100
SME-48	2-MA	49.3	45.34		1.419		28900	< 1090	< 1090	20700	< 1090	< 1090	< 1090
SME-48	3-MA	47.82	42.69		1.418		26800	< 1060	< 1060	19400	< 1060	< 1060	< 1060
SME-48	4-MA	49.43	43.93		1.411		27300	< 1000	< 1000	18100	< 1000	< 1000	< 1080

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-42	2	2.269	2.711	0.866	0.069	0.012	7.754	0.177	1.625	1.243	0.783	8.537	0.116	20.501	0.02	1.062	0.035			
SME-42	3	2.64	2.481	1.042	0.106	0.019	9.558	0.199	2.039	1.47	0.978	10.671	0.174	27.721	0.026	1.254	0.051			
SME-42	4	2.589	2.416	1.057	0.087	0.014	8.843	0.204	1.785	1.416	0.951	9.776	0.15	22.568	0.022	1.172	0.048			
SME-42	5	2.98	2.798	1.149	0.106	0.018	10.423	0.148	1.962	1.546	1.062	10.81	0.132	26.196	0.024	1.277	0.05			
SME-42	6	3.161	2.671	1.246	0.092	0.019	10.628	0.245	2.119	1.672	1.099	11.34	0.132	10.16	0.03	1.57	0.062			
SME-42	1	2.43		0.903	0.062	0.013	8.305	0.145	1.645	1.24	0.85	8.804	0.096	22.327	0.022	1.182	0.048			
SME-42	2	2.362		0.878	0.06	0.011	8.164	0.168	1.713	1.265	0.815	8.986	0.087	23.278	0.022	1.129	0.037			
SME-42	3	2.405		0.954	0.061	0.013	8.197	0.14	1.668	1.274	0.876	9.12	0.09	22.727	0.021	1.211	0.047			
SME-42	4	2.487		0.926	0.063	0.012	8.612	0.149	1.635	1.225	0.877	8.91	0.102	20.796	0.02	1.136	0.038			
SME-42	5	2.469		0.923	0.059	0.01	8.455	0.114	1.667	1.25	0.872	8.972	0.098	22.538	0.02	1.061	0.041			
SME-42	6	2.381		0.998	0.054	0.012	7.517	0.158	1.711	1.279	0.825	9.242	0.084	23.257	0.021	1.071	0.042			
SME-43	1	2.695	2.624	1.021	0.075	0.016	9.083	0.184	1.635	1.36	0.959	9.069	0.113	19.312	0.019	1.283	0.068	9260		
SME-43	2	2.69	2.349	0.979	0.123	0.015	9.166	0.188	1.636	1.36	0.92	9.056	0.152	22.544	0.019	1.16	0.068			
SME-43	3	2.787	2.386	1.122	0.081	0.014	9.198	0.187	1.607	1.438	0.979	9.17	0.119	22.042	0.02	1.27	0.078			
SME-43	4	2.606	2.428	0.921	0.075	0.012	8.804	0.192	1.58	1.259	0.887	8.67	0.107	21.679	0.018	1.122	0.064			
SME-43	5	2.669	2.415	0.944	0.071	0.014	897	0.175	1.647	1.318	0.903	9.019	0.119	22.993	0.019	1.151	0.066			
SME-43	6	2.729	2.328	0.993	0.078	0.013	9.156	0.186	1.646	1.335	0.952	9.094	0.119	22.375	0.019	1.157	0.066			
SME-44	1-MA	2.245		0.709	0.049	0.004	7.365	0.081	1.775	1.295	0.722	8.459	0.084	23.87	0.015	0.71	0.009	9200		
SME-44	2-MA	2.443		0.814	0.058	0.006	8.093	0.089	1.7	1.294	0.804	8.64	0.083	23.315	0.015	0.799	0.024			
SME-44	3-MA	2.303		0.788	0.052	0.007	7.624	0.139	1.692	1.313	0.775	8.674	0.089	23.488	0.015	0.791	-0.002			
SME-44	4-MA	2.256		0.708	0.057	0.013	7.441	0.096	1.719	1.305	0.73	8.55	0.08	23.77	0.015	0.706	0.027			
SME-44	5-MA	1.921		0.582	0.044	0.004	6.166	0.132	1.835	1.281	0.588	8.126	0.066	25.4	0.015	0.583	-0.001			
SME-44	6-MA	2.073		0.654	0.046	0.006	6.744	0.137	1.768	1.292	0.659	8.32	0.074	23.946	0.015	0.678	0.021			
SME-44	1-F	1.959	2.459	0.585	0.048	0.01	6.591	0.011	1.518	1.087	0.63		0.056	23.351	0.022					
SME-44	2-F	2.191	2.443	0.673	0.052	0.008	731	0.058	1.603	1.204	0.73		0.074	24.423	0.017					
SME-44	3-F	1.86	2.142	0.513	0.044	0.029	6.098	0.043	1.742	1.182	0.575		0.057	27.087	0.033					
SME-44	4-F	1.838	269	0.569	0.099	0.053	6.099	0.099	1.66	1.141	0.556		0.117	26.149	0.084					
SME-44	5-F	2.258	2.474	0.717	0.067	0.018	7.692	0.078	1.538	1.164	0.758		0.088	23.766	0.028					
SME-44	6-F	2.379	2.486	0.669	0.064	0.01	7.761	0.111	1.654	1.193	0.778		0.09	25.237	0.019					
SME-44	7-F	2.201	3.075	0.597	0.057	0.011	7.165	0.127	1.854	1.274	0.681		0.085	28.856	0.022					
SME-44	8-F	2.225	2.766	0.598	0.068	0.014	7.243	0.161	1.673	1.207	0.714		0.122	26.092	0.021					
SME-44	9-F	1.943	2.979	0.495	0.049	0.009	6.185	0.157	1.834	1.219	0.585		0.071	28.289	0.02					
SME-44	10-F	2.284	2.751	0.714	0.06	0.015	7.457	0.133	1.653	1.229	0.749		0.079	25.9	0.025					
SME-45	1-MA	2.461		0.826	0.07	0.014	8.356	0.171	1.718	1.25	0.809	8.556	0.099	22.423	0.018	1.268	0.02	10300		
SME-45	2-MA	2.53		0.875	0.072	0.015	8.623	0.182	1.713	1.26	0.846	8.731	0.104	22.118	0.019	1.335	0.021			
SME-45	3-MA	2.335		0.754	0.068	0.016	7.894	0.195	1.756	1.224	0.743	8.403	0.09	22.867	0.019	1.272	0.019			
SME-45	4-MA	2.449		0.875	0.077	0.018	8.458	0.229	1.692	1.265	0.843	8.714	0.104	22.414	0.02	1.433	0.02			
SME-45	5-MA	2.409		0.81	0.07	0.015	8.286	0.19	1.697	1.22	0.804	8.48	0.095	22.336	0.019	1.314	0.02			
SME-45	6-MA	2.566		0.887	0.077	0.016	8.745	0.155	1.688	1.282	0.867	8.88	0.107	22.043	0.018	1.317	0.02			
SME-45	1-F	2.059	2.358	0.684	0.06	0.013	7.155	0.104	1.376	1.049	0.713		0.092	21.431	0.021					
SME-45	2-F	2.431	2.436	0.727	0.079	0.016	8.415	0.14	1.777	1.23	0.78		0.105	26.054	0.025					
SME-45	3-F	2.4	2.427	0.754	0.071	0.013	8.265	0.144	1.77	1.219	0.769		0.078	25.923	0.024					
SME-45	4-F	2.021	2.357	0.643	0.057	0.011	7.103	0.088	1.35	1.03	0.698		0.088	21.015	0.019					
SME-45	5-F	1.983	2.352	0.654	0.058	0.011	6.525	0.073	1.337	1.011	0.691		0.103	20.717	0.018					
SME-45	6-F	2.413	2.711	0.757	0.066	0.012	8.363	0.086	1.65	1.181	0.802		0.101	24.322	0.028					
SME-46	1-MA	2.32		0.861	0.07	0.015	7.654	0.205	1.705	1.231	0.747	8.818	0.107	24.357	0.022	1.28	0.05	10000		
SME-46	2-MA	2.514		0.997	0.075	0.018	8.292	0.223	1.665	1.241	0.845	8.782	0.094	23.118	0.023	1.476	0.043			
SME-46	3-MA	2.471		0.862	0.077	0.017	8.161	0.22	1.686	1.195	0.799	8.41	0.104	23.427	0.021	1.369	0.041			
SME-46	4-MA	2.43		0.921	0.077	0.017	7.967	0.292	1.674	1.22	0.805	8.681	0.109	23.074	0.023	1.478	0.041			
SME-46	5-MA	2.645		1.009	0.085	0.019	8.827	0.241	1.605	1.232	0.904	8.846	0.108	22.33	0.027	1.585	0.042			
SME-46	6-MA	2.223		0.804	0.068	0.014	7.149	0.224	1.693	1.182	0.714	8.436	0.084	23.853	0.021	1.289	0.043			
SME-46	1-F	2.224	2.796	0.733	0.064	0.013	7.352	0.124	1.682	1.254	0.733		0.113	25.539	0.028					
SME-46	2-F	2.421	2.759	0.834	0.069	0.017	8.173	0.028	1.663	1.286	0.828		0.116	25.09	0.034					
SME-46	3-F	2.401	2.765	0.841	0.071	0.016	8.119	0.041	1.656	1.284	0.822		0.118	24.938	0.033					
SME-46	4-F	2.525	2.514	0.845	0.074	0.02	8.003	0.095	1.516	1.249	0.885		0.135	22.891	0.037					
SME-46	5-F	2.44	2.445	0.848	0.07	0.018	8.314	0.062	1.471	1.209	0.859		0.12	22.158	0.036					
SME-46	6-F	2.24	2.224	0.758	0.057	0.008	7.451	0.093	1.636	1.26	0.742		0.098	25.178	0.02					
SME-47	1-MA	2.258		0.777	0.059	0.009	7.714	0.07	1.765	1.277	0.776	8.821	0.085	24.072	0.017	0.939	0.02	10400		
SME-47	2-MA	2.303		0.891	0.062	0.009	7.915	0.076	1.706	1.274	0.802	8.761	0.082	23.619	0.018	0.989	0.019			
SME-47	3-MA	2.127		0.733	0.054	0.009	7.318	0.093	1.645	1.221	0.737	8.546	0.087	23.477	0.017	0.896	0.018			
SME-47	4-MA	2.307		0.816	0.062	0.008	7.979	0.08	1.677	1.273	0.815	8.793	0.089	23.267	0.017	0.976	0.02			
SME-47	5-MA	2.252		0.805	0.058	0.009	7.573	0.106	1.756	1.293	0.782	8.815	0.082	23.55	0.018	0.945	0.02			
SME-47	1-F	2.483	2.631	0.733	0.073	0.016	8.278	0.112	1.564	1.219	0.855		0.105	23.651	0.026					
SME-47	2-F	2.206	2.773	0.738	0.066	0.015	7.331	0.125	1.69	1.231	0.768		0.134	24.902	0.021					
SME-47	3-F	2.293	2.681	0.764	0.072	0.015	7.854	0.157	1.609	1.236	0.816		0.149	24.267	0.022					
SME-47	4-F	2.258	284	0.653	0.071	0.018	7.492	0.194	1.674	1.257	0.775		0.105	25.204	0.025					
SME-47	5-F	2.19	2.852	0.703	0.075	0.018	747	0.193	1.665	1.259	0.758		0.109	25.351	0.025					
SME-47	6-F	2.329	2.784	0.775	0.075	0.019	7.574	0.199	1.655	1.28	0.817		0.12	25.075	0.027					
SME-48	1-MA	2.544		0.944	0.077	0.012	8.723	0.141	1.616	1.319	0.902	8.802	0.113	22.42	0.027	1.091	0.032	9980		
SME-48	2-MA	2.505		0.939	0.07	0.012	8.568	0.177	1.662	1.338	0.887	9.013	0.106	23.47	0.028	1.118	0.033			
SME-48	3-MA	2.5		0.861	0.08	0.012	8.477	0.138	1.678	1.274	0.826	8.561	0.127	23.429	0.03	0.976	0.036			
SME-48	4-MA	2.026		0.741	0.057	0.008	7.492	0.14	1.68	1.162	0.779	8.497	0.091	23.231	0.026	0.904	0.032			
SME-48	5-MA	2.466		0.904	0.065	0.011	8.853	0.122	1.566	1.248	0.922	8.793	0.1	22.02	0.025	1.052	0.031			
SME-48	1-F	2.733	2.785	1.034	0.084	0.016	9.539	0.14	1.702	1.411	0.988		0.112	25.263	0.033					
SME-48	2-F	2.288	2.697	0.802	0.064	0.015	7.797	0.149	1.659	1.325	0.814		0.093	24.651	0.031					
SME-48	3-F	2.62	253	0.995	0.073	0.016	9.069	0.143	1.551	1.324	0.939		0.107	23.408	0.029					
SME-48	4-F	2.388	2.532	0.828	0.068	0.015	7.927	0.157	1.601	1.273	0.798		0.092	24.163	0.031					
SME-48	5-F	2.45	2.638	0.856	0.07	0.016	8.474	0.149	1.603	1.328	0.865		0.104	23.99	0.031					
SME-48	6-F	2.374	2.701	0.868	0.076	0.027	7.529	0.135	1.396	1.178	0.783		0.115	21.729	0.029					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for latter SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/ml)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-49	1-MA	50.99	45.44		1.411		27900	< 1110	< 1110	19900	< 1110	< 1110	< 1050	2.382		0.865	0.062	0.013	7.908	0.22	1745	1.335	0.798	8.978	0.093	24.618	0.027	1.134	0.102	10100		
SME-49	2-MA	50.4	44.96		1.414		23800	< 1050	< 1050	20500	< 1050	< 1050	< 1080	2.468		0.884	0.071	0.015	8.433	0.194	1673	1.298	0.85	8.959	0.099	23.947	0.028	1.218	0.099			
SME-49	3-MA	50.39	44.78		1.413		22700	< 1080	< 1080	19600	< 1080	< 1080	< 1110	2.452		0.872	0.063	0.011	8.148	0.197	1667	1.288	0.828	8.739	0.097	23.737	0.025	1.087	0.096			
SME-49	4-MA	51.31	45.19		1.412		22900	< 1140	< 1140	19700	< 1140	< 1140	< 1140	2.321		0.819	0.06	0.01	7.714	0.15	1.64	1.262	0.778	8.642	0.096	23.082	0.024	1.011	0.095			
SME-49	5-MA													2.377		0.833	0.059	0.009	7.986	0.131	1573	1.243	0.8	8.35	0.089	22.341	0.024	0.988	0.091			
SME-49	6-MA													2.691		0.964	0.067	0.012	9.071	0.172	1614	1.344	0.939	9.065	0.106	22.511	0.024	1.114	0.094			
SME-49	1-F													2.29	2.736	0.84	0.056	0.009	7.681	0.155	1.68	1.26	0.768		0.084	25.125	0.025					
SME-49	2-F													2.197	2.001	0.774	0.056	0.01	7.39	0.139	1606	1.207	0.733		0.082	23.982	0.024					
SME-49	3-F													2.462	2.059	0.855	0.064	0.011	8.278	0.159	1625	1.266	0.831		0.097	24.443	0.025					
SME-49	4-F													2.422	2.397	0.839	0.062	0.012	7.929	0.18	1556	1.224	0.801		0.095	24.489	0.026					
SME-49	5-F													2.393	2.667	0.871	0.061	0.011	8.052	0.18	1621	1.259	0.813		0.104	24.488	0.026					
SME-49	6-F													2.43	2.692	0.861	0.066	0.012	8.19	0.167	1635	1.274	0.827		0.097	24.796	0.025					
SME-50	1-MA	47.91	42.12		1.413		35900	< 1090	< 1090	28900	< 1090	< 1090	994	2.131		0.674	0.064	0.007	7.005	0.201	1794	1.251	0.651	8.467	0.089	25.275	0.02	1.043	0.045	10600		
SME-50	2-MA	48.63	43.14		1.413		33700	< 1070	< 1070	28700	< 1070	< 956	< 1150	2.483		0.915	0.067	0.01	8.194	0.165	1.67	1.38	0.876	8.935	0.101	23.043	0.019	1.096	0.049			
SME-50	3-MA	48.38	42.32		1.386		32200	< 1050	< 1050	25600	< 1050	< 1050	< 1070	2.587		0.915	0.066	0.011	8.49	0.146	1641	1.339	0.894	9.034	0.094	22.681	0.017	1.132	0.044			
SME-50	4-MA	48.13	42.6		1.414		31000	< 956	< 956	25200	< 956	< 1070	< 1090	2.269		0.725	0.058	0.009	7.545	0.199	1745	1.23	0.716	8.568	0.084	24.696	0.019	1.155	0.042			
SME-50	5-MA													2.101		0.657	0.052	0.007	6.948	0.161	1767	1.22	0.655	8.327	0.079	24.58	0.018	0.897	0.048			
SME-50	6-MA													2.502		0.797	0.067	0.011	8.46	0.187	1668	1.257	0.826	8.651	0.11	23.45	0.018	1.11	0.043			
SME-50	1-F													2.235	3.084	0.6	0.061	0.011	7.335	0.131	1848	1.264	0.689		0.089	28.088	0.023					
SME-50	2-F													2.729	2.761	0.895	0.073	0.014	9.103	0.114	1.75	1.394	0.943		0.121	25.539	0.022					
SME-50	3-F													2.174	3.27	0.607	0.071	0.01	7.087	0.146	1819	1.222	0.659		0.088	26.979	0.024					
SME-50	4-F													2.506	2.111	0.763	0.072	0.018	8.347	0.184	1643	1.218	0.809		0.097	24.687	0.025					
SME-50	5-F													2.647	2.119	0.956	0.077	0.017	8.459	0.178	1682	1.416	0.906		0.109	25.238	0.026					
SME-50	6-F													2.313	298	0.694	0.076	0.012	7.588	0.152	1735	1.212	0.714		0.103	25.853	0.023					
SME-51	1-MA	49.94	44.17		1.417		42500	< 1000	< 1000	30100	< 1000	< 1000	< 577	2.692		0.812	0.099	0.018	9.156	0.175	1579	1.253	0.855	8.235	0.121	22.178	0.018	1.194	0.062	11700		
SME-51	2-MA	49.2	43.3		1.365		36900	< 977	< 977	25500	< 977	< 977	< 1180	2.685		0.816	0.069	0.013	9.141	0.196	1.61	1.278	0.864	8.36	0.113	22.554	0.018	1.206	0.061			
SME-51	3-MA	49.95	43.79		1.371		35700	< 1070	< 1070	25500	< 1070	< 1070	< 1100	2.443		0.746	0.059	0.011	8.194	0.171	1695	1.288	0.772	8.327	0.105	23.773	0.017	0.956	0.063			
SME-51	4-MA	50.32	44.11		1.373		35600	< 1180	< 1180	24700	< 1180	< 1180	< 1070	2.12		0.661	0.051	0.009	6.987	0.165	1776	1.271	0.664	8.171	0.084	24.714	0.017	0.902	0.066			
SME-51	5-MA													2.53		0.919	0.07	0.013	9.052	0.161	1572	1.265	0.931	8.857	0.116	21.971	0.017	1.132	0.057			
SME-51	6-MA													2.925		1.048	0.074	0.012	9.321	0.123	1554	1.517	1.003	8.82	0.106	21.061	0.016	1.114	0.057			
SME-51	1-F													2.329	2.412	0.798	0.069	0.012	7.943	0.098	1583	1.271	0.792		0.098	24.157	0.021					
SME-51	2-F													2.886	2.345	1.056	0.085	0.013	9.354	0.117	1772	1.613	0.97		0.107	26.582	0.025					
SME-51	3-F													2.328	2.487	0.638	0.059	0.008	7.73	0.099	1639	1.221	0.73		0.083	24.922	0.019					
SME-51	4-F													2.661	2.128	0.784	0.074	0.009	8.996	0.115	1667	1.286	0.841		0.105	26.047	0.019					
SME-51	5-F													2.064	284	0.616	0.058	0.007	6.784	0.088	1731	1.247	0.638		0.068	26.398	0.018					
SME-52	1-MA	48.48	42.68		1.4		56500	< 1070	< 1070	18500	< 1070	< 1070	< 1080	2.59		0.938	0.071	0.014	9.253	0.151	1649	1.265	0.929	8.956	0.103	22.245	0.015	1.365	0.02	10400		
SME-52	2-MA	48.73	43.11		1.419		45300	< 1080	< 1080	18500	< 1080	< 1080	< 1080	2.305		0.854	0.061	0.012	8.01	0.168	1647	1.232	0.814	8.58	0.102	24.155	0.014	1.203	0.02			
SME-52	3-MA	49.65	44.02		1.429		43800	< 1080	< 1080	17900	< 1080	< 1080	< 1130	2.68		0.961	0.073	0.014	9.498	0.15	1672	1.296	0.952	9.085	0.114	22.628	0.015	1.32	0.021			
SME-52	4-MA	49.56	43.9		1.424		42000	< 1130	< 1130	18300	< 1130	< 1130	< 1070	2.427		0.939	0.065	0.012	8.69	0.139	1689	1.308	0.923	9.090	0.112	23.141	0.015	1.201	0.021			
SME-52	5-MA													2.665		1.047	0.073	0.014	9.357	0.152	1644	1.381	0.965	9.208	0.112	20.925	0.015	1.328	0.021			
SME-52	6-MA													2.542		0.926	0.067	0.015	8.973	0.175	1653	1.309	0.917	8.978	0.101	22.736	0.015	1.316	0.021			
SME-52	1-F													2.552	2.567	0.841	0.074	0.014	8.724	0.133	1588	1.329	0.908		0.119	23.307	0.018					
SME-52	2-F													2.487	2.625	0.789	0.088	0.018	8.698	0.114	1583	1.265	0.874		0.131	23.692	0.019					
SME-52	3-F													2.494	2.634	0.81	0.083	0.018	8.633	0.147	1586	1.277	0.873		0.12	23.854	0.02					
SME-52	4-F													2.456	2.309	0.846	0.08	0.016	8.618	0.134	1705	1.363	0.912		0.151	25.39	0.018					
SME-52	5-F													2.134	2.519	0.682	0.063	0.014	7.479	0.158	1542	1.187	0.757		0.1	25.431	0.019					
SME-52	6-F													2.286	2.619	0.706	0.073	0.02	7.745	0.159	1574	1.216	0.769		0.108	26.186	0.021					
SME-53	1-MA	51.53	45.14		1.424		31300	< 1120	< 1120	32600	< 1120	< 1120	1150	2.393		0.87	0.068	0.01	8.28	0.086	1659	1.255	0.851	8.856	0.096	22.506	0.015	1.016	0.039	9720		
SME-53	2-MA	50.88	44.43		1.412		32300	< 1030	< 1030	29000	< 1030	< 1030	1140	2.48		0.906	0.073	0.01	8.541	0.083	1.69	1.282	0.88	8.963	0.099	22.788	0.016	1.073	0.041			
SME-53	3-MA	52.16	46.43		1.414		33500	< 1080	< 1080	29100	< 1080	< 1080	< 1120	2.339		0.836	0.068	0.014	7.998	0.094	1691	1.251	0.81	8.879	0.094	23.536	0.017	0.982	0.043			
SME-53	4-MA	52.1	46.04		1.451		32300	< 1150	< 1150	29300	< 1150	< 1150	< 1150	2.242		0.838	0.067	0.008	8.14	0.088	1716	1.202	0.845	8.636	0.104	23.495	0.015	0.994	0.042			
SME-53	5-MA													2.445		0.884	0.065	0.009	8.408	0.059	1714	1.276	0.865	9.123	0.086	23.168	0.013	0.996	0.037			
SME-53	1-F													2.336	2.764	0.846	0.064	0.012	8.151	0.078	1.62	1.263	0.843		0.101	24.631	0.017					
SME-53	2-F													2.328	2.774	0.856	0.067	0.012	8.12	0.115	1.62	1.257	0.833		0.102	24.589	0.019					
SME-53	3-F													2.252	2.115	0.775	0.061	0.012	7.696	0.106	1596	1.239	0.777		0.095	24.832	0.018					
SME-53	4-F													2.272	2.177	0.769	0.066	0.013	7.724	0.136	1619	1.23	0.757		0.108	24.894	0.02					
SME-53	5-F													2.324	2.621	0.835	0.066	0.012	8.188	0.087	1569	1.222	0.839		0.102	23.656	0.017					
SME-53	6-F													2.351	2.663	0.868	0.068	0.013	8.221	0.125	1595	1.244	0.847		0.093	23.978	0.02					
SME-54	1-MA	51.41	45.02		1.42		36500	< 952	< 952	28600	< 952	< 952	1140	2.214		0.659	0.121	0.018	7.977	0.084	1617	1.204	0.704	8.06	0.108	21.701	0.014	0.834	0.087	9770		
SME-54	2-MA	49.81	43.93		1.412		35500	< 962	< 962	27700	< 962	< 962	1100	2.327		0.744	0.063	0.007	7.94	0.073	1667	1.253	0.764	8.42	0.103	22.863	0.018	0.865	0.089			
SME-54	3-MA	50.2	44.15		1.416		33600	< 900	< 900	26900	< 900	< 900	1030	2.089		0.677	0.06	0.008	7.331	0.122	1725	1.134	0.744	8.66	0.08	23.681	0.016	0.962	0.092			
SME-54	4-MA	46.66	40.6		1.418		34700	< 939	< 939	27200	< 939	< 939	1040	2.314		0.774	0.06	0.008	7.797	0.121	1718	1.329	0.766	8.791	0.089	23.342	0.016	0.909	0.093			
SME-54	5-MA													2.178		0.648	0.056	0.006	7.403	0.112	1698	1.244	0.682	8.254	0.08	23.559	0.015	0.842	0.091			
SME-54	1-F													2.424	2.334	0.774	0.066	0.011	8.21	0.157	1693	1.314	0.792		0.104	25.538	0.022					
SME-54	2-F													2.248	2.701	0.719	0.065	0.011	7.606	0.157	1625	1.241	0.716		0.092	24.747	0.019					
SME-54	3-F													2.327	2.783	0.711	0.064	0.011	7.883	0.106	1679	1.294	0.743		0.092	25.618	0.018					
SME-54	4-F													2.016	286	0.586	0.06	0.01	6.781	0.179	1707	1.241	0.603		0.086	26.061	0.02					
SME-54	5-F													2.188	2.775	0.62	0.059	0.01	7.438	0.138	1652	1.267	0.688		0.093	25.292	0.021					
SME-54	6-F													2.275	2.152	0.685	0.059	0.007	7.696	0.102	1658	1.289	0.725		0.098	25.042	0.017					
SME-55	1-MA	49.27	43.63		1.416		37000	< 1120	< 1120	30600	< 1120	< 1120	< 1120	2.608		0.975	0.322	0.024	9.105	0.266	1705	1.291	0.943	9.074	0.44	23.208	0.019	1.34	0.068	12000		
SME-55	2-MA	49.18	43.51		1.409		27400	< 1020	< 1020	26800	< 1020	< 1020	< 1020	3.028		0.871	0.069	0.013	8.399	0.211	1637	1.274	0.843	9.29	0.107	22.79	0.019	1.132	0.077			
SME-55	3-MA	49.6	43.32		1.407		30600	< 1040	< 1040	29700	< 1040	< 1040	< 1040	2.443		0.908	0.074	0.013	8.282	0.211	1667	1.303	0.868	8.875	0.116	23.135	0.018	1.173	0.065			
SME-55	4-MA	48.08	42.07		1.44		27700	< 1340	< 1340	23300	< 1340	< 1340	< 1340	2.482		0.941	0.12	0.013	8.34	0.173	1616	1.29	0.878	8.808	0.164	22.43	0.017	1.071	0.064			
SME-55	5-MA													2.724		1.029	0.077	0.016	9.748	0.295	1.68	1.362	1.01	9.418	0.139	21.823	0.034	1.306	0.064			
SME-55	1-F													2.35	2.197	0.829	0.1	0.019	7.894	0.176	.492	1.184	0.8		0.109	22.863	0.025					
SME-55	2-F													2.496	2.544	0.881	0.089	0.031	7.595	0.187	.556	1.243	0.837		0.099	24.08	0.043					
SME-55	3-F													2.363	2.525	0.755	0.077	0.016	7.325	0.139	.558	1.234	0.801		0.091	23.848	0.024					
SME-55	4-F													2.184	2.148	0.691	0.098	0.02	7.35	0.14	.391	1.12	0.732		0.12	21.479	0.034					
SME-55	5-F													2.611	2.524	0.891	0.089	0.026	8.724	0.216	.553	1.288	0.924		0.113	23.725	0.031					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
SME-56	1-MA	50.38	48.06		1.415		32000	< 886	< 886	23500	< 886	< 886	< 886
SME-56	2-MA	47.83	42.54		1.415		35200	< 911	< 911	26200	< 911	< 911	< 911
SME-56	3-MA	50.39	45.5		1.41		32100	< 938	< 938	28900	< 938	< 938	< 918
SME-56	4-MA	52.91	47.43		1.406		24300	< 1010	< 1010	23400	< 1010	< 1010	< 1010
SME-56	5-MA												
SME-56	6-MA												
SME-56	1-F												
SME-56	2-F												
SME-56	3-F												
SME-56	4-F												
SME-57	1-MA	49.38	43.69		1.416		29700	< 1060	< 1060	21900	< 1060	< 1060	< 1040
SME-57	2-MA	49.51	43.96		1.42		27100	< 1060	< 1060	22200	< 1060	< 1060	< 1070
SME-57	3-MA	49.25	43.69		1.412		25100	< 1040	< 1040	20600	< 1040	< 1040	< 1060
SME-57	4-MA	49.35	43.66		1.411		25100	< 1070	< 1070	20700	< 1070	< 1070	< 1060
SME-57	5-MA												
SME-57	1-F												
SME-57	2-F												
SME-57	3-F												
SME-57	4-F												
SME-57	5-F												
SME-57	6-F												
SME-58	1-MA	47.37	41.82		1.413		41300	< 1070	< 1070	22500	< 1070	1110	< 1030
SME-58	2-MA	49.45	43.76		1.435		40500	< 1100	< 1100	22600	< 1100	< 1100	< 1010
SME-58	3-MA	47.49	41.83		1.391		40800	< 1010	< 1010	21800	< 1010	< 1030	< 1070
SME-58	4-MA	47.62	41.57		1.411		39600	< 1030	< 1030	22500	< 1030	< 1070	< 1100
SME-58	5-MA												
SME-58	1-F												
SME-58	2-F												
SME-58	3-F												
SME-58	4-F												
SME-58	5-F												
SME-58	6-F												
SME-59	1-MA	43.86	38.89		1.377		39600	< 1070	< 1070	21100	< 1070	1700	< 974
SME-59	2-MA	43.97	38.27		1.338		34300	< 974	< 974	20600	< 974	1180	< 1030
SME-59	3-MA	43.54	38.02		1.355		37700	< 1030	< 1030	18400	< 1030	1200	< 1060
SME-59	4-MA	43.82	38.16		1.334		32500	< 1060	< 1060	17800	< 1060	< 1060	< 1070
SME-59	5-MA												
SME-59	6-MA												
SME-59	1-F												
SME-59	2-F												
SME-59	3-F												
SME-59	4-F												
SME-59	5-F												
SME-60	1-MA	41.42	38.35		1.318		26200	< 1060	< 1060	14900	< 1060	< 1090	< 1040
SME-60	2-MA	40.52	37		1.317		22400	< 1040	< 1040	14400	< 1040	< 1060	< 1060
SME-60	3-MA	40.9	37.61		1.352		21900	< 1090	< 1090	13900	< 1090	< 1040	< 1060
SME-60	4-MA	41.29	37.65		1.371		21900	< 1060	< 1060	14100	< 1060	< 1060	< 1090
SME-60	1-F												
SME-60	2-F												
SME-60	3-F												
SME-60	4-F												
SME-60	5-F												
SME-60	6-F												
SME-60 (rem)	1-MA	45.41	39.87		1.311		32000	< 597	< 597	21200	< 597	< 1030	841
SME-60 (rem)	2-MA	45.08	39.35		1.315		34000	< 1030	< 1030	23500	< 1030	< 961	< 961
SME-60 (rem)	3-MA	44.61	38.91		1.312		30500	< 961	< 961	20500	< 961	< 597	< 1030
SME-60 (rem)	4-MA	45	39.25		1.318		30100	< 1060	< 1060	20200	< 1060	< 1060	< 1060
SME-60 (rem)	1-F												
SME-60 (rem)	2-F												
SME-60 (rem)	3-F												
SME-60 (rem)	4-F												
SME-60 (rem)	5-F												
SME-60 (rem)	6-F												
SME-61	1-MA	42.11	36.84		1.12		25900	< 994	< 994	22900	< 994	< 971	< 994
SME-61	2-MA	42.9	37.81		1.11		24000	< 989	< 989	24000	< 989	< 989	< 971
SME-61	3-MA	42.29	37.09		1.14		26300	< 1080	< 1080	22600	< 1080	< 994	< 989
SME-61	4-MA	42.26	37.05		1.364		24300	< 971	< 971	23900	< 971	< 1080	< 1080
SME-61	5-MA												
SME-61	6-MA												
SME-61	1-F												
SME-61	2-F												
SME-61	3-F												
SME-61	4-F												
SME-61	5-F												
SME-61	6-F												
SME-62	1-MA	47.08	403		1.414		33000	< 1090	< 1090	29500	< 1090	< 1150	< 1090
SME-62	2-MA	50.03	43.58		1.412		32400	< 1140	< 1140	27500	< 1140	< 1190	< 1140
SME-62	3-MA	49.23	42.65		1.418		31100	< 1180	< 1180	27500	< 1180	< 1140	< 1180
SME-62	4-MA	46.97	42.22		1.43		32500	< 1140	< 1140	27300	< 1140	< 1090	< 1140

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-56	1-MA	2.576		0.912	0.063	0.01	9.214	-0.01	1632	1.317	0.945	9.197	0.103	22.329	0.01	1.128	0.028	10900		
SME-56	2-MA	2.383		0.861	0.057	0.007	8.375	0.041	1664	1.313	0.872	9.186	0.101	22.877	0.01	0.966	0.028			
SME-56	3-MA	2.142		0.682	0.052	0.007	7.509	0.027	1757	1.277	0.73	8.843	0.093	23.317	0.01	0.857	0.042			
SME-56	4-MA	1.984		0.614	0.061	0.006	6.985	0.016	1813	1.261	0.645	8.658	0.09	24.537	0.01	0.721	0.03			
SME-56	5-MA	1.954		0.551	0.045	0.006	6.878	0.031	1834	1.248	0.612	8.51	0.078	25.16	0.012	0.727	0.029			
SME-56	6-MA	1.866		0.569	0.044	0.004	6.527	0.03	1844	1.273	0.603	8.617	0.087	25.088	0.011	0.751	0.03			
SME-56	1-F	2.485	2.525	0.79	0.083	0.009	8.955	0.079	1712	1.375	0.903		0.158	26.001	0.015					
SME-56	2-F	1.952	2.394	0.421	0.053	0.009	6.926	0.064	1768	1.241	0.631		0.084	26.618	0.015					
SME-56	3-F	1.982	2.357	0.523	0.066	0.005	7.018	0.138	1794	1.243	0.646		0.095	26.719	0.019					
SME-56	4-F	2.221	2.347	0.625	0.054	0.006	7.891	0.036	1403	1.146	0.794		0.085	21.391	0.011					
SME-57	1-MA	3.111		0.945	0.341	0.021	9.073	-0.152	1719	1.189	0.862	9.45	0.878	23.316	0.03	0.765	0.096	8350		
SME-57	2-MA	2.416		0.77	0.057	0.007	8.071	-0.098	1689	1.161	0.805	8.78	0.088	23.078	0.022	0.847	0.09			
SME-57	3-MA	2.377		0.782	0.058	0.016	7.924	-0.097	1618	1.144	0.801	8.56	0.089	22.292	0.018	0.897	0.086			
SME-57	4-MA	2.183		0.741	0.061	0.008	8.083	-0.137	1675	1.057	0.814	8.74	0.086	23.607	0.038	0.941	0.09			
SME-57	5-MA	2.468		0.842	0.062	0.008	8.249	-0.091	1676	1.199	0.84	8.86	0.086	23.07	0.022	0.935	0.09			
SME-57	1-F	2.335	2.95	0.763	0.055	0.009	7.753	0.139	1588	1.196	0.797		0.081	23.803	0.017					
SME-57	2-F	2.32	2.08	0.758	0.058	0.009	7.772	0.146	1587	1.202	0.801		0.095	23.735	0.019					
SME-57	3-F	2.206	2.537	0.72	0.054	0.008	7.28	0.161	1569	1.164	0.753		0.088	23.126	0.016					
SME-57	4-F	2.373	2.7	0.726	0.056	0.007	7.946	0.102	1641	1.24	0.812		0.102	24.641	0.017					
SME-57	5-F	2.26	2.551	0.661	0.054	0.007	7.56	0.106	1557	1.174	0.758		0.1	23.543	0.017					
SME-57	6-F	2.518	2.831	0.781	0.06	0.008	8.428	0.154	1731	1.316	0.865		0.097	26.105	0.018					
SME-58	1-MA	2.433		0.86	0.072	0.018	8.603	0.248	1682	1.28	0.885	8.72	0.104	23.155	0.023	1.591	0.055	9160		
SME-58	2-MA	2.388		0.852	0.064	0.013	8.51	0.15	1668	1.256	0.885	8.856	0.088	22.733	0.056	1.255	0.054			
SME-58	3-MA	2.512		0.907	0.071	0.014	8.728	0.168	1654	1.313	0.908	8.75	0.094	22.197	0.025	1.355	0.054			
SME-58	4-MA	2.281		0.819	0.079	0.014	8.705	0.166	1645	1.184	0.897	8.725	0.101	22.778	0.024	1.334	0.054			
SME-58	5-MA	2.446		0.887	0.068	0.019	8.737	0.19	1673	1.288	0.911	8.95	0.104	22.867	0.076	1.375	0.053			
SME-58	1-F	2.321	2.495	0.761	0.061	0.009	7.957	0.08	1574	1.195	0.817		0.095	23.448	0.016					
SME-58	2-F	2.677	2.815	0.955	0.069	0.014	9.203	0.13	1774	1.357	0.931		0.102	26.577	0.02					
SME-58	3-F	2.432	2.562	0.864	0.064	0.014	8.406	0.1	1616	1.261	0.852		0.103	24.014	0.016					
SME-58	4-F	2.558	2.491	0.823	0.099	0.02	8.981	0.082	1593	1.259	0.856		0.161	23.959	0.017					
SME-58	5-F	2.124	2.254	0.742	0.053	0.007	7.388	0.094	1.41	1.111	0.761		0.093	21.169	0.013					
SME-58	6-F	2.36	2.412	0.769	0.072	0.011	7.995	0.072	1514	1.208	0.83		0.101	22.761	0.014					
SME-59	1-MA	2.681		0.963	0.063	0.007	9.013	0.084	1719	1.388	0.952	9.216	0.104	23.139	0.016	1.044	0.099	8970		
SME-59	2-MA	2.462		0.902	0.058	0.006	8.255	0.095	1667	1.32	0.883	8.971	0.094	22.184	0.014	0.952	0.095			
SME-59	3-MA	2.352		0.799	0.059	0.006	8.281	0.054	1607	1.211	0.87	8.45	0.097	22.474	0.134	0.929	0.093			
SME-59	4-MA	2.441		0.894	0.059	0.006	8.225	0.068	1633	1.289	0.871	8.76	0.09	22.392	0.055	0.899	0.094			
SME-59	5-MA	2.345		0.885	0.057	0.008	7.964	0.11	1566	1.225	0.858	8.526	0.088	21.666	0.014	0.978	0.09			
SME-59	6-MA	2.557		0.897	0.058	0.005	8.619	0.078	1612	1.305	0.91	8.637	0.093	22.343	0.013	0.937	0.091			
SME-59	1-F	2.509	2.689	0.844	0.067	0.011	8.302	0.179	1644	1.322	0.888		0.111	25.271	0.02					
SME-59	2-F	2.483	2.713	0.879	0.069	0.011	8.152	0.193	1.64	1.312	0.872		0.1	25.425	0.02					
SME-59	3-F	2.545	2.628	0.856	0.066	0.01	8.232	0.191	1603	1.297	0.882		0.102	24.566	0.018					
SME-59	4-F	2.501	2.655	0.805	0.071	0.011	8.292	0.211	1573	1.274	0.871		0.106	24.384	0.019					
SME-59	5-F	2.389	248	0.888	0.068	0.013	7.97	0.183	1509	1.243	0.834		0.104	23.474	0.019					
SME-60	1-MA	1.915		0.716	0.051	0.009	6.351	0.124	1776	1.251	0.656	8.664	0.085	24.925	0.016	0.911	0.078	7110		
SME-60	2-MA	1.814		0.624	0.045	0.01	5.948	0.17	1813	1.246	0.581	8.526	0.08	25.911	0.017	0.94	0.08			
SME-60	3-MA	1.805		0.624	0.045	0.009	5.916	0.169	1789	1.221	0.579	8.314	0.075	25.689	0.016	0.888	0.078			
SME-60	4-MA	1.73		0.608	0.044	0.011	5.615	0.201	1831	1.229	0.544	8.40	0.08	25.548	0.017	0.974	0.078			
SME-60	1-F	2.038	2.922	0.711	0.062	0.013	6.828	0.152	1738	1.271	0.665		0.082	26.743	0.02					
SME-60	2-F	1.846	3.102	0.639	0.068	0.015	6.09	0.194	1791	1.268	0.592		0.099	27.575	0.021					
SME-60	3-F	1.841	2.979	0.717	0.061	0.016	6.103	0.241	1759	1.263	0.581		0.093	27.223	0.02					
SME-60	4-F	1.744	3.032	0.7	0.055	0.012	5.391	0.202	1823	1.285	0.567		0.098	27.78	0.02					
SME-60	5-F	1.91	2.935	0.795	0.056	0.014	6.283	0.261	1753	1.294	0.639		0.1	26.732	0.019					
SME-60	6-F	1.812	3.026	0.664	0.058	0.013	5.903	0.258	1782	1.272	0.58		0.101	27.435	0.019					
SME-60 (rem)	1-MA	2.437		0.766	0.066	0.013	8.324	0.235	1697	1.261	0.786	8.606	0.084	23.37	0.019	1.383	0.073	9180		
SME-60 (rem)	2-MA	2.476		0.711	0.079	0.012	8.621	0.167	1684	1.221	0.746	8.506	0.105	23.458	0.023	1.232	0.072			
SME-60 (rem)	3-MA	2.571		0.849	0.059	0.011	7.666	0.202	1672	1.36	0.818	9.21	0.079	22.903	0.025	1.094	0.071			
SME-60 (rem)	4-MA	2.443		0.827	0.064	0.013	8.357	0.223	1671	1.285	0.827	8.739	0.09	22.717	0.021	1.344	0.072			
SME-60 (rem)	1-F	2.397	2.633	0.787	0.059	0.01	8.247	0.055	1648	1.189	0.77		0.093	25.143	0.017					
SME-60 (rem)	2-F	2.354	2.573	0.693	0.058	0.014	8.217	0.057	1584	1.119	0.714		0.088	24.365	0.015					
SME-60 (rem)	3-F	2.564	2.309	0.95	0.066	0.011	8.328	0.097	1507	1.223	0.889		0.104	22.6	0.016					
SME-60 (rem)	4-F	2.197	2.638	0.805	0.058	0.012	7.517	0.084	1617	1.181	0.707		0.088	25.163	0.018					
SME-60 (rem)	5-F	2.507	239	0.885	0.059	0.01	7.643	0.065	1614	1.281	0.798		0.083	24.459	0.016					
SME-60 (rem)	6-F	2.393	262	0.857	0.062	0.011	8.242	0.076	1632	1.221	0.81		0.084	24.93	0.018					
SME-61	1-MA	2.56		0.823	0.07	0.01	8.71	0.151	1635	1.212	0.858	8.726	0.113	22.473	0.052	1.155	0.056	7750		
SME-61	2-MA	2.221		0.653	0.058	0.01	7.667	0.205	1737	1.15	0.714	8.311	0.1	23.992	0.022	1.138	0.058			
SME-61	3-MA	2.629		0.978	0.071	0.012	8.942	0.213	1572	1.284	0.92	8.861	0.137	21.637	0.073	1.318	0.054			
SME-61	4-MA	2.304		0.718	0.063	0.008	7.815	0.147	1711	1.241	0.766	8.656	0.103	23.785	0.018	1.035	0.059			
SME-61	5-MA	2.319		0.743	0.06	0.008	7.919	0.168	1704	1.246	0.782	8.687	0.098	23.296	0.03	1.025	0.058			
SME-61	6-MA	2.676		0.952	0.073	0.009	9.186	0.16	1603	1.296	0.934	9.215	0.114	21.899	0.036	1.163	0.053			
SME-61	1-F	2.222	268	0.724	0.059	0.011	7.578	0.153	1628	1.189	0.734		0.081	24.927	0.015					
SME-61	2-F	2.504	2.478	0.934	0.066	0.016	8.574	0.139	1.63	1.22	0.824		0.097	24.87	0.015					
SME-61	3-F	2.23	2.8	0.734	0.06	0.011	7.671	0.132	1668	1.211	0.747		0.097	25.984	0.017					
SME-61	4-F	2.309	2.911	0.789	0.056	0.01	7.706	0.118	1785	1.238	0.707		0.08	26.646	0.015					
SME-61	5-F	2.141	2.674	0.767	0.055	0.009	7.227	0.194	1624	1.169	0.722		0.089	23.246	0.016					
SME-61	6-F	2.624	2.035	1.051	0.065	0.01	9.349	0.133	1591	1.274	0.897		0.094	24.052	0.015					
SME-62	1-MA	2.282		0.735	0.061	0.012	8.003	0.147	1721	1.242	0.776	8.712	0.085	23.429	0.016	1.127	0.035	9010		
SME-62	2-MA	2.321		0.786	0.065	0.011	8.261	0.152	1665	1.261	0.831	8.823	0.106	23.569	0.016	1.154	0.034			
SME-62	3-MA	2.15		0.671	0.056	0.01	7.305	0.119	1763	1.234	0.706	8.515	0.082	24.334	0.021	0.997	0.034			
SME-62	4-MA	2.199		0.851	0.066	0.013	8.155	0.153	1.71	1.169	0.795	8.707	0.1	22.835	0.021	1.085	0.034			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-62	5-MA													2.177		0.627	0.058	0.01	7.495	0.147	1.763	1.213	0.703	8.297	0.082	23.799	0.019	1.016	0.035			
SME-62	6-MA													2.385		0.83	0.07	0.014	9.145	0.195	1.624	1.195	0.932	9.046	0.105	22.6	0.028	1.271	0.033			
SME-62	1-F													1.984	2.074	0.588	0.055	0.009	6.699	0.084	1.627	1.093	0.651		0.099	23.512	0.014					
SME-62	2-F													2.225	2.079	0.594	0.061	0.011	7.659	0.088	1.631	1.153	0.75		0.103	23.86	0.014					
SME-62	3-F													2.264	2.131	0.611	0.068	0.011	8.144	0.107	1.681	1.168	0.753		0.111	24.4	0.014					
SME-62	4-F													2.533	2.123	0.718	0.074	0.012	8.911	0.11	1.586	1.209	0.903		0.134	23.43	0.014					
SME-62	5-F													2.545	2.065	0.712	0.074	0.012	8.908	0.069	1.598	1.214	0.899		0.114	23.628	0.014					
SME-62	6-F													2.817	2.472	0.65	0.076	0.016	8.383	0.129	1.479	1.12	0.843		0.131	21.912	0.017					
SME-63	1-MA	46.97	41.49	38.78	1.352		32200	< 872	< 872	29400	< 872	1100	1160	2.627		0.876	0.068	0.011	8.838	0.128	1.639	1.328	0.89	8.907	0.111	22.276	0.04	1.093	0.042	8890		
SME-63	2-MA	46.56	40.75	39.24	1.359		34400	< 1020	< 1020	29200	< 1020	< 1040	1160	2.581		0.936	0.076	0.016	8.714	0.148	1.629	1.324	0.899	9.037	0.113	19.322	0.037	1.145	0.041			
SME-63	3-MA	48.41	41.1	38.91	1.358		32700	< 1040	< 1040	28200	< 1040	< 1040	1160	2.589		0.932	0.071	0.011	8.781	0.141	1.622	1.313	0.912	8.974	0.105	21.378	0.027	1.135	0.04			
SME-63	4-MA	46.99	42.92	39.38	1.341		34400	< 1040	< 1040	29600	< 1040	< 872	1150	2.563		0.933	0.067	0.012	8.633	0.106	1.666	1.341	0.9	9.105	0.113	22.299	0.052	1.076	0.043			
SME-63	5-MA													2.576		0.94	0.068	0.011	8.749	0.121	1.646	1.346	0.921	9.023	0.114	21.608	0.027	1.103	0.043			
SME-63	6-MA													2.565		0.92	0.066	0.013	8.653	0.119	1.644	1.333	0.896	9.036	0.11	22.065	0.03	1.085	0.041			
SME-63	1-F													2.679	2.716	0.891	0.068	0.016	8.936	0.122	1.699	1.371	0.925		0.102	25.769	0.019					
SME-63	2-F													2.835	2.387	0.913	0.078	0.016	8.774	0.143	1.643	1.304	0.97		0.128	24.003	0.017					
SME-63	3-F													2.584	2.437	0.927	0.071	0.017	8.656	0.165	1.66	1.347	0.908		0.106	24.823	0.019					
SME-63	4-F													2.761	2.469	0.835	0.096	0.018	8.928	0.127	1.657	1.347	0.979		0.132	25.018	0.019					
SME-63	5-F													2.598	2.492	0.869	0.066	0.011	8.679	0.104	1.576	1.283	0.915		0.108	23.723	0.016					
SME-63	6-F													2.597	2.406	0.821	0.058	0.006	8.638	0.051	1.7	1.329	0.9		0.1	25.024	0.014					
SME-64	1-MA	47.7	41.34		1.337		31900	< 1100	< 1100	21900	< 1100	< 1100	< 1100	2.623		1.122	0.058	0.008	8.145	0.157	1.659	1.446	0.843	8.94	0.104	22.389	0.016	0.916	0.081	9250		
SME-64	2-MA	47.48	41.61		1.404		34300	< 1100	< 1100	24500	< 1100	< 1100	< 1100	2.424		0.908	0.057	0.007	8.211	0.142	1.531	1.269	0.862	8.461	0.09	20.971	0.017	0.977	0.076			
SME-64	3-MA	48.23	42.2		1.334		34500	< 1310	< 1310	23300	< 1310	< 1310	< 1310	2.498		0.912	0.061	0.008	8.417	0.109	1.558	1.285	0.874	8.595	0.086	21.623	0.016	1.008	0.079			
SME-64	4-MA	48.43	42.38		1.374		33700	< 1240	< 1240	20600	< 1240	< 1240	< 1240	2.473		0.919	0.059	0.007	8.055	0.137	1.651	1.385	0.832	8.771	0.101	22.701	0.018	0.942	0.082			
SME-64	5-MA													2.38		0.935	0.057	0.009	7.949	0.136	1.581	1.329	0.859	8.757	0.087	21.895	0.017	1.034	0.083			
SME-64	6-MA													2.692		1.044	0.065	0.009	9.049	0.171	1.588	1.356	0.942	8.767	0.104	21.708	0.02	1.164	0.078			
SME-64	1-F													2.532	2.699	0.955	0.068	0.007	8.467	0.112	1.664	1.36	0.916		0.119	25.07	0.021					
SME-64	2-F													2.592	2.665	0.976	0.07	0.007	8.846	0.116	1.642	1.321	0.93		0.115	24.629	0.019					
SME-64	3-F													2.539	2.659	0.917	0.069	0.007	7.985	0.105	1.64	1.395	0.806		0.116	24.909	0.019					
SME-64	4-F													2.446	2.493	0.728	0.066	0.004	8.229	0.094	1.496	1.204	0.854		0.122	22.734	0.017					
SME-64	5-F													2.461	261	0.838	0.063	0.005	7.963	0.107	1.646	1.321	0.82		0.11	24.334	0.018					
SME-64	6-F													2.318	2.312	0.728	0.064	0.005	7.763	0.078	1.364	1.125	0.803		0.099	20.382	0.016					
SME-65	1-MA	49.43	43.36		1.308		36100	< 1140	< 1140	26100	< 1140	< 1140	< 1140	2.206		0.692	0.058	0.009	7.53	0.11	1.739	1.216	0.723	8.482	0.078	22.25	0.017	0.982	0.04	8620		
SME-65	2-MA	50.93	45.35		1.307		29100	< 1150	< 1150	22300	< 1150	< 1150	< 1150	2.019		0.631	0.052	0.009	6.83	0.087	1.723	1.179	0.66	8.408	0.07	24.004	0.015	0.913	0.039			
SME-65	3-MA	46.82	40.87		1.367		31000	< 1210	< 1210	22700	< 1210	< 1210	< 1210	2.29		0.732	0.059	0.008	7.886	0.074	1.663	1.19	0.763	8.416	0.086	23.39	0.03	0.948	0.039			
SME-65	4-MA	48.79	43.35		1.318		25500	< 1190	< 1190	20900	< 1190	< 1190	< 1190	2.018		0.614	0.051	0.008	6.77	0.116	1.761	1.203	0.639	8.234	0.06	24.693	0.022	0.916	0.04			
SME-65	5-MA													2.08		0.636	0.051	0.008	6.983	0.094	1.781	1.219	0.67	8.55	0.078	24.886	0.018	0.887	0.04			
SME-65	6-MA													2.203		0.699	0.054	0.007	7.496	0.094	1.701	1.197	0.732	8.396	0.084	23.605	0.018	0.893	0.039			
SME-65	1-F													2.135	282	0.725	0.055	0.012	6.97	0.089	1.735	1.227	0.681		0.101	25.972	0.016					
SME-65	2-F													2.035	2.806	0.549	0.048	0.008	6.762	0.035	1.749	1.183	0.651		0.078	25.936	0.015					
SME-65	3-F													2.343	2.734	0.673	0.058	0.008	7.98	0.074	1.704	1.224	0.771		0.098	25.363	0.014					
SME-65	4-F													2.122	2.735	0.648	0.054	0.008	7.296	0.044	1.687	1.197	0.704		0.095	25.08	0.018					
SME-65	5-F													1.921	2.756	0.554	0.047	0.008	6.503	0.054	1.678	1.159	0.615		0.065	25.088	0.016					
SME-65	6-F													2.19	2.766	0.588	0.052	0.006	7.425	0.033	1.746	1.205	0.715		0.091	25.725	0.014					
SME-66	1-MA	48.2	42.04	37.22	1.388		33800	< 1060	< 1060	26600	< 1060	< 1060	< 979	2.447		0.949	0.059	0.014	8.529	0.102	1.611	1.2	0.889	8.845	0.104	21.432	0.019	1.033	0.041	8840		
SME-66	2-MA	49.95	43.42	37.05	1.404		36900	< 1000	< 1000	25700	< 1000	< 1000	< 1000	2.707		1.01	0.067	0.036	9.13	0.099	1.603	1.215	0.961	9.12	0.086	21.582	0.021	1.055	0.041			
SME-66	3-MA	49.2	43.17	37.32	1.407		33200	< 1050	< 1050	24300	< 1050	< 1050	< 1050	2.348		0.921	0.062	0.015	8.825	0.114	1.621	1.088	0.927	8.923	0.101	21.76	0.019	1.077	0.043			
SME-66	4-MA	50.24	44.05	37.63	1.411		34200	< 979	< 979	22700	< 979	< 979	< 1060	2.51		1	0.061	0.01	8.801	0.098	1.654	1.209	0.914	9.141	0.083	22.553	0.016	1.111	0.042			
SME-66	5-MA													2.533		1.02	0.092	0.014	8.976	0.144	1.641	1.224	0.945	9.116	0.114	22.359	0.019	1.234	0.044			
SME-66	6-MA													2.654		0.962	0.068	0.015	9.268	0.2	1.632	1.215	0.923	8.753	0.105	22.007	0.036	1.353	0.048			
SME-66	1-F													2.533	249	0.735	0.074	0.012	8.356	0.103	1.572	1.272	0.871		0.1	23.401	0.016					
SME-66	2-F													2.512	2.464	0.672	0.067	0.011	8.73	0.104	1.575	1.228	0.875		0.093	23.442	0.014					
SME-66	3-F													2.491	2.366	0.803	0.064	0.01	8.496	0.067	1.627	1.263	0.894		0.088	24.076	0.014					
SME-66	4-F													2.689	2.499	0.822	0.073	0.01	9.066	0.044	1.604	1.312	0.955		0.097	23.761	0.027					
SME-66	5-F													1.93	1.919	0.489	0.051	0.007	6.57	0.036	1.219	0.969	0.699		0.07	17.699	0.011					
SME-66	6-F													2.581	2.422	0.997	0.068	0.009	8.671	0.087	1.647	1.352	0.929		0.09	24.443	0.016					
SME-67	1-MA	50.67	44.54		1.408		35400	< 1180	< 1180	24600	< 1180	< 1180	< 1180	2.2		0.786	0.064	0.009	8.266	0.126	1.642	1.128	0.821	8.117	0.082	23.198	0.033	1.068	0.067	8750		
SME-67	2-MA	51.22	45.33		1.468		33400	< 1260	< 1260	25400	< 1260	< 1260	< 1260	2.483		0.899	0.069	0.012	8.305	0.179	1.713	1.302	0.855	9.046	0.095	22.517	0.02	1.177	0.069			
SME-67	3-MA	50.74	45.29		1.451		32300	< 1240	< 1240	24700	< 1240	< 1240	< 1240	2.463		0.828	0.066	0.01	8.244	0.135	1.773	1.301	0.814	9.088	0.094	23.971	0.045	1.123	0.072			
SME-67	4-MA	50.25	44.77		1.461		32500	< 1240	< 1240	21700	< 1240	< 1240	< 1240	2.151		0.749	0.065	0.011	8.168	0.129	1.621	1.116	0.826	7.93	0.088	23.359	0.017	1.132	0.067			
SME-67	5-MA													2.696		0.977	0.072	0.015	9.163	0.161	1.61	1.338	0.967	9.408	0.094	21.236	0.022	1.258	0.063			
SME-67	6-MA													2.691		0.934	0.071	0.014	9.081	0.186	1.656	1.324	0.908	9.154	0.095	22.04	0.027	1.341	0.069			
SME-67	1-F													2.437	2.334	0.816	0.061	0.009	7.976	0.069	1.611	1.301	0.821		0.082	23.924	0.013					
SME-67	2-F													2.299	2.339	0.728	0.056	0.006	7.812	0	1.542	1.223	0.787		0.077	23.281	0.011					
SME-67	3-F													2.349	2.381	0.659	0.058	0.006	8.023	0.004	1.57	1.237	0.803		0.082	23.811	0.012					
SME-67	4-F													2.56	2.316	0.724	0.059	0.007	8.707	0.026	1.544	1.238	0.872		0.094	23.313	0.011					
SME-67	5-F													2.595	2.305	0.727	0.072	0.009	8.722	0.019	1.549	1.24	0.865		0.088	23.318	0.012					
SME-67	6-F													3.283	3.366	0.985	0.105	0.011	10.974	0.038	1.911	1.539	1.051		0.152	24.867	0.042					
SME-68	1-MA	50.26	44.71		1.445		34600	< 1100	< 1100	30900	< 1100	< 1140	< 1060	2.572		0.929	0.062	0.011	8.391	0.165	1.673	1.324	0.845	9.083	0.1	23.086	0.101	1.122	0.066	9960		
SME-68	2-MA	50.51	45.48		1.446		37200	< 1050	< 1050	32400	< 1050	< 1100	< 1140	2.686		0.959	0.071	0.014	8.77	0.202	1.715	1.368	0.874	9.392	0.102	23.193	0.035	1.191	0.068			
SME-68	3-MA	49.68	43.36		1.422		35700	< 1090	< 1090	28700	< 1090	< 1050	< 1090	2.608		0.929	0.063	0.011	8.524	0.161	1.639	1.315	0.848	8.965	0.096	22.949	0.08	1.109	0.065			
SME-68	4-MA	46.51	40.46		1.43		34100	< 1140	< 1140	28200	< 1140	< 1090	< 1100	2.535		0.915	0.061	0.01	8.205	0.152	1.649	1.315	0.827	8.887	0.094	22.909	0.034	1.061	0.065			
SME-68	5-MA													2.556		0.904	0.06	0.009	8.314	0.128	1.664	1.33	0.84	8.991	0.09	22.979	0.045	1.057	0.064			
SME-68	6-MA													2.552		0.988	0.062	0.011	8.342	0.161	1.644	1.367	0.882	9.147	0.098	22.257	0.029	1.121	0.064			
SME-68	1-F													2.603	266	0.983	0.068	0.012	8.48	0.157	1.655	1.268	0.856		0.108	25.07	0.02					
SME-68	2-F													2.462	2.291	0.975	0.063	0.013	7.859	0.168	1.622	1.249	0.831		0.103	24.159	0.019					
SME-68	3-F													2.495	2.608	0.932	0.063	0.011	8.034	0.134	1.639	1.243	0.815		0.097	24.85	0.019					
SME-68	4-F													2.532	2.674	0.966	0.068	0.015	8.307	0.17	1.671	1.279	0.839		0.109	25.421	0.022					
SME-68	5-F													2.557	2.614	1.073	0.068	0.013	8.072	0.169	1.651	1.249	0.806		0.105	24.866	0.02					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
SME-68	6-F												
SME-69	1MA	47.62	42.77		1.362		35100	< 968	< 968	25900	< 968	< 968	< 968
SME-69	2MA	46.94	42.31		1.377		32600	< 991	< 991	23600	< 991	< 991	< 991
SME-69	3MA	46.31	40.88		1.369		31400	< 1060	< 1060	27200	< 1060	< 1060	< 1060
SME-69	4MA	46.17	40.54		1.377		28600	< 910	< 910	25500	< 910	< 910	< 910
SME-69	5MA												
SME-69	6MA												
SME-69	1-F												
SME-69	2-F												
SME-69	3-F												
SME-69	4-F												
SME-69	5-F												
SME-69	6-F												
SME-70	1MA	49.33	43.83	42.89	1.168		31600	< 1050	< 1050	27800	< 1050	< 954	< 954
SME-70	2MA	49.71	43.69	42.45	1.181		31700	< 954	< 954	26900	< 954	< 1070	< 1070
SME-70	3MA	49.45	44.14	42.38	1.174		26700	< 1070	< 1070	27000	< 1070	< 1010	< 1010
SME-70	4MA	49.75	43.85	42.23	1.197		23800	< 1010	< 1010	21300	< 1010	< 1050	< 1050
SME-70	5MA												
SME-70	6MA												
SME-70	1-F												
SME-70	2-F												
SME-70	3-F												
SME-70	4-F												
SME-70	5-F												
SME-70	6-F												
SME-71	1MA	49.33	41.5	40.87	1.433		35300	< 1190	< 1190	27200	< 1190	< 1190	< 1160
SME-71	2MA	49.35	43.18	40.94	1.447		34500	< 1230	< 1230	26300	< 1230	< 1230	< 1190
SME-71	3MA	49.67	41.6	40.61	1.423		35000	< 1220	< 1220	27000	< 1220	< 1220	< 1230
SME-71	4MA	49.03	43.62	40.59	1.396		35000	< 1160	< 1160	25300	< 1160	< 1160	< 1220
SME-71	5MA												
SME-71	6MA												
SME-71	1-F												
SME-71	2-F												
SME-71	3-F												
SME-71	4-F												
SME-71	5-F												
SME-71	6-F												
SME-72	1-MA	51.08	45.71		1.408		34100	< 879	< 879	20600	< 879	< 879	884
SME-72	2-MA	49.28	44.43		1.439		34300	< 826	< 826	20500	< 826	< 826	1000
SME-72	3-MA	50.34	44.14		1.42		32200	< 1000	< 1000	21300	< 1000	< 1000	< 879
SME-72	4-MA	49.82	44.09		1.41		30800	< 961	< 961	20800	< 961	< 961	< 961
SME-72	5-MA												
SME-72	1-F												
SME-72	2-F												
SME-72	3-F												
SME-72	4-F												
SME-72	5-F												
SME-73	1-MA	47.72	42.66		1.348		32600	< 1110	< 1110	23900	< 1110	< 1110	1570
SME-73	2-MA	48.5	42.83		1.388		32200	< 1110	< 1110	22200	< 1110	< 1110	< 1120
SME-73	3-MA	50.59	45.3		1.337		29900	< 1120	< 1120	21400	< 1120	< 1120	< 1110
SME-73	4-MA	48.61	42.32		1.374		31100	< 1150	< 1150	20000	< 1150	< 1150	< 1150
SME-73	5-MA												
SME-73	6-MA												
SME-73	1-F												
SME-73	2-F												
SME-73	3-F												
SME-73	4-F												
SME-73	5-F												
SME-73	6-F												
SME-74	1-MA	43.3	38.25		1.344		29100	< 761	< 761	20300	< 761	< 761	1040
SME-74	2-MA	43.47	37.37		1.331		27600	< 1060	< 1060	20500	< 1060	< 1060	< 1060
SME-74	3-MA	43.32	38.71		1.338		27200	< 1070	< 1070	20600	< 1070	< 1070	< 1070
SME-74	4-MA	43.07	38.29		1.333		27500	< 1110	< 1110	21200	< 1110	< 1110	< 1110
SME-74	5-MA												
SME-74	6-MA												
SME-74	1-F												
SME-74	2-F												
SME-74	3-F												
SME-74	4-F												
SME-74	5-F												
SME-74	6-F												
SME-75	1-MA	50.66	44.38		1.392		31300	< 1100	< 1100	25200	< 1100	< 1190	1130
SME-75	2-MA	50.46	44.32		1.427		30700	< 1090	< 1090	24700	< 1090	< 1100	1200
SME-75	3-MA	50.71	45.09		1.42		30200	< 1190	< 1190	24700	< 1190	< 1150	1150
SME-75	4-MA	50.49	44.51		1.382		29100	< 1150	< 1150	23600	< 1150	< 1090	1190
SME-75	5-MA												
SME-75	6-MA												
SME-75	1-F												
SME-75	2-F												

Tank_Batch	Sample	Aluminum (wt%)	Boron (w %)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-68	6-F	2.536	2606	0.973	0.068	0.015	8.163	0.185	1.639	1.264	0.822		0.112	24.959	0.023					
SME-69	1MA	2.668		0.858	0.209	0.018	10.035	0.239	1.674	1.247	0.898	9.148	0.152	23.451	0.037	1.36	0.046	8480		
SME-69	2MA	2.856		0.933	0.077	0.024	9.511	0.264	1.762	1.344	0.959	9.5	0.11	24.354	0.022	1.587	0.049			
SME-69	3MA	2.574		0.863	0.072	0.015	8.187	0.224	1.769	1.311	0.858	9.317	0.085	24.601	0.052	1.332	0.048			
SME-69	4MA	2.423		0.8	0.064	0.013	7.359	0.192	1.668	1.226	0.805	8.75	0.092	22.867	0.04	1.229	0.045			
SME-69	5MA	2.375		0.782	0.066	0.014	7.764	0.228	1.62	1.194	0.786	8.523	0.094	22.561	0.027	1.238	0.044			
SME-69	6MA	2.439		0.787	0.071	0.014	8.54	0.224	1.621	1.139	0.86	8.651	0.094	22.328	0.024	1.382	0.044			
SME-69	1-F	2.36	2579	0.914	0.073	0.014	7.308	0.209	1.617	1.18	0.781		0.104	24.282	0.017					
SME-69	2-F	2.385	2476	0.783	0.065	0.013	7.093	0.19	1.508	1.142	0.8		0.097	22.956	0.016					
SME-69	3-F	2.572	2613	0.909	0.078	0.015	8.504	0.218	1.621	1.204	0.856		0.106	24.469	0.018					
SME-69	4-F	2.374	2699	0.882	0.067	0.013	7.84	0.204	1.657	1.2	0.788		0.103	25.099	0.017					
SME-69	5-F	2.424	2652	0.968	0.07	0.017	8.121	0.222	1.638	1.18	0.805		0.1	24.733	0.019					
SME-69	6-F	2.653	2662	0.867	0.075	0.024	8.316	0.206	1.633	1.238	0.881		0.113	24.74	0.019					
SME-70	1MA	2.525		0.959	0.067	0.012	8.595	0.134	1.677	1.383	0.911	9.151	0.111	23.5	0.059	1.216	0.048	8920		
SME-70	2MA	2.5		0.964	0.078	0.015	8.473	0.173	1.692	1.399	0.896	9.238	0.131	23.612	0.035	1.243	0.048			
SME-70	3MA	2.696		1.006	0.075	0.012	9.222	0.16	1.651	1.397	0.971	9.303	0.118	23.272	0.029	1.261	0.047			
SME-70	4MA	2.607		0.996	0.068	0.015	8.404	0.154	1.654	1.392	0.943	9.256	0.112	23.078	0.027	1.24	0.048			
SME-70	5MA	2.538		0.977	0.074	0.013	8.522	0.177	1.677	1.375	0.919	9.214	0.119	23.232	0.04	1.258	0.048			
SME-70	6MA	2.518		0.959	0.07	0.011	8.565	0.134	1.665	1.366	0.909	9.192	0.11	23.141	0.026	1.159	0.05			
SME-70	1-F	2.537	2585	0.928	0.071	0.013	8.79	0.083	1.616	1.28	0.92		0.108	24.385	0.015					
SME-70	2-F	2.459	2616	0.831	0.066	0.009	8.467	0.146	1.625	1.27	0.894		0.116	24.47	0.018					
SME-70	3-F	2.623	2607	0.956	0.07	0.011	9.042	0.077	1.612	1.267	0.947		0.111	24.323	0.017					
SME-70	4-F	2.418	2649	0.883	0.063	0.01	8.262	0.118	1.644	1.29	0.879		0.108	24.735	0.018					
SME-70	5-F	2.499	2676	0.949	0.066	0.01	8.505	0.113	1.668	1.308	0.907		0.109	25.031	0.019					
SME-70	6-F	2.383	2472	0.987	0.064	0.01	8.14	0.109	1.552	1.234	0.849		0.109	23.748	0.015					
SME-71	1MA	2.708		0.996	0.067	0.009	9.181	0.123	1.643	1.343	0.993	9.3	0.112	21.42	0.035	1.046	0.065	9760		
SME-71	2MA	2.567		0.969	0.062	0.009	8.689	0.133	1.578	1.299	0.948	8.995	0.098	22.626	0.032	1.037	0.063			
SME-71	3MA	2.671		0.991	0.067	0.01	9.143	0.075	1.612	1.33	0.97	9.123	0.097	21.887	0.066	1.082	0.063			
SME-71	4MA	2.679		1.006	0.066	0.008	9.198	0.072	1.629	1.341	0.98	9.169	0.108	22.33	0.046	1.03	0.063			
SME-71	5MA	2.624		0.998	0.064	0.009	8.992	0.092	1.626	1.345	0.968	9.213	0.101	21.656	0.07	1.055	0.064			
SME-71	6MA	2.678		0.997	0.067	0.009	9.191	0.095	1.63	1.348	0.977	9.203	0.102	22.577	0.055	1.077	0.064			
SME-71	1-F	2.629	2.62	0.905	0.068	0.011	8.792	0.059	1.621	1.227	0.926		0.105	24.446	0.016					
SME-71	2-F	2.451	2.41	0.824	0.067	0.012	8.271	0.095	1.51	1.164	0.868		0.092	22.948	0.016					
SME-71	3-F	2.658	2.6	0.938	0.069	0.012	8.969	0.117	1.612	1.249	0.933		0.113	24.495	0.017					
SME-71	4-F	2.623	2578	0.956	0.066	0.011	8.367	0.086	1.604	1.252	0.933		0.101	24.266	0.015					
SME-71	5-F	2.651	2589	0.936	0.069	0.012	8.96	0.086	1.618	1.277	0.94		0.111	24.579	0.015					
SME-71	6-F	2.647	2666	0.925	0.066	0.011	8.556	0.085	1.636	1.308	0.948		0.11	24.665	0.017					
SME-72	1-MA	2.404		0.844	0.064	0.011	8.481	0.111	1.642	1.256	0.862	8.957	0.127	22.948	0.017	1.202	0.022	9490		
SME-72	2-MA	2.488		0.937	0.067	0.013	8.83	0.102	1.676	1.302	0.921	9.16	0.121	22.764	0.016	1.351	0.023			
SME-72	3-MA	2.421		0.869	0.06	0.01	8.271	0.069	1.702	1.29	0.873	9.128	0.107	22.748	0.034	1.181	0.022			
SME-72	4-MA	2.555		0.972	0.065	0.012	9.017	0.072	1.657	1.271	0.955	9.119	0.113	22.248	0.072	1.277	0.022			
SME-72	5-MA	2.568		0.968	0.067	0.011	9.047	0.052	1.669	1.271	0.959	9.187	0.116	21.918	0.021	1.196	0.021			
SME-72	1-F	2.422	2593	0.988	0.064	0.014	8.592	0.058	1.669	1.303	0.894		0.109	24.713	0.014					
SME-72	2-F	2.27	2.6	0.878	0.063	0.013	8.016	0.081	1.659	1.305	0.849		0.098	24.748	0.012					
SME-72	3-F	2.489	2539	0.937	0.068	0.014	8.365	0.064	1.644	1.301	0.92		0.11	24.569	0.013					
SME-72	4-F	2.547	2596	0.96	0.068	0.015	9.056	0.079	1.665	1.344	0.957		0.112	24.676	0.013					
SME-72	5-F	2.362	2539	0.892	0.063	0.013	8.161	0.073	1.607	1.262	0.868		0.099	23.979	0.012					
SME-73	1-MA	2.683		0.964	0.068	0.014	9.201	0.168	1.613	1.292	0.961	8.85	0.117	22.243	0.025	1.333	0.022	9020		
SME-73	2-MA	2.611		0.958	0.067	0.012	8.82	0.148	1.632	1.322	0.935	9.039	0.121	23.894	0.026	1.33	0.023			
SME-73	3-MA	2.386		0.891	0.063	0.013	8.197	0.172	1.595	1.221	0.879	8.686	0.112	22.147	0.021	1.216	0.023			
SME-73	4-MA	2.419		0.894	0.066	0.01	8.133	0.159	1.646	1.27	0.841	8.849	0.114	22.77	0.022	1.244	0.022			
SME-73	5-MA	2.631		0.97	0.067	0.012	8.905	0.157	1.658	1.328	0.939	9.138	0.119	23.506	0.023	1.231	0.023			
SME-73	6-MA	2.608		0.96	0.182	0.012	9.041	0.13	1.676	1.333	0.933	9.166	0.182	23.335	0.023	1.222	0.024			
SME-73	1-F	2.386	2532	0.846	0.063	0.01	8.132	0.07	1.631	1.237	0.838		0.104	24.188	0.019					
SME-73	2-F	2.573	2502	0.928	0.07	0.01	8.788	0.029	1.601	1.262	0.92		0.111	24.166	0.019					
SME-73	3-F	2.596	2573	0.93	0.072	0.015	8.351	0.061	1.655	1.273	0.916		0.106	25.094	0.021					
SME-73	4-F	2.605	2523	0.94	0.076	0.011	8.351	0.066	1.626	1.28	0.935		0.113	24.587	0.021					
SME-73	5-F	2.702	2592	0.938	0.085	0.017	9.22	0.063	1.586	1.263	0.952		0.126	24.092	0.031					
SME-73	6-F	2.536	2592	0.912	0.07	0.011	8.683	0.079	1.613	1.239	0.903		0.106	24.422	0.019					
SME-74	1-MA	2.559		0.979	0.097	0.017	8.977	0.24	1.695	1.328	0.949	9.279	0.213	23.346	0.022	1.491	0.015	7960		
SME-74	2-MA	2.415		0.937	0.071	0.017	8.442	0.251	1.679	1.316	0.914	8.953	0.094	22.01	0.014	1.497	0.014			
SME-74	3-MA	2.492		0.962	0.071	0.016	8.678	0.238	1.7	1.335	0.933	9.208	0.112	23.45	0.018	1.46	0.015			
SME-74	4-MA	2.482		0.988	0.074	0.017	8.723	0.235	1.69	1.348	0.936	9.228	0.105	23.343	0.027	1.533	0.016			
SME-74	5-MA	2.465		0.962	0.073	0.017	8.636	0.315	1.709	1.339	0.944	9.272	0.1	23.566	0.033	1.473	0.016			
SME-74	6-MA	2.554		1.022	0.07	0.018	8.797	0.242	1.669	1.364	0.943	9.261	0.109	22.812	0.088	1.535	0.015			
SME-74	1-F	2.307	2556	0.751	0.059	0.01	8.162	0.054	1.561	1.255	0.863		0.091	23.314	0.014					
SME-74	2-F	2.54	2.74	0.788	0.079	0.013	9	0.061	1.685	1.332	0.945		0.105	24.967	0.015					
SME-74	3-F	2.607	2.75	0.753	0.085	0.012	9.306	0.019	1.69	1.34	0.949		0.109	25.089	0.012					
SME-74	4-F	2.589	2.797	0.868	0.06	0.009	9.025	0.047	1.698	1.364	0.937		0.102	25.242	0.014					
SME-74	5-F	2.614	2.781	0.9	0.081	0.012	9.319	0.064	1.719	1.372	0.973		0.116	25.567	0.014					
SME-74	6-F	2.655	2.358	0.859	0.063	0.009	9.201	0.012	1.723	1.368	0.945		0.091	25.559	0.013					
SME-75	1-MA	2.616		0.949	0.071	0.015	8.791	0.24	1.605	1.237	0.909	8.641	0.117	22.543	0.024	1.47	0.044	9300		
SME-75	2-MA	2.545		0.887	0.069	0.015	8.667	0.236	1.637	1.19	0.871	8.456	0.104	23.358	0.033	1.411	0.045			
SME-75	3-MA	2.561		0.944	0.067	0.016	8.538	0.224	1.633	1.224	0.874	8.829	0.102	22.839	0.026	1.357	0.043			
SME-75	4-MA	2.529		0.955	0.071	0.019	8.355	0.321	1.638	1.234	0.888	8.811	0.115	22.479	0.051	1.632	0.046			
SME-75	5-MA	2.611		0.99	0.071	0.016	8.752	0.253	1.599	1.27	0.918	8.909	0.114	22.409	0.047	1.448	0.044			
SME-75	6-MA	2.682		1.007	0.073	0.015	8.488	0.272	1.618	1.278	0.932	9.031	0.11	22.38	0.024	1.408	0.043			
SME-75	1-F	2.509	2.564	0.884	0.069	0.01	8.444	-0.03	1.63	1.247	0.868		0.094	24.142	0.015					
SME-75	2-F	2.531	2.176	0.871	0.08	0.01	8.608	-0.041	1.578	1.228	0.885		0.104	23.477	0.015					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for latter SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-75	3-F													2.479	2.55	0.863	0.075	0.009	8.403	-0.045	1559	1.226	0.886		0.099	23.2	0.013					
SME-75	4-F													2.542	2.85	0.937	0.074	0.011	8.672	-0.001	1602	1.244	0.902		0.101	23.885	0.019					
SME-75	5-F													2.383	2.45	0.828	0.067	0.011	8.05	-0.042	1572	1.185	0.826		0.101	23.191	0.015					
SME-75	6-F													2.391	2.27	0.835	0.064	0.01	8.075	-0.085	1586	1.193	0.826		0.09	23.324	0.014					
SME-76	1-MA	50.01	44.31		1.406		39100	< 1120	< 1120	27500	< 1120	< 1120	< 1120	2.513		0.954	0.071	0.013	8.3	0.187	1645	1.297	0.855	8.841	0.115	23.029	0.033	1.16	0.028	9650		
SME-76	2-MA	50.14	44.97		1.419		38200	< 1020	< 1020	26700	< 1020	< 1020	< 1020	2.481		0.841	0.072	0.012	8.151	0.158	1.7	1.254	0.782	8.466	0.107	23.55	0.039	1.045	0.028			
SME-76	3-MA	50.51	45.08		1.405		38000	< 1140	< 1140	26700	< 1140	< 1140	< 1140	2.777		1.221	0.078	0.011	8.494	0.16	1569	1.41	0.81	9.39	0.106	22.126	0.018	1.054	0.028			
SME-76	4-MA	50.07	44.08		1.414		38000	< 1160	< 1160	25900	< 1160	< 1160	< 1160	2.487		0.91	0.077	0.012	8.389	0.15	1634	1.265	0.818	8.714	0.107	23.107	0.023	1.014	0.027			
SME-76	5-MA													2.603		1.933	0.099	0.015	8.329	0.197	1621	1.277	0.822	8.858	0.13	22.673	0.031	1.074	0.027			
SME-76	6-MA													2.287		0.887	0.068	0.01	7.655	0.129	1749	1.295	0.737	8.767	0.101	24.842	0.052	0.949	0.03			
SME-76	1-F													2.792	2.523	1.146	0.063	0.011	8.596	0.067	1587	1.436	0.824		0.081	24.246	0.019					
SME-76	2-F													2.159	2.663	0.683	0.087	0.01	7.252	0.11	1678	1.241	0.709		0.088	25.597	0.019					
SME-76	3-F													2.358	2.529	0.757	0.06	0.01	7.926	0.081	1596	1.259	0.826		0.089	23.723	0.018					
SME-76	4-F													2.348	2.479	0.76	0.082	0.009	8.006	0.044	1571	1.235	0.795		0.09	23.893	0.019					
SME-76	5-F													2.118	2.351	0.713	0.056	0.011	7.136	0.108	1434	1.137	0.745		0.082	21.356	0.016					
SME-76	6-F													2.134	2.605	0.658	0.086	0.008	7.11	0.09	1638	1.222	0.693		0.076	25.078	0.018					
SME-77	1-MA	50.68	44.51		1.4		36100	< 1220	< 1220	28300	< 1220	2130	< 1220	2.72		1.066	0.066	0.016	8.878	0.245	1588	1.272	0.909	8.717	0.091	22.289	0.025	1.411	0.091	9660		
SME-77	2-MA	49.75	43.85		1.413		36700	< 1190	< 1190	27200	< 1190	2010	< 1190	2.717		1.112	0.071	0.017	8.803	0.225	1586	1.324	0.937	9.03	0.105	22.151	0.029	1.429	0.091			
SME-77	3-MA	50.06	44.04		1.414		36300	< 1210	< 1210	26500	< 1210	2020	< 1210	2.713		1.033	0.065	0.015	8.803	0.234	1.6	1.324	0.926	9.089	0.106	22.491	0.028	1.411	0.09			
SME-77	4-MA	49.12	43.48		1.427		35800	< 1240	< 1240	25500	< 1240	2010	< 1240	2.8		1.083	0.075	0.017	9.049	0.25	1571	1.326	0.956	9.083	0.092	21.966	0.025	1.383	0.089			
SME-77	5-MA													2.81		1.052	0.07	0.016	9.304	0.192	1572	1.309	0.966	8.95	0.116	22.17	0.024	1.412	0.091			
SME-77	6-MA													2.767		1.015	0.066	0.014	9.132	0.207	1551	1.287	0.936	8.915	0.108	21.937	0.024	1.301	0.095			
SME-77	1-F													2.637	2.463	0.988	0.064	0.013	8.605	0.15	1555	1.278	0.906		0.106	23.78	0.024					
SME-77	2-F													2.639	2.465	0.977	0.063	0.012	8.711	0.143	1555	1.286	0.908		0.103	23.851	0.022					
SME-77	3-F													2.684	2.385	0.981	0.069	0.012	8.858	0.159	1534	1.278	0.938		0.103	23.264	0.021					
SME-77	4-F													2.655	2.397	0.978	0.073	0.013	8.815	0.174	1485	1.21	0.89		0.109	22.506	0.024					
SME-77	5-F													2.769	2.46	1.283	0.074	0.018	9.116	0.279	1629	1.297	0.928		0.116	24.404	0.027					
SME-77	6-F													2.675	2.456	1.044	0.071	0.013	8.852	0.164	1573	1.301	0.934		0.107	23.794	0.024					
SME-77a2	1	50.77	44.03		1.429		37300	< 818	< 818	31000	< 818	1140	1280																			
SME-77a2	2	51.25	44.62		1.43		31600	< 735	< 735	30600	< 735	< 1000	1480																			
SME-77a2	3	51.09	44.4		1.452		36300	< 1000	< 1000	29400	< 1000	< 1120	1460																			
SME-77a2	4	52.21	45.64		1.425		34200	< 1120	< 1120	22200	< 1120	< 735	955																			
SME-78	1-MA	51.91	45.66		1.427		37700	< 1040	< 1040	25500	< 1040	2490	1140	2.62		0.997	0.064	0.01	8.478	0.171	1629	1.309	0.89	9.051	0.103	22.873	0.026	1.183	0.072	9560		
SME-78	2-MA	51.61	45.18		1.472		41100	< 1100	< 1100	25900	< 1100	2240	1110	2.777		1.05	0.066	0.014	8.802	0.174	1613	1.32	0.927	9.004	0.109	22.271	0.048	1.218	0.073			
SME-78	3-MA	52.08	45.35		1.438		41400	< 1160	< 1160	23800	< 1160	2300	< 1150	2.59		1.014	0.065	0.011	8.4	0.207	1565	1.288	0.889	8.684	0.102	21.805	0.019	1.135	0.072			
SME-78	4-MA	52.07	45.76		1.468		38900	< 1210	< 1210	23200	< 1210	2000	< 1210	2.666		1.015	0.065	0.011	8.739	0.186	1601	1.317	0.902	8.834	0.107	22.409	0.033	1.174	0.07			
SME-78	5-MA													2.666		1.025	0.067	0.011	8.634	0.156	1.62	1.323	0.914	8.94	0.103	22.512	0.045	1.159	0.073			
SME-78	6-MA													2.637		1.035	0.069	0.012	8.485	0.177	1573	1.287	0.898	8.776	0.112	22.12	0.02	1.134	0.09			
SME-78	1-F													2.683	2.628	0.985	0.071	0.011	8.58	0.115	1603	1.31	0.923		0.112	24.704	0.019					
SME-78	2-F													2.612	2.595	0.967	0.084	0.014	8.125	0.123	1568	1.263	0.859		0.107	24.428	0.026					
SME-78	3-F													2.714	2.573	0.976	0.138	0.014	8.857	0.111	1585	1.315	0.932		0.133	24.4	0.02					
SME-78	4-F													2.581	2.541	0.946	0.083	0.013	8.317	0.106	1557	1.277	0.891		0.122	24.108	0.019					
SME-78	5-F													2.674	2.654	1.119	0.123	0.013	8.39	0.13	1617	1.342	0.919		0.142	24.685	0.019					
SME-79	1-MA	48.67	42.24		1.347		35700	< 908	< 908	28400	< 908	2040	1750	2.728		1.025	0.065	0.011	9.116	0.119	1701	1.37	0.945	9.171	0.116	22.739	0.015	1.112	0.049	8910		
SME-79	2-MA	48.44	42.16		1.374		34500	< 1100	< 1100	26800	< 1100	2140	1140	2.737		1.061	0.068	0.011	9.174	0.146	1696	1.371	0.936	9.171	0.135	22.437	0.015	1.171	0.049			
SME-79	3-MA	48.78	42.88		1.43		36500	< 1100	< 1100	28400	< 1100	2220	1320	2.725		1.033	0.064	0.013	9.12	0.142	1605	1.324	0.91	8.967	0.127	22.059	0.016	1.15	0.057			
SME-79	4-MA	48.36	42.39		1.356		36000	< 1030	< 1030	29000	< 1030	2220	1230	2.63		1.008	0.065	0.011	8.714	0.148	1651	1.3	0.878	8.861	0.112	21.987	0.016	1.152	0.052			
SME-79	5-MA													2.563		0.985	0.063	0.013	8.515	0.137	1697	1.304	0.849	8.85	0.105	22.324	0.016	1.224	0.051			
SME-79	6-MA													2.615		0.973	0.065	0.013	8.673	0.157	1664	1.306	0.857	9.106	0.112	22.443	0.016	1.21	0.049			
SME-79	7-MA													2.639		0.996	0.07	0.017	8.754	0.192	1613	1.26	0.893	8.834	0.095	22.292	0.019	1.447	0.051			
SME-79	8-MA													2.589		0.938	0.068	0.013	8.58	0.162	1648	1.227	0.843	8.739	0.102	22.953	0.021	1.416	0.051			
SME-79	9-MA													2.608		0.979	0.075	0.016	8.715	0.212	1596	1.251	0.878	8.639	0.107	22.316	0.023	1.45	0.051			
SME-79	10-MA													2.451		0.887	0.064	0.013	8.153	0.175	1622	1.23	0.818	8.484	0.094	22.662	0.019	1.305	0.049			
SME-79	11-MA													2.646		0.957	0.066	0.012	8.716	0.164	1568	1.235	0.886	8.849	0.097	22.408	0.026	1.311	0.057			
SME-79	1-F													2.734	2.681	1.028	0.069	0.017	9.314	-0.126	1694	1.276	0.916		0.114	25.444	0.018					
SME-79	2-F													2.556	2.667	0.972	0.068	0.018	8.55	-0.231	1662	1.248	0.845		0.109	25.452	0.02					
SME-79	3-F													2.567	2.612	0.925	0.069	0.016	8.685	-0.128	1597	1.225	0.861		0.104	24.806	0.019					
SME-79	4-F													2.704	2.645	0.972	0.069	0.017	8.785	-0.21	1651	1.256	0.861		0.105	25.335	0.018					
SME-79	5-F													2.747	2.578	1.024	0.072	0.017	9.136	-0.221	1604	1.307	0.927		0.111	25.197	0.018					
SME-79	6-F													2.714	2.664	0.941	0.067	0.015	9.029	0.149	1648	1.282	0.911		0.108	25.219	0.018					
SME-80	1-MA	49.03	43.59		1.425		36600	< 1080	< 1080	25200	< 1080	2050	1110	2.522		0.91	0.059	0.01	8.315	0.087	1.75	1.326	0.829	9.069	0.094	23.903	0.02	0.991	0.04	9700		
SME-80	2-MA	49.2	43.8		1.44		37100	< 1080	< 1080	24700	< 1080	1990	1070	2.356		0.94	0.065	0.011	8.314	0.079	1.65	1.294	0.873	8.882	0.108	22.567	0.023	1.041	0.039			
SME-80	3-MA	49.11	43.28		1.419		38000	< 981	< 981	21700	< 981	1820	1110	2.418		0.931	0.061	0.011	8.457	0.115	1695	1.305	0.851	8.809	0.1	22.537	0.024	1.068	0.04			
SME-80	4-MA	49.01	43.25		1.421		36500	< 1020	< 1020	21200	< 1020	1640	< 1080	2.36		0.943	0.059	0.01	8.213	0.111	1665	1.32	0.851	9.001	0.096	22.727	0.017	0.976	0.04			
SME-80	5-MA													2.389		0.883	0.058	0.01	8.234	0.092	1705	1.289	0.804	8.766	0.096	23.205	0.014	0.978	0.042			
SME-80	6-MA													2.407		0.934	0.061	0.01	8.334	0.102	1687	1.332	0.846	8.862	0.1	22.864	0.014	0.974	0.04			
SME-80	1-F													2.407	2.64	0.945	0.067	0.014	8.25	0.175	1.63	1.288	0.861		0.11	24.377	0.016					
SME-80	2-F													2.534	2.637	0.935	0.073	0.022	8.134	0.129	1618	1.301	0.857		0.107	24.376	0.015					
SME-80	3-F													2.385	2.58	0.872	0.066	0.014	8.159	0.125	1632	1.227	0.817		0.116	23.936	0.016					
SME-80	4-F													2.374	2.702	0.907	0.069	0.016	8.153	0.12	1638	1.32	0.844		0.104	25.066	0.025					
SME-80	5-F													2.103	2.294	0.821	0.059	0.014	7.118	0.113	1422	1.14	0.736		0.09	21.643	0.022					
SME-80	6-F													2.444	2.515	0.89	0.071	0.023	[illegible]	0.121	1556	1.229	0.82		0.103	23.419	0.015					
SME-81	1-MA	49.77	43.65		1.445		34300	< 1020	< 1020	27900	< 1020	2360	1080	2.553		0.937	0.059	0.005	9.124	0.033	1631	1.394	0.971	8.805	0.104	21.022	0.015	0.86	0.02	8620		
SME-81	2-MA	50.15	44.45		1.452		34900	< 1010	< 1010	27200	< 1010	2290	1060	2.481		0.924	0.059	0.004	8.985	0.028	1622	1.361	0.937	8.641	0.105	21.459	0.017	0.806	0.021			
SME-81	3-MA	50.06	43.94		1.46		33500	< 1000	< 1000	26200	< 1000	2380	1050	2.497		0.935	0.06	0.005	8.76	0.05	1.63	1.386	0.944	8.726	0.109	22.21	0.026	0.824	0.017			
SME-81	4-MA	50.15	44.59		1.41		33700	< 1050	< 1050	26100	< 1050	2140	1070	2.58		0.943	0.06	0.006	9.274	0.016	1671	1.437	0.987	8.854	0.116	22.512	0.009	0.829	0.016			
SME-81	5-MA													2.351		0.824	0.058	0.006	8.925	0.024	1602	1.275	0.946	8.668	0.102	22.227	0.021	0.866	0.015			
SME-81	6-MA													2.502		0.905	0.059	0.005	9.089	0.013	1578	1.332	0.947	8.432	0.101	21.32	0.031	0.816	0.015			
SME-81	1-F													2.52	2.616	0.944	0.07	0.009	9.068	0.017	1643	1.39	0.957		0.11	24.183	0.01					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFF batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)
SME-81	2-F													2.576
SME-81	3-F													2.484
SME-81	4-F													2.518
SME-81	5-F													2.586
SME-81	6-F													2.464
SME-81e	1-MA													2.647
SME-81e	2-MA													2.505
SME-81e	3-MA													2.512
SME-81e	4-MA													2.555
SME-81e	5-MA													2.507
SME-81e	6-MA													2.582
SME-81e	1-F													2.502
SME-81e	2-F													2.45
SME-81e	3-F													2.561
SME-81e	4-F													2.544
SME-81e	5-F													2.51
SME-81e	6-F													2.574
SME-82	1-MA	49.21	43.34		1.428		30900	< 1060	< 1060	20700	< 1060	1950	1160	2.594
SME-82	2-MA	48.9	43.32		1.491		30800	< 1040	< 1040	20100	< 1040	1920	1190	3.026
SME-82	3-MA	48.46	43.21		1.452		31000	< 908	< 908	20200	< 908	1800	1100	2.62
SME-82	4-MA	48.8	43.37		1.479		30800	< 1040	< 1040	20200	< 1040	1430	1180	2.55
SME-82	5-MA													2.629
SME-82	6-MA													2.653
SME-82	1-F													3.159
SME-82	2-F													2.846
SME-82	3-F													2.626
SME-82	4-F													2.858
SME-82	5-F													2.501
SME-82	6-F													2.439
SME-83	1-MA	47.27	41.9		1.414		37700	< 1000	< 1000	23000	< 1000	1910	992	2.513
SME-83	2-MA	47.29	42.5		1.385		31600	< 1080	< 1080	22900	< 1080	2060	< 1000	2.472
SME-83	3-MA	47.66	42.5		1.392		34500	< 936	< 936	23100	< 916	2080	< 1080	1.901
SME-83	4-MA	47.72	42.53		1.388		37600	< 1090	< 1090	22000	< 1090	1890	< 1090	2.469
SME-83	5-MA													2.445
SME-83	6-MA													2.63
SME-83	1-F													2.537
SME-83	2-F													2.626
SME-83	3-F													1.956
SME-83	4-F													2.438
SME-83	5-F													2.524
SME-83	5-F													2.424
SME-84	1-MA	47.92	42.32		1.34		36100	< 787	< 787	21500	< 787	2090	< 987	2.417
SME-84	2-MA	48.04	42.48		1.354		36700	< 987	< 987	22100	< 987	1470	< 1020	2.535
SME-84	3-MA	47.98	42.26		1.343		35600	< 1100	< 1100	21500	< 1100	2010	< 1100	2.557
SME-84	4-MA	47.98	42.35		1.358		36200	< 1020	< 1020	20500	< 1020	1840	< 787	2.462
SME-84	5-MA													2.499
SME-84	1-F													2.546
SME-84	2-F													2.487
SME-84	3-F													2.526
SME-84	4-F													2.535
SME-84	5-F													2.49
SME-85	1-MA	48.95	43.37		1.387		35500	< 1090	< 1090	24000	< 1090	1980	< 1090	2.373
SME-85	2-MA	48.64	42.97		1.359		35000	< 1080	< 1080	22000	< 1080	1870	< 1080	2.616
SME-85	3-MA	49.02	43.36		1.362		38000	< 1090	< 1090	22700	< 1090	1900	< 1090	2.541
SME-85	4-MA	49.25	43.43		1.385		35500	< 1110	< 1110	21900	< 1110	1860	< 1110	2.528
SME-85	5-MA													2.659
SME-85	6-MA													2.598
SME-85	1-F													2.631
SME-85	2-F													2.565
SME-85	3-F													2.619
SME-85	4-F													2.869
SME-85	5-F													2.743
SME-85	6-F													2.64
SME-86	1-MA	48.03	42.13		1.377		27900	< 1020	< 1020	26400	< 1020	< 1020	< 1020	2.786
SME-86	2-MA	47.44	41.28		1.422		28500	< 1120	< 1120	24900	< 1120	< 1120	< 1080	2.462
SME-86	3-MA	47.23	41.14		1.416		27600	< 1100	< 1100	26000	< 1100	< 1100	< 1120	2.733
SME-86	4-MA	47.16	41.06		1.412		27900	< 1080	< 1080	25100	< 1080	< 1080	< 1100	2.709
SME-86	5-MA													2.557
SME-86	6-MA													2.672
SME-86	1-F													2.835
SME-86	2-F													3.331
SME-86	3-F													2.434
SME-86	4-F													2.755
SME-86	5-F													2.825
SME-87	1-MA	47.31	42.09		1.412		39300	< 716	< 716	21500	< 716	1350	981	2.425
SME-87	2-MA	47.74	42.34		1.415		39100	< 847	< 847	22700	< 847	1520	1030	2.551
SME-87	3-MA	45.6	40.29		1.416		39500	< 1000	< 1000	22900	< 1000	1740	1030	2.556
SME-87	4-MA	46.37	408		1.433		40300	< 1200	< 1200	22300	< 1200	1830	< 1200	2.612
SME-87	5-MA													2.562

Tank_Batch	Sample	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SME-81	2-F	2.412	0.913	0.08	0.011	9.232	0.02	1.623	1.394	0.955		0.104	24.003	0.011					
SME-81	3-F	2.324	0.881	0.074	0.007	8.837	0.002	1.581	1.364	0.922		0.104	23.714	0.009					
SME-81	4-F	2.334	0.91	0.067	0.007	8.951	0.005	1.598	1.354	0.952		0.115	23.538	0.01					
SME-81	5-F	2.392	0.956	0.076	0.011	9.216	0.034	1.609	1.392	0.979		0.118	23.703	0.009					
SME-81	6-F	2.388	0.858	0.066	0.008	8.865	0.04	1.603	1.355	0.937		0.094	23.642	0.011					
SME-81e	1-MA		0.906	0.058	0.012	8.565	0.057	1.549	1.241	0.903	8.356	0.111	20.713	0.008	0.94	0.017			
SME-81e	2-MA		0.904	0.06	0.007	8.519	0.059	1.638	1.313	0.942	8.931	0.115	22.06	0.008	0.869	0.017			
SME-81e	3-MA		0.893	0.059	0.007	8.515	0.063	1.636	1.289	0.933	8.8	0.109	21.873	0.008	0.955	0.023			
SME-81e	4-MA		0.893	0.065	0.006	9.082	0.065	1.621	1.284	0.943	8.72	0.115	21.87	0.008	0.898	0.016			
SME-81e	5-MA		0.915	0.062	0.009	8.512	0.089	1.584	1.297	0.937	8.67	0.12	21.239	0.01	1.017	0.021			
SME-81e	6-MA		0.936	0.065	0.01	9.184	0.091	1.607	1.297	0.964	8.741	0.115	21.588	0.01	1.141	0.02			
SME-81e	1-F	2.376	0.92	0.068	0.012	8.579	0.065	1.629	1.296	0.936		0.105	24.113	0.012					
SME-81e	2-F	2.493	0.896	0.075	0.013	8.836	0.045	1.606	1.28	0.919		0.103	23.588	0.013					
SME-81e	3-F	2.465	0.914	0.069	0.012	8.531	0.037	1.572	1.299	0.931		0.104	23.239	0.012					
SME-81e	4-F	2.352	0.921	0.07	0.011	9.116	0.064	1.641	1.326	0.958		0.098	24.051	0.01					
SME-81e	5-F	2.304	0.923	0.079	0.013	8.969	0.063	1.602	1.286	0.923		0.109	23.63	0.013					
SME-81e	6-F	2.166	0.923	0.072	0.013	9.107	0.07	1.628	1.289	0.955		0.112	24.144	0.012					
SME-82	1-MA		0.894	0.067	0.014	8.836	0.196	1.625	1.314	0.916	8.511	0.134	22.939	0.018	1.339	0.085	8460		
SME-82	2-MA		0.89	0.068	0.012	8.531	0.165	1.623	1.329	0.914	8.564	0.13	22.952	0.016	1.195	0.083			
SME-82	3-MA		0.901	0.066	0.011	8.511	0.124	1.627	1.333	0.918	8.581	0.13	22.976	0.016	1.176	0.084			
SME-82	4-MA		0.876	0.064	0.012	8.631	0.174	1.585	1.295	0.9	8.32	0.125	22.665	0.016	1.213	0.085			
SME-82	5-MA		0.89	0.083	0.012	8.896	0.173	1.582	1.313	0.905	8.28	0.143	22.244	0.016	1.194	0.083			
SME-82	6-MA		0.908	0.066	0.013	8.997	0.155	1.62	1.349	0.928	8.51	0.129	22.663	0.016	1.22	0.083			
SME-82	1-F	3.159	0.932	0.079	0.014	10.624	0.142	1.932	1.604	1.085		0.134	29.386	0.017					
SME-82	2-F	2.779	0.967	0.081	0.012	9.464	0.085	1.791	1.454	0.979		0.111	26.395	0.015					
SME-82	3-F	2.362	0.776	0.066	0.01	8.796	0.078	1.605	1.333	0.899		0.101	24.392	0.014					
SME-82	4-F	281	0.856	0.074	0.01	9.603	0.088	1.752	1.454	0.984		0.118	26.634	0.016					
SME-82	5-F	2.393	0.744	0.064	0.01	8.432	0.075	1.48	1.25	0.862		0.112	22.913	0.014					
SME-82	6-F	2.398	0.722	0.063	0.009	8.159	0.072	1.439	1.212	0.834		0.109	22.265	0.013					
SME-83	1-MA		0.846	0.06	0.011	8.552	0.098	1.646	1.279	0.869	8.41	0.092	22.676	0.014	1.125	0.051	8570		
SME-83	2-MA		0.81	0.062	0.01	8.341	0.105	1.655	1.264	0.841	8.35	0.093	22.18	0.016	1.095	0.051			
SME-83	3-MA		0.529	0.045	0.007	6.341	0.078	1.781	1.192	0.588	7.561	0.072	25.146	0.013	0.764	0.055			
SME-83	4-MA		0.824	0.06	0.01	8.437	0.106	1.63	1.256	0.854	8.406	0.093	22.303	0.014	1.066	0.049			
SME-83	5-MA		0.801	0.06	0.009	8.305	0.091	1.689	1.276	0.836	8.406	0.085	23.273	0.013	1.028	0.052			
SME-83	6-MA		0.901	0.064	0.011	8.999	0.121	1.668	1.303	0.911	8.564	0.112	23.203	0.014	1.069	0.054			
SME-83	1-F	2.143	0.906	0.111	0.017	8.619	0.098	1.629	1.267	0.873		0.116	24.748	0.019					
SME-83	2-F	2.176	0.923	0.083	0.022	8.873	0.148	1.616	1.288	0.895		0.133	24.563	0.021					
SME-83	3-F	2.126	0.616	0.056	0.015	6.413	0.143	1.745	1.201	0.603		0.085	26.848	0.02					
SME-83	4-F	2.621	0.862	0.077	0.016	821	0.176	1.62	1.232	0.823		0.122	24.474	0.017					
SME-83	5-F	262	0.952	0.071	0.015	858	0.127	1.627	1.26	0.868		0.112	24.417	0.017					
SME-83	5-F	2.656	0.86	0.076	0.016	8.211	0.147	1.656	1.265	0.822		0.111	25.061	0.019					
SME-84	1-MA		0.902	0.065	0.015	8.553	0.123	1.643	1.264	0.893	8.7	0.094	22.4	0.013	1.275	0.035	8120		
SME-84	2-MA		0.948	0.068	0.016	8.788	0.12	1.667	1.323	0.916	8.954	0.096	22.353	0.014	1.379	0.029			
SME-84	3-MA		0.937	0.07	0.017	8.516	0.155	1.705	1.318	0.922	8.847	0.106	22.876	0.021	1.427	0.028			
SME-84	4-MA		0.918	0.071	0.017	8.483	0.166	1.652	1.305	0.891	8.761	0.1	22.421	0.016	1.462	0.03			
SME-84	5-MA		0.956	0.069	0.022	8.641	0.154	1.639	1.338	0.915	8.763	0.101	21.973	0.016	1.388	0.031			
SME-84	1-F	2.687	0.908	0.073	0.014	8.523	0.14	1.669	1.353	0.93		0.116	24.748	0.014					
SME-84	2-F	2.721	0.854	0.091	0.014	8.591	0.12	1.66	1.345	0.902		0.101	24.741	0.015					
SME-84	3-F	2.645	0.911	0.069	0.013	8.773	0.116	1.654	1.354	0.921		0.103	24.504	0.013					
SME-84	4-F	2.727	0.813	0.093	0.014	8.795	0.104	1.676	1.317	0.908		0.115	24.835	0.014					
SME-84	5-F	2.663	0.852	0.084	0.013	8.655	0.084	1.657	1.353	0.898		0.118	24.55	0.013					
SME-85	1-MA		0.864	0.067	0.013	8.724	0.14	1.609	1.263	0.875	8.771	0.088	22.174	0.021	1.183	0.062	8950		
SME-85	2-MA		0.951	0.067	0.011	8.645	0.133	1.629	1.374	0.921	8.906	0.104	22.034	0.017	1.147	0.063			
SME-85	3-MA		0.92	0.068	0.012	8.621	0.123	1.609	1.318	0.897	8.74	0.094	21.597	0.021	1.149	0.063			
SME-85	4-MA		0.892	0.065	0.011	8.723	0.096	1.609	1.29	0.897	8.711	0.098	22.068	0.016	1.114	0.063			
SME-85	5-MA		0.951	0.067	0.012	9.081	0.097	1.603	1.347	0.953	8.902	0.097	20.105	0.017	1.153	0.062			
SME-85	6-MA		0.918	0.067	0.01	8.886	0.096	1.645	1.358	0.926	8.927	0.092	21.886	0.018	1.12	0.063			
SME-85	1-F	2.595	0.933	0.275	0.014	9.194	0.157	1.628	1.324	0.926		0.091	23.82	0.018					
SME-85	2-F	2.629	0.866	0.241	0.019	8.827	0.185	1.657	1.358	0.898		0.095	24.222	0.017					
SME-85	3-F	2.622	0.933	0.201	0.013	8.966	0.109	1.638	1.347	0.916		0.1	23.991	0.016					
SME-85	4-F	2.564	0.976	0.189	0.016	9.295	0.115	1.616	1.337	0.932		0.12	23.838	0.117					
SME-85	5-F	2.607	0.957	0.098	0.019	9.378	0.121	1.638	1.359	0.97		0.101	23.984	0.016					
SME-85	6-F	2.628	0.968	0.089	0.014	8.512	0.139	1.664	1.395	0.938		0.116	24.371	0.019					
SME-86	1-MA		0.988	0.066	0.011	9.276	0.167	1.594	1.311	0.952	8.841	0.109	21.524	0.02	1.164	0.056	7660		
SME-86	2-MA		0.911	0.06	0.028	8.144	0.138	1.652	1.348	0.867	8.949	0.101	22.782	0.019	0.938	0.053			
SME-86	3-MA		0.95	0.064	0.008	9.068	0.129	1.603	1.345	0.938	8.911	0.099	21.858	0.02	1.051	0.053			
SME-86	4-MA		0.947	0.066	0.009	8.577	0.122	1.603	1.327	0.926	8.811	0.1	21.4	0.019	1.057	0.053			
SME-86	5-MA		0.907	0.061	0.008	8.464	0.119	1.62	1.313	0.875	8.771	0.097	22.175	0.025	0.987	0.052			
SME-86	6-MA		0.954	0.066	0.009	8.796	0.155	1.611	1.31	0.913	8.821	0.111	21.615	0.022	1.015	0.052			
SME-86	1-F	2.631	0.993	0.141	0.018	9.309	0.215	1.65	1.338	0.949		0.146	24.989	0.021					
SME-86	2-F	2.527	0.972	0.187	0.022	9.304	0.204	1.571	1.264	0.939		0.123	24.143	0.02					
SME-86	3-F	2.442	0.861	0.115	0.014	7.923	0.168	1.505	1.21	0.774		0.11	23.026	0.018					
SME-86	4-F	2.635	0.989	0.168	0.018	9.027	0.25	1.638	1.3	0.92		0.133	24.825	0.021					
SME-86	5-F	2.689	0.981	0.188	0.018	9.349	0.256	1.619	1.317	0.951		0.127	24.683	0.02					
SME-87	1-MA		0.831	0.063	0.012	8.028	0.157	1.632	1.281	0.815	8.681	0.105	22.467	0.052	1.041	0.056	10200		
SME-87	2-MA		0.928	0.062	0.01	825	0.136	1.629	1.324	0.839	8.7	0.099	22.482	0.034	1.045	0.056			
SME-87	3-MA		0.909	0.108	0.012	836	0.147	1.628	1.343	0.85	8.76	0.12	22.552	0.031	1.012	0.057			
SME-87	4-MA		0.892	0.061	0.01	8.518	0.15	1.649	1.334	0.856	8.91	0.094	22.489	0.027	1.066	0.056			
SME-87	5-MA		0.932	0.063	0.009	8.332	0.124	1.644	1.37	0.87	8.929	0.097	22.942	0.781	0.939	0.057			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
SNE-87	6-MA												
SNE-87	1-F												
SNE-87	2-F												
SNE-87	3-F												
SNE-87	4-F												
SNE-87	5-F												
SNE-87	6-F												
SNE-88	1-MA	49.87	45.31		1.408		42900	< 1110	< 1110	25300	< 1110	1420	1220
SNE-88	2-MA	49.01	44.57		1.389		40900	< 1110	< 1110	25600	< 1110	1360	1170
SNE-88	3-MA	49.16	44.73		1.408		40800	< 1110	< 1110	23800	< 1110	1340	1120
SNE-88	4-MA	49.44	44.97		1.409		40900	< 1080	< 1080	23200	< 1080	1200	< 1110
SNE-88	5-MA												
SNE-88	6-MA												
SNE-88	1-F												
SNE-88	2-F												
SNE-88	3-F												
SNE-88	4-F												
SNE-88	5-F												
SNE-88	6-F												
SNE-89	1-MA	46.99	42.01		1.319		35000	< 994	< 994	20700	< 994	1360	1300
SNE-89	2-MA	47.32	43.32		1.334		35800	< 1090	< 1090	21300	< 1090	1090	< 1070
SNE-89	3-MA	47.34	43.11				35700	< 1070	< 1070	20700	< 1070	1110	< 988
SNE-89	4-MA	47.23	42.65				34800	< 988	< 988	20800	< 988	< 994	< 994
SNE-89	5-MA												
SNE-89	6-MA												
SNE-89	1-F												
SNE-89	2-F												
SNE-89	3-F												
SNE-89	4-F												
SNE-89	5-F												
SNE-90	1-MA	46.39	41.53		1.391		31500	< 1100	< 1100	23200	< 1100	< 1100	< 1040
SNE-90	2-MA	46.13	41.27		1.361		32000	< 1040	< 1040	23300	< 1040	< 1040	< 1100
SNE-90	3-MA	46.27	41.14		1.381		31700	< 1130	< 1130	22200	< 1130	< 1130	< 1130
SNE-90	4-MA	46.3	40.86		1.399		31200	< 1130	< 1130	21900	< 1130	< 1130	< 1130
SNE-90	5-MA												
SNE-90	1-F												
SNE-90	2-F												
SNE-90	3-F												
SNE-90	4-F												
SNE-90	5-F												
SNE-91	1-MA	50.14	43.58		1.42		42700	< 1090	< 1090	31300	< 1090	2520	1260
SNE-91	2-MA	50.52	43.87		1.404		43700	< 1070	< 1070	28700	< 1070	2440	1270
SNE-91	3-MA	50.5	44.49		1.406		45800	< 1120	< 1120	28900	< 1120	2300	1150
SNE-91	4-MA	50.51	44.32		1.417		43600	< 1090	< 1090	26100	< 1090	2320	1160
SNE-91	5-MA												
SNE-91	6-MA												
SNE-91	1-F												
SNE-91	2-F												
SNE-91	3-F												
SNE-91	4-F												
SNE-9,	5-F												
SNE-91	6-F												
SNE-92	1-MA	43.7	38.65		1.379		41400	< 1060	< 1060	32200	< 1060	2260	1370
SNE-92	2-MA	44.04	39.35		1.371		39800	< 1070	< 1070	27600	< 1070	2290	1330
SNE-92	3-MA	43.79	37.85		1.366		27900	< 1040	< 1040	26900	< 1040	2160	1200
SNE-92	4-MA	43.73	38.48		1.378		29100	< 1000	< 1000	26500	< 1000	2150	1180
SNE-92	5-MA												
SNE-92	1-F												
SNE-92	2-F												
SNE-92	3-F												
SNE-92	4-F												
SNE-92	5-F												
SNE-93	1-MA	44.13	37.04		1.352		43200	< 1110	< 1110	40400	< 1110	2620	1740
SNE-93	2-MA	43.4	37.49		1.362		42500	< 1090	< 1090	39400	< 1090	2490	1730
SNE-93	3-MA	43.94	38.32		1.346		42700	< 1110	< 1110	39800	< 1110	2360	1640
SNE-93	4-MA	43.34	37.01		1.364		42700	< 1100	< 1100	39700	< 1100	2380	1600
SNE-93	5-MA												
SNE-93	1-F												
SNE-93	2-F												
SNE-93	3-F												
SNE-93	4-F												
SNE-93	5-F												
SNE-93a	1						43400	< 1060	< 1060	38900	< 1060	< 1060	1440
SNE-93a	2						43400	< 1090	< 1090	40000	< 1090	< 1090	1460
SNE-93a	3						42800	< 1080	< 1080	38900	< 1080	< 1080	1450
SNE-93a	4						42900	< 1080	< 1080	39000	< 1080	< 1080	1400
MFT-19	1	48	43	39	1.389		21800	395	96.7	22900			588
MFT-19	2						22500	393	100	22700			566

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
SNE-87	6-MA	2.448		0.801	0.057	0.011	7.369	0.258	1.648	1.281	0.768	8.485	0.085	22.078	0.018	0.948	0.055			
SNE-87	1-F	2.184	2079	0.698	0.133	0.056	6.427	0.222	1.263	1.099	0.629		0.115	19.497	0.078					
SNE-87	2-F	2.53	2665	0.832	0.087	0.02	8.303	0.162	1.683	1.307	0.793		0.1	25.482	0.029					
SNE-87	3-F	2.664	2654	0.906	0.071	0.013	8.684	0.149	1.663	1.346	0.87		0.098	25.31	0.019					
SNE-87	4-F	2.44	2472	0.879	0.084	0.017	7.343	0.231	1.55	1.297	0.796		0.087	23.986	0.019					
SNE-87	5-F	2.57	2547	0.888	0.101	0.022	8.315	0.258	1.611	1.317	0.834		0.097	24.899	0.029					
SNE-87	6-F	2.616	[illegible]	0.896	0.116	0.031	8.388	0.226	1.691	1.386	0.862		0.114	25.83	0.045					
SNE-88	1-MA	2.265		0.647	0.048	0.007	7.284	0.079	1.702	1.225	0.687	8.435	0.076	24.279	0.013	0.885	0.062	8630		
SNE-88	2-MA	2.568		0.802	0.058	0.008	8.44	0.091	1.678	1.279	0.838	8.889	0.098	23.08	0.014	0.995	0.061			
SNE-88	3-MA	2.218		0.639	0.048	0.007	7.127	0.089	1.727	1.213	0.671	8.3	0.083	24.182	0.016	0.827	0.062			
SNE-88	4-MA	2.478		0.789	0.055	0.009	8.19	0.096	1.646	1.24	0.813	8.62	0.084	22.795	0.012	0.962	0.059			
SNE-88	5-MA	2.426		0.688	0.053	0.007	7.718	0.132	1.674	1.198	0.73	8.306	0.088	23.501	0.015	0.922	0.06			
SNE-88	6-MA	2.468		0.667	0.07	0.008	8.115	0.131	1.651	1.188	0.734	8.297	0.094	22.906	0.015	0.928	0.06			
SNE-88	1-F	2.435	2563	0.784	0.065	0.018	7.328	0.246	1.594	1.205	0.793		0.099	24.068	0.018					
SNE-88	2-F	2.44	2773	0.642	0.089	0.015	7.018	0.198	1.733	1.202	0.674		0.088	27.919	0.019					
SNE-88	3-F	2.432	2683	0.713	0.091	0.015	7.738	0.231	1.667	1.187	0.729		0.099	25.411	0.018					
SNE-88	4-F	2.495	2647	0.712	0.067	0.015	7.639	0.197	1.643	1.17	0.727		0.105	25.16	0.018					
SNE-88	5-F	2.311	2803	0.691	0.067	0.015	7.217	0.26	1.715	1.233	0.693		0.085	26.685	0.019					
SNE-88	6-F	2.283	2739	0.666	0.065	0.017	7.159	0.28	1.683	1.216	0.68		0.087	26.192	0.02					
SNE-89	1-MA	2.904		1.052	0.072	0.013	9.314	0.117	1.6	1.36	0.963	9.017	0.106	21.756	0.018	1.237	0.056	9060		
SNE-89	2-MA	2.677		1.048	0.064	0.012	8.586	0.176	1.577	1.259	0.885	8.673	0.095	21.996	0.018	1.133	0.055			
SNE-89	3-MA	2.646		0.942	0.064	0.011	8.574	0.141	1.586	1.274	0.906	8.8	0.096	22.442	0.017	1.068	0.055			
SNE-89	4-MA	2.708		0.971	0.065	0.011	8.508	0.152	1.63	1.306	0.907	8.932	0.102	22.691	0.017	1.081	0.058			
SNE-89	5-MA	2.724		0.986	0.063	0.009	8.577	0.114	1.617	1.327	0.907	8.893	0.104	22.293	0.017	0.971	0.054			
SNE-89	6-MA	2.681		0.993	0.062	0.01	8.549	0.126	1.623	1.325	0.93	9.056	0.099	22.635	0.017	1.078	0.055			
SNE-89	1-F	2.741	2629	0.92	0.068	0.015	8.783	0.131	1.573	1.216	0.895		0.101	24.766	0.019					
SNE-89	2-F	2.725	2624	1.117	0.101	0.012	8.77	0.097	1.579	1.223	0.888		0.106	24.464	0.018					
SNE-89	3-F	2.637	2523	0.847	0.086	0.015	8.41	0.495	1.512	1.173	0.862		0.098	23.454	0.019					
SNE-89	4-F	2.697	2599	0.94	0.098	0.016	8.701	0.173	1.565	1.258	0.905		0.095	24.452	0.019					
SNE-89	5-F	2.684	2489	0.909	0.076	0.017	8.39	0.149	1.499	1.222	0.88		0.109	23.385	0.019					
SNE-90	1-MA	2.386		0.722	0.063	0.013	8.329	0.169	1.702	1.164	0.786	8.082	0.096	23.024	0.019	1.192	0.061	8030		
SNE-90	2-MA	2.496		0.843	0.066	0.015	8.593	0.178	1.671	1.179	0.88	8.499	0.106	22.485	0.018	1.359	0.062			
SNE-90	3-MA	2.54		0.765	0.065	0.012	8.505	0.165	1.672	1.172	0.823	8.346	0.095	22.651	0.017	1.181	0.063			
SNE-90	4-MA	2.364		0.802	0.061	0.011	7.846	0.144	1.701	1.229	0.791	8.541	0.094	22.799	0.017	1.131	0.062			
SNE-90	5-MA	2.425		0.681	0.061	0.012	7.977	0.132	1.713	1.199	0.768	7.763	0.09	23.083	0.018	1.166	0.079			
SNE-90	1-F	2.663	2579	0.772	0.075	0.013	8.435	0.142	1.622	1.205	0.854		0.108	24.909	0.018					
SNE-90	2-F	2.299	2601	0.587	0.066	0.011	7.4	0.091	1.64	1.119	0.712		0.094	25.243	0.017					
SNE-90	3-F	2.769	3093	0.711	0.082	0.013	8.928	0.146	1.97	1.353	0.857		0.109	30.385	0.021					
SNE-90	4-F	2.865	3284	0.747	0.084	0.014	9.25	0.156	2.059	1.411	0.89		0.116	31.58	0.021					
SNE-90	5-F	2.348	2629	0.595	0.069	0.012	7.518	0.146	1.654	1.155	0.725		0.1	25.629	0.017					
SNE-91	1-MA	2.312		0.897	0.068	0.018	8314	0.14	1.613	1.178	0.864	8.957	0.077	22.581	0.018	1.189	0.079	8550		
SNE-91	2-MA	2.528		0.969	0.065	0.013	8469	0.153	1.642	1.302	0.886	9.222	0.087	22.664	0.02	1.21	0.082			
SNE-91	3-MA	2.564		0.99	0.066	0.013	8556	0.164	1.697	1.335	0.889	9.41	0.085	23.269	0.02	1.256	0.082			
SNE-91	4-MA	2.548		0.955	0.065	0.014	8524	0.141	1.664	1.295	0.879	9.201	0.081	22.983	0.019	1.228	0.084			
SNE-91	5-MA	2.48		0.938	0.063	0.012	8254	0.154	1.666	1.28	0.858	9.216	0.075	22.95	0.019	1.139	0.087			
SNE-91	6-MA	2.587		0.973	0.063	0.013	8563	0.089	1.647	1.27	0.893	9.109	0.09	22.893	0.019	1.177	0.086			
SNE-91	1-F	2.414	2.6	0.856	0.093	0.021	7959	0.149	1.593	1.227	0.838		0.11	24.761	0.017					
SNE-91	2-F	2.458	2611	0.931	0.072	0.012	8196	0.136	1.585	1.265	0.862		0.113	25.031	0.017					
SNE-91	3-F	2.453	2652	0.949	0.067	0.012	8143	0.141	1.625	1.278	0.85		0.098	25.456	0.018					
SNE-91	4-F	2.461	2638	0.853	0.101	0.011	8167	0.137	1.609	1.245	0.846		0.104	25.327	0.017					
SNE-9,	5-F	2.391	2617	0.779	0.068	0.011	7848	0.112	1.597	1.235	0.82		0.108	25.155	0.016					
SNE-91	6-F	2.227	2.31	0.769	0.057	0.009	7371	0.11	1.413	1.105	0.759		0.087	22.246	0.015					
SNE-92	1-MA	2.405		0.749	0.064	0.01	7589	0.159	1.676	1.194	0.701	9.758	0.097	22.911	0.024	0.958	0.083	8640		
SNE-92	2-MA	2.518		0.799	0.066	0.007	8121	0.083	1.651	1.208	0.771	9.7	0.104	23.048	0.024	0.931	0.076			
SNE-92	3-MA	2.288		0.716	0.059	0.007	7194	0.115	1.682	1.187	0.674	9.417	0.079	23.253	0.023	0.862	0.078			
SNE-92	4-MA	2.381		0.748	0.061	0.009	7589	0.122	1.669	1.19	0.706	9.564	0.082	23.421	0.024	0.965	0.079			
SNE-92	5-MA	2.427		0.764	0.063	0.006	7726	0.118	1.676	1.195	0.717	9.775	0.088	23.478	0.022	0.912	0.082			
SNE-92	1-F	2.394	2624	0.703	0.061	0.025	7586	0.1	1.602	1.168	0.684		0.076	25.285	0.02					
SNE-92	2-F	2.326	2691	0.699	0.06	0.023	7164	0.104	1.664	1.171	0.665		0.072	25.971	0.021					
SNE-92	3-F	2.464	2733	0.736	0.084	0.027	7629	0.176	1.659	1.191	0.692		0.094	26.069	0.021					
SNE-92	4-F	2.567	2641	0.833	0.066	0.025	7975	0.138	1.614	1.219	0.788		0.09	25.167	0.02					
SNE-92	5-F	2.719	2626	0.753	0.069	0.025	7851	0.095	1.588	1.168	0.732		0.094	24.861	0.019					
SNE-93	1-MA	2.491		0.863	0.069	0.011	7776	0.202	1.631	1.203	0.754	10.699	0.108	22.559	0.08	1.027	0.071	9680		
SNE-93	2-MA	2.578		0.912	0.065	0.011	8079	0.199	1.596	1.189	0.795	10.864	0.078	22.164	0.049	1.05	0.069			
SNE-93	3-MA	2.616		0.911	0.066	0.012	8188	0.222	1.68	1.239	0.789	11.15	0.079	23.36	0.031	1.085	0.073			
SNE-93	4-MA	2.675		0.972	0.066	0.012	8424	0.181	1.647	1.258	0.849	11.9	0.085	23.041	0.061	1.071	0.072			
SNE-93	5-MA	2.693		0.933	0.068	0.011	8484	0.176	1.651	1.245	0.818	11.178	0.093	23.554	0.042	1.04	0.072			
SNE-93	1-F	2.421	2468	0.812	0.074	0.013	7636	0.099	1.509	1.117	0.745		0.102	23.179	0.024					
SNE-93	2-F	2.297	2476	0.745	0.067	0.014	7181	0.096	1.519	1.097	0.698		0.089	23.288	0.024					
SNE-93	3-F	2.382	2527	0.782	0.071	0.012	7.44	0.11	1.558	1.144	0.718		0.087	23.941	0.023					
SNE-93	4-F	2.437	2399	0.814	0.075	0.012	7491	0.117	1.481	1.125	0.752		0.1	22.725	0.022					
SNE-93	5-F	2.486	2509	0.797	0.086	0.013	7.77	0.108	1.541	1.117	0.741		0.108	23.506	0.025					
SNE-93a	1																			
SNE-93a	2																			
SNE-93a	3																			
SNE-93a	4																			
MFT-19	1	2.121	2772	0.787	0.074	0.285	7875	0.817	1.779	1.288	1.107	8.919	0.222	23.6	0.076	0.251	0.216			
MFT-19	2	2.112	2381	0.776	0.068	0.281	7795	0.768	1.775	1.229	1.101	8.825	0.212	23.506	0.08	0.234	0.21			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for latter SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
MFT-19	3												
MFT-19	4												
MFT-20	1	49.33	43.73	39.06	1.433		24700	1090	1090	24480			1170
MFT-20	2	47.61	41.53	40.04			24100	1140	1140	24170			1410
MFT-20	3	48.42	43	40.36									
MFT-20	4	47.63	42.22	40.57									
MFT-21	1	42.53	44	43	1.456		24900	946	946	34500			546
MFT-21	2	43.09					27100	987	987	30100			587
MFT-21	3	42.8											
MFT-21	4	43.03											
MFT-22	1	51	45	41.97	1.467		29900	1080	1080	26300			1080
MFT-22	2			40.94			28100	1010	1010	24700			1010
MFT-22	3			41.97									
MFT-22	4			41.57									
MFT-22	5												
MFT-22	6												
MFT-23	1	50	45	41.22	1.46		32500	1130	1130	26500			1130
MFT-23	2			40.09			30600	1120	1120	25900			1120
MFT-23	3			40.01									
MFT-23	4			40.69									
MFT-24	1	48	42	39.47	1.457		35800	1070	1070	35400			1070
MFT-24	2			38.82			34600	1080	1080	32300			1080
MFT-24	3			39.46									
MFT-24	4			40.04									
MFT-25	1	45	39	37.62	1.337		3 200	1040	1040	22900			1040
MFT-25	2			35.38			30400	1170	1170	23000			1170
MFT-25	3			36.28									
MFT-25	4			36.46									
MFT-26	1	51	44	43.01	1.413		37100	1110	1110	26800			1110
MFT-26	2			42.96			33700	1100	1100	24300			1100
MFT-26	3			7.01									
MFT-26	4			43.63									
MFT-27	1	51	47	44.47	1.443		3 600	961	961	22400			961
MFT-27	2			43.7			3 600	974	974	25000			974
MFT-27	3			44.79			32500	1070	1070	20200			1070
MFT-27	4			44.64			33000	1030	1030	23700			1030
MFT-28	1	47	41	38.7	1.435		3 200	1100	1100	27000			1100
MFT-28	2			38.61			3 000	1030	1030	24900			1030
MFT-28	3			38.68									
MFT-28	4			38.66									
MFT-28	5												
MFT-28	6												
MFT-29	1	46	41	38.8	1.446		27500	< 1110	<1110	22000			< 1110
MFT-29	2			38.9			23300	< 1150	<1150	19800			< 1150
MFT-29	3			38.4									
MFT-29	4			38.69									
MFT-29	5												
MFT-30	1	44	39		1.395		27300	< 1020	<1020	26200			< 1020
MFT-30	2						26200	< 1150	<1150	26200			< 1150
MFT-30	3												
MFT-30	4												
MFT-31	1	45	40		1.377		29100	< 1000	<1000	25300			< 1000
MFT-31	2						26500	< 995	< 995	26200			< 995
MFT-31	3												
MFT-31	4												
MFT-31	5												
MFT-31	6												
MFT-32	1	43	38		1.302		22800	< 1040	<1040	22800			< 1040
MFT-32	2						21200	< 1180	<1180	20300			< 1180
MFT-32	3												
MFT-32	4												
MFT-32	5												
MFT-33	1	43	37		1.306		32900	< 1130	<1130	29000			< 1130
MFT-33	2						29700	< 1140	<1140	26500			< 1140
MFT-33	3												
MFT-33	4												
MFT-34	1	48	43		1.437		23600	< 1120	< 973	18100			1020
MFT-34	2						25000	< 973	<1120	17900			< 1120
MFT-34	3												
MFT-34	4												
MFT-34	5												
MFT-34	6												
MFT-35	1	46	40		1.386		29400	< 1090	<1090	28800			< 1070
MFT-35	2						29100	< 1070	<1070	26600			< 1090
MFT-35	3												
MFT-35	4												
MFT-35	5												
MFT-36	1	47	41		1.399		33800	< 891	< 891	25800			< 916

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-19	3	2.147	2.132	0.746	0.078	0.312	7.909	0.712	1.777	1.193	1.062	8.499	0.22	23.925	0.078	0.287	0.212			
MFT-19	4	2.078	2.707	0.752	0.072	0.281	7.698	0.744	1.861	1.272	1.073	8.937	0.222	24.979	0.076	0.233	0.212			
MFT-20	1	2.013	2.784	0.575	0.065	0.287	7.854	0.267	1.856	1.204	0.762	8.349	0.14	25.72	0.044	0.19	0.096			
MFT-20	2	1.855	301	0.521	0.053	0.266	7.044	0.251	1.815	1.16	0.689	8.119	0.12	24.844	0.048	0.315	0.078			
MFT-20	3	2.071	2.491	0.682	0.058	0.317	7.973	0.286	1.752	1.18	0.913	9.022	0.313	23.782	0.051	0.372	0.088			
MFT-20	4	1.78	2.175	0.504	0.055	0.256	6.776	0.249	1.72	1.1	0.66	7.755	0.112	23.718	0.047	0.32	0.076			
MFT-21	1	2.318	2.461	0.933	0.09	0.365	8.639	0.208	1.701	1.287	0.96	8.86	0.167	22.772	0.069	0.813	0.049			
MFT-21	2	2.271	2.468	0.924	0.067	0.354	8.475	0.172	1.671	1.254	0.928	8.554	0.127	22.375	0.058	0.781	0.061			
MFT-21	3	2.261	2.476	0.824	0.092	0.33	8.349	0.163	1.69	1.23	0.843	8.311	0.142	23.043	0.087	0.755	0.05			
MFT-21	4	2.243	2.469	0.864	0.081	0.336	8.357	0.195	1.725	1.255	0.863	8.561	0.129	23.397	0.054	0.735	0.052			
MFT-22	1	2.201	2.424	0.803	0.043	0.325	7.552	0.194	1.78	1.25	0.803	9.334	0.093	24.506	0.019	0.858	0.042			
MFT-22	2	2.224	273	0.73	0.043	0.3	8.074	0.135	1.81	1.236	0.766	8.872	0.086	24.559	0.018	0.808	0.036			
MFT-22	3	2.351	3.007	0.921	0.04	0.365	8.651	0.132	.773	1.312	0.926	9.206	0.104	24.313	0.019	0.853	0.033			
MFT-22	4	2.061	283	0.794	0.047	0.327	7.804	0.109	.784	1.215	0.831	8.692	0.088	24.332	0.017	0.793	0.1			
MFT-22	5	2.255	2.418	0.856	0.053	0.337	8.201	0.141	.792	1.266	0.863	8.942	0.094	24.311	0.018	0.826	0.03			
MFT-22	6	1.927	2.708	0.651	0.049	0.268	7.319	0.114	.902	1.22	0.676	8.597	0.081	26.05	0.017	0.668	0.034			
MFT-23	1	2.277	2.656	0.852	0.094	0.326	8.346	0.164	.752	1.276	0.839	8.771	0.122	23.624	0.018	1.033	0.057			
MFT-23	2	2.234	2.656	0.823	0.083	0.32	8.014	0.143	.712	1.249	0.826	8.591	0.119	23.166	0.019	1	0.032			
MFT-23	3	2.269	2.778	0.846	0.0851	0.327	8.116	0.153	.735	1.251	0.824	8.735	0.102	23.658	0.022	0.982	0.033			
MFT-23	4	2.231	2.783	0.823	0.07	0.32	8.156	0.135	.719	1.261	0.819	8.659	0.102	23.503	0.021	0.943	0.041			
MFT-24	1	2.243	2.352	0.735	0.074	0.285	8.122	0.1	.716	1.198	0.721	8.216	0.116	23.086	0.014	0.964	0.014			
MFT-24	2	2.225	2.656	0.766	0.06	0.304	8.176	0.119	.728	1.233	0.746	8.361	0.112	23.635	0.013	0.959	0.012			
MFT-24	3	2.408	2.569	0.789	0.076	0.327	8.651	0.051	1.67	1.192	0.791	8.311	0.114	22.86	0.013	0.933	0.02			
MFT-24	4	1.922	274	0.584	0.072	0.256	6.785	0.078	.822	1.178	0.583	8.201	0.087	25.085	0.012	0.76	0.011			
MFT-25	1	2.402	2.488	0.831	0.072	0.32	8.499	-0.017	.708	1.252	0.822	8.771	0.096	24.193	0.009	1.003	0.008			
MFT-25	2	2.248	241	0.621	0.102	0.278	8.112	0.08	.823	1.214	0.67	8.629	0.104	26.097	0.009	0.892	0.007			
MFT-25	3	2.762	2.174	1.015	0.088	0.384	9.554	-0.01	.725	1.351	0.985	9.41	0.121	23.901	0.008	1.289	0.007			
MFT-25	4	2.469	2.766	0.882	0.064	0.328	8.705	-0.008	1.79	1.286	0.839	9.215	0.099	24.643	0.009	1.067	0.014			
MFT-26	1	2.469	2.313	0.863	0.104	0.373	8.758	0.109	.892	1.319	0.837	9.466	0.105	25.557	0.017	1.317	0.016			
MFT-26	2	2.467	2.728	0.893	0.1	0.357	8.714	0.101	.983	1.393	0.862	9.892	0.103	26.331	0.02	1.277	0.013			
MFT-26	3	2.585	2.763	0.952	0.08	0.369	901	0.071	1.93	1.364	0.912	9.851	0.107	26.077	0.015	1.298	0.013			
MFT-26	4	2.348	2.806	0.879	0.067	0.348	8.447	0.122	.809	1.255	0.854	9.221	0.111	24.446	0.014	1.236	0.012			
MFT-27	1	2.469	2.396	0.91	0.079	0.353	8.808	0.079	.829	1.38	0.904	9.515	0.099	25.112	0.012	1.115	0.011			
MFT-27	2	2.222	2.379	0.748	0.067	0.29	7.318	0.068	.786	1.263	0.738	9.131	0.08	24.902	0.013	0.972	0.008			
MFT-27	3	2.298	2.993	0.866	0.083	0.336	824	0.113	.752	1.307	0.84	9.125	0.087	24.276	0.012	1.08	0.009			
MFT-27	4	2.306	2.802	0.862	0.086	0.326	8.191	0.105	.751	1.318	0.833	9.117	0.091	24.065	0.011	1.044	0.009			
MFT-28	1	2.364	2.306	0.771	0.073	0.313	8.246	0.055	.684	1.228	0.79	8.505	0.093	22.934	0.013	1.04	0.009			
MFT-28	2	2.23	2.399	0.722	0.063	0.303	785	0.081	.708	1.246	0.747	8.695	0.104	23.814	0.012	1.012	0.011			
MFT-28	3	2.12	2.712	0.682	0.064	0.298	7.469	0.049	.683	1.238	0.72	8.7	0.084	23.964	0.013	0.916	0.009			
MFT-28	4	2.347	265	0.795	0.109	0.351	8.602	0.048	1.67	1.257	0.816	8.72	0.116	22.865	0.012	0.974	0.009			
MFT-28	5		2.669																	
MFT-28	6		2.628																	
MFT-29	1	2.256	2.312	0.842	0.069	0.317	8.002	0.081	.747	1.294	0.818	8.906	0.097	23.823	0.011	0.998	0.009			
MFT-29	2	2.243	2.349	0.848	0.071	0.316	7.952	0.097	.732	1.286	0.813	8.855	0.098	23.641	0.013	1.013	0.01			
MFT-29	3	2.121	2.479	0.712	0.061	0.252	7.556	0.065	.816	1.231	0.684	8.624	0.078	24.396	0.012	0.947	0.008			
MFT-29	4	2.126	2.773	0.719	0.064	0.251	7.4	0.093	.824	1.233	0.684	8.654	0.081	24.57	0.013	1.002	0.012			
MFT-29	5	2.13	283	0.625	0.069	0.26	7.554	0.075	.822	1.207	0.648	8.424	0.083	24.851	0.011	0.893	0.008			
MFT-30	1	2.629	2.664	0.889	0.103	0.352	945	0.093	.642	1.267	0.888	8.89	0.201	22.835	0.017	1.314	0.015			
MFT-30	2	2.735	277	0.949	0.148	0.366	989	0.094	.675	1.304	0.948	9.138	0.311	22.958	0.016	1.279	0.013			
MFT-30	3	2.568	267	0.945	0.119	0.346	9.132	0.102	.678	1.288	0.902	9.053	0.223	22.903	0.017	1.336	0.013			
MFT-30	4	2.556	2.741	0.889	0.133	0.332	9.363	0.097	.668	1.259	0.876	8.807	0.258	23.139	0.014	1.262	0.013			
MFT-31	1	2.578	2.706	0.914	0.074	0.334	9.148	0.192	.697	1.232	0.882	9.108	0.122	23.026	0.013	1.251	0.013			
MFT-31	2	2.55	2.761	0.897	0.07	0.328	9.029	0.18	.685	1.213	0.87	8.999	0.112	22.945	0.013	1.162	0.012			
MFT-31	3	2.751	2.705	0.953	0.084	0.351	9.657	0.236	.794	1.312	0.927	9.615	0.134	24.296	0.014	1.275	0.013			
MFT-31	4	2.649	2.377	0.921	0.071	0.342	9.387	0.204	.752	1.293	0.909	9.374	0.112	23.759	0.014	1.232	0.013			
MFT-31	5	2.891		0.958	0.072	0.359	9.783	0.155	.827	1.35	0.95	9.791	0.116	25.062	0.013	1.208	0.013			
MFT-31	6	2.514		0.873	0.067	0.32	8.124	0.187	.643	1.209	0.855	8.813	0.109	22.35	0.012	1.14	0.011			
MFT-32	1	2.375	2.613	0.803	0.069	0.339	8.469	0.097	.587	1.218	0.843	8.448	0.112	21.584	0.012	1.06	0.01			
MFT-32	2	2.467	2.611	0.834	0.067	0.34	8.302	0.126	1.61	1.283	0.859	8.591	0.111	21.537	0.012	1.112	0.01			
MFT-32	3	2.514	2.643	0.95	0.072	0.348	899	0.072	.652	1.3	0.942	9.046	0.111	22.315	0.012	1.069	0.009			
MFT-32	4	2.52	2.457	0.926	0.082	0.348	9.008	0.121	.651	1.309	0.968	9.137	0.12	22.079	0.013	1.059	0.013			
MFT-32	5		2.204																	
MFT-33	1	2.418	2.338	0.892	0.07	0.339	8.359	0.162	.687	1.289	0.833	8.987	0.107	23.017	0.024	1.216	0.013			
MFT-33	2	2.382	2.002	0.828	0.067	0.332	8.405	0.133	.637	1.233	0.792	8.6	0.104	22.43	0.035	1.13	0.004			
MFT-33	3	2.444	2.318	0.89	0.071	0.34	8.641	0.11	.635	1.268	0.862	8.913	0.121	22.293	0.022	1.095	0.006			
MFT-33	4	2.383	2.776	0.828	0.067	0.337	8.403	0.103	.651	1.26	0.81	8.777	0.095	22.203	0.017	1.094	0.002			
MFT-34	1	2.44	2.301	0.927	0.068	0.358	8.601	0.091	.707	1.296	0.822	8.933	0.106	23.568	0.015	1.157	0.014			
MFT-34	2	2.373	2.518	0.864	0.064	0.348	8	0.111	.737	1.339	0.772	8.917	0.096	23.862	0.015	1.135	0.015			
MFT-34	3	2.258	2.247	0.824	0.066	0.355	8.399	0.104	.709	1.17	0.788	8.746	0.092	22.623	0.015	1.15	0.011			
MFT-34	4	2.436	2.775	0.918	0.068	0.376	8.544	0.101	.723	1.305	0.839	10.523	0.096	23.308	0.015	1.187	0.012			
MFT-34	5	2.41	2.808	0.82	0.069	0.356	8.487	0.114	.748	1.269	0.789	8.723	0.104	23.672	0.015	1.199	0.013			
MFT-34	6		2.779																	
MFT-35	1	2.231	2.401	0.807	0.054	0.346	7.775	0.059	.723	1.253	0.797	8.88	0.074	23.238	0.031	0.823	0.009			
MFT-35	2	2.391	2.9	0.826	0.076	0.366	8.352	0.049	.713	1.282	0.831	9.017	0.13	22.991	0.025	0.953	0.01			
MFT-35	3	2.438	2.536	0.824	0.087	0.372	8.601	0.037	.769	1.284	0.852	9.301	0.178	24.237	0.015	0.798	0.017			
MFT-35	4	2.391	2.315	0.888	0.059	0.378	8.401	0.049	1.703	1.296	0.885	9.108	0.093	23.447	0.016	0.94	0.009			
MFT-35	5		2.85																	
MFT-36	1	2.5	2.742	0.987	0.064	0.367	8.449	0.067	1.728	1.314	0.9	9.021	0.097	23.746	0.021	1.229	0.012			

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-36	2						34000	< 916	< 916	25500			< 891	2.204	276	0.793	0.058	0.312	7.91	0.1	1786	1.259	0.734	8.679	0.083	24.401	0.021	1.056	0.017			
MFT-36	3													2.377	2.394	0.897	0.061	0.347	8.223	0.061	1747	1.268	0.816	8.894	0.097	23.999	0.021	1.136	0.011			
MFT-36	4													2.466	2.342	0.96	0.069	0.356	8.596	0.052	1731	1.293	0.883	8.92	0.117	23.739	0.021	1.165	0.011			
MFT-36	5													2.291	279	0.832	0.061	0.328	8.228	0.072	1764	1.227	0.791	8.654	0.096	23.484	0.021	1.111	0.014			
MFT-36	6													2.417	2.383	0.898	0.063	0.336	8.359	0.1	1.74	1.254	0.809	8.805	0.098	23.791	0.022	1.196	0.012			
MFT-37	1	46	40		1.37		34300	< 1200	< 1200	28500			< 1300																			
MFT-37	2						35700	< 1220	< 1220	28100			< 1220																			
MFT-37	3																															
MFT-37	4																															
MFT-37	5																															
MFT-37	6																															
MFT-38	1	42	37		1.344		24100	1020	< 963	25200			< 363	2.234	2.358	0.693	0.065	0.098	7.704	0.077	1869	1.248	0.722	8.857	0.095	25.168	0.022	0.828	0.009			
MFT-38	2						22600	< 1130	< 1130	22900			< 1130	2.54	2.743	0.863	0.073	0.12	8.844	0.104	1777	1.304	0.872	9.316	0.106	23.203	0.019	1.031	0.011			
MFT-38	3													2.328	259	0.776	0.063	0.113	8.092	0.081	1671	1.218	0.803	8.658	0.091	22.744	0.018	0.897	0.018			
MFT-38	4													2.495	2.694	0.826	0.067	0.114	8.512	0.074	1.77	1.296	0.834	9.269	0.103	23.724	0.018	0.931	0.012			
MFT-38	5													2.505	2.682	0.84	0.065	0.121	874	0.078	1753	1.31	0.873	9.22	0.106	24.081	0.017	0.937	0.009			
MFT-38	6													2.443	2.767	0.823	0.065	0.115	8.445	0.04	1784	1.321	0.841	9.137	0.097	24.138	0.017	0.857	0.039			
MFT-39	1-MA	44	39		1.355		28700	< 1040	< 1040	26800			< 1040	2.208		0.736	0.062	0.06	7.646	0.16	1769	1.234	0.721	8.672	0.088	23.906	0.032	0.954	0.011			
MFT-39	2-MA						26900	< 1090	< 1090	26400			< 1090	2.246		0.78	0.065	0.065	7.927	0.185	1613	1.176	0.774	8.408	0.096	22.818	0.031	1.031	0.011			
MFT-39	3-MA													2.412		0.83	0.063	0.065	8.501	0.221	1716	1.245	0.833	8.947	0.11	23.436	0.031	1.112	0.011			
MFT-39	4-MA													2.019		0.671	0.054	0.057	6.962	0.107	1716	1.192	0.657	8.326	0.078	24.105	0.031	0.837	0.011			
MFT-39	5-MA													2.642		0.96	0.071	0.083	9.316	0.116	1595	1.277	0.953	9.091	0.107	22.067	0.029	1.134	0.011			
MFT-39	6-MA													2.426		0.839	0.068	0.067	851	0.165	1704	1.228	0.833	8.874	0.104	23.139	0.031	1.063	0.012			
MFT-39	1-F													2.327	2.706	0.654	0.064	0.065	8.155	0.133	1626	1.198	0.791		0.081	24.255	0.031					
MFT-39	2-F													2.122	2.63	0.614	0.055	0.056	7.394	0.099	1.46	1.091	0.721		0.087	21.403	0.028					
MFT-39	3-F													2.177	2.474	0.626	0.06	0.057	7.603	0.091	1503	1.113	0.74		0.078	22.054	0.029					
MFT-39	4-F													2.448	236	0.742	0.065	0.074	8.575	0.101	1435	1.161	0.868		0.096	21.36	0.028					
MFT-39	5-F													1.682	231	0.391	0.046	0.044	5.824	0.131	1379	0.968	0.541		0.062	20.67	0.026					
MFT-39	6-F													2.186	2.791	0.765	0.063	0.062	7.453	0.239	1747	1.177	0.698		0.085	25.142	0.033					
MFT-40	1-MA	44	39		1.338		30900	< 1100	< 1100	28800			< 1100	2.386		0.808	0.066	0.033	8.504	0.074	1687	1.157	0.821	8.88	0.109	22.805	0.037	1.017	0.02			
MFT-40	2-MA						28300	< 1370	< 1370	27800			< 1370	2.466		0.833	0.076	0.033	8.645	0.115	1687	1.193	0.828	8.995	0.116	23.4	0.039	1.095	0.016			
MFT-40	3-MA													2.376		0.861	0.171	0.041	9.173	0.091	1592	1.122	0.883	8.876	0.159	22.095	0.037	1.147	0.031			
MFT-40	4-MA													2.298		0.774	0.069	0.031	8.233	0.122	1724	1.278	0.792	8.809	0.113	23.669	0.04	1.058	0.018			
MFT-40	5-MA													2.452		0.837	0.095	0.037	8.598	0.174	1702	1.171	0.805	8.822	0.116	23.525	0.041	1.201	0.022			
MFT-40	1-F													2.194	2.653	0.667	0.061	0.025	7.691	0.058	1569	1.128	0.722		0.065	22.842	0.034					
MFT-40	2-F													2.329	2.721	0.849	0.084	0.038	8.172	0.135	1623	1.176	0.768		0.116	24.035	0.043					
MFT-40	3-F													2.286	262	0.627	0.058	0.029	8.127	0.087	1523	1.145	0.769		0.084	22.976	0.035					
MFT-40	4-F													2.281	2.555	0.711	0.072	0.03	7.813	0.056	1524	1.105	0.741		0.091	22.27	0.035					
MFT-41	1-MA	49	43		1.429		36500	< 1120	< 1120	27600			< 1120	2.122		0.673	0.066	0.013	7.253	0.073	1801	1.225	0.654	8.505	0.141	24.736	0.028	0.776	0.032			
MFT-41	2-MA						32900	< 1250	< 1250	29600			< 1250	2.061		0.628	0.062	0.012	7.069	0.044	1772	1.195	0.63	8.34	0.097	24.284	0.026	0.642	0.03			
MFT-41	3-MA													2.057		0.641	0.051	0.01	7.084	0.06	1775	1.195	0.634	8.335	0.096	24.539	0.027	0.683	0.03			
MFT-41	4-MA													2.07		0.651	0.051	0.011	7.083	0.071	1.8	1.207	0.637	8.434	0.087	24.87	0.027	0.717	0.031			
MFT-41	5-MA													2.056		0.652	0.054	0.011	7.082	0.074	1783	1.192	0.637	8.405	0.095	24.605	0.027	0.67	0.03			
MFT-41	1-F													2.535	2.411	0.813	0.075	0.023	8.679	0.066	1602	1.199	0.863		0.104	24.01	0.035					
MFT-41	2-F													2.557	2.412	0.827	0.075	0.023	8.743	0.084	1611	1.205	0.865		0.098	24.15	0.035					
MFT-41	3-F													2.066	2.906	0.641	0.065	0.021	6.964	0.105	1805	1.169	0.623		0.087	26.761	0.038					
MFT-41	4-F													2.272	3.74	0.686	0.07	0.023	7.621	0.067	1967	1.287	0.681		0.079	29.279	0.043					
MFT-41	5-F													2.042	2.922	0.649	0.054	0.016	6.911	0.097	1803	1.172	0.623		0.074	26.395	0.031					
MFT-41	5-F													2.052	2.916	0.645	0.057	0.018	6.947	0.136	1797	1.173	0.625		0.07	26.364	0.03					
MFT-42	1-MA	49	44		1.413		37800	< 1090	< 1090	25500			1980	2.368		0.854	0.068	0.015	8.135	0.089	1707	1.3	0.828	8.982	0.094	23.507	0.022	0.915	0.037			
MFT-42	2-MA						37500	< 1150	< 1150	24900			1880	2.531		0.905	0.089	0.015	8.681	0.093	1667	1.331	0.882	9.071	0.111	22.39	0.023	0.974	0.034			
MFT-42	3-MA													2.54		0.866	0.085	0.017	8.812	0.048	1689	1.315	0.862	8.988	0.104	23.068	0.023	1.012	0.034			
MFT-42	4-MA													2.654		0.893	0.113	0.022	1.9	0.062	1683	1.312	0.878	9.108	0.12	23.171	0.022	0.928	0.032			
MFT-42	5-MA													2.461		0.907	0.073	0.015	8.478	0.105	1722	1.316	0.852	9.047	0.092	22.376	0.058	0.984	0.029			
MFT-42	6-MA													2.149		0.78	0.075	0.016	7.6	0.073	1533	1.212	0.791	8.195	0.111	21.216	0.022	0.837	0.028			
MFT-42	1-F													2.829	3.031	0.976	0.087	0.022	9.765	0.075	1876	1.479	0.983		0.118	28.651	0.033					
MFT-42	2-F													2.539	2.845	0.819	0.119	0.029	8.99	0.031	1745	1.306	0.871		0.143	26.467	0.031					
MFT-42	3-F													2.657	2.725	0.925	0.074	0.018	9.068	0.048	1739	1.351	0.921		0.102	26.053	0.026					
MFT-42	4-F													2.42	279	0.78	0.12	0.021	8.302	0.082	1695	1.273	0.84		0.152	26.079	0.035					
MFT-42	5-F													2.549	3.158	0.768	0.125	0.021	814	0.118	1818	1.32	0.816		0.139	29.996	0.034					
MFT-42	6-F													2.484	299	0.87	0.078	0.018	8.569	0.135	1895	1.367	0.857		0.099	28.593	0.033					
MFT-43	1-MA	48	42		1.315		27900	< 1080	< 1080	24400			< 1090	2.703		0.83	0.07	0.012	9.15	0.181	1661	1.287	0.815	8.398	0.098	22.646	0.019	1.037	0.044			
MFT-43	2-MA						27200	< 1090	< 1090	23300			< 1080	2.476		0.827	0.062	0.01	8.475	0.141	1.62	1.249	0.806	8.46	0.094	22.418	0.019	0.995	0.122			
MFT-43	3-MA													2.463		0.799	0.067	0.011	8.583	0.22	1654	1.251	0.785	8.36	0.124	22.355	0.019	1.033	0.023			
MFT-43	4-MA													2.867		1.002	0.083	0.013	9.951	0.202	1534	1.285	0.984	8.747	0.128	20.514	0.02	1.251	0.075			
MFT-43	5-MA													2.737		1.014	0.07	0.014	9.341	0.185	1602	1.356	0.966	9.008	0.115	20.508	0.02	1.223	0.105			
MFT-43	1-F													2.849	2.516	0.939	0.075	0.012	9.514	0.12	1542	1.285	0.959		0.115	23.217	0.021					
MFT-43	2-F													2.701	2.513	0.759	0.071	0.008	9.281	0.063	1534	1.202	0.891		0.11	22.968	0.018					
MFT-43	3-F													2.463	2.341	0.615	0.067	0.015	8.116	0.057	1643	1.189	0.748		0.105	25.382	0.023					
MFT-43	4-F													2.415	2.099	0.626	0.059	0.008	8.094	0.1	1665	1.198	0.735		0.101	25.32	0.019					
MFT-44	1-MA	50			1.418		26500	< 1040	< 1040	24800			< 977	2.583		0.916	0.07	0.014	8.698	0.183	1711	1.301	0.864	8.82	0.112	21.686	0.021	1.259	0.044			
MFT-44	2-MA						26000	< 977	< 977	23800			< 1040	2.489		0.874	0.072	0.015	8.434	0.189	1641	1.292	0.843	8.664	0.121	22.186	0.021	1.259	0.042			
MFT-44	3-MA													2.542		0.865	0.067	0.013	8.557	0.133	1644	1.269	0.841	8.704	0.103	22.931	0.019	1.147	0.043			
MFT-44	4-MA													2.502		0.859	0.064	0.01	842	0.14	1665	1.257	0.833	8.577	0.096	22.362	0.018	1.004	0.041			
MFT-44	5-MA													2.504		0.857	0.062	0.009	8.445	0.098	1679	1.252	0.834	8.664	0.109	22.586	0.018	0.986	0.042			
MFT-44	1-F													2.512	2.683	0.816	0.065	0.028	8.541	0.066	1644	1.308	0.855		0.088	25.29	0.02					
MFT-44	2-F													2.641	2.763	0.852	0.07	0.013	8.911	0.088	1716	1.339	0.879		0.1	25.638	0.02					
MFT-44	3-F													2.158	2.304	0.847	0.073	0.01	8.54	1.907	1266	0.459	1.253		0.703	19.396	0.589					
MFT-44	4-F													2.538	2.703	0.858	0.074	0.023	8.583	0.108	1624	1.263	0.853		0.109	24.713	0.044					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-44	5-F													2.599	2.746	0.906	0.08	0.024	8.864	0.134	1659	1.3	0.878		0.111	25.302	0.045					
MFT-44	6-F													2.527	2.696	0.768	0.066	0.012	8.571	0.078	1636	1.293	0.853		0.073	24.633	0.019					
MFT-45	1-MA	41	36		1.427		20900	< 1030	< 1030	15800			< 1080	2.57		0.857	0.074	0.015	8.737	0.203	1676	1.245	0.834	8.544	0.109	23.064	0.022	1.272	0.033			
MFT-45	2-MA						20000	< 1060	< 1060	15100			< 1060	2.388		0.843	0.087	0.015	8.53	0.196	1666	1.172	0.839	8.581	0.158	23.205	0.024	1.273	0.033			
MFT-45	3-MA													2.505		0.843	0.074	0.013	8.542	0.191	1665	1.217	0.805	8.487	0.118	22.754	0.021	1.197	0.032			
MFT-45	4-MA													2.551		0.898	0.072	0.013	8.755	0.188	1635	1.231	0.852	8.603	0.108	22.498	0.02	1.226	0.031			
MFT-45	5-MA													2.588		0.86	0.073	0.014	8.878	0.186	1667	1.245	0.84	8.533	0.107	22.719	0.022	1.278	0.032			
MFT-45	6-MA													2.568		0.887	0.077	0.015	8.815	0.194	1625	1.266	0.852	8.641	0.113	22.271	0.022	1.297	0.031			
MFT-45	1-F													2.652	2.678	0.865	0.071	0.014	9.063	0.12	1648	1.249	0.836		0.114	24.25	0.022					
MFT-45	2-F													2.581	2.711	0.823	0.071	0.012	8.958	0.123	1619	1.278	0.858		0.117	24.34	0.022					
MFT-45	3-F													2.533	2.734	0.747	0.069	0.01	8.657	0.126	1668	1.269	0.818		0.111	24.563	0.022					
MFT-45	4-F													2.595	2.683	0.901	0.074	0.011	9.075	0.111	1653	1.307	0.872		0.112	24.394	0.022					
MFT-45	5-F													2.547	2.738	0.762	0.07	0.011	8.748	0.122	1673	1.308	0.851		0.116	24.978	0.021					
MFT-45	5-F													2.53	2.707	0.854	0.072	0.012	8.33	0.143	1.64	1.262	0.835		0.115	24.449	0.022					
MFT-46	1-MA	48	42		1.401		24200	< 825	< 825	21500			833	2.65		0.944	0.078	0.017	8.823	0.221	1721	1.335	0.886	9.325	0.131	23.819	0.024	1.528	0.007			
MFT-46	2-MA						23900	< 1110	< 1110	21100			< 1110	2.607		0.87	0.072	0.014	8.738	0.18	1.64	1.242	0.844	8.701	0.115	23.006	0.02	1.321	0.016			
MFT-46	3-MA													2.664		0.972	0.073	0.014	8.806	0.22	1662	1.306	0.884	8.865	0.109	23.113	0.021	1.499	0.006			
MFT-46	4-MA													2.71		0.956	0.072	0.012	9.211	0.153	1645	1.31	0.918	9.057	0.121	23.017	0.02	1.242	0.021			
MFT-46	5-MA													2.574		0.879	0.066	0.011	8.555	0.17	1714	1.273	0.815	8.792	0.116	24.044	0.02	1.192	0.017			
MFT-46	1-F													2.264	2.791	0.71	0.063	0.012	7.514	0.118	1702	1.201	0.713		0.089	25.563	0.023					
MFT-46	2-F													2.543	2.691	0.869	0.073	0.015	8.556	0.133	1624	1.266	0.854		0.107	24.795	0.024					
MFT-46	3-F													2.639	2.716	0.889	0.081	0.016	8.997	0.144	1644	1.258	0.858		0.111	24.841	0.024					
MFT-46	4-F													2.759	2.782	0.804	0.076	0.013	9.105	0.128	1691	1.321	0.913		0.112	25.548	0.022					
MFT-46	5-F													2.614	2.766	0.863	0.074	0.016	8.746	0.15	1713	1.271	0.829		0.108	25.552	0.028					
MFT-46	5-F													2.375	2.328	0.845	0.067	0.011	7.925	0.132	1417	1.152	0.813		0.092	21.324	0.019					
MFT-47	1-MA	47	41		1.416		27900	< 1030	< 1030	26400			< 1060	2.451		0.855	0.07	0.012	8.273	0.172	1712	1.244	0.812	8.713	0.11	23.734	0.025	1.185	0.024			
MFT-47	2-MA						27100	< 1060	< 1060	23500			< 1080	2.278		0.757	0.063	0.011	7.669	0.142	1714	1.191	0.729	8.326	0.108	23.88	0.019	1.118	0.024			
MFT-47	3-MA													2.391		0.795	0.069	0.011	8.36	0.122	1729	1.212	0.798	8.555	0.105	24.247	0.02	1.058	0.024			
MFT-47	4-MA													2.359		0.918	0.065	0.012	7.952	0.101	1728	1.22	0.754	8.594	0.091	24.357	0.021	1.114	0.024			
MFT-47	1-F													2.361	285	0.73	0.064	0.008	8.371	0.076	1712	1.234	0.773		0.089	25.563	0.02					
MFT-47	2-F													2.223	2.525	0.715	0.06	0.009	7.556	0.08	1785	1.222	0.715		0.091	26.382	0.02					
MFT-47	3-F													2.274	2.804	0.71	0.058	0.008	7.856	0.075	1705	1.21	0.732		0.097	25.388	0.02					
MFT-47	4-F													2.357	2.776	0.732	0.058	0.009	8.121	0.088	1688	1.208	0.759		0.088	25.144	0.019					
MFT-47	5-F													2.41	2.324	0.77	0.064	0.009	8.315	0.077	1689	1.237	0.814		0.1	25.229	0.025					
MFT-47	6-F													2.457	2.661	0.847	0.063	0.011	8.517	0.1	1596	1.219	0.851		0.098	23.816	0.02					
MFT-48	1-MA	48	43		1.396		25500	< 1480	< 480	23700			< 1480	2.52		0.892	0.066	0.012	8.611	0.144	1675	1.307	0.851	8.86	0.114	23.337	0.026	1.104	0.03			
MFT-48	2-MA						25200	< 1540	< 540	23200			< 1540	2.525		0.859	0.066	0.011	8.687	0.126	1657	1.26	0.85	8.761	0.096	22.672	0.025	1.106	0.028			
MFT-48	3-MA													2.49		0.904	0.066	0.01	8.481	0.13	1687	1.3	0.855	9.031	0.103	23.256	0.026	1.111	0.03			
MFT-48	4-MA													2.659		0.976	0.071	0.013	9.096	0.149	1.63	1.337	0.931	9.04	0.117	22.748	0.026	1.241	0.027			
MFT-48	5-MA													2.643		0.964	0.07	0.013	9.066	0.137	1623	1.308	0.918	9.017	0.12	22.615	0.026	1.213	0.027			
MFT-48	6-MA													2.557		0.842	0.069	0.011	8.77	0.142	1666	1.272	0.844	8.72	0.11	23.296	0.026	1.096	0.03			
MFT-48	1-F													2.473	272	0.794	0.073	0.014	8.395	0.159	1659	1.325	0.853		0.117	24.879	0.028					
MFT-48	2-F													2.624	2.672	0.852	0.081	0.015	9.006	0.145	1597	1.337	0.912		0.121	23.909	0.027					
MFT-48	3-F													2.714	2.778	0.896	0.078	0.014	9.292	0.15	1661	1.392	0.942		0.116	24.821	0.028					
MFT-48	4-F													2.542	2.716	0.728	0.08	0.015	8.689	0.177	1646	1.346	0.858		0.106	25.003	0.029					
MFT-48	5-F													2.494	2.734	0.779	0.082	0.012	8.573	0.172	1634	1.302	0.832		0.106	24.605	0.028					
MFT-48	6-F													2.522	272	0.792	0.072	0.013	8.612	0.168	1633	1.321	0.848		0.102	24.785	0.028					
MFT-49	1-MA	48	43		1.407		29100	< 1460	< 460	26000			< 1450	2.377		0.804	0.062	0.011	7.924	0.167	1744	1.308	0.772	8.755	0.105	24.107	0.026	1.101	0.071			
MFT-49	2-MA						25900	< 1500	< 500	24900			< 1500	2.658		0.927	0.07	0.012	8.87	0.165	1778	1.405	0.898	9.515	0.117	24.509	0.026	1.198	0.073			
MFT-49	3-MA													2.665		1.014	0.069	0.013	8.934	0.162	1661	1.389	0.922	9.246	0.123	22.472	0.024	1.2	0.067			
MFT-49	4-MA													2.374		0.81	0.064	0.011	8.2	0.121	1695	1.292	0.811	8.864	0.108	23.839	0.025	1.043	0.071			
MFT-49	5-MA													2.461		0.858	0.062	0.011	8.407	0.125	1668	1.318	0.848	8.775	0.109	22.921	0.025	1.049	0.069			
MFT-49	6-MA													2.734		1.076	0.07	0.014	8.712	0.141	1634	1.519	0.959	9.21	0.11	21.385	0.024	1.214	0.064			
MFT-49	1-F													2.86	282	0.952	0.077	0.015	8.688	0.194	1.7	1.372	0.887		0.099	26.941	0.028					
MFT-49	2-F													2.599	244	0.625	0.063	0.013	7.357	0.101	1.47	1.19	0.717		0.08	24.422	0.027					
MFT-49	3-F													2.483	2.643	0.79	0.078	0.013	8.376	0.113	1628	1.294	0.839		0.097	24.459	0.026					
MFT-49	4-F													2.477	2.721	0.726	0.108	0.023	8.446	0.208	1657	1.306	0.821		0.107	25.257	0.027					
MFT-49	5-F													2.355	2.779	0.771	0.065	0.01	7.881	0.147	1705	1.286	0.763		0.077	25.33	0.027					
MFT-49	6-F													2.702	2.671	0.901	0.09	0.018	8.956	0.212	1627	1.161	0.931		0.115	27.44	0.098					
MFT-50	1-MA	48			1.413		32500	< 1300	< 300	25900			< 1300	2.339		0.777	0.058	0.008	7.947	0.169	1648	1.245	0.775	8.524	0.09	22.959	0.02	1.034	0.053			
MFT-50	2-MA						33500	< 1310	< 310	25900			< 1310	2.48		0.896	0.063	0.01	8.465	0.169	1632	1.305	0.862	8.976	0.101	22.557	0.021	1.103	0.052			
MFT-50	3-MA													2.28		0.749	0.057	0.01	7.621	0.143	1707	1.278	0.739	8.616	0.098	24.181	0.021	0.976	0.056			
MFT-50	4-MA													2.59		0.909	0.069	0.013	9.145	0.155	1628	1.256	0.915	9.089	0.11	22.779	0.023	1.221	0.053			
MFT-50	5-MA													2.356		0.751	0.06	0.01	7.891	0.149	1713	1.267	0.742	8.584	0.084	24.027	0.022	1.031	0.057			
MFT-50	1-F													2.52	2.704	0.904	0.068	0.015	8.58	0.138	1654	1.285	0.865		0.101	24.746	0.022					
MFT-50	2-F													2.523	2.686	0.907	0.069	0.012	8.564	0.127	1646	1.302	0.869		0.076	24.736	0.022					
MFT-50	3-F													2.098	2.597	0.615	0.055	0.009	7.036	0.089	1.55	1.171	0.678		0.063	23.847	0.02					
MFT-50	4-F													2.175	2.602	0.664	0.056	0.01	7.214	0.119	1597	1.186	0.701		0.069	24.486	0.021					
MFT-50	5-F													2.395	2.773	0.772	0.065	0.015	8.18	0.127	1704	1.268	0.776		0.087	25.98	0.024					
MFT-50	6-F													2.363	2.719	0.662	0.076	0.019	7.963	0.123	1686	1.256	0.741		0.083	25.848	0.025					
MFT-51	1-MA	49			1.412		36000	< 1070	< 070	27800			< 1070	2.604		0.927	0.072	0.01	9.674	0.134	1577	1.249	0.976	8.75	0.115	21.831	0.019	1.122	0.063			
MFT-51	2-MA						31800	< 1050	< 050	23900			< 1050	2.426		0.785	0.062	0.008	8.162	0.148	1.73	1.339	0.788	8.61	0.103	23.867	0.02	0.922	0.065			
MFT-51	3-MA													2.396		0.825	0.061	0.009	8.225	0.155	1685	1.312	0.814	8.75	0.097	23.633	0.019	0.927	0.063			
MFT-51	4-MA													2.242		0.689	0.053	0.008	7.4	0.146	1749	1.305	0.694	8.52	0.081	24.012	0.019	0.821	0.066			
MFT-51	5-MA													2.458		0.854	0.059	0.008	8.276	0.161	1631	1.325	0.809	8.61	0.096	23.304	0.018	0.93	0.063			
MFT-51	6-MA													2.375		0.726	0.059	0.007	8.06	0.137	1693	1.292	0.762	8.504	0.094	24.066	0.018	0.83	0.063			
MFT-51	-F													2.347	2.748	0.791	0.07	0.013	7.98	0.167	1677	1.258	0.767		0.097	25.318	0.024					
MFT-51	2-F													2.356	2.671	0.759	0.066	0.012	7.97	0.182	1.66	1.237	0.748		0.104	25.072	0.023					
MFT-51	3-F													2.792	2.637	0.981	0.077	0.014	9.611	0.183	1612	1.303	0.957		0.118	24.385	0.024					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
MFT-51	4-F												
MFT-51	5-F												
MFT-51	6-F												
MFT-52	1-MA	50	43		1.405		<995	30400	<834	31400			<834
MFT-52	2-MA						<1030	32500	<913	31100			<913
MFT-52	3-MA												
MFT-52	4-MA												
MFT-52	1-F												
MFT-52	2-F												
MFT-52	3-F												
MFT-52	4-F												
MFT-52	5-F												
MFT-52	6-F												
MFT-53	1-MA	51	44		1.426		36100	<984	<984	25600			<553
MFT-53	2-MA						35600	<953	<953	25300			<984
MFT-53	3-MA												
MFT-53	4-MA												
MFT-53	5-MA												
MFT-53	6-MA												
MFT-53	1-F												
MFT-53	2-F												
MFT-53	3-F												
MFT-53	4-F												
MFT-53	5-F												
MFT-53	5-F												
MFT-54	1-MA												
MFT-54	2-MA												
MFT-54	3-MA												
MFT-54	4-MA												
MFT-54	5-MA												
MFT-54	6-MA												
MFT-54	1-F												
MFT-54	2-F												
MFT-54	3-F												
MFT-54	4-F												
MFT-54	5-F												
MFT-54	6-F												
MFT-55	1-MA	49			1.419		32000	< 1040	< 1040	23700			< 1040
MFT-55	2-MA						31200	< 1050	< 1050	22800			< 1050
MFT-55	3-MA												
MFT-55	4-MA												
MFT-55	5-MA												
MFT-55	1-F												
MFT-55	2-F												
MFT-55	3-F												
MFT-55	4-F												
MFT-55	5-F												
MFT-55	6-F												
MFT-56	1-MA	49			1.5		24900	< 1120	< 1120	22700			< 1090
MFT-56	2-MA						22700	< 1090	< 1090	22300			< 1120
MFT-56	3-MA												
MFT-56	4-MA												
MFT-56	5-MA												
MFT-56	6-MA												
MFT-56	1-F												
MFT-56	2-F												
MFT-56	3-F												
MFT-56	4-F												
MFT-56	5-F												
MFT-56	6-F												
MFT-57	1-MA	48	42		1.396		24700	< 1060	< 1060	26100			< 1060
MFT-57	2-MA						25100	< 1070	< 1070	27100			< 1070
MFT-57	3-MA												
MFT-57	4-MA												
MFT-57	5-MA												
MFT-57	1-F												
MFT-57	2-F												
MFT-57	3-F												
MFT-57	4-F												
MFT-57	5-F												
MFT-57	6-F												
MFT-58	1-MA	46	41		1.384		33500	< 874	<874	27500			< 874
MFT-58	2-MA						31800	< 1040	< 1040	25100			< 1040
MFT-58	3-MA												
MFT-58	4-MA												
MFT-58	5-MA												
MFT-58	6-MA												
MFT-58	1-F												
MFT-58	2-F												

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-51	4-F	2.419	2.703	0.763	0.066	0.015	825	0.152	1605	1.233	0.799		0.106	24.669	0.027					
MFT-51	5-F	2.4	267	0.802	0.073	0.017	8.118	0.23	1631	1.229	0.787		0.098	24.721	0.025					
MFT-51	6-F	2.217	2.708	0.672	0.067	0.022	6.919	0.174	1632	1.156	0.639		0.104	25.065	0.033					
MFT-52	1-MA	2.679		0.98	0.082	0.015	9.153	0.196	1649	1.344	0.934	8.905	0.107	21.56	0.021	1.419	0.041			
MFT-52	2-MA	2.7		1.012	0.078	0.015	9.323	0.191	1681	1.443	0.934	9.101	0.114	21.784	0.019	1.335	0.043			
MFT-52	3-MA	2.369		0.708	0.076	0.015	8.238	0.226	1747	1.266	0.724	8.43	0.114	23.592	0.021	1.368	0.045			
MFT-52	4-MA	2.596		0.801	0.078	0.019	908	0.189	1677	1.272	0.815	8.497	0.113	22.378	0.019	1.315	0.044			
MFT-52	1-F	2.552	2.104	0.837	0.085	0.016	8.887	0.137	1684	1.265	0.837		0.109	25.297	0.023					
MFT-52	2-F	2.588	252	0.932	0.069	0.013	8.763	0.09	1561	1.331	0.874		0.097	23.341	0.018					
MFT-52	3-F	2.472	2.495	0.756	0.092	0.014	8.521	0.101	1824	1.271	0.741		0.11	27.94	0.025					
MFT-52	4-F	2.575	2.483	0.929	0.07	0.013	8.657	0.066	1541	1.309	0.861		0.118	23.202	0.018					
MFT-52	5-F	2.455	2.437	0.871	0.071	0.012	8.416	0.097	1494	1.157	0.836		0.109	22.197	0.022					
MFT-52	6-F	2.561	2.384	0.895	0.086	0.015	9.047	0.092	1573	1.239	0.897		0.112	23.654	0.018					
MFT-53	1-MA	2.529		0.928	0.071	0.011	9.109	0.113	1654	1.283	0.935	9.021	0.117	22.457	0.016	1.179	0.04			
MFT-53	2-MA	2.603		0.939	0.076	0.014	9.056	0.182	1657	1.33	0.935	9.155	0.117	22.744	0.018	1.257	0.041			
MFT-53	3-MA	2.55		0.921	0.068	0.012	8.893	0.135	1678	1.33	0.917	9.154	0.105	23.02	0.016	1.131	0.041			
MFT-53	4-MA	2.621		0.935	0.07	0.01	9.109	0.112	1628	1.306	0.934	9.016	0.11	22.058	0.016	1.132	0.042			
MFT-53	5-MA	2.456		0.875	0.067	0.012	882	0.09	1659	1.294	0.904	9.052	0.104	22.706	0.017	1.098	0.04			
MFT-53	6-MA	2.546		0.883	0.067	0.012	8.812	0.111	1661	1.321	0.902	9.048	0.1	22.477	0.015	1.132	0.039			
MFT-53	1-F	2.434	254	0.913	0.073	0.01	8.505	0.083	1552	1.258	0.876		0.095	23.286	0.019					
MFT-53	2-F	2.428	2.364	0.885	0.067	0.008	847	0.059	1557	1.268	0.879		0.104	23.299	0.017					
MFT-53	3-F	2.473	2.338	0.895	0.065	0.01	863	0.074	1585	1.28	0.896		0.1	23.556	0.018					
MFT-53	4-F	2.519	2.371	0.853	0.071	0.011	8.831	0.084	1556	1.279	0.907		0.114	23.329	0.019					
MFT-53	5-F	2.323	2.312	0.848	0.065	0.01	8.157	0.084	1525	1.239	0.84		0.102	22.916	0.017					
MFT-53	5-F	2.368	2.344	0.829	0.063	0.01	8.224	0.078	1.53	1.234	0.835		0.092	22.866	0.017					
MFT-54	1-MA																			
MFT-54	2-MA																			
MFT-54	3-MA																			
MFT-54	4-MA																			
MFT-54	5-MA																			
MFT-54	6-MA																			
MFT-54	1-F																			
MFT-54	2-F																			
MFT-54	3-F																			
MFT-54	4-F																			
MFT-54	5-F																			
MFT-54	6-F																			
MFT-55	1-MA	1.957		0.63	0.05	0.007	6.879	0.087	1761	1.166	0.657	8.435	0.063	24.142	0.015	0.807	0.007			
MFT-55	2-MA	1.895		0.674	0.049	0.008	6.623	0.112	1776	1.14	0.626	8.322	0.069	23.765	0.016	0.863	0.002			
MFT-55	3-MA	1.648		0.573	0.038	0.006	5.242	0.108	1872	1.267	0.522	8.525	0.064	25.071	0.015	0.631	0.019			
MFT-55	4-MA	2.049		0.686	0.052	0.011	6.927	0.153	1.77	1.222	0.658	8.415	0.071	24.366	0.017	1.059	0.009			
MFT-55	5-MA	2.098		0.616	0.068	0.01	6.916	0.191	1824	1.245	0.6	8.395	0.095	25.025	0.017	0.984	0.011			
MFT-55	1-F	2.139	2.655	0.59	0.059	0.015	7.019	0.158	1662	1.164	0.643		0.078	24.636	0.019					
MFT-55	2-F	1.697	3.098	0.48	0.045	0.007	5.321	0.154	1.88	1.269	0.526		0.064	28.621	0.018					
MFT-55	3-F	1.883	2.622	0.484	0.056	0.011	6.175	0.169	1.63	1.086	0.532		0.087	24.389	0.019					
MFT-55	4-F	1.719	2.495	0.494	0.045	0.009	5.463	0.12	1503	1.043	0.501		0.069	22.656	0.017					
MFT-55	5-F	2.041	2.744	0.594	0.055	0.01	6.764	0.13	1682	1.197	0.638		0.084	25.502	0.018					
MFT-55	6-F	2.155	2.556	0.561	0.061	0.012	7.102	0.152	1.8	1.278	0.671		0.095	27.12	0.019					
MFT-56	1-MA	2.366		0.874	0.062	0.004	8.163	0.174	1695	1.309	0.851	9.112	0.095	22.74	0.02	1.206	0.046			
MFT-56	2-MA	2.232		0.788	0.057	0.003	7.6	0.138	1742	1.294	0.762	8.892	0.079	23.807	0.017	1.006	0.047			
MFT-56	3-MA	2.408		0.835	0.066	0.005	8.255	0.161	1.71	1.278	0.81	8.872	0.1	23.391	0.034	1.155	0.047			
MFT-56	4-MA	2.532		0.988	0.111	0.016	8.867	0.191	1701	1.326	0.898	9.62	0.143	23.153	0.026	1.436	0.049			
MFT-56	5-MA	2.297		0.833	0.066	0.005	7.824	0.204	1667	1.273	0.798	8.711	0.103	22.633	0.017	1.196	0.045			
MFT-56	6-MA	2.415		0.9	0.092	0.009	8.291	0.202	1684	1.298	0.835	8.5	0.131	23.185	0.023	1.384	0.048			
MFT-56	1-F	2.302	2.557	0.891	0.063	0.013	8.067	0.107	1676	1.274	0.81		0.101	25.039	0.018					
MFT-56	2-F	2.191	2.791	0.818	0.056	0.008	7.546	0.107	1691	1.262	0.753		0.09	25.48	0.015					
MFT-56	3-F	2.41	2.351	0.839	0.075	0.012	8.386	0.122	1.7	1.334	0.851		0.109	26.307	0.031					
MFT-56	4-F	2.333	2.733	0.732	0.068	0.013	7.915	0.169	1632	1.214	0.776		0.098	24.58	0.019					
MFT-56	5-F	2.43	2.707	0.879	0.068	0.016	8.471	0.155	1639	1.298	0.874		0.106	24.818	0.019					
MFT-56	6-F	2.356	274	0.847	0.067	0.014	8.176	0.106	1639	1.259	0.819		0.101	24.868	0.018					
MFT-57	1-MA	2.342		0.832	0.071	0.015	8.018	0.184	1707	1.299	0.811	8.984	0.094	21.453	0.036	1.28	0.074			
MFT-57	2-MA	2.484		0.859	0.067	0.012	8.431	0.149	1702	1.331	0.856	9.002	0.093	22.169	0.047	1.191	0.073			
MFT-57	3-MA	2.401		0.829	0.064	0.012	8.446	0.104	1644	1.271	0.851	8.833	0.089	22.605	0.02	1.126	0.072			
MFT-57	4-MA	2.056		0.739	0.056	0.009	7.153	0.122	1662	1.229	0.73	8.567	0.085	22.63	0.038	0.848	0.071			
MFT-57	5-MA	2.205		0.763	0.061	0.011	7.403	0.077	1727	1.327	0.758	8.805	0.089	23.029	0.021	0.919	0.073			
MFT-57	1-F	2.267	2.352	0.723	0.059	0.015	7.518	0.166	1724	1.286	0.756		0.085	26.494	0.021					
MFT-57	2-F	2.355	2.804	0.725	0.065	0.016	7.815	0.226	1.72	1.28	0.781		0.078	26.046	0.021					
MFT-57	3-F	2.364	2.719	0.756	0.067	0.019	7.751	0.252	1666	1.246	0.765		0.079	25.595	0.026					
MFT-57	4-F	2.456	275	0.797	0.064	0.013	8.234	0.157	1684	1.265	0.831		0.095	25.629	0.019					
MFT-57	5-F	2.412	2.683	0.772	0.064	0.015	8.154	0.207	1622	1.212	0.812		0.092	25.05	0.019					
MFT-57	6-F	2.467	2.899	0.726	0.066	0.021	8.526	0.234	1778	1.312	0.81		0.084	27.133	0.023					
MFT-58	1-MA	2.604		0.993	0.07	0.013	8.926	0.152	1635	1.361	0.949	9.154	0.115	21.909	0.035	1.269	0.057			
MFT-58	2-MA	2.462		0.916	0.062	0.011	8.754	0.127	1573	1.279	0.927	8.595	0.11	21.809	0.02	1.177	0.056			
MFT-58	3-MA	2.442		0.903	0.062	0.01	8.413	0.1	1633	1.314	0.894	8.843	0.101	22.424	0.057	1.084	0.057			
MFT-58	4-MA	2.45		0.916	0.064	0.011	8.71	0.11	1617	1.29	0.929	9.095	0.101	22.029	0.031	1.164	0.055			
MFT-58	5-MA	2.638		0.952	0.065	0.01	9.152	0.099	1633	1.327	0.954	8.981	0.109	22.015	0.024	1.123	0.056			
MFT-58	6-MA	2.53		0.919	0.065	0.011	8.829	0.108	1623	1.316	0.923	8.887	0.122	22.043	0.022	1.142	0.056			
MFT-58	1-F	2.517	2.312	0.938	0.072	0.01	8.733	0.094	1602	1.349	0.929		0.099	24.698	0.017					
MFT-58	2-F	2.524	2.627	0.97	0.067	0.012	8.742	0.09	1598	1.305	0.929		0.104	24.053	0.019					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
MFT-58	3-F												
MFT-58	4-F												
MFT-58	5-F												
MFT-58	6-F												
MFT-59	1-MA	45	40		1.361		32500	< 1000	< 1000	22400			<928
MFT-59	2-MA						32200	< 928	< 928	22300			< 1300
MFT-59	3-MA												
MFT-59	4-MA												
MFT-59	5-MA												
MFT-59	6-MA												
MFT-59	1-F												
MFT-59	2-F												
MFT-59	3-F												
MFT-59	4-F												
MFT-59	5-F												
MFT-59	6-F												
MFT-60	1-MA	42			1.311		27600	< 1250	< 1250	21000			< 1160
MFT-60	2-MA						28000	< 1160	< 1160	20700			< 1250
MFT-60	3-MA												
MFT-60	4-MA												
MFT-60	1-F												
MFT-60	2-F												
MFT-60	3-F												
MFT-60	4-F												
MFT-60	5-F												
MFT-60	6-F												
MFT-61	1-MA	41			1.343		24500	< 1230	< 1230	22100			< 1160
MFT-61	2-MA						25400	< 1160	< 1160	22700			< 1230
MFT-61	3-MA												
MFT-61	4-MA												
MFT-61	1-F												
MFT-61	2-F												
MFT-61	3-F												
MFT-61	4-F												
MFT-61	5-F												
MFT-61	6-F												
MFT-62	1-MA	44	39		1.369		30100	< 988	< 988	26700			1290
MFT-62	2-MA						32800	< 1070	< 1070	28800			1010
MFT-62	3-MA												
MFT-62	4-MA												
MFT-62	1-F												
MFT-62	2-F												
MFT-62	3-F												
MFT-62	4-F												
MFT-62	5-F												
MFT-63	1-MA	45			1.381		27000	< 1240	< 1240	23600			< 1240
MFT-63	2-MA						27300	< 1170	< 1170	22700			< 1170
MFT-63	3-MA												
MFT-63	4-MA												
MFT-63	5-MA												
MFT-63	6-MA												
MFT-63	1-F												
MFT-63	2-F												
MFT-63	3-F												
MFT-63	4-F												
MFT-63	5-F												
MFT-63	6-F												
MFT-64	1-MA	45			1.379		33400	< 1110	< 1110	24500			< 1110
MFT-64	2-MA						31000	< 1080	< 1080	22800			< 1080
MFT-64	3-MA												
MFT-64	4-MA												
MFT-64	5-MA												
MFT-64	1-F												
MFT-64	2-F												
MFT-64	3-F												
MFT-64	4-F												
MFT-64	5-F												
MFT-64	6-F												
MFT-65	1-MA	46	41		1.391		33600	< 1090	< 1090	23500			< 1100
MFT-65	2-MA						33300	< 1100	< 1100	21700			< 1090
MFT-65	3-MA												
MFT-65	4-MA												
MFT-65	5-MA												
MFT-65	6-MA												
MFT-65	1-F												
MFT-65	2-F												
MFT-65	3-F												
MFT-65	4-F												
MFT-65	5-F												

Tank Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-58	3-F	2.666	2668	0.973	0.071	0.013	9.229	0.124	1.615	1.304	0.937		0.104	24.443	0.019					
MFT-58	4-F	2.567	2712	0.93	0.07	0.014	8.918	0.163	1.603	1.305	0.921		0.117	24.683	0.02					
MFT-58	5-F	2.827	2787	1.023	0.072	0.016	9.218	0.137	1.661	1.364	0.97		0.109	25.211	0.021					
MFT-58	6-F	2.448	279	0.925	0.065	0.011	8.394	0.126	1.683	1.357	0.895		0.114	25.758	0.018					
MFT-59	1-MA	2.661		0.973	0.064	0.009	9.343	0.117	1.61	1.332	0.947	8.907	0.11	22.129	0.017	1.175	0.081			
MFT-59	2-MA	2.477		1.05	0.062	0.01	8.339	0.121	1.603	1.284	0.869	8.465	0.086	21.538	0.02	1.148	0.082			
MFT-59	3-MA	2.465		0.92	0.059	0.011	8.287	0.141	1.651	1.323	0.873	8.822	0.091	22.541	0.02	1.147	0.083			
MFT-59	4-MA	2.582		0.971	0.063	0.01	8.741	0.113	1.649	1.344	0.922	8.903	0.105	22.545	0.02	1.191	0.083			
MFT-59	5-MA	2.52		0.958	0.061	0.01	8.553	0.115	1.629	1.325	0.909	8.801	0.099	22.489	0.023	1.146	0.084			
MFT-59	6-MA	2.597		0.957	0.06	0.011	8.803	0.113	1.627	1.328	0.921	8.804	0.093	21.988	0.021	1.188	0.082			
MFT-59	1-F	2.519	2481	0.74	0.064	0.008	8.51	0.144	1.532	1.266	0.891		0.095	23.164	0.017					
MFT-59	2-F	2.399	2486	0.701	0.066	0.007	8.205	0.164	1.515	1.232	0.851		0.093	22.83	0.015					
MFT-59	3-F	2.604	2542	0.744	0.067	0.011	8.806	0.173	1.569	1.304	0.917		0.104	23.821	0.017					
MFT-59	4-F	2.564	2626	0.768	0.061	0.007	8.599	0.134	1.613	1.323	0.897		0.093	24.404	0.015					
MFT-59	5-F	2.528	2537	0.758	0.068	0.008	8.57	0.116	1.585	1.309	0.901		0.106	23.958	0.016					
MFT-59	6-F	2.495	2626	0.787	0.066	0.008	8.331	0.125	1.612	1.305	0.87		0.114	24.21	0.016					
MFT-60	1-MA	2.273		0.762	0.064	0.012	7.78	0.178	1.65	1.228	0.772	8.461	0.106	22.754	0.019	1.044	0.077			
MFT-60	2-MA	2.429		0.856	0.07	0.014	8.724	0.199	1.615	1.25	0.89	8.922	0.116	22.425	0.017	1.148	0.076			
MFT-60	3-MA	2.491		0.856	0.065	0.01	8.545	0.146	1.67	1.314	0.854	8.818	0.098	23.16	0.018	1.071	0.079			
MFT-60	4-MA	2.455		0.835	0.066	0.013	8.54	0.191	1.668	1.313	0.863	8.974	0.095	22.646	0.017	1.085	0.078			
MFT-60	1-F	2.361	2733	0.777	0.068	0.012	8.358	0.136	1.671	1.314	0.791		0.116	25.272	0.019					
MFT-60	2-F	2.515	2877	0.842	0.073	0.012	8.56	0.181	1.779	1.403	0.84		0.111	26.897	0.018					
MFT-60	3-F	2.204	2528	0.598	0.066	0.01	7.56	0.229	1.551	1.231	0.731		0.131	23.481	0.015					
MFT-60	4-F	2.324	2701	0.686	0.061	0.008	7.826	0.133	1.656	1.312	0.776		0.115	25.01	0.016					
MFT-60	5-F	2.079	2555	0.653	0.056	0.008	7.353	0.089	1.564	1.202	0.714		0.088	22.878	0.014					
MFT-60	6-F	1.633	1887	0.401	0.046	0.006	5.588	0.125	1.156	0.907	0.548		0.06	17.533	0.01					
MFT-61	1-MA	2.499		0.916	0.063	0.01	8.63	0.122	1.607	1.283	0.895	8.909	0.1	22.104	0.014	1.054	0.062			
MFT-61	2-MA	2.506		0.925	0.065	0.011	8.529	0.132	1.641	1.301	0.899	9.001	0.099	22.742	0.015	1.08	0.063			
MFT-61	3-MA	2.55		0.911	0.067	0.011	8.312	0.17	1.623	1.272	0.887	8.882	0.104	22.246	0.016	1.185	0.064			
MFT-61	4-MA	2.572		0.959	0.07	0.012	8.886	0.161	1.617	1.306	0.928	8.959	0.11	22.404	0.016	1.195	0.065			
MFT-61	1-F	2.717	2709	0.86	0.073	0.012	9.394	0.086	1.663	1.334	0.93		0.09	25.458	0.017					
MFT-61	2-F	2.146	2251	0.751	0.061	0.009	7.481	0.082	1.353	1.105	0.77		0.071	20.642	0.014					
MFT-61	3-F	2.459	2604	0.861	0.067	0.01	8.583	0.101	1.57	1.259	0.866		0.088	23.985	0.016					
MFT-61	4-F	2.523	2658	0.825	0.066	0.01	8.74	0.098	1.601	1.265	0.872		0.096	24.364	0.017					
MFT-61	5-F	2.399	2694	0.726	0.06	0.01	8.295	0.083	1.631	1.276	0.834		0.085	24.872	0.016					
MFT-61	6-F	2.604	2714	0.754	0.071	0.016	8.91	0.094	1.595	1.306	0.907		0.084	24.603	0.018					
MFT-62	1-MA	2.723		0.922	0.081	0.011	9.706	0.163	1.57	1.252	0.956	8.903	0.116	21.113	0.028	1.4	0.04			
MFT-62	2-MA	2.27		0.71	0.063	0.009	7.935	0.147	1.671	1.221	0.759	8.247	0.106	21.764	0.029	1.15	0.043			
MFT-62	3-MA	1.854		0.57	0.05	0.006	6.598	0.086	1.721	1.073	0.583	7.719	0.074	22.935	0.027	0.92	0.041			
MFT-62	4-MA	2.355		0.852	0.064	0.008	8.434	0.108	1.633	1.249	0.862	8.975	0.105	22.398	0.018	1.13	0.041			
MFT-62	1-F	2	2826	0.509	0.051	0.007	6.92	0.055	1.753	1.15	0.601		0.084	26.371	0.015					
MFT-62	2-F	2.187	2635	0.624	0.059	0.008	7.695	0.074	1.615	1.161	0.739		0.101	24.748	0.014					
MFT-62	3-F	1.809	2866	0.512	0.045	0.006	6.201	0.05	1.791	1.17	0.563		0.065	27.161	0.014					
MFT-62	4-F	2.29	2719	0.648	0.058	0.007	7.961	0.055	1.676	1.214	0.776		0.098	25.082	0.013					
MFT-62	5-F	1.943	2722	0.489	0.049	0.007	6.732	0.048	1.702	1.114	0.584		0.085	25.638	0.013					
MFT-63	1-MA	2.655		0.924	0.072	0.014	8.559	0.188	1.696	1.485	0.905	9.338	0.105	20.853	0.017	1.307	0.043			
MFT-63	2-MA	2.641		0.853	0.072	0.016	9.336	0.227	1.649	1.328	0.894	8.801	0.116	22.819	0.017	1.37	0.044			
MFT-63	3-MA	2.726		0.912	0.074	0.017	9.412	0.225	1.563	1.282	0.94	8.88	0.11	18.094	0.018	1.38	0.041			
MFT-63	4-MA	2.512		0.842	0.066	0.012	8.535	0.153	1.697	1.327	0.856	9.045	0.105	21.928	0.015	1.134	0.043			
MFT-63	5-MA	2.377		0.727	0.068	0.016	7.914	0.226	1.766	1.293	0.746	8.745	0.103	24.036	0.019	1.281	0.045			
MFT-63	6-MA	2.82		1.089	0.069	0.014	8.588	0.19	1.634	1.577	0.95	9.291	0.113	21.521	0.017	1.24	0.043			
MFT-63	1-F	2.33	1922	0.86	0.05	0.004	6.96	0.021	1.338	1.256	0.729		0.083	18.437	0.012					
MFT-63	2-F	2.752	2498	0.871	0.069	0.009	9.265	0.088	1.535	1.255	0.93		0.109	23.339	0.016					
MFT-63	3-F	2.488	2452	0.899	0.063	0.005	8.222	0.073	1.593	1.372	0.857		0.101	23.227	0.015					
MFT-63	4-F	2.284	2766	0.654	0.058	0.005	7.738	0.058	1.702	1.245	0.729		0.092	25.819	0.018					
MFT-63	5-F	2.517	2698	0.781	0.059	0.006	8.463	0.066	1.649	1.317	0.847		0.1	24.887	0.016					
MFT-63	6-F	2.534	2618	0.754	0.064	0.004	8.787	0.027	1.58	1.265	0.867		0.105	24.261	0.017					
MFT-64	1-MA	2.554		0.933	0.07	0.013	8.525	0.176	1.685	1.338	0.869	8.956	0.109	23.321	0.024	1.235	0.079			
MFT-64	2-MA	2.565		0.955	0.069	0.013	8.57	0.18	1.688	1.353	0.883	9.012	0.091	22.555	0.021	1.299	0.079			
MFT-64	3-MA	2.553		0.953	0.067	0.011	8.566	0.125	1.681	1.352	0.891	9	0.112	23.232	0.026	1.192	0.078			
MFT-64	4-MA	2.43		0.84	0.06	0.009	8.366	0.099	1.699	1.307	0.806	8.775	0.091	23.707	0.018	1.056	0.077			
MFT-64	5-MA	2.387		0.878	0.063	0.011	7.922	0.143	1.685	1.337	0.81	8.949	0.105	23.987	0.019	1.08	0.078			
MFT-64	1-F	2.393	2449	0.838	0.06	0.158	7.866	0.136	1.509	1.185	0.793		0.112	22.645	0.016					
MFT-64	2-F	2.533	2616	0.997	0.064	0.013	8.357	0.202	1.61	1.249	0.842		0.109	24.131	0.019					
MFT-64	3-F	2.396	2597	0.8	0.059	0.039	8.02	0.083	1.621	1.238	0.811		0.116	24.195	0.019					
MFT-64	4-F	2.466	2687	0.818	0.062	0.009	8.123	0.101	1.647	1.267	0.835		0.109	24.623	0.016					
MFT-64	5-F	2.462	2571	0.812	0.066	0.01	8.262	0.086	1.567	1.23	0.843		0.121	23.554	0.018					
MFT-64	6-F	2.429	1.64	0.913	0.061	0.011	8.349	0.098	1.634	1.242	0.824		0.107	24.442	0.04					
MFT-65	1-MA	2.506		0.974	0.073	0.014	8.734	0.179	1.611	1.294	0.918	8.974	0.102	22.642	0.017	1.66	0.051			
MFT-65	2-MA	2.544		0.994	0.074	0.014	8.725	0.167	1.634	1.322	0.912	8.931	0.093	22.299	0.018	1.612	0.053			
MFT-65	3-MA	2.733		0.975	0.089	0.022	8.452	0.178	1.681	1.335	0.909	9.266	0.19	22.706	0.036	1.63	0.055			
MFT-65	4-MA	2.545		0.974	0.073	0.014	8.788	0.173	1.62	1.333	0.912	8.923	0.113	22.546	0.018	1.6	0.052			
MFT-65	5-MA	2.505		0.974	0.071	0.014	8.384	0.161	1.618	1.355	0.87	8.806	0.099	22.354	0.019	1.576	0.051			
MFT-65	6-MA	2.495		0.946	0.073	0.014	8.399	0.167	1.653	1.351	0.88	9.005	0.096	22.897	0.043	1.566	0.054			
MFT-65	1-F	2.48	2546	0.752	0.061	0.008	8.327	0.061	1.613	1.271	0.851		0.095	23.773	0.016					
MFT-65	2-F	2.521	2683	0.786	0.06	0.008	8.581	0.027	1.63	1.301	0.904		0.094	24.376	0.015					
MFT-65	3-F	2.557	2739	0.724	0.062	0.009	8.508	0.014	1.632	1.295	0.873		0.092	24.545	0.016					
MFT-65	4-F	2.524	2596	0.785	0.065	0.008	8.401	0.031	1.608	1.281	0.889		0.095	24.078	0.014					
MFT-65	5-F	2.437	2548	0.722	0.059	0.009	8.385	0.032	1.563	1.246	0.862		0.083	23.275	0.016					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
MFT-66	1-MA	45			1.39		30200	< 889	< 889	21400			< 531
MFT-66	2-MA						33800	< 931	< 931	24300			< 889
MFT-66	3-MA												
MFT-66	4-MA												
MFT-66	5-MA												
MFT-66	6-MA												
MFT-66	1-F												
MFT-66	2-F												
MFT-66	3-F												
MFT-66	4-F												
MFT-66	5-F												
MFT-66	6-F												
MFT-67	1-MA	48	42		1.389		31700	< 1230	< 1230	26800			< 1150
MFT-67	2-MA						31400	< 1150	< 1150	25900			< 1230
MFT-67	3-MA												
MFT-67	4-MA												
MFT-67	5-MA												
MFT-67	1-F												
MFT-67	2-F												
MFT-67	3-F												
MFT-67	4-F												
MFT-67	5-F												
MFT-68	1-MA	48			1.403		34500	< 1100	< 1100	28900			< 1160
MFT-68	2-MA						25500	< 1160	< 1160	25400			< 1100
MFT-68	3-MA												
MFT-68	4-MA												
MFT-68	5-MA												
MFT-68	6-MA												
MFT-68	1-F												
MFT-68	2-F												
MFT-68	3-F												
MFT-68	4-F												
MFT-68	5-F												
MFT-69	1-MA	49			1.418		32000	< 1070	< 1070	24600			1290
MFT-69	2-MA						31700	< 1120	< 1120	23200			1300
MFT-69	3-MA												
MFT-69	4-MA												
MFT-69	5-MA												
MFT-69	6-MA												
MFT-69	1-F												
MFT-69	2-F												
MFT-69	3-F												
MFT-69	4-F												
MFT-69	5-F												
MFT-69	6-F												
MFT-70	1-MA	48	44		1.41		31000	< 871	< 871	26700			< 871
MFT-70	2-MA						34100	< 976	< 976	29400			< 976
MFT-70	3-MA												
MFT-70	4-MA												
MFT-70	5-MA												
MFT-70	6-MA												
MFT-70	1-F												
MFT-70	2-F												
MFT-70	3-F												
MFT-70	4-F												
MFT-70	5-F												
MFT-70	6-F												
MFT-71	1-MA	48			1.391		32700	< 1100	< 1100	27400			< 1110
MFT-71	2-MA						33300	< 1110	< 1110	24900			< 1100
MFT-71	3-MA												
MFT-71	4-MA												
MFT-71	5-MA												
MFT-71	6-MA												
MFT-71	1-F												
MFT-71	2-F												
MFT-71	3-F												
MFT-71	4-F												
MFT-71	5-F												
MFT-72	1-NA	48	42		1.382		33500	< 1070	< 1070	23600			968
MFT-72	2-NA						31100	< 968	< 968	21600			< 1070
MFT-72	3-NA												
MFT-72	4-NA												
MFT-72	5-NA												
MFT-72	6-NA												
MFT-72	1-F												
MFT-72	2-F												
MFT-72	3-F												
MFT-72	4-F												
MFT-72	5-F												

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-66	1-MA	2.697		1.019	0.065	0.009	8.882	0.078	1649	1.362	0.918	9.45	0.102	22.111	0.028	1.084	0.044			
MFT-66	2-MA	2.467		0.892	0.064	0.01	8.314	0.08	1714	1.332	0.833	9.581	0.099	22.58	0.03	1.078	0.047			
MFT-66	3-MA	2.438		0.839	0.064	0.009	8.579	0.107	1705	1.277	0.848	9.117	0.108	22.907	0.027	1.075	0.045			
MFT-66	4-MA	2.402		0.879	0.06	0.01	8.197	0.096	1697	1.327	0.846	9.164	0.103	22.718	0.026	1.113	0.046			
MFT-66	5-MA	2.536		0.923	0.07	0.012	8.688	0.137	1693	1.336	0.895	9.32	0.106	22.759	0.048	1.245	0.046			
MFT-66	6-MA	2.483		0.878	0.063	0.009	8.51	0.099	1702	1.309	0.857	9.12	0.092	22.411	0.017	1.036	0.045			
MFT-66	1-F	2.408	2.113	0.845	0.065	0.013	8.311	0.08	1685	1.305	0.856		0.103	25.42	0.017					
MFT-66	2-F	2.519	2.58	0.788	0.07	0.013	8.567	0.088	1673	1.304	0.896		0.12	25.306	0.016					
MFT-66	3-F	2.528	2.59	0.733	0.066	0.014	8.556	0.049	1689	1.265	0.85		0.109	25.354	0.017					
MFT-66	4-F	2.693	266	0.873	0.071	0.013	8.747	0.071	1637	1.322	0.912		0.1	24.524	0.016					
MFT-66	5-F	2.389	2.63	0.726	0.064	0.013	8.076	0.084	1647	1.248	0.81		0.096	25.004	0.017					
MFT-66	6-F	2.42	2.723	0.799	0.066	0.012	8.259	0.086	1.66	1.246	0.835		0.098	24.867	0.015					
MFT-67	1-MA	2.766		1.042	0.073	0.012	9.135	0.174	1.63	1.379	0.926	9.272	0.112	22.294	0.02	1.203	0.057			
MFT-67	2-MA	2.629		0.986	0.075	0.012	9.401	0.155	1618	1.281	0.976	9.382	0.122	22.141	0.016	1.221	0.056			
MFT-67	3-MA	2.714		1.054	0.074	0.012	8.975	0.191	1631	1.377	0.924	9.302	0.114	22.01	0.022	1.234	0.057			
MFT-67	4-MA	2.503		0.763	0.066	0.012	8.535	0.219	1725	1.262	0.791	8.774	0.099	22.92	0.033	1.167	0.06			
MFT-67	5-MA	2.257		0.72	0.059	0.011	7.651	0.177	1754	1.274	0.72	8.572	0.079	24.123	0.039	1.055	0.06			
MFT-67	1-F	2.558	2.898	0.644	0.064	0.011	8.772	0.056	1775	1.265	0.807		0.082	26.672	0.016					
MFT-67	2-F	2.561	2.41	0.84	0.069	0.013	8.187	0.081	1527	1.233	0.83		0.096	22.791	0.021					
MFT-67	3-F	2.216	2.59	0.569	0.054	0.012	7.529	0.064	1717	1.2	0.702		0.09	25.943	0.017					
MFT-67	4-F	2.692	2.552	0.879	0.068	0.012	8.908	0.08	1575	1.314	0.913		0.103	23.685	0.019					
MFT-67	5-F	2.652	2.509	0.835	0.075	0.011	9.175	0.089	1564	1.25	0.944		0.116	23.428	0.016					
MFT-68	1-MA	2.131		0.709	0.056	0.01	6.816	0.204	1842	1.246	0.63	8.411	0.081	24.9	0.064	1.081	0.056			
MFT-68	2-MA	2.445		0.843	0.064	0.011	7.99	0.195	1737	1.292	0.775	8.908	0.092	24.154	0.026	1.129	0.055			
MFT-68	3-MA	2.245		0.727	0.058	0.01	7.35	0.143	1818	1.267	0.675	8.627	0.088	24.371	0.04	1.004	0.058			
MFT-68	4-MA	2.408		0.776	0.061	0.009	7.987	0.157	1702	1.244	0.742	8.637	0.086	23.151	0.025	1.022	0.056			
MFT-68	5-MA	2.164		0.702	0.058	0.01	7.086	0.222	1735	1.234	0.656	8.317	0.082	23.887	0.044	1.036	0.054			
MFT-68	6-MA	2.928		0.998	0.057	0.01	7.481	0.21	1.76	1.285	0.709	8.566	0.092	24.389	0.04	1.074	0.445			
MFT-68	1-F	2.364	2.228	0.721	0.059	0.012	7.503	0.084	1.67	1.203	0.732		0.072	25.726	0.018					
MFT-68	2-F	2.159	2.318	0.593	0.063	0.011	6.956	0.117	1744	1.162	0.628		0.076	26.611	0.021					
MFT-68	3-F	2.441	2.335	0.691	0.083	0.016	8.684	0.093	1672	1.185	0.714		0.099	26.034	0.023					
MFT-68	4-F	2.234	2.459	0.634	0.071	0.01	7.028	0.063	1523	1.078	0.636		0.081	23.626	0.024					
MFT-68	5-F	1.999	2.312	0.596	0.059	0.013	6.36	0.08	1705	1.119	0.572		0.073	25.514	0.023					
MFT-69	1-MA	2.547		0.904	0.063	0.01	8.604	0.108	1631	1.27	0.87	8.901	0.107	22.664	0.04	1.072	0.051			
MFT-69	2-MA	2.538		0.924	0.064	0.01	8.511	0.128	1632	1.298	0.874	8.973	0.101	22.539	0.031	1.096	0.05			
MFT-69	3-MA	2.672		0.986	0.068	0.009	9.026	0.131	1618	1.301	0.938	9.153	0.104	22.296	0.033	1.158	0.049			
MFT-69	4-MA	2.66		0.962	0.069	0.011	8.885	0.156	1613	1.29	0.92	9.077	0.107	22.88	0.027	1.143	0.05			
MFT-69	5-MA	2.599		0.923	0.065	0.009	8.58	0.151	1629	1.29	0.887	9.022	0.09	22.986	0.034	1.096	0.05			
MFT-69	6-MA	2.584		0.905	0.067	0.01	8.785	0.138	1658	1.282	0.88	8.984	0.101	22.514	0.025	1.139	0.052			
MFT-69	1-F	2.495	2.608	0.912	0.067	0.011	8.426	0.133	1599	1.231	0.845		0.109	23.82	0.016					
MFT-69	2-F	2.519	2.607	0.845	0.065	0.01	8.342	0.119	1593	1.205	0.839		0.11	23.839	0.016					
MFT-69	3-F	2.644	2.591	0.998	0.07	0.011	9.011	0.121	1591	1.26	0.927		0.113	23.866	0.017					
MFT-69	4-F	2.498	2.635	0.896	0.066	0.011	8.516	0.136	1598	1.233	0.857		0.116	24.255	0.017					
MFT-69	5-F	2.623	2.358	0.784	0.065	0.011	8.847	0.102	1689	1.284	0.782		0.107	25.508	0.015					
MFT-69	6-F	2.616	2.656	0.937	0.07	0.011	8.889	0.098	1604	1.257	0.902		0.134	24.217	0.017					
MFT-70	1-MA	2.366		0.783	0.059	0.005	7.612	0.103	1743	1.296	0.751	8.911	0.078	24.269	0.026	0.882	0.048			
MFT-70	2-MA	2.469		0.876	0.067	0.005	8.178	0.158	1766	1.351	0.853	9.547	0.084	25.439	0.085	0.975	0.051			
MFT-70	3-MA	2.417		0.854	0.064	0.005	7.952	0.132	1676	1.296	0.814	9.057	0.086	21.299	0.022	0.947	0.048			
MFT-70	4-MA	2.287		0.789	0.061	0.004	7.622	0.097	1765	1.303	0.761	8.839	0.09	24.51	0.039	0.892	0.049			
MFT-70	5-MA	2.353		0.803	0.06	0.005	7.912	0.105	1626	1.26	0.797	8.585	0.091	22.349	0.042	0.929	0.045			
MFT-70	6-MA	2.353		0.785	0.066	0.007	7.514	0.131	1685	1.247	0.741	8.671	0.106	23.498	0.032	0.924	0.048			
MFT-70	1-F	2.348	2.665	0.695	0.062	0.009	7.73	0.091	1637	1.248	0.788		0.078	25.065	0.018					
MFT-70	2-F	2.129	2.589	0.673	0.06	0.021	7.027	0.117	1626	1.128	0.689		0.074	23.962	0.015					
MFT-70	3-F	2.343	2.711	0.663	0.062	0.011	7.664	0.109	1706	1.265	0.748		0.083	25.918	0.017					
MFT-70	4-F	2.355	2.828	0.719	0.062	0.01	7.809	0.115	1.8	1.292	0.775		0.082	26.856	0.017					
MFT-70	5-F	2.377	2.615	0.7	0.063	0.01	7.953	0.102	1639	1.209	0.792		0.089	25.224	0.02					
MFT-70	6-F	2.234	255	0.684	0.061	0.009	7.447	0.108	1607	1.207	0.759		0.073	24.266	0.015					
MFT-71	1-MA	2.673		1.02	0.066	0.008	9.114	0.142	1656	1.334	0.974	9.306	0.11	22.784	0.031	1.069	0.055			
MFT-71	2-MA	2.614		1.002	0.065	0.008	8.809	0.132	1.61	1.317	0.952	9.029	0.093	22.176	0.037	1.005	0.055			
MFT-71	3-MA	2.778		1.036	0.072	0.011	9.225	0.174	1652	1.339	0.983	9.503	0.109	25.387	0.023	1.142	0.064			
MFT-71	4-MA	2.692		1.037	0.073	0.014	9.133	0.205	1628	1.337	0.977	9.239	0.103	23.784	0.04	1.333	0.059			
MFT-71	5-MA	2.416		0.951	0.065	0.01	8.334	0.172	1622	1.303	0.889	8.829	0.103	22.278	0.021	1.156	0.057			
MFT-71	6-MA	2.389		1.456	0.062	0.01	8.112	0.11	1574	1.271	0.862	8.616	0.096	21.596	0.019	1.035	0.054			
MFT-71	1-F	2.586	256	1.068	0.069	0.014	8.865	0.185	1624	1.303	0.93		0.101	24.327	0.018					
MFT-71	2-F	2.682	2.597	1.009	0.073	0.014	9.261	0.154	1635	1.335	0.978		0.115	24.707	0.02					
MFT-71	3-F	2.578	2.609	1.061	0.071	0.015	8.804	0.172	1667	1.306	0.919		0.103	24.948	0.019					
MFT-71	4-F	2.645	2.503	1.061	0.074	0.014	9.118	0.185	1624	1.282	0.95		0.11	24.172	0.019					
MFT-71	5-F	2.638	252	1.005	0.075	0.015	9.071	0.127	1591	1.266	0.954		0.105	23.821	0.019					
MFT-72	1-NA	2.621		0.946	0.094	0.013	8.866	0.209	1702	1.297	0.919	9.229	0.244	23.412	0.02	1.267	0.039			
MFT-72	2-NA	2.31		0.768	0.104	0.022	7.38	0.198	1746	1.229	0.747	8.69	0.158	24.073	0.024	1.114	0.039			
MFT-72	3-NA	2.534		0.876	0.081	0.016	8.644	0.176	1736	1.268	0.88	9.003	0.309	23.697	0.023	1.202	0.038			
MFT-72	4-NA	2.467		0.835	0.067	0.011	8.357	0.202	1699	1.246	0.821	8.712	0.133	23.693	0.015	1.188	0.038			
MFT-72	5-NA	2.298		0.792	0.07	0.013	7.715	0.242	1746	1.25	0.782	8.873	0.231	24.305	0.021	1.196	0.04			
MFT-72	6-NA	2.403		0.828	0.066	0.011	8.216	0.177	1725	1.247	0.803	8.613	0.132	21.772	0.039	1.186	0.039			
MFT-72	1-F	2.409	2.544	0.955	0.08	0.009	9.411	2.265	1442	0.51	1.411		0.833	22.203	0.678					
MFT-72	2-F	2.264	2.514	0.706	0.071	0.012	7.611	0.095	1581	1.197	0.748		0.086	23.705	0.014					
MFT-72	3-F	2.94	3.641	0.96	0.111	0.017	10.27	0.145	2254	1.654	0.978		0.139	33.998	0.019					
MFT-72	4-F	2.23	2.763	0.749	0.077	0.013	7.66	0.131	1711	1.24	0.738		0.107	25.696	0.014					
MFT-72	5-F	2.392	2.575	0.821	0.066	0.011	8.212	0.113	1614	1.237	0.834		0.097	24.044	0.012					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-72	6-F													1.929	2.153	0.586	0.06	0.01	6.705	0.079	1.331	1.008	0.651		0.079	20.028	0.012					
MFT-73	1-MA	47			1.38		32800	< 1190	< 1190	24700			< 1150	2.444		0.842	0.06	0.009	8.357	0.095	1.589	1.217	0.848	8.57	0.09	22.275	0.016	1.064	0.027			
MFT-73	2-MA						32700	< 1150	< 1150	23600			< 1190	2.441		0.872	0.061	0.01	8.326	0.123	1.621	1.255	0.864	8.801	0.103	22.746	0.017	1.082	0.028			
MFT-73	3-MA													2.249		0.796	0.058	0.01	7.703	0.114	1.622	1.19	0.772	8.453	0.085	22.941	0.016	1.061	0.028			
MFT-73	4-MA													2.367		0.803	0.059	0.01	8.068	0.098	1.583	1.196	0.811	8.514	0.085	22.466	0.016	1.072	0.028			
MFT-73	5-MA													2.403		0.811	0.057	0.01	8.93	0.085	1.64	1.216	0.818	8.572	0.092	23.008	0.017	1.028	0.027			
MFT-73	6-MA													2.368		0.793	0.057	0.009	806	0.074	1.678	1.241	0.802	8.738	0.093	23.802	0.016	0.967	0.029			
MFT-73	1-F													2.388	2.587	0.799	0.098	0.014	8.396	0.134	1.628	1.217	0.826		0.113	24.276	0.019					
MFT-73	2-F													2.492	2.519	0.843	0.074	0.012	8.184	0.136	1.643	1.266	0.843		0.102	24.775	0.018					
MFT-73	3-F													2.364	2.721	0.834	0.128	0.021	8.432	0.11	1.689	1.284	0.817		0.113	25.511	0.029					
MFT-73	4-F													3.425	2.774	0.947	0.079	0.015	9.467	0.187	1.738	1.368	0.964		0.116	26.154	0.019					
MFT-73	5-F													2.978	2.575	0.928	0.127	0.015	9.297	0.134	1.657	1.314	0.921		0.118	24.889	0.02					
MFT-74	1-MA	44			1.36		27800	< 1100	< 1100	21100			< 1100	2.439		0.889	0.068	0.012	8.333	0.103	1.688	1.363	0.894	9.073	0.114	23.269	0.014	1.198	0.02			
MFT-74	2-MA						23100	< 1100	< 1100	20500			< 1100	2.376		0.903	0.065	0.01	8.167	0.056	1.661	1.351	0.886	8.949	0.109	22.962	0.012	1.066	0.018			
MFT-74	3-MA													2.48		0.906	0.06	0.007	8.709	0.022	1.698	1.365	0.919	9.143	0.099	23.318	0.012	1.043	0.019			
MFT-74	4-MA													2.57		0.94	0.064	0.011	895	0.075	1.711	1.394	0.926	9.285	0.12	23.598	0.012	1.114	0.019			
MFT-74	5-MA													2.477		0.938	0.065	0.01	8.434	0.104	1.69	1.361	0.907	9.217	0.102	23.509	0.013	1.092	0.018			
MFT-74	1-F													2.505	2.532	0.823	0.073	0.012	8.607	0.157	1.664	1.298	0.887		0.11	24.426	0.016					
MFT-74	2-F													2.454	2.725	0.915	0.088	0.012	8.384	0.14	1.703	1.305	0.892		0.103	25.079	0.015					
MFT-74	3-F													2.421	2.538	0.908	0.073	0.016	8.179	0.216	1.679	1.289	0.878		0.099	24.636	0.017					
MFT-74	4-F													2.345	2.541	0.692	0.079	0.012	8.047	0.18	1.614	1.218	0.835		0.111	23.541	0.015					
MFT-74	5-F													2.637	2.305	0.98	0.096	0.013	9.112	0.124	1.802	1.392	0.962		0.12	26.536	0.017					
MFT-74	6-F													2.504	2.561	0.838	0.072	0.014	8.309	0.141	1.677	1.268	0.887		0.109	24.355	0.016					
MFT-75	1-MA	47			1.51		31200	< 1210	< 1210	26000			< 1210	2.669		0.984	0.068	0.011	8.912	0.138	1.631	1.38	0.954	8.995	0.106	22.879	0.044	1.272	0.036			
MFT-75	2-MA						28500	< 1130	< 1130	21800			< 1130	2.517		0.862	0.071	0.011	8.258	0.128	1.619	1.29	0.894	8.81	0.105	22.717	0.021	1.146	0.035			
MFT-75	3-MA													2.724		0.936	0.068	0.014	8.946	0.2	1.666	1.388	0.933	9.157	0.107	23.052	0.02	1.295	0.036			
MFT-75	4-MA													2.446		0.839	0.224	0.029	9.063	0.088	1.557	1.271	0.857	8.461	0.186	21.855	0.023	1.039	0.033			
MFT-75	5-MA													2.617		0.941	0.065	0.009	894	0.155	1.614	1.368	0.94	8.894	0.114	22.648	0.018	1.148	0.035			
MFT-75	6-MA													2.643		0.915	0.068	0.011	8.962	0.219	1.642	1.368	0.921	8.951	0.119	22.969	0.035	1.166	0.036			
MFT-75	1-F													2.665	2.552	0.873	0.084	0.016	9.059	0.228	1.662	1.365	0.947		0.118	24.956	0.018					
MFT-75	2-F													2.592	2.574	0.848	0.093	0.016	8.826	0.202	1.6	1.319	0.918		0.115	23.882	0.017					
MFT-75	3-F													2.963	3.01	0.966	0.085	0.018	10.045	0.267	1.885	1.545	1.039		0.138	28.28	0.021					
MFT-75	4-F													2.878	2.322	0.919	0.089	0.016	9.781	0.169	1.781	1.482	1.044		0.134	26.435	0.02					
MFT-75	5-F													2.855	2.762	0.855	0.081	0.018	9.621	0.17	1.764	1.427	0.991		0.136	26.459	0.019					
MFT-75	6-F													2.687	2.589	0.848	0.113	0.015	9.54	0.227	1.624	1.346	0.96		0.131	24.488	0.019					
MFT-76	1-MA	48			1.391		34200	< 1080	< 1080	23500			< 1080	2.365		0.707	0.055	0.015	7.087	0.242	1.683	1.218	0.675	7.985	0.098	23.973	0.066	1.086	0.034			
MFT-76	2-MA						32700	< 1110	< 1110	22300			< 1110	2.408		0.712	0.056	0.012	732	0.153	1.736	1.258	0.695	8.203	0.092	24.755	0.025	0.997	0.033			
MFT-76	3-MA													2.558		0.696	0.053	0.013	701	0.15	1.74	1.253	0.669	8.168	0.092	24.754	0.049	0.971	0.033			
MFT-76	4-MA													2.253		0.695	0.054	0.009	6.992	0.134	1.746	1.256	0.67	8.199	0.083	24.89	0.04	0.888	0.033			
MFT-76	5-MA													2.297		0.713	0.058	0.017	697	0.214	1.73	1.247	0.667	8.147	0.096	24.658	0.031	1.197	0.035			
MFT-76	6-MA													2.652		0.745	0.06	0.018	7.22	0.201	1.757	1.275	0.68	8.287	0.101	24.867	0.021	1.103	0.034			
MFT-76	1-F													2.422	2.333	0.737	0.082	0.015	7.593	0.227	1.634	1.299	0.817		0.105	25.134	0.019					
MFT-76	2-F													2.209	2.77	0.584	0.063	0.011	7.091	0.258	1.741	1.27	0.684		0.102	26.606	0.018					
MFT-76	3-F													2.275	2.302	0.545	0.09	0.011	7.421	0.114	1.82	1.285	0.663		0.104	27.854	0.018					
MFT-76	4-F													2.441	2.551	0.827	0.092	0.023	7.541	0.125	1.572	1.3	0.869		0.115	24.217	0.032					
MFT-76	5-F													2.556	2.228	0.656	0.103	0.01	7.612	0.094	1.818	1.329	0.742		0.109	27.737	0.018					
MFT-76	6-F													2.182	2.318	0.623	0.078	0.016	6.223	0.13	1.778	1.268	0.662		0.091	27.094	0.025					
MFT-77	1-MA				1.433		35500	< 1050	< 1050	26600			1130	2.615		1.267	0.073	0.014	873	0.206	1.663	1.365	0.907	8.976	0.119	23.433	0.077	1.175	0.067			
MFT-77	2-MA						35200	< 1070	< 1070	24600			1120	2.561		1.203	0.07	0.015	8.454	0.19	1.593	1.325	0.891	8.719	0.125	22.526	0.024	1.227	0.066			
MFT-77	3-MA													2.594		1.206	0.071	0.016	8.561	0.201	1.67	1.364	0.896	8.871	0.122	23.635	0.05	1.255	0.069			
MFT-77	4-MA													2.642		1.146	0.071	0.015	8.842	0.154	1.621	1.344	0.907	8.909	0.134	23.04	0.048	1.158	0.069			
MFT-77	5-MA													2.313		0.865	0.063	0.016	7.343	0.174	1.737	1.213	0.617	7.338	0.106	24.839	0.035	1.033	0.073			
MFT-77	6-MA													2.632		1.252	0.072	0.02	8.255	0.233	1.675	1.382	0.91	9.013	0.134	23.317	0.058	1.282	0.069			
MFT-77	1-F													2.585	2.617	0.982	0.068	0.013	8.478	0.092	1.594	1.311	0.899		0.115	24.672	0.02					
MFT-77	2-F													2.614	2.662	0.927	0.075	0.012	8.438	0.172	1.619	1.304	0.86		0.115	24.818	0.019					
MFT-77	3-F													2.804	2.676	0.972	0.066	0.012	8.909	0.11	1.646	1.353	0.914		0.13	26.204	0.021					
MFT-77	4-F													2.16	2.238	0.847	0.076	0.023	7.67	0.077	1.37	1.126	0.743		0.114	21.099	0.036					
MFT-77	5-F													2.906	2.987	1.052	0.081	0.012	9.505	0.093	1.834	1.473	0.99		0.119	28.062	0.024					
MFT-77	6-F													2.325	2.461	0.653	0.057	0.009	7.478	0.073	1.737	1.191	0.62		0.094	26.988	0.02					
MFT-78	1-MA	48			1.43		38100	< 1330	< 1330	26200			1470	2.751		1.025	0.066	0.015	8.382	0.245	1.632	1.307	0.906	8.691	0.114	22.109	0.022	1.635	0.069			
MFT-78	2-MA						37600	< 1340	< 1340	26800			< 1330	2.716		1.045	0.066	0.016	8.375	0.253	1.646	1.327	0.91	8.908	0.117	22.587	0.021	1.536	0.07			
MFT-78	3-MA													2.772		1.026	0.066	0.014	9.015	0.186	1.607	1.315	0.927	8.857	0.117	22.526	0.022	1.429	0.07			
MFT-78	4-MA													2.671		1.025	0.068	0.014	8.607	0.211	1.642	1.326	0.888	9.025	0.119	22.702	0.023	1.482	0.07			
MFT-78	5-MA													2.712		1.015	0.066	0.014	878	0.213	1.621	1.311	0.897	8.876	0.117	22.663	0.022	1.523	0.07			
MFT-78	6-MA													2.693		0.997	0.066	0.012	8.39	0.208	1.656	1.31	0.879	8.776	0.111	23.123	0.021	1.433	0.071			
MFT-78	1-F													2.62	2.61	0.918	0.066	0.012	8.7	0.1	1.619	1.262	0.869		0.108	24.562	0.019					
MFT-78	2-F													2.564	2.339	0.785	0.065	0.009	8.22	0.099	1.577	1.216	0.83		0.117	24.061	0.018					
MFT-78	3-F													2.731	2.655	0.991	0.07	0.016	8.988	0.06	1.648	1.309	0.92		0.111	24.931	0.019					
MFT-78	4-F													2.662	2.181	0.948	0.067	0.01	8.798	0.072	1.605	1.27	0.895		0.113	24.305	0.018					
MFT-78	5-F													2.692	2.372	0.911	0.065	0.009	8.854	0.059	1.589	1.248	0.891		0.104	24.141	0.017					
MFT-78	6-F													2.731	2.618	0.927	0.067	0.009	8.921	0.057	1.614	1.27	0.901		0.098	24.497	0.017					
MFT-79	1-MA	47			1.388		34400	< 1050	< 1050	26800			1310	2.774		0.999	0.079	0.017	9.083	0.235	1.659	1.344	0.933	9.217	0.149	22.89	0.019	1.454	0.064			
MFT-79	2-MA						34200	< 942	< 942	25000			1120	2.708		0.918	0.092	0.016	8.935	0.201	1.6	1.262	0.883	8.811	0.173	22.209	0.018	1.336	0.067			
MFT-79	3-MA													2.731		0.96	0.075	0.015	8.988	0.183	1.679	1.303	0.899	9.098	0.136	23.034	0.019	1.382	0.063			
MFT-79	4-MA													2.732		0.963	0.076	0.015	9.043	0.204	1.622	1.321	0.917	8.995	0.141	22.561	0.019	1.366	0.059			
MFT-79	5-MA													2.661		0.941	0.073	0.014	8.794	0.192	1.664	1.305	0.889	8.905	0.122	22.541	0.018	1.312	0.06			
MFT-79	6-MA													2.622		0.891	0.077	0.015	8.635	0.212	1.666	1.296	0.858	9.028	0.152	23.085	0.018	1.281	0.061			
MFT-79	1-F													2.584	2.343	0.977	0.083	0.021	8.583	0.091	1.59	1.239	0.863		0.11	24.174	0.019					
MFT-79	2-F													2.598	2.605	0.967	0.07	0.014	862	0.117	1.603	1.249	0.871		0.113	24.527	0.018					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank_Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)
MFT-79	3-F												
MFT-79	4-F												
MFT-79	5-F												
MFT-79	6-F												
MFT-80	1-MA	44			1.301		31300	< 1070	< 1070	22600			1900
MFT-80	2-MA						25100	< 1040	< 1040	21400			1800
MFT-80	3-MA												
MFT-80	4-MA												
MFT-80	1-F												
MFT-80	2-F												
MFT-80	3-F												
MFT-80	4-F												
MFT-80	5-F												
MFT-80	6-F												
MFT-81	1-MA	47			1.401		31200	< 1090	< 1090	24200			1050
MFT-81	2-MA						30400	< 1020	< 1020	21900			< 1090
MFT-81	3-MA												
MFT-81	4-MA												
MFT-81	5-MA												
MFT-81	6-MA												
MFT-81	1-F												
MFT-81	2-F												
MFT-81	3-F												
MFT-81	4-F												
MFT-81	5-F												
MFT-81	6-F												
MFT-82	1-MA	45			1.311		30900	< 971	<971	19100			< 971
MFT-82	2-MA						31100	< 1160	< 1160	22700			< 1160
MFT-82	3-MA												
MFT-82	4-MA												
MFT-82	5-MA												
MFT-82	6-MA												
MFT-82	1-F												
MFT-82	2-F												
MFT-82	3-F												
MFT-82	4-F												
MFT-82	5-F												
MFT-82	6-F												
MFT-83	1-MA	46			1.314		30400	< 1200	< 1200	22600			< 1200
MFT-83	2-MA						30700	< 1170	< 1170	22600			< 1170
MFT-83	3-MA												
MFT-83	4-MA												
MFT-83	5-MA												
MFT-83	1-F												
MFT-83	2-F												
MFT-83	3-F												
MFT-83	4-F												
MFT-83	5-F												
MFT-83	6-F												
MFT-84	1-MA	47			1.367		38000	< 1110	< 1110	21600			< 1110
MFT-84	2-MA						36800	< 1140	< 1140	20800			< 1140
MFT-84	3-MA												
MFT-84	4-MA												
MFT-84	5-MA												
MFT-84	6-MA												
MFT-84	1-F												
MFT-84	2-F												
MFT-84	3-F												
MFT-84	4-F												
MFT-84	5-F												
MFT-84	6-F												
MFT-85	1-MA	48			1.303		38400	< 1010	< 1010	24000			< 1010
MFT-85	2-MA						37800	< 1140	< 1140	22700			< 1140
MFT-85	3-MA												
MFT-85	4-MA												
MFT-85	5-MA												
MFT-85	1-F												
MFT-85	2-F												
MFT-85	3-F												
MFT-85	4-F												
MFT-85	5-F												
MFT-86	1-MA	48			1.302		36200	< 670	<670	24100			1030
MFT-86	2-MA						37700	< 962	<962	26600			1060
MFT-86	3-MA												
MFT-86	4-MA												
MFT-86	5-MA												
MFT-86	6-MA												
MFT-86	1-F												
MFT-86	2-F												

Tank_Batch	Sample	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-79	3-F	2.599	2.639	0.969	0.064	0.013	8.579	0.108	1618	1.261	0.869		0.107	24.413	0.017					
MFT-79	4-F	2.657	2.095	0.979	0.071	0.014	8.884	0.054	1645	1.269	0.892		0.112	25.081	0.018					
MFT-79	5-F	2.601	2.625	0.997	0.064	0.013	8.665	0.093	1618	1.271	0.879		0.097	24.613	0.017					
MFT-79	6-F	2.563	2.593	0.947	0.071	0.011	8.458	0.061	1586	1.236	0.836		0.101	24.1	0.016					
MFT-80	1-MA	2.336		0.778	0.06	0.011	7.814	0.13	1715	1.254	0.731	8.527	0.081	23.137	0.035	1.098	0.047			
MFT-80	2-MA	2.266		0.792	0.058	0.013	7.612	0.16	1661	1.212	0.71	8.251	0.085	22.367	0.034	1.079	0.046			
MFT-80	3-MA	2.246		0.772	0.055	0.01	7.46	0.135	1697	1.231	0.721	8.549	0.088	22.832	0.029	0.984	0.047			
MFT-80	4-MA	2.295		0.781	0.057	0.01	7.611	0.152	1737	1.267	0.733	8.746	0.076	23.294	0.03	1.007	0.047			
MFT-80	1-F	2.425	2.572	0.9	0.072	0.013	8.116	0.107	1566	1.254	0.821		0.111	23.877	0.016					
MFT-80	2-F	2.543	2.715	0.941	0.096	0.043	8.514	0.105	1665	1.296	0.858		0.099	25.389	0.017					
MFT-80	3-F	2.465	2.635	0.909	0.08	0.017	8.339	0.145	1612	1.264	0.842		0.112	24.556	0.017					
MFT-80	4-F	2.34	2.579	0.76	0.1	0.019	7.664	0.124	1626	1.191	0.707		0.141	24.428	0.016					
MFT-80	5-F	2.42	2.331	0.815	0.081	0.015	8.141	0.103	1741	1.289	0.76		0.106	26.409	0.019					
MFT-80	6-F	2.507	2.662	0.932	0.078	0.014	8.518	0.131	1629	1.309	0.86		0.115	24.802	0.016					
MFT-81	1-MA	2.507		0.888	0.07	0.017	8.611	0.215	1635	1.235	0.867	8.635	0.111	22.528	0.016	1.51	0.029			
MFT-81	2-MA	2.513		0.946	0.07	0.02	8.665	0.227	1578	1.231	0.907	8.686	0.113	22.109	0.016	1.596	0.029			
MFT-81	3-MA	2.542		0.868	0.07	0.019	8.704	0.211	1666	1.257	0.866	8.652	0.111	22.947	0.015	1.504	0.03			
MFT-81	4-MA	2.467		0.9	0.069	0.019	8.526	0.217	1646	1.266	0.87	8.714	0.117	21.874	0.02	1.54	0.031			
MFT-81	5-MA	2.422		0.885	0.068	0.018	8.556	0.186	1618	1.224	0.875	8.677	0.098	22.255	0.015	1.46	0.029			
MFT-81	6-MA	2.639		0.883	0.072	0.018	8.993	0.178	1613	1.229	0.89	8.572	0.11	22.365	0.016	1.47	0.03			
MFT-81	1-F	2.494	2.628	0.871	0.088	0.013	8.678	0.059	1627	1.248	0.878		0.108	24.277	0.013					
MFT-81	2-F	2.534	2.599	0.934	0.07	0.013	8.619	0.068	1596	1.264	0.909		0.1	23.797	0.012					
MFT-81	3-F	2.451	265	0.822	0.072	0.011	8.516	0.035	1635	1.265	0.867		0.096	24.472	0.012					
MFT-81	4-F	2.496	2.665	0.742	0.074	0.011	8.615	0.059	1637	1.241	0.839		0.103	24.44	0.012					
MFT-81	5-F	2.594	2.606	0.75	0.077	0.011	8.858	0.017	1614	1.243	0.863		0.105	24.159	0.012					
MFT-81	6-F	2.517	2.656	0.808	0.09	0.013	8.716	0.043	1626	1.27	0.873		0.109	24.649	0.012					
MFT-82	1-MA	2.493		0.893	0.067	0.011	8.976	0.129	1.62	1.245	0.912	8.482	0.104	23.176	0.028	1.082	0.069			
MFT-82	2-MA	2.196		0.8	0.066	0.009	8.779	0.115	1592	1.077	0.903	8.396	0.107	22.853	0.016	1.05	0.069			
MFT-82	3-MA	2.047		0.709	0.06	0.008	8.417	0.131	1599	0.988	0.843	8.153	0.107	23.202	0.031	0.994	0.068			
MFT-82	4-MA	2.063		0.697	0.062	0.009	8.851	0.108	1611	0.985	0.895	8.209	0.095	23.383	0.02	1.006	0.067			
MFT-82	5-MA	2.172		0.733	0.104	0.011	9.086	0.102	1627	1.025	0.875	8.344	0.148	23.509	0.02	0.937	0.069			
MFT-82	6-MA	2.294		0.831	0.063	0.008	8.56	0.118	1643	1.19	0.887	8.494	0.095	23.183	0.022	0.941	0.068			
MFT-82	1-F	2.532	2.787	0.965	0.077	0.02	9.35	0.106	1537	1.262	0.87		0.112	22.224	0.019					
MFT-82	2-F	2.626	2.523	0.963	0.082	0.014	8.943	0.109	1585	1.306	0.899		0.105	23.864	0.015					
MFT-82	3-F	2.647	253	0.94	0.08	0.014	9.001	0.118	1599	1.32	0.909		0.1	23.966	0.016					
MFT-82	4-F	2.539	2.546	0.92	0.071	0.012	8.673	0.101	1608	1.295	0.863		0.104	23.983	0.014					
MFT-82	5-F	2.494	2.771	0.9	0.079	0.015	8.579	0.154	1512	1.262	0.872		0.111	22.383	0.015					
MFT-82	6-F	1.821	1.841	0.639	0.083	0.011	6.063	0.107	1.17	0.922	0.6		0.073	17.323	0.012					
MFT-83	1-MA	2.495		0.776	0.068	0.013	8.358	0.211	1.62	1.192	0.788	7.945	0.12	21.259	0.018	1.336	0.055			
MFT-83	2-MA	2.477		0.761	0.062	0.011	8.344	0.155	1623	1.196	0.785	7.933	0.098	22.641	0.019	1.151	0.054			
MFT-83	3-MA	2.617		0.84	0.069	0.017	9.027	0.189	1567	1.219	0.873	8.332	0.112	21.614	0.018	1.29	0.061			
MFT-83	4-MA	2.422		0.732	0.062	0.01	8.152	0.127	1634	1.219	0.775	8.049	0.105	22.846	0.015	1.084	0.057			
MFT-83	5-MA	2.633		0.86	0.064	0.011	8.953	0.137	1.54	1.242	0.857	7.95	0.109	21.362	0.014	1.174	0.053			
MFT-83	1-F	2.615	2.662	0.81	0.088	0.014	9.082	0.067	1644	1.296	0.876		0.11	25.061	0.017					
MFT-83	2-F	2.549	2.708	0.792	0.066	0.015	8.715	0.121	1669	1.268	0.822		0.096	25.522	0.016					
MFT-83	3-F	2.693	2.621	0.881	0.073	0.017	9.486	0.12	1601	1.273	0.915		0.123	24.437	0.018					
MFT-83	4-F	2.422	2.645	0.689	0.058	0.011	8.124	0.094	1622	1.211	0.77		0.093	24.867	0.014					
MFT-83	5-F	2.117	2.641	0.562	0.059	0.013	6.977	0.103	1628	1.159	0.663		0.071	24.649	0.015					
MFT-83	6-F	2.451	2.406	0.735	0.063	0.014	8.483	0.095	1.51	1.132	0.816		0.101	21.783	0.014					
MFT-84	1-MA	2.146		0.673	0.054	0.009	7.243	0.095	1.76	1.271	0.673	8.195	0.079	24.158	0.018	0.922	0.039			
MFT-84	2-MA	2.41		0.763	0.061	0.01	8.229	0.099	1708	1.306	0.798	8.399	0.097	23.66	0.021	1.013	0.039			
MFT-84	3-MA	2.507		0.728	0.064	0.011	8.295	0.082	1678	1.248	0.79	8.266	0.121	23.223	0.044	1.029	0.041			
MFT-84	4-MA	2.237		0.741	0.059	0.016	7.653	0.07	1707	1.292	0.744	8.439	0.097	23.638	0.017	0.883	0.038			
MFT-84	5-MA	2.605		0.833	0.067	0.009	9.112	0.067	1.62	1.298	0.902	8.479	0.123	22.297	0.017	1.009	0.036			
MFT-84	6-MA	2.444		0.86	0.064	0.009	8.504	0.062	1643	1.311	0.872	8.708	0.103	22.454	0.033	0.969	0.037			
MFT-84	1-F	2.516	2.743	0.695	0.081	0.014	8.29	0.148	1683	1.266	0.793		0.104	25.099	0.016					
MFT-84	2-F	2.304	2.703	0.765	0.209	0.014	7.858	0.114	1718	1.279	0.747		0.111	25.463	0.015					
MFT-84	3-F	2.647	2.657	0.836	0.096	0.014	9.189	0.136	1623	1.283	0.904		0.126	24.219	0.015					
MFT-84	4-F	2.273	2.4	0.738	0.167	0.013	7.801	0.14	1475	1.196	0.781		0.106	21.863	0.013					
MFT-84	5-F	2.125	2.708	0.589	0.129	0.012	6.899	0.132	1669	1.191	0.644		0.102	24.829	0.015					
MFT-84	6-F	2.428	2.725	0.779	0.114	0.018	8.26	0.139	1684	1.304	0.797		0.114	25.214	0.015					
MFT-85	1-MA	2.749		0.992	0.067	0.009	9.427	0.072	1735	1.408	0.96	9.385	0.109	23.47	0.017	1.062	0.053			
MFT-85	2-MA	2.632		0.957	0.061	0.009	8.98	0.082	1643	1.333	0.911	8.887	0.099	22.135	0.018	1.039	0.051			
MFT-85	3-MA	2.17		0.74	0.063	0.008	8.507	0.078	1558	1.104	0.864	8.228	0.086	22.303	0.023	0.947	0.05			
MFT-85	4-MA	2.601		1.051	0.067	0.015	9.145	0.32	1699	1.357	0.928	9.035	0.116	22.962	0.015	1.134	0.053			
MFT-85	5-MA	2.781		1.021	0.069	0.011	9.507	0.098	1737	1.41	0.961	9.433	0.115	23.633	0.014	1.128	0.054			
MFT-85	1-F	2.487	2.533	0.805	0.109	0.015	8.301	0.146	1612	1.256	0.831		0.101	23.764	0.016					
MFT-85	2-F	2.57	2.636	0.851	0.118	0.014	8.619	0.127	1626	1.306	0.859		0.101	24.316	0.015					
MFT-85	3-F	2.539	2.526	0.85	0.118	0.014	8.573	0.143	1586	1.275	0.864		0.075	23.42	0.015					
MFT-85	4-F	2.575	2.608	0.805	0.153	0.019	8.682	0.214	1597	1.286	0.882		0.095	23.798	0.017					
MFT-85	5-F	2.317	2.644	0.739	0.086	0.013	7.625	0.131	1641	1.257	0.747		0.088	24.772	0.014					
MFT-86	1-MA	2.61		0.976	0.059	0.009	8.532	0.146	1719	1.364	0.878	8.949	0.107	24.665	0.018	1.08	0.052			
MFT-86	2-MA	2.676		0.983	0.062	0.01	8.986	0.12	1672	1.339	0.904	8.881	0.115	24.469	0.034	1.154	0.053			
MFT-86	3-MA	2.736		1.021	0.062	0.009	9.081	0.143	1696	1.377	0.927	9.148	0.112	23.442	0.029	1.054	0.052			
MFT-86	4-MA	2.64		0.954	0.058	0.01	8.817	0.123	1696	1.358	0.881	9.001	0.109	23.242	0.032	1.086	0.052			
MFT-86	5-MA	2.651		0.964	0.057	0.007	8.764	0.118	1.71	1.358	0.884	8.96	0.104	23.535	0.016	0.995	0.052			
MFT-86	6-MA	2.666		0.98	0.059	0.007	8.83	0.082	1704	1.344	0.893	8.926	0.108	23.375	0.028	0.937	0.053			
MFT-86	1-F	2.428	2.5	0.824	0.074	0.011	8.136	0.123	1537	1.18	0.818		0.099	23.257	0.014					
MFT-86	2-F	2.656	2.678	0.934	0.132	0.016	8.841	0.143	1639	1.298	0.908		0.105	24.818	0.018					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 1: Sample Results for DWPF's Macro-Batch 1

Tank Batch	Sample	Total Solids (wt%)	Calcined Solids (wt%)	Insoluble Solids (wt%)	Density (g/mL)	Total Hydroxide (eq/L)	Formate (ppm)	Chloride (ppm)	Fluoride (ppm)	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)	Sulfate (ppm)	Aluminum (wt%)	Boron (wt%)	Calcium (wt%)	Chromium (wt%)	Copper (wt%)	Iron (wt%)	Potassium (wt%)	Lithium (wt%)	Magnesium (wt%)	Manganese (wt%)	Sodium (wt%)	Nickel (wt%)	Silicon (wt%)	Titanium (wt%)	Uranium (wt%)	Zirconium (wt%)	TOC (ppm)	TIC (ppm)	Mercury (ppm)
MFT-86	3-F													3.849	3.174	1.306	0.116	0.018	12.881	0.187	2.438	1.877	1.295		0.155	36.834	0.023					
MFT-86	4-F													2.546	2.391	0.796	0.089	0.013	8.262	0.189	1.594	1.218	0.822		0.094	24.172	0.016					
MFT-87	1-MA	47			1.371		36700	< 1110	< 1110	25000			1220	2.549		0.873	0.068	0.012	8.245	0.178	1.723	1.37	0.819	8.87	0.127	23.256	0.018	1.139	0.061			
MFT-87	2-MA						39300	< 1030	< 1030	22700			1230	2.414		0.844	0.066	0.012	7.703	0.194	1.678	1.344	0.776	8.695	0.112	22.924	0.026	1.188	0.059			
MFT-87	3-MA													2.549		0.872	0.082	0.011	8.284	0.203	1.782	1.403	0.808	9.084	0.124	24.135	0.022	1.202	0.061			
MFT-87	4-MA													2.419		0.844	0.067	0.014	7.708	0.241	1.67	1.33	0.776	8.671	0.115	22.748	0.026	1.209	0.058			
MFT-87	5-MA													2.558		0.885	0.065	0.011	8.385	0.205	1.692	1.337	0.836	8.88	0.104	23.017	0.022	1.154	0.057			
MFT-87	1-F													2.475	2.465	0.669	0.069	0.01	7.579	0.128	1.659	1.287	0.791		0.122	24.832	0.017					
MFT-87	2-F													2.47	2.708	0.828	0.074	0.014	8.034	0.196	1.657	1.314	0.818		0.119	24.945	0.018					
MFT-87	3-F													2.527	2.471	0.707	0.07	0.012	8.201	0.129	1.647	1.298	0.812		0.105	25.023	0.017					
MFT-87	4-F													2.422	2.309	0.638	0.065	0.012	7.755	0.185	1.713	1.308	0.758		0.096	26.056	0.018					
MFT-87	5-F													2.506	2.476	0.724	0.066	0.012	815	0.168	1.646	1.298	0.81		0.101	24.801	0.018					
MFT-88	1-MA	47			1.383		43300	< 1260	< 1260	24100			< 1290	2.412		0.863	0.057	0.011	785	0.131	1.69	1.379	0.793	8.706	0.091	23.168	0.021	1.108	0.059			
MFT-88	2-MA						40900	< 1290	< 1290	22700			< 1260	2.413		0.866	0.059	0.011	7.854	0.146	1.691	1.384	0.793	8.706	0.093	23.161	0.033	1.105	0.059			
MFT-88	3-MA													2.392		0.857	0.056	0.009	7.791	0.126	1.681	1.391	0.792	8.666	0.094	23.218	0.03	1.034	0.059			
MFT-88	4-MA													2.411		0.864	0.057	0.012	7.865	0.164	1.696	1.401	0.795	8.733	0.09	23.315	0.02	1.083	0.059			
MFT-88	5-MA													2.406		0.865	0.056	0.01	7.883	0.136	1.699	1.397	0.798	8.744	0.092	23.086	0.024	1.018	0.059			
MFT-88	1-F													2.633	2.397	0.851	0.069	0.011	8.491	0.155	1.605	1.288	0.878		0.103	24.32	0.017					
MFT-88	2-F													2.547	2.494	0.757	0.116	0.012	8.241	0.167	1.648	1.257	0.803		0.1	25.222	0.018					
MFT-88	3-F													2.499	2.451	0.768	0.07	0.013	7.976	0.184	1.648	1.244	0.784		0.097	25.041	0.018					
MFT-88	4-F													2.671	2.379	0.873	0.069	0.014	8.567	0.177	1.84	1.381	0.859		0.113	28.022	0.02					
MFT-88	5-F													2.37	2.422	0.784	0.107	0.012	7.702	0.134	1.487	1.176	0.785		0.102	22.678	0.017					
MFT-88	6-F													2.485	2.382	0.798	0.072	0.014	8.159	0.187	1.615	1.235	0.815		0.098	24.51	0.017					
MFT-89	1-MA	44			1.389		35500	< 1110	< 1110	23400			1020	2.651		0.954	0.067	0.011	8.62	0.135	1.639	1.26	0.88	8.915	0.11	22.103	0.018	1.128	0.054			
MFT-89	2-MA						37700	< 997	< 997	21600			< 1110	2.599		0.952	0.065	0.01	8.464	0.138	1.631	1.277	0.884	8.9	0.107	22.397	0.018	1.079	0.054			
MFT-89	3-MA													2.673		0.955	0.066	0.011	8.719	0.128	1.617	1.275	0.897	8.873	0.11	22.1	0.018	1.114	0.055			
MFT-89	4-MA													2.6		0.905	0.063	0.012	8.344	0.121	1.611	1.25	0.842	8.709	0.1	22.873	0.018	1.068	0.056			
MFT-89	5-MA													2.685		0.926	0.065	0.016	8.699	0.098	1.6	1.236	0.871	8.774	0.108	22.03	0.017	1.057	0.055			
MFT-89	6-MA													2.578		0.903	0.063	0.01	8.324	0.117	1.637	1.221	0.829	8.775	0.105	22.536	0.018	1.067	0.055			
MFT-89	1-F													2.815	2.337	0.86	0.067	0.009	8.589	0.112	1.55	1.227	0.85		0.102	24.678	0.02					
MFT-89	2-F													2.591	2.412	0.894	0.065	0.009	8.426	0.126	1.607	1.267	0.869		0.102	24.538	0.017					
MFT-89	3-F													2.581	2.305	0.883	0.062	0.008	8.397	0.076	1.558	1.216	0.868		0.11	23.726	0.017					
MFT-89	4-F													2.555	2.418	0.859	0.09	0.01	8.268	0.114	1.589	1.252	0.839		0.11	24.831	0.018					
MFT-89	5-F													2.576	2.442	0.851	0.09	0.008	8.404	0.392	1.613	1.243	0.836		0.11	24.89	0.017					
MFT-90	1-MA	44			1.315		36600	< 1260	< 1260	23300			< 1260	2.581		0.886	0.066	0.014	8.677	0.187	1.676	1.298	0.904	9.028	0.102	22.885	0.018	1.271	0.06			
MFT-90	2-MA						31600	< 1200	< 1200	23500			< 1200	2.534		0.869	0.064	0.012	8.495	0.154	1.643	1.265	0.87	8.631	0.098	22.647	0.018	1.191	0.058			
MFT-90	3-MA													2.532		0.846	0.063	0.013	8.478	0.152	1.633	1.26	0.871	8.656	0.094	22.506	0.018	1.188	0.059			
MFT-90	4-MA													2.557		0.892	0.062	0.013	8.459	0.128	1.645	1.261	0.883	8.857	0.094	22.571	0.018	1.139	0.059			
MFT-90	5-MA													2.447		0.81	0.062	0.012	8.171	0.152	1.688	1.239	0.826	8.576	0.094	23.173	0.019	1.055	0.06			
MFT-90	1-F													2.343	2.413	0.777	0.069	0.011	7.398	0.152	1.527	1.1	0.757		0.101	22.527	0.017					
MFT-90	2-F													2.116	2.305	0.752	0.062	0.012	7.063	0.124	1.38	1.081	0.741		0.101	20.816	0.016					
MFT-90	3-F													2.425	2.493	0.835	0.068	0.014	7.989	0.167	1.568	1.242	0.835		0.108	24.027	0.017					
MFT-90	4-F													2.122	2.271	0.704	0.066	0.012	7.075	0.132	1.417	1.052	0.736		0.095	21.047	0.016					
MFT-91	1-MA	45			1.365		35200	< 1030	< 1030	25600			1050	2.622		1	0.058	0.015	8.672	0.064	1.646	1.28	0.905	9.016	0.098	22.102	0.019	1.325	0.073			
MFT-91	2-MA						34700	< 982	< 982	25400			< 1080	2.534		0.956	0.064	0.016	8.394	0.104	1.65	1.264	0.878	8.92	0.103	21.791	0.018	1.22	0.078			
MFT-91	3-MA													2.517		0.901	0.059	0.014	827	0.075	1.659	1.253	0.848	8.92	0.099	23.035	0.019	1.266	0.07			
MFT-91	4-MA													2.525		0.923	0.057	0.015	834	0.13	1.64	1.244	0.858	8.908	0.087	22.505	0.019	1.305	0.073			
MFT-91	5-MA													2.525		0.897	0.057	0.015	8.286	0.095	1.654	1.245	0.845	8.912	0.096	22.653	0.019	1.267	0.07			
MFT-91	1-F													2.434	2.454	0.895	0.068	0.011	8.001	0.082	1.545	1.214	0.843		0.097	23.096	0.017					
MFT-91	2-F													2.495	2.577	0.905	0.074	0.01	8.202	0.082	1.6	1.284	0.866		0.106	24.274	0.017					
MFT-91	3-F													2.394	2.435	0.853	0.075	0.011	8.281	0.091	1.598	1.219	0.831		0.106	23.14	0.016					
MFT-91	4-F													2.344	2.449	0.824	0.065	0.011	7.716	0.092	1.529	1.197	0.793		0.091	23.53	0.016					
MFT-92	1-MA	42			1.33		35100	< 1170	< 170	25400			< 1170	2.439		0.883	0.072	0.011	7.926	0.116	1.676	1.313	0.798	9.	0.178	22.636	0.02	0.999	0.073			
MFT-92	2-MA						33000	< 1180	< 180	26000			< 1130	2.578		0.932	0.058	0.011	8.421	0.182	1.621	1.315	0.853	9.447	0.084	22.504	0.02	1.116	0.072			
MFT-92	3-MA													2.442		0.82	0.053	0.01	7.879	0.178	1.662	1.262	0.756	9.036	0.093	23.061	0.019	1.005	0.072			
MFT-92	4-MA													2.564		0.946	0.059	0.011	8.171	0.142	1.622	1.318	0.832	9.527	0.082	22.181	0.018	1.042	0.077			
MFT-92	5-MA													2.51		0.863	0.058	0.015	8.178	0.348	1.625	1.259	0.795	9.07	0.078	22.108	0.02	1.045	0.073			
MFT-92	1-F													2.315	2.422	0.723	0.065	0.011	7.592	0.137	1.512	1.164	0.769		0.094	22.573	0.018					
MFT-92	2-F													2.459	2.669	0.681	0.065	0.01	7.893	0.115	1.659	1.245	0.754		0.098	26.035	0.019					
MFT-92	3-F													2.41	2.427	0.721	0.073	0.017	7.52	0.086	1.516	1.195	0.763		0.096	23.564	0.017					
MFT-92	4-F													2.411	262	0.719	0.071	0.019	7.749	0.121	1.656	1.26	0.785		0.081	25.406	0.019					
MFT-92	5-F													2.619	2.499	0.808	0.068	0.014	8.11	0.115	1.588	1.278	0.828		0.094	24.1	0.018					
MFT-92	6-F													2.464	2.557	0.636	0.066	0.015	7.999	0.177	1.597	1.216	0.787		0.104	25.729	0.019					
MFT-93	1-NA	40			1.332		34500	967	< 1060	30700			2080	2.119		0.738	0.07	0.019	6.379	0.305	1.775	1.25	0.616	9.635	0.092	24.621	0.034	1.271	0.078			
MFT-93	2-NA						38300	< 1060	< 930	28700			1820	2.29		0.819	0.075	0.019	7.11	0.28	1.714	1.222	0.667	9.848	0.095	23.661	0.029	1.275	0.075			
MFT-93	3-NA													2.344		0.773	0.069	0.018	7.111	0.238	1.667	1.196	0.675	9.727	0.092	23.008	0.037	1.258	0.1			
MFT-93	4-NA													2.462		0.892	0.076	0.02	7.728	0.331	1.631	1.237	0.762	10.106	0.095	22.671	0.028	1.47	0.075			
MFT-93	5-NA													2.356		0.853	0.075	0.019	7.321	0.275	1.655	1.229	0.72	10.015	0.096	22.914	0.033	1.306	0.074			
MFT-93	6-NA													2.287		0.821	0.07	0.018	7.095	0.259	1.66	1.198	0.688	9.834	0.088	22.83	0.032	1.322	0.073			
MFT-93	1-F													2.002	2.772	0.59	0.043	0.001	6.002	0.045	1.694	1.115	0.573		0.068	25.831	0.018					
MFT-93	2-F													2.079	2.708	0.586	0.044	0.002	6.326	0.051	1.637	1.127	0.588		0.07	25.67	0.019					
MFT-93	3-F													2.18	2.659	0.629	0.046	0	6.636	0.046	1.651	1.139	0.636		0.065	25.232	0.018					
MFT-93	4-F													2.138	2.534	0.579	0.047	0	6.395	0.051	1.577	1.116	0.607		0.068	24.384	0.016					
MFT-93	5-F													2.285	2.629	0.6	0.046	-0.003	6.908	0.034	1.649	1.158	0.654		0.07	25.194	0.017					
MFT-93	6-F													2.286	265	0.651	0.051	0.002	7.11	0.023	1.608	1.143	0.69		0.082	24.7	0.021					

Values at their detection limits (<) were set equal to their detection limits.

Sample #'s indicate dissolution method for later SME and MFT batches.

Table 2: Components of Variation for SRAT Receipt Sample Results

Data from Batches 22-93		%	Components of Variation			% Coefficients of Variation		
Analyte	Mean	S. E. Mean	%Batch	%Residual	Variance	Total	Batch	Residual
Total Solids (wt%)	15.811	2.1%	98.6%	1.4%	1.923	8.8%	8.7%	1.1%
Calcine Solids (wt%)	13.432	2.0%	90.9%	9.1%	1.068	7.7%	7.3%	2.3%
Insoluble Solids (wt%)	12.011	3.9%	76.8%	23.2%	0.508	5.9%	5.2%	2.9%
Density (g/mL)	1.078	0.5%	76.7%	23.3%	0.001	2.4%	2.1%	1.2%
Total Hydroxide (eq/L)	0.177	2.7%	25.6%	74.4%	0.0004	11.3%	5.7%	9.8%
Format (ppm)	4139.2	4.6%	94.4%	5.6%	662514.2	19.7%	19.1%	4.6%
Chloride (ppm)	1025.4	4.5%	21.1%	78.9%	10304.7	9.9%	4.6%	8.8%
Fluoride (ppm)	1025.4	4.5%	21.1%	78.9%	10304.7	9.9%	4.6%	8.8%
Nitrate (ppm)	12441.3	2.6%	87.4%	12.6%	2056380.9	11.5%	10.8%	4.1%
Nitrite (ppm)	7276.5	1.7%	86.8%	13.2%	288907.2	7.4%	6.9%	2.7%
Sulfate (ppm)	1075.5	1.7%	52.7%	47.3%	8879.6	8.8%	6.4%	6.0%
Aluminum (wt%)	6.764	2.0%	53.3%	46.7%	0.082	4.2%	3.1%	2.9%
Boron (wt%)								
Calcium (wt%)	2.441	4.3%	83.0%	17.0%	0.039	8.1%	7.3%	3.3%
Chromium	0.180	7.6%	25.2%	74.8%	0.001	20.2%	10.1%	17.5%
Copper (wt%)	0.326	21.5%	97.8%	2.2%	0.015	37.6%	37.2%	5.6%
Iron (wt%)	25.958	2.4%	73.6%	26.4%	1.420	4.6%	3.9%	2.4%
Potassium (wt%)	0.039	27.4%	66.2%	33.8%	0.000	55.3%	45.0%	32.1%
Magnesium (wt%)	1.233	5.8%	82.8%	17.2%	0.018	10.8%	9.8%	4.5%
Manganese (wt%)	2.737	2.3%	73.9%	26.1%	0.015	4.5%	3.8%	2.3%
Sodium (wt%)	6.413	9.1%	77.0%	23.0%	1.236	17.3%	15.2%	8.3%
Nickel (wt%)	0.297	2.9%	90.5%	9.5%	0.002	15.2%	14.5%	4.7%
Silicon (wt%)	0.843	21.1%	63.4%	36.6%	0.132	43.1%	34.3%	26.1%
Titanium (wt%)	0.016	24.5%	57.7%	42.3%	0.000	51.5%	39.1%	33.4%
Uranium (wt%)	2.861	2.2%	72.6%	27.4%	0.015	4.3%	3.7%	2.3%
Zirconium (wt%)	0.027	51.0%	55.8%	44.2%	0.001	108.8%	81.3%	72.3%
TIC (ppm)	584.606	6.0%	94.9%	5.1%	22792.786	25.8%	25.2%	5.8%
Fe/Al	3.838	0.8%	29.3%	70.7%	0.006	2.0%	1.1%	1.7%

Table 3: Components of Variation for SRAT Product Sample Results

Data from Batches 22-93		%	Components of Variation			% Coefficients of Variation		
Analyte	**Mean**	**S. E. Mean**	**%Batch**	**%Residual**	**Variance**	**Total**	**Batch**	**Residual**
Total Solids (wt%)	22.334	1.7%	93.0%	7.0%	2.591	7.2%	7.0%	1.9%
Calcine Solids (wt%)	17.552	2.0%	87.6%	12.4%	2.463	8.9%	8.4%	3.2%
Insoluble Solids (wt%)	14.809	5.2%	64.9%	35.1%	2.997	11.7%	9.4%	6.9%
Density (g/mL)	1.147	0.5%	72.2%	27.8%	0.001	2.3%	1.9%	1.2%
Format (ppm)	20902.8	5.0%	89.0%	11.0%	21206134	22.0%	20.8%	7.3%
Chloride (ppm)	1074.6	1.7%	45.9%	54.1%	10268.7	9.4%	6.4%	6.9%
Fluoride (ppm)	1081.4	1.7%	38.2%	61.8%	11180.0	9.8%	6.0%	7.7%
Nitrate (ppm)	36598.2	2.8%	84.0%	16.0%	20783674	12.5%	11.4%	5.0%
Nitrite (ppm)	1109.7	4.2%	87.4%	12.6%	42802.3	18.6%	17.4%	6.6%
Phosphate (ppm)	1084.1	1.9%	50.0%	50.0%	11146.4	9.7%	6.9%	6.9%
Sulfate (ppm)	1213.5	2.5%	70.8%	29.2%	21048.6	12.0%	10.1%	6.5%
Aluminum (wt%)	6.214	1.5%	68.1%	31.9%	0.223	7.6%	6.3%	4.3%
Boron (wt%)								
Calcium (wt%)	2.012	1.6%	67.8%	32.2%	0.022	7.5%	6.1%	4.2%
Chromium (wt%)	0.162	1.4%	12.2%	87.8%	0.001	15.8%	5.5%	14.8%
Copper (wt%)	0.135	55.3%	99.9%	0.1%	0.093	225.1%	225.0%	7.5%
Iron (wt%)	23.474	1.6%	76.9%	23.1%	2.844	7.2%	6.3%	3.4%
Potassium (wt%)	0.040	10.0%	76.1%	23.9%	0.000	45.1%	39.4%	22.1%
Magnesium (wt%)	0.945	2.3%	64.9%	35.1%	0.011	11.2%	9.0%	6.6%
Manganese (wt%)	2.450	1.6%	82.1%	17.9%	0.031	7.2%	6.6%	3.1%
Sodium (wt%)	7.168	3.6%	83.0%	17.0%	1.302	15.9%	14.5%	6.6%
Nickel (wt%)	0.268	1.8%	43.8%	56.2%	0.001	9.9%	6.6%	7.4%
Silicon (wt%)	0.711	4.9%	51.5%	48.5%	0.033	25.6%	18.4%	17.9%
Titanium (wt%)	0.019	18.8%	77.0%	23.0%	0.000	84.9%	74.5%	40.7%
Uranium (wt%)	2.647	1.6%	75.3%	24.7%	0.036	7.2%	6.2%	3.6%
Zirconium (wt%)	0.017	17.5%	74.4%	25.6%	0.000	80.0%	69.0%	40.4%
Fe/Al	3.781	0.8%	62.7%	37.3%	0.021	3.8%	3.0%	2.3%

Table 4: Components of Variation for SME Sample Results

Data from Batches 22-93	Diss.		%	Components of Variation			% Coefficients of Variation		
Analyte	**Method**	**Mean**	**S. E. Mean**	**%Batch**	**%Residual**	**Variance**	**Total**	**Batch**	**Residual**
Total Solids (wt%)		48.821	1.2%	83.9%	16.1%	7.680	5.7%	5.2%	2.3%
Calcine Solids (wt%)		43.098	1.4%	78.9%	21.1%	7.316	6.3%	5.6%	2.9%
Insoluble Solids (wt%)		40.764	3.6%	91.9%	8.1%	7.000	6.5%	6.2%	1.8%
Density (g/mL)		1.415	0.7%	83.4%	16.6%	0.002	3.2%	2.9%	1.3%
Format (ppm)		32735.2	3.6%	83.4%	16.6%	28237665	16.2%	14.8%	6.6%
Chloride (ppm)		1159.6	11.4%	33.3%	66.7%	689330.2	71.6%	41.3%	58.5%
Fluoride (ppm)		1160.8	11.4%	33.3%	66.7%	689362.5	71.5%	41.3%	58.4%
Nitrate (ppm)		25244.1	3.8%	84.4%	15.6%	19549200	17.5%	16.1%	6.9%
Nitrite (ppm)		1159.6	11.4%	33.3%	66.7%	689330.2	71.6%	41.3%	58.5%
Phosphate (ppm)		1358.3	11.4%	40.6%	59.4%	838581.2	67.4%	43.0%	52.0%
Sulfate (ppm)		1205.4	11.0%	33.5%	66.5%	691804.8	69.0%	39.9%	56.3%
Aluminum (wt%)	PF	2.453	1.8%	41.2%	58.8%	0.0482	8.9%	5.7%	6.9%
	MA	2.452	1.5%	51.2%	48.8%	0.0430	8.5%	6.1%	5.9%
Boron (wt%)	PF	2.645	1.0%	26.5%	73.5%	0.0294	6.5%	3.3%	5.6%
	MA			Not Available for this Analysis.					
Calcium (wt%)	PF	0.823	3.6%	58.0%	42.0%	0.0169	15.8%	12.0%	10.2%
	MA	0.877	2.6%	55.0%	45.0%	0.0157	14.3%	10.6%	9.6%
Chromium (wt%)	PF	0.074	8.3%	64.1%	35.9%	0.0007	34.6%	27.7%	20.7%
	MA	0.069	4.1%	12.5%	87.5%	0.0005	33.4%	11.8%	31.2%
Copper (wt%)	PF	0.013	8.8%	41.9%	58.1%	0.0000	41.4%	26.8%	31.5%
	MA	0.070	40.6%	99.7%	0.3%	0.0152	175.7%	175.4%	9.8%
Iron (wt%)	PF	8.205	1.8%	42.6%	57.4%	0.5392	8.9%	5.8%	6.8%
	MA	8.393	1.3%	44.6%	55.4%	0.4172	7.7%	5.1%	5.7%
Potassium (wt%)	PF	0.114	15.9%	70.4%	29.6%	0.0053	64.2%	53.9%	34.9%
	MA	0.130	10.7%	84.8%	15.2%	0.0042	49.5%	45.6%	19.3%
Lithium (wt%)	PF	1.620	0.9%	15.9%	84.1%	0.0092	5.9%	2.4%	5.4%
	MA	1.674	0.7%	33.4%	66.6%	0.0058	4.6%	2.6%	3.7%
Magnesium (wt%)	PF	1.254	1.2%	34.3%	65.7%	0.0066	6.5%	3.8%	5.2%
	MA	1.275	1.0%	46.1%	53.9%	0.0058	6.0%	4.1%	4.4%
Manganese (wt%)	PF	0.830	2.5%	54.2%	45.8%	0.0086	11.2%	8.2%	7.6%
	MA	0.849	1.9%	56.8%	43.2%	0.0074	10.1%	7.6%	6.7%
Sodium (wt%)	PF			Not Available for this Analysis.					
	MA	8.860	0.9%	50.3%	49.7%	0.2182	5.3%	3.7%	3.7%
Nickel (wt%)	PF	0.103	2.9%	34.3%	65.7%	0.0002	15.0%	8.8%	12.2%
	MA	0.105	4.9%	8.7%	91.3%	0.0020	42.4%	12.5%	40.5%
Silicon (wt%)	PF	24.523	1.0%	23.2%	76.8%	2.0754	5.9%	2.8%	5.1%
	MA	22.881	0.8%	22.8%	77.2%	1.6687	5.6%	2.7%	5.0%
Titanium (wt%)	PF	0.020	7.9%	22.7%	77.3%	0.0001	46.8%	22.3%	41.1%
	MA	0.026	17.0%	6.7%	93.3%	0.0016	153.3%	39.8%	148.0%
Uranium (wt%)	PF			Not Available for this Analysis.					
	MA	1.112	3.4%	78.0%	22.0%	0.0330	16.3%	14.4%	7.6%
Zirconium (wt%)	PF			Not Available for this Analysis.					
	MA	0.043	13.8%	97.1%	2.9%	0.0007	60.2%	59.3%	10.2%
Fe/Li	PF	5.076	2.1%	51.3%	48.7%	0.2281	9.4%	6.7%	6.6%
	MA	5.027	1.7%	54.6%	45.4%	0.2262	9.5%	7.0%	6.4%
Fe/Al	PF	3.348	0.9%	63.9%	36.1%	0.0161	3.8%	3.0%	2.3%
	MA	3.429	0.9%	63.4%	36.6%	0.0260	4.7%	3.7%	2.8%

Table 5: Components of Variation for MFT Sample Results

Data from Batches 22-93			%	Components of Variation			% Coefficients of Variation		
Analyte		Mean	S. E. Mean	%Batch	%Residual	Variance	Total	Batch	Residual
Total Solids (wt%)				Not Available for this Analysis.					
Calcine Solids (wt%)				Not Available for this Analysis.					
Insoluble Solids (wt%)*		39.239	6.7%	0.0%	100.0%	41.182	16.4%	0.0%	16.4%
Density (g/mL)†				Not Available for this Analysis.					
Format (ppm)		30804.3	4.3%	93.9%	6.1%	31834321	18.3%	17.8%	4.5%
Chloride (ppm)		1518.0	55.8%	99.7%	0.3%	12831852	236.0%	235.7%	12.2%
Fluoride (ppm)		1092.7	2.5%	73.0%	27.0%	16035.5	11.6%	9.9%	6.0%
Nitrate (ppm)		24556.9	2.7%	81.3%	18.7%	8893900	12.1%	11.0%	5.2%
Sulfate (ppm)		1147.6	4.1%	88.7%	11.3%	42709.0	18.0%	17.0%	6.1%
Aluminum (wt%)	PF	2.450	1.9%	40.9%	59.1%	0.0556	9.6%	6.2%	7.4%
	MA	2.457	1.5%	55.8%	44.2%	0.0355	7.7%	5.7%	5.1%
Boron (wt%)	PF	2.669	1.0%	21.1%	78.9%	0.0354	7.1%	3.2%	6.3%
		2.712	4.7%	51.9%	48.1%	0.0304	6.4%	4.6%	4.5%
Calcium (wt%)	PF	0.795	3.5%	55.5%	44.5%	0.0163	16.1%	12.0%	10.7%
	MA	0.868	2.4%	56.1%	43.9%	0.0121	12.6%	9.5%	8.4%
Chromium (wt%)	PF	0.073	5.6%	57.9%	42.1%	0.0003	25.7%	19.5%	16.7%
	MA	0.069	3.7%	85.1%	14.9%	0.0010	46.3%	42.7%	17.9%
Copper (wt%)	PF	0.015	34.6%	82.4%	17.6%	0.0005	138.4%	125.6%	58.1%
	MA	0.074	40.3%	99.4%	0.6%	0.0157	169.5%	169.0%	13.5%
Iron (wt%)	PF	8.234	2.0%	44.1%	55.9%	0.6970	10.1%	6.7%	7.6%
	MA	8.385	1.5%	60.4%	39.6%	0.4211	7.7%	6.0%	4.9%
Potassium (wt%)	PF	0.131	15.3%	2.2%	97.8%	0.0279	127.5%	18.8%	126.1%
	MA	0.141	8.1%	69.9%	30.1%	0.0030	39.0%	32.6%	21.4%
Lithium (wt%)	PF	1.634	1.0%	13.8%	86.2%	0.0134	7.1%	2.6%	6.6%
	MA	1.685	0.8%	62.7%	37.3%	0.0044	3.9%	3.1%	2.4%
Magnesium (wt%)	PF	1.250	1.3%	16.4%	83.6%	0.0118	8.7%	3.5%	7.9%
	MA	1.282	1.0%	55.7%	44.3%	0.0043	5.1%	3.8%	3.4%
Manganese (wt%)	PF	0.820	2.6%	43.3%	56.7%	0.0118	13.3%	8.7%	10.0%
	MA	0.835	2.0%	57.5%	42.5%	0.0073	10.2%	7.7%	6.7%
Sodium (wt%)	PF			Not Available for this Analysis.					
	MA	8.846	0.8%	55.9%	44.1%	0.1409	4.2%	3.2%	2.8%
Nickel (wt%)	PF	0.105	6.4%	1.7%	98.3%	0.0032	53.7%	6.9%	53.2%
	MA	0.108	4.9%	59.6%	40.4%	0.0007	25.3%	19.5%	16.1%
Silicon (wt%)	PF	24.668	1.1%	17.4%	82.6%	3.3443	7.4%	3.1%	6.7%
	MA	23.128	0.8%	55.2%	44.8%	0.9760	4.3%	3.2%	2.9%
Titanium (wt%)	PF	0.024	23.6%	0.0%	100.0%	0.0025	208.6%	0.0%	208.6%
	MA	0.023	8.1%	51.5%	48.5%	0.0001	43.8%	31.4%	30.5%
Uranium (wt%)	PF			Not Available for this Analysis.					
	MA	1.124	3.4%	78.2%	21.8%	0.0308	15.6%	13.8%	7.3%
Zirconium (wt%)	PF			Not Available for this Analysis.					
	MA	0.044	13.1%	51.1%	48.9%	0.0010	70.6%	50.5%	49.3%
Fe/Li	PF	5.055	2.2%	51.4%	48.6%	0.2772	10.4%	7.5%	7.3%
	MA	4.991	2.0%	61.7%	38.3%	0.2473	10.0%	7.8%	6.2%
Fe/Al	PF	3.362	0.8%	48.5%	51.5%	0.0175	3.9%	2.7%	2.8%
	MA	3.416	1.0%	73.4%	26.6%	0.0280	4.9%	4.2%	2.5%

Table 6: Comparison of SME Sample-to-Sample Error versus PCCS Historical[4]

		SME Results for MB1						PCCS			
			Components of Variation Standard Deviations			% Coefficients of Variation		Historical (Hist)		Std Dev Based Upon	
Analyte	Diss. Method	Mean	Total	Batch	Residual	Batch	Residual	Average	% RSD	Hist. Avg. Std Dev	MB1 Avg. Std Dev
Aluminum (wt%)	PF	2.453	0.2195	0.1409	0.1683	5.7%	6.9%	2.222	5.1%	0.113	0.125
	MA	2.452	0.2073	0.1484	0.1448	6.1%	5.9%	2.222	5.1%	0.113	0.125
Boron (wt%)	PF	2.645	0.1716	0.0884	0.1470	3.3%	5.6%	2.093	7.2%	0.151	0.190
	MA	Not Available for this Analysis.									
Calcium (wt%)	PF	0.823	0.1300	0.0990	0.0843	12.0%	10.2%	1.077	5.9%	0.064	0.049
	MA	0.877	0.1254	0.0930	0.0841	10.6%	9.6%	1.077	5.9%	0.064	0.052
Chromium (wt%)	PF	0.074	0.0257	0.0206	0.0154	27.7%	20.7%	0.064	33.5%	0.021	0.025
	MA	0.069	0.0232	0.0082	0.0217	11.8%	31.2%	0.064	33.5%	0.021	0.023
Copper (wt%)	PF	0.013	0.0056	0.0036	0.0042	26.8%	31.5%	0.25	5.8%	0.015	0.001
	MA	0.070	0.1231	0.1229	0.0069	175.4%	9.8%	0.25	5.8%	0.015	0.004
Iron (wt%)	PF	8.205	0.7343	0.4794	0.5561	5.8%	6.8%	6.235	4.8%	0.299	0.394
	MA	8.393	0.6459	0.4316	0.4805	5.1%	5.7%	6.235	4.8%	0.299	0.403
Potassium (wt%)	PF	0.114	0.0731	0.0613	0.0397	53.9%	34.9%	2.455	6.5%	0.160	0.007
	MA	0.130	0.0645	0.0594	0.0252	45.6%	19.3%	2.455	6.5%	0.160	0.008
Lithium (wt%)	PF	1.620	0.0961	0.0383	0.0881	2.4%	5.4%	1.963	4.1%	0.080	0.066
	MA	1.674	0.0762	0.0440	0.0622	2.6%	3.7%	1.963	4.1%	0.080	0.069
Magnesium (wt%)	PF	1.254	0.0811	0.0475	0.0657	3.8%	5.2%	0.842	4.8%	0.040	0.060
	MA	1.275	0.0765	0.0519	0.0561	4.1%	4.4%	0.842	4.8%	0.040	0.061
Manganese (wt%)	PF	0.830	0.0929	0.0684	0.0628	8.2%	7.6%	2.111	5.2%	0.110	0.043
	MA	0.849	0.0859	0.0648	0.0565	7.6%	6.7%	2.111	5.2%	0.110	0.044
Sodium (wt%)	PF	Not Available for this Analysis.									
	MA	8.860	0.4671	0.3314	0.3292	3.7%	3.7%	7.463	4.5%	0.336	0.399
Nickel (wt%)	PF	0.103	0.0155	0.0091	0.0125	8.8%	12.2%	0.643	13.2%	0.085	0.014
	MA	0.105	0.0446	0.0132	0.0426	12.5%	40.5%	0.643	13.2%	0.085	0.014
Silicon (wt%)	PF	24.523	1.4406	0.6943	1.2623	2.8%	5.1%	23.31	5.7%	1.329	1.398
	MA	22.881	1.2918	0.6171	1.1349	2.7%	5.0%	23.31	5.7%	1.329	1.304
Titanium (wt%)	PF	0.020	0.0094	0.0045	0.0082	22.3%	41.1%	0.256	4.5%	0.012	0.001
	MA	0.026	0.0395	0.0102	0.0381	39.8%	148.0%	0.256	4.5%	0.012	0.001
Uranium (wt%)	PF	Not Available for this Analysis.									
	MA	1.112	0.1815	0.1604	0.0851	14.4%	7.6%	0	0.0%	0.000	0.000
Zirconium (wt%)	PF	Not Available for this Analysis.									
	MA	0.043	0.0256	0.0253	0.0044	59.3%	10.2%	0.029	9.0%	0.003	0.004

[4]The current version of PCCS computes the variance for each constraint two ways, both using the historical relative standard deviations (RSD's). These RSD's are multiplied by the historical means of the elemental concentrations to compute one variance, and they are multiplied by the average concentrations of the current samples to compute the other. The larger of the two is used by PCCS to determine the appropriate Measurement Acceptable Region.

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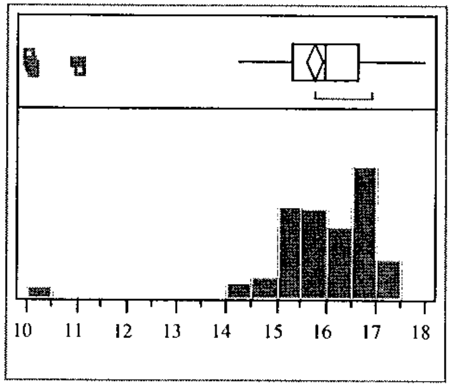
Exhibit 1: Summary Statistics for SRAT Receipt Measurements

Total Solids (wt%)



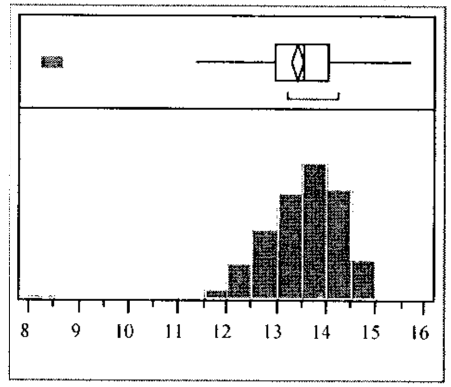
Quantiles

maximum	100.0%	17.970
	99.5%	17.762
	97.5%	17.359
	90.0%	16.945
quartile	75.0%	16.660
median	50.0%	16.000
quartile	25.0%	15.340
	10.0%	14.920
	2.5%	10.120
	0.5%	10.004
minimum	0.0%	10.000

Moments

Mean	15.8109
Std Dev	1.3792
Std Error Mean	0.0818
Upper 95% Mean	15.9720
Lower 95% Mean	15.6498
N	284.0000
Sum Weights	284.0000

Calcined Solids (wt%)



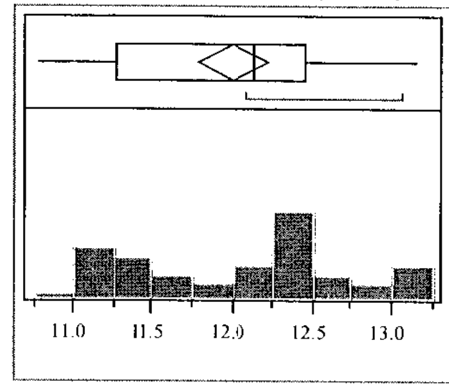
Quantiles

maximum	100.0%	15.730
	99.5%	15.629
	97.5%	14.823
	90.0%	14.483
quartile	75.0%	14.100
median	50.0%	13.570
quartile	25.0%	12.975
	10.0%	12.347
	2.5%	11.421
	0.5%	8.337
minimum	0.0%	8.330

Moments

Mean	13.4322
Std Dev	1.0272
Std Error Mean	0.0683
Upper 95% Mean	13.5669
Lower 95% Mean	13.2976
N	226.0000
Sum Weights	226.0000

Insoluble Solids (wt%)



Quantiles

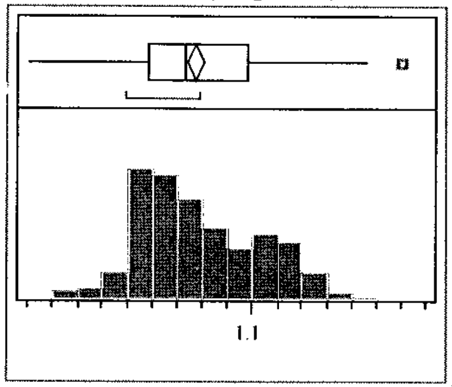
maximum	100.0%	13.150
	99.5%	13.150
	97.5%	13.149
	90.0%	13.052
quartile	75.0%	12.458
median	50.0%	12.150
quartile	25.0%	11.273
	10.0%	11.052
	2.5%	10.787
	0.5%	10.780
minimum	0.0%	10.780

Moments

Mean	12.01125
Std Dev	0.69158
Std Error Mean	0.10935
Upper 95% Mean	12.23243
Lower 95% Mean	11.79007
N	40.00000
Sum Weights	40.00000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Density (g/mL)



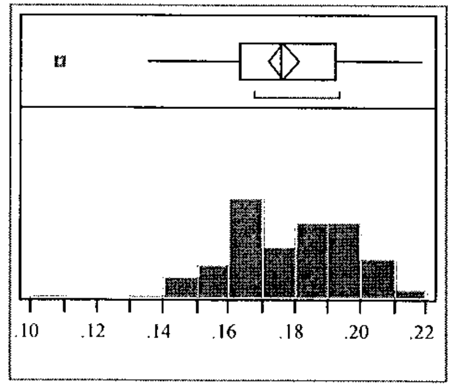
Quantiles

maximum	100.0%	1.1610
	99.5%	1.1545
	97.5%	1.1300
	90.0%	1.1156
quartile	75.0%	1.0985
median	50.0%	1.0740
quartile	25.0%	1.0590
	10.0%	1.0500
	2.5%	1.0300
	0.5%	1.0154
minimum	0.0%	1.0110

Moments

Mean	1.0782
Std Dev	0.0262
Std Error Mean	0.0016
Upper 95% Mean	1.0813
Lower 95% Mean	1.0752
N	286.0000
Sum Weights	286.0000

Total Hydroxide (eq/L)



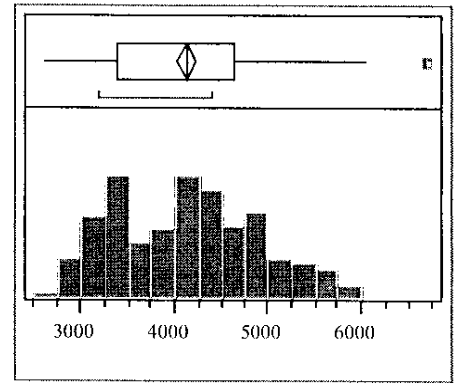
Quantiles

maximum	100.0%	0.21900
	99.5%	0.21900
	97.5%	0.21475
	90.0%	0.20160
quartile	75.0%	0.19300
median	50.0%	0.17600
quartile	25.0%	0.16400
	10.0%	0.15040
	2.5%	0.13195
	0.5%	0.10900
minimum	0.0%	0.10900

Moments

Mean	0.17685
Std Dev	0.02007
Std Error Mean	0.00235
Upper 95% Mean	0.18153
Lower 95% Mean	0.17217
N	73.00000
Sum Weights	73.00000

Formate (ppm)



Quantiles

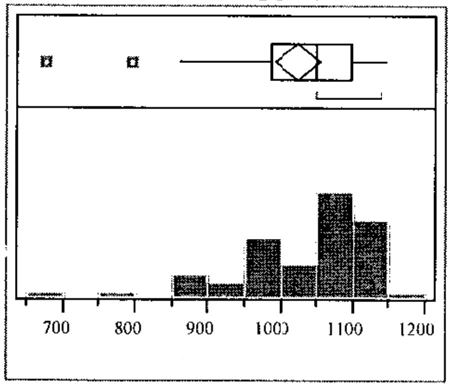
maximum	100.0%	6690.0
	99.5%	6418.0
	97.5%	5782.5
	90.0%	5250.0
quartile	75.0%	4660.0
median	50.0%	4150.0
quartile	25.0%	3400.0
	10.0%	3095.0
	2.5%	2831.3
	0.5%	2661.3
minimum	0.0%	2640.0

Moments

Mean	4139.225
Std Dev	809.866
Std Error Mean	48.057
Upper 95% Mean	4233.821
Lower 95% Mean	4044.630
N	284.000
Sum Weights	284.000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Chloride (ppm)



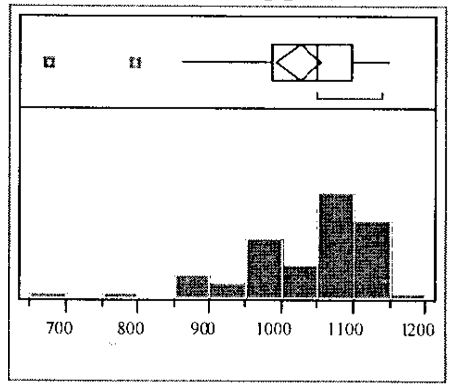
Quantiles

maximum	100.0%	1150.0
	99.5%	1150.0
	97.5%	1149.8
	90.0%	1130.0
quartile	75.0%	1097.5
median	50.0%	1050.0
quartile	25.0%	986.3
	10.0%	868.6
	2.5%	679.0
	0.5%	676.0
minimum	0.0%	676.0

Moments

Mean	1025.400
Std Dev	100.684
Std Error Mean	15.919
Upper 95% Mean	1057.600
Lower 95% Mean	993.200
N	40.000
Sum Weights	40.000

Fluoride (ppm)



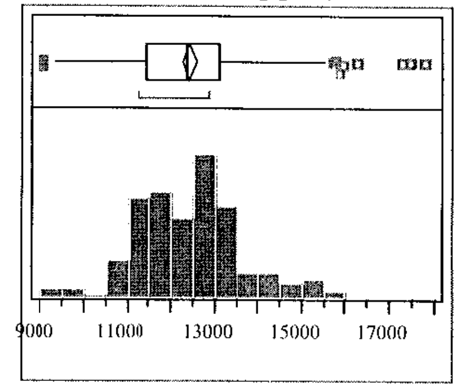
Quantiles

maximum	100.0%	1150.0
	99.5%	1150.0
	97.5%	1149.8
	90.0%	1130.0
quartile	75.0%	1097.5
median	50.0%	1050.0
quartile	25.0%	986.3
	10.0%	868.6
	2.5%	679.0
	0.5%	676.0
minimum	0.0%	676.0

Moments

Mean	1025.400
Std Dev	100.684
Std Error Mean	15.919
Upper 95% Mean	1057.600
Lower 95% Mean	993.200
N	40.000
Sum Weights	40.000

Nitrate (ppm)



Quantiles

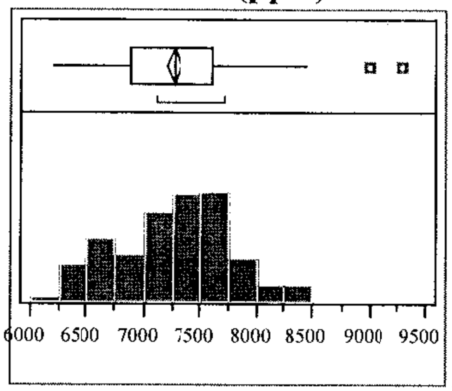
maximum	100.0%	17800
	99.5%	17672
	97.5%	15788
	90.0%	14400
quartile	75.0%	13100
median	50.0%	12400
quartile	25.0%	11500
	10.0%	10900
	2.5%	9679
	0.5%	9054
minimum	0.0%	9050

Moments

Mean	12441.34
Std Dev	1427.35
Std Error Mean	84.70
Upper 95% Mean	12608.06
Lower 95% Mean	12274.62
N	284.00
Sum Weights	284.00

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Nitrite (ppm)



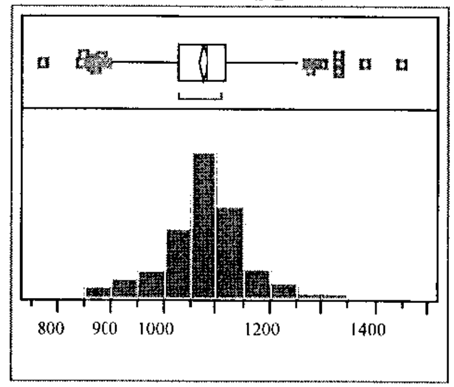
Quantiles

maximum	100.0%	9300.0
	99.5%	9172.5
	97.5%	8400.0
	90.0%	7895.0
quartile	75.0%	7617.5
median	50.0%	7290.0
quartile	25.0%	6890.0
	10.0%	6510.0
	2.5%	6280.0
	0.5%	6200.0
minimum	0.0%	6200.0

Moments

Mean	7276.549
Std Dev	535.023
Std Error Mean	31.748
Upper 95% Mean	7339.042
Lower 95% Mean	7214.057
N	284.000
Sum Weights	284.000

Sulfate (ppm)



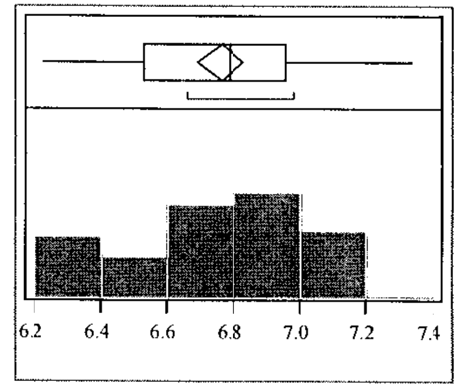
Quantiles

maximum	100.0%	1450.0
	99.5%	1420.2
	97.5%	1298.8
	90.0%	1190.0
quartile	75.0%	1120.0
median	50.0%	1080.0
quartile	25.0%	1030.0
	10.0%	957.5
	2.5%	866.6
	0.5%	801.0
minimum	0.0%	770.0

Moments

Mean	1075.482
Std Dev	93.968
Std Error Mean	5.576
Upper 95% Mean	1086.458
Lower 95% Mean	1064.507
N	284.000
Sum Weights	284.000

Aluminum (wt%)



Quantiles

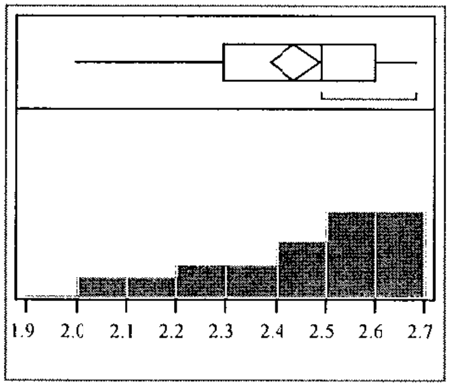
maximum	100.0%	7.3390
	99.5%	7.3390
	97.5%	7.2543
	90.0%	7.1234
quartile	75.0%	6.9620
median	50.0%	6.7920
quartile	25.0%	6.5365
	10.0%	6.3314
	2.5%	6.2382
	0.5%	6.2360
minimum	0.0%	6.2360

Moments

Mean	6.76366
Std Dev	0.28273
Std Error Mean	0.03620
Upper 95% Mean	6.83607
Lower 95% Mean	6.69125
N	61.00000
Sum Weights	61.00000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Calcium (wt%)



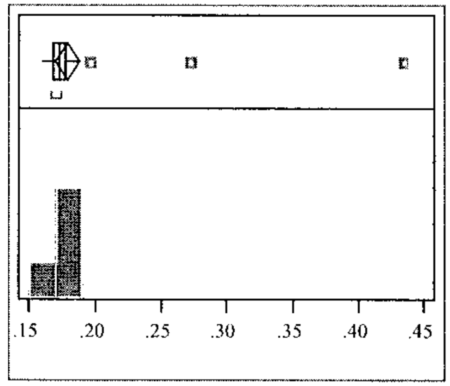
Quantiles

maximum	100.0%	2.6840
	99.5%	2.6840
	97.5%	2.6835
	90.0%	2.6462
quartile	75.0%	2.6025
median	50.0%	2.4970
quartile	25.0%	2.2980
	10.0%	2.1080
	2.5%	1.9987
	0.5%	1.9970
minimum	0.0%	1.9970

Moments

Mean	2.44085
Std Dev	0.19210
Std Error Mean	0.02460
Upper 95% Mean	2.49005
Lower 95% Mean	2.39165
N	61.00000
Sum Weights	61.00000

Chromium (wt%)



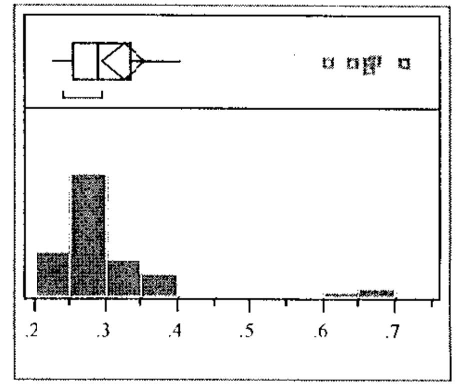
Quantiles

maximum	100.0%	0.43400
	99.5%	0.43400
	97.5%	0.34490
	90.0%	0.18480
quartile	75.0%	0.17800
median	50.0%	0.17400
quartile	25.0%	0.16950
	10.0%	0.16520
	2.5%	0.16155
	0.5%	0.16100
minimum	0.0%	0.16100

Moments

Mean	0.17980
Std Dev	0.03606
Std Error Mean	0.00462
Upper 95% Mean	0.18904
Lower 95% Mean	0.17057
N	61.00000
Sum Weights	61.00000

Copper (wt%)



Quantiles

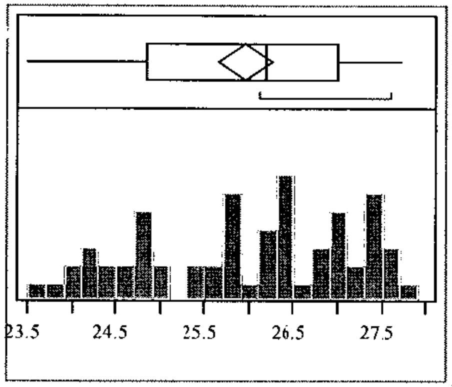
maximum	100.0%	0.71400
	99.5%	0.71400
	97.5%	0.69145
	90.0%	0.56720
quartile	75.0%	0.33450
median	50.0%	0.28900
quartile	25.0%	0.25800
	10.0%	0.23940
	2.5%	0.22965
	0.5%	0.22800
minimum	0.0%	0.22800

Moments

Mean	0.32646
Std Dev	0.11923
Std Error Mean	0.01527
Upper 95% Mean	0.35701
Lower 95% Mean	0.29591
N	61.00000
Sum Weights	61.00000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Iron (wt%)



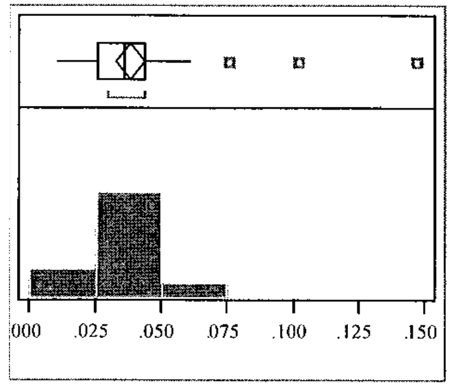
Quantiles

maximum	100.0%	27.745
	99.5%	27.745
	97.5%	27.684
	90.0%	27.389
quartile	75.0%	27.015
median	50.0%	26.193
quartile	25.0%	24.853
	10.0%	24.215
	2.5%	23.700
	0.5%	23.516
minimum	0.0%	23.516

Moments

Mean	25.95830
Std Dev	1.16604
Std Error Mean	0.14930
Upper 95% Mean	26.25693
Lower 95% Mean	25.65966
N	61.00000
Sum Weights	61.00000

Potassium (wt%)



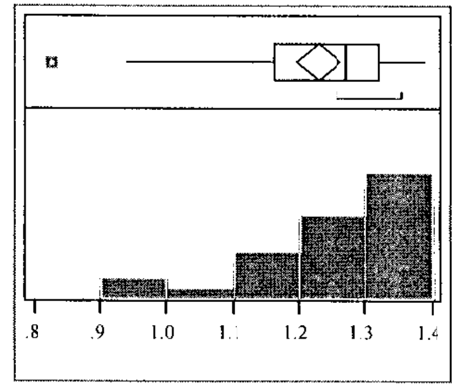
Quantiles

maximum	100.0%	0.14700
	99.5%	0.14700
	97.5%	0.12225
	90.0%	0.05740
quartile	75.0%	0.04400
median	50.0%	0.03700
quartile	25.0%	0.02650
	10.0%	0.01560
	2.5%	0.01155
	0.5%	0.01100
minimum	0.0%	0.01100

Moments

Mean	0.03877
Std Dev	0.02102
Std Error Mean	0.00269
Upper 95% Mean	0.04415
Lower 95% Mean	0.03339
N	61.00000
Sum Weights	61.00000

Magnesium (wt%)



Quantiles

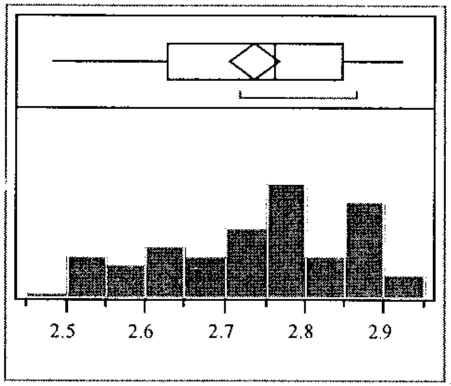
maximum	100.0%	1.3900
	99.5%	1.3900
	97.5%	1.3818
	90.0%	1.3566
quartile	75.0%	1.3225
median	50.0%	1.2750
quartile	25.0%	1.1665
	10.0%	1.0070
	2.5%	0.8907
	0.5%	0.8280
minimum	0.0%	0.8280

Moments

Mean	1.23267
Std Dev	0.12968
Std Error Mean	0.01660
Upper 95% Mean	1.26589
Lower 95% Mean	1.19946
N	61.00000
Sum Weights	61.00000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Manganese (wt%)



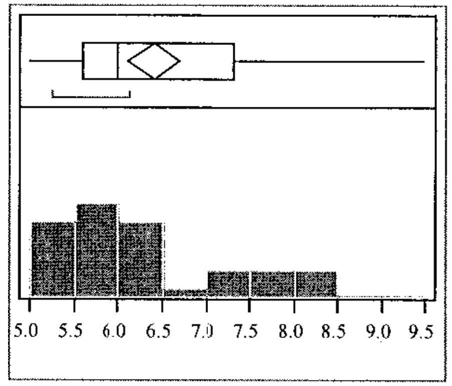
Quantiles

maximum	100.0%	2.9240
	99.5%	2.9240
	97.5%	2.9141
	90.0%	2.8836
quartile	75.0%	2.8465
median	50.0%	2.7620
quartile	25.0%	2.6270
	10.0%	2.5476
	2.5%	2.4928
	0.5%	2.4840
minimum	0.0%	2.4840

Moments

Mean	2.73685
Std Dev	0.11960
Std Error Mean	0.01531
Upper 95% Mean	2.76748
Lower 95% Mean	2.70622
N	61.00000
Sum Weights	61.00000

Sodium (wt%)



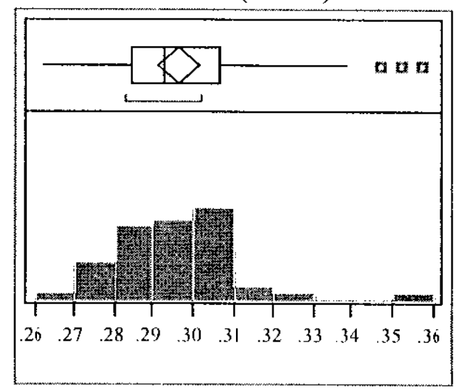
Quantiles

maximum	100.0%	9.4300
	99.5%	9.4300
	97.5%	9.1385
	90.0%	8.1282
quartile	75.0%	7.3265
median	50.0%	6.0200
quartile	25.0%	5.6025
	10.0%	5.3310
	2.5%	5.0481
	0.5%	5.0080
minimum	0.0%	5.0080

Moments

Mean	6.41275
Std Dev	1.08649
Std Error Mean	0.13911
Upper 95% Mean	6.69102
Lower 95% Mean	6.13449
N	61.00000
Sum Weights	61.00000

Nickel (wt%)



Quantiles

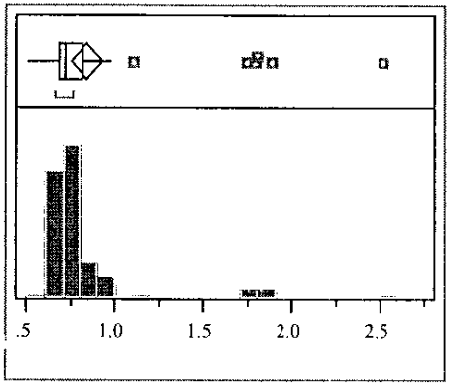
maximum	100.0%	0.35700
	99.5%	0.35700
	97.5%	0.35425
	90.0%	0.31880
quartile	75.0%	0.30650
median	50.0%	0.29300
quartile	25.0%	0.28450
	10.0%	0.27520
	2.5%	0.26465
	0.5%	0.26300
minimum	0.0%	0.26300

Moments

Mean	0.29672
Std Dev	0.01915
Std Error Mean	0.00245
Upper 95% Mean	0.30163
Lower 95% Mean	0.29182
N	61.00000
Sum Weights	61.00000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Silicon (wt%)



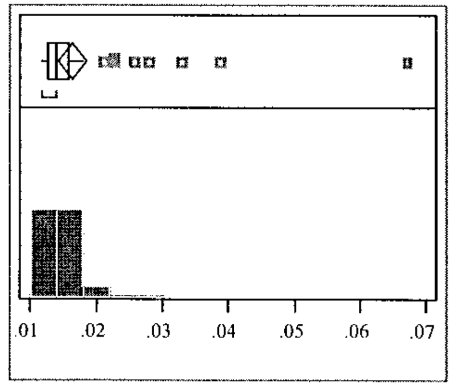
Quantiles

maximum	100.0%	2.5130
	99.5%	2.5130
	97.5%	2.1659
	90.0%	1.0872
quartile	75.0%	0.8235
median	50.0%	0.7260
quartile	25.0%	0.6830
	10.0%	0.6450
	2.5%	0.5643
	0.5%	0.5120
minimum	0.0%	0.5120

Moments

Mean	0.84275
Std Dev	0.35643
Std Error Mean	0.04564
Upper 95% Mean	0.93404
Lower 95% Mean	0.75147
N	61.00000
Sum Weights	61.00000

Titanium (wt%)



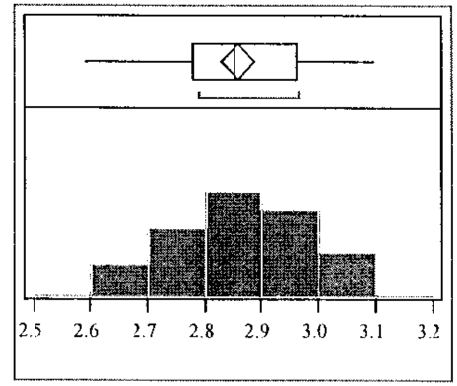
Quantiles

maximum	100.0%	0.06700
	99.5%	0.06700
	97.5%	0.05160
	90.0%	0.02300
quartile	75.0%	0.01600
median	50.0%	0.01400
quartile	25.0%	0.01300
	10.0%	0.01200
	2.5%	0.01200
	0.5%	0.01200
minimum	0.0%	0.01200

Moments

Mean	0.01538
Std Dev	0.00831
Std Error Mean	0.00106
Upper 95% Mean	0.01851
Lower 95% Mean	0.01425
N	61.00000
Sum Weights	61.00000

Uranium (wt%)



Quantiles

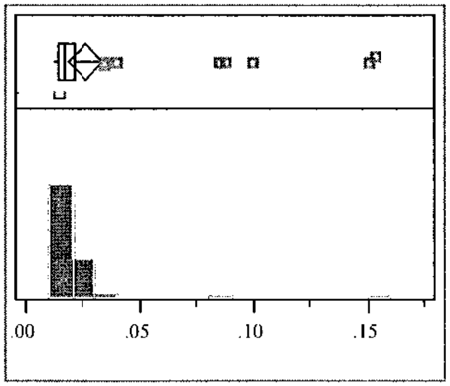
maximum	100.0%	3.1000
	99.5%	3.1000
	97.5%	3.0890
	90.0%	3.0294
quartile	75.0%	2.9640
median	50.0%	2.8550
quartile	25.0%	2.7795
	10.0%	2.6960
	2.5%	2.6231
	0.5%	2.5950
minimum	0.0%	2.5950

Moments

Mean	2.86120
Std Dev	0.12101
Std Error Mean	0.01549
Upper 95% Mean	2.89219
Lower 95% Mean	2.83020
N	61.00000
Sum Weights	61.00000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Zirconium (wt%)



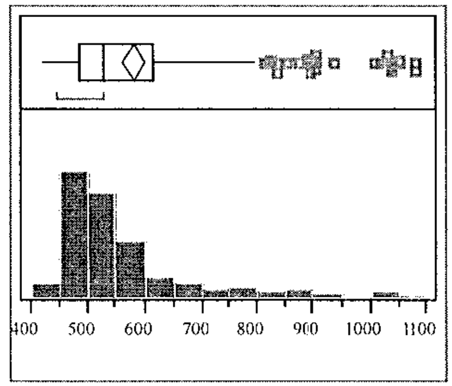
Quantiles

maximum	100.0%	0.15300
	99.5%	0.15300
	97.5%	0.15190
	90.0%	0.03900
quartile	75.0%	0.02200
median	50.0%	0.01700
quartile	25.0%	0.01500
	10.0%	0.01400
	2.5%	0.01300
	0.5%	0.01300
minimum	0.0%	0.01300

Moments

Mean	0.02674
Std Dev	0.02863
Std Error Mean	0.00367
Upper 95% Mean	0.03407
Lower 95% Mean	0.01940
N	61.00000
Sum Weights	61.00000

TIC (ppm)



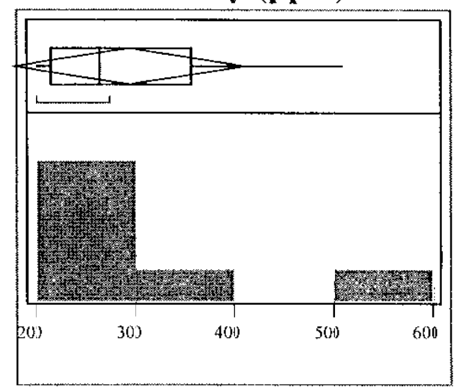
Quantiles

maximum	100.0%	1083.0
	99.5%	1083.0
	97.5%	1038.4
	90.0%	827.8
quartile	75.0%	617.0
median	50.0%	527.4
quartile	25.0%	486.0
	10.0%	458.9
	2.5%	445.9
	0.5%	424.8
minimum	0.0%	424.6

Moments

Mean	584.6057
Std Dev	150.1355
Std Error Mean	9.5529
Upper 95% Mean	603.4218
Lower 95% Mean	565.7895
N	247.0000
Sum Weights	247.0000

Mercury (ppm)



Quantiles

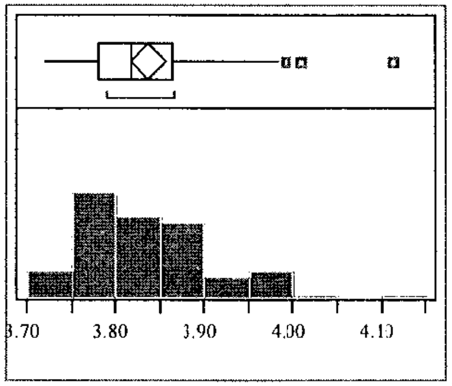
maximum	100.0%	513.00
	99.5%	513.00
	97.5%	513.00
	90.0%	513.00
quartile	75.0%	357.75
median	50.0%	266.00
quartile	25.0%	217.25
	10.0%	203.00
	2.5%	203.00
	0.5%	203.00
minimum	0.0%	203.00

Moments

Mean	296.0000
Std Dev	112.4953
Std Error Mean	45.9260
Upper 95% Mean	414.0549
Lower 95% Mean	177.9451
N	6.0000
Sum Weights	6.0000

Exhibit 1: Summary Statistics for SRAT Receipt Measurements (Continued)

Fe/Al



Quantiles

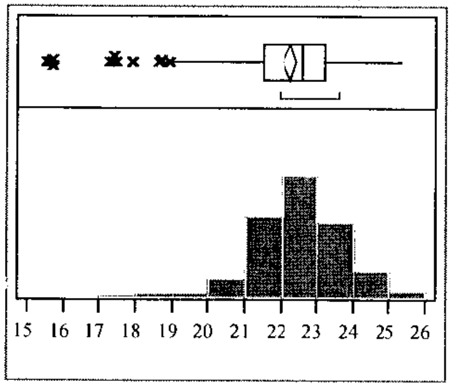
maximum	100.0%	4.1148
	99.5%	4.1148
	97.5%	4.0568
	90.0%	3.9572
quartile	75.0%	3.8642
median	50.0%	3.8200
quartile	25.0%	3.7841
	10.0%	3.7634
	2.5%	3.7249
	0.5%	3.7211
minimum	0.0%	3.7211

Moments

Mean	3.83813
Std Dev	0.07651
Std Error Mean	0.00980
Upper 95% Mean	3.85772
Lower 95% Mean	3.81853
N	61.00000
Sum Weights	61.00000

Exhibit 2: Summary Statistics for SRAT Product Measurements

Total Solids (wt%)



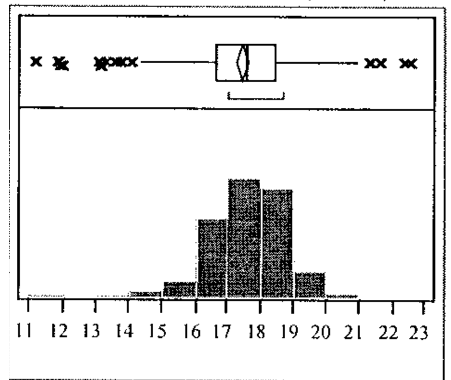
Quantiles

maximum	100.0%	25.380
	99.5%	25.342
	97.5%	25.080
	90.0%	24.065
quartile	75.0%	23.250
median	50.0%	22.635
quartile	25.0%	21.512
	10.0%	20.665
	2.5%	17.420
	0.5%	15.575
minimum	0.0%	15.520

Moments

Mean	22.2964
Std Dev	1.6222
Std Error Mean	0.0963
Upper 95% Mean	22.4859
Lower 95% Mean	22.1069
N	284.0000
Sum Weights	284.0000

Calcined Solids (wt%)



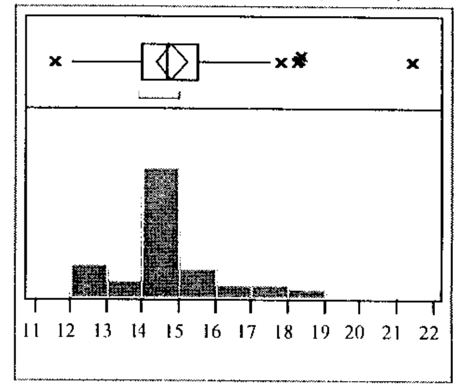
Quantiles

maximum	100.0%	22.630
	99.5%	22.519
	97.5%	20.576
	90.0%	19.060
quartile	75.0%	18.477
median	50.0%	17.655
quartile	25.0%	16.745
	10.0%	15.750
	2.5%	13.187
	0.5%	11.508
minimum	0.0%	11.240

Moments

Mean	17.5157
Std Dev	1.5833
Std Error Mean	0.0940
Upper 95% Mean	17.7006
Lower 95% Mean	17.3308
N	284.0000
Sum Weights	284.0000

Insoluble Solids (wt%)



Quantiles

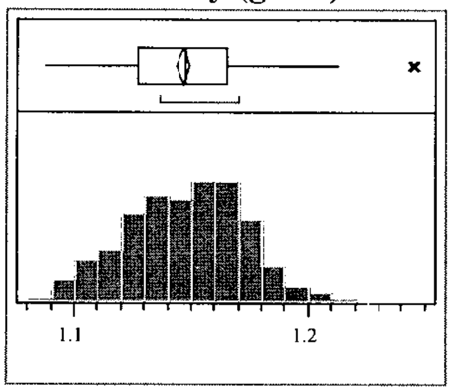
maximum	100.0%	21.410
	99.5%	21.410
	97.5%	19.220
	90.0%	17.294
quartile	75.0%	15.508
median	50.0%	14.700
quartile	25.0%	14.053
	10.0%	12.666
	2.5%	11.944
	0.5%	11.560
minimum	0.0%	11.560

Moments

Mean	14.8094
Std Dev	1.70583
Std Error Mean	0.20686
Upper 95% Mean	15.2223
Lower 95% Mean	14.3965
N	68.00000
Sum Weights	68.00000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Density (g/mL)



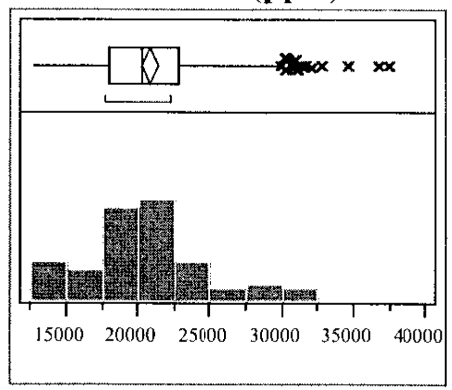
Quantiles

maximum	100.0%	1.2460
	99.5%	1.2326
	97.5%	1.2000
	90.0%	1.1789
quartile	75.0%	1.1650
median	50.0%	1.1480
quartile	25.0%	1.1280
	10.0%	1.1121
	2.5%	1.0940
	0.5%	1.0880
minimum	0.0%	1.0880

Moments

Mean	1.1471
Std Dev	0.0262
Std Error Mean	0.0016
Upper 95% Mean	1.1502
Lower 95% Mean	1.1441
N	280.0000
Sum Weights	280.0000

Formate (ppm)



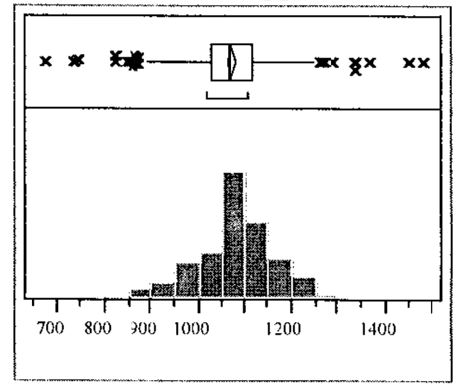
Quantiles

maximum	100.0%	37500
	99.5%	37202
	97.5%	31350
	90.0%	28050
quartile	75.0%	22800
median	50.0%	20400
quartile	25.0%	18125
	10.0%	14600
	2.5%	13800
	0.5%	12843
minimum	0.0%	12800

Moments

Mean	20902.82
Std Dev	4583.25
Std Error Mean	271.97
Upper 95% Mean	21438.16
Lower 95% Mean	20367.48
N	284.00
Sum Weights	284.00

Chloride (ppm)



Quantiles

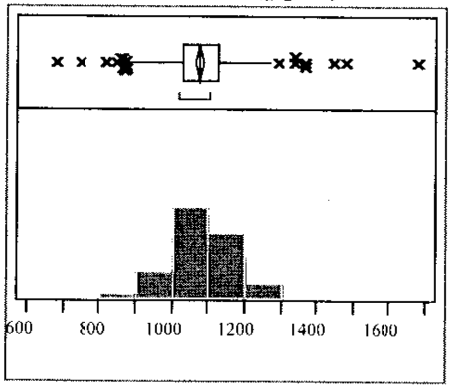
maximum	100.0%	1480.0
	99.5%	1467.8
	97.5%	1269.7
	90.0%	1190.0
quartile	75.0%	1120.0
median	50.0%	1070.0
quartile	25.0%	1030.0
	10.0%	959.6
	2.5%	858.2
	0.5%	702.7
minimum	0.0%	678.0

Moments

Mean	1074.568
Std Dev	101.084
Std Error Mean	6.041
Upper 95% Mean	1086.460
Lower 95% Mean	1062.676
N	280.000
Sum Weights	280.000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Fluoride (ppm)



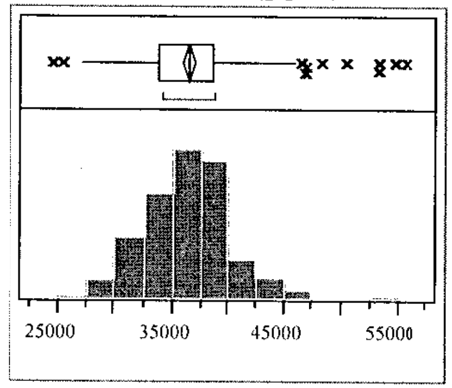
Quantiles

maximum	100.0%	1680.0
	99.5%	1595.0
	97.5%	1333.8
	90.0%	1200.0
quartile	75.0%	1130.0
median	50.0%	1080.0
quartile	25.0%	1030.0
	10.0%	969.0
	2.5%	865.8
	0.5%	706.5
minimum	0.0%	678.0

Moments

Mean	1081.437
Std Dev	105.522
Std Error Mean	6.262
Upper 95% Mean	1093.762
Lower 95% Mean	1069.111
N	284.000
Sum Weights	284.000

Nitrate (ppm)



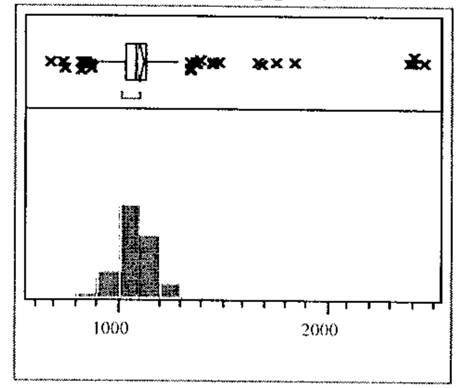
Quantiles

maximum	100.0%	55800
	99.5%	55354
	97.5%	46900
	90.0%	41590
quartile	75.0%	38900
median	50.0%	36500
quartile	25.0%	33900
	10.0%	31300
	2.5%	28603
	0.5%	24924
minimum	0.0%	24600

Moments

Mean	36598.21
Std Dev	4538.28
Std Error Mean	271.21
Upper 95% Mean	37132.11
Lower 95% Mean	36064.32
N	280.00
Sum Weights	280.00

Nitrite (ppm)



Quantiles

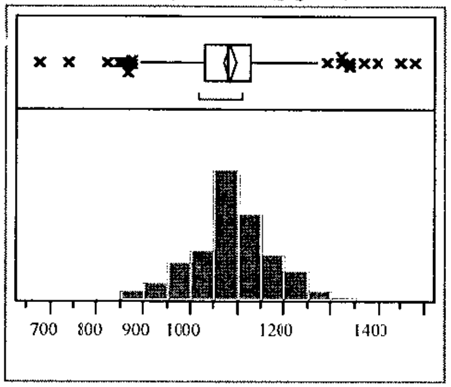
maximum	100.0%	2460.0
	99.5%	2439.7
	97.5%	1689.5
	90.0%	1219.0
quartile	75.0%	1140.0
median	50.0%	1080.0
quartile	25.0%	1032.5
	10.0%	965.2
	2.5%	858.2
	0.5%	702.7
minimum	0.0%	678.0

Moments

Mean	1109.686
Std Dev	205.913
Std Error Mean	12.306
Upper 95% Mean	1133.910
Lower 95% Mean	1085.462
N	280.000
Sum Weights	280.000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Phosphate (ppm)



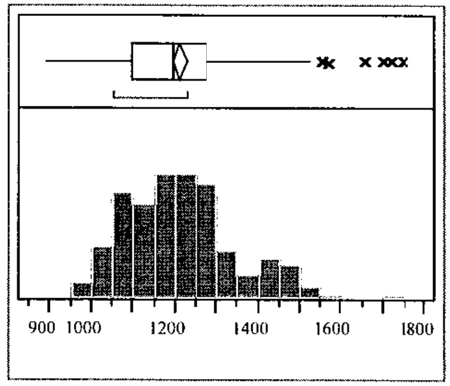
Quantiles

maximum	100.0%	1480.0
	99.5%	1469.0
	97.5%	1323.5
	90.0%	1210.0
quartile	75.0%	1130.0
median	50.0%	1080.0
quartile	25.0%	1032.5
	10.0%	971.0
	2.5%	863.0
	0.5%	700.3
minimum	0.0%	678.0

Moments

Mean	1084.110
Std Dev	105.284
Std Error Mean	6.384
Upper 95% Mean	1096.679
Lower 95% Mean	1071.542
N	272.000
Sum Weights	272.000

Sulfate (ppm)



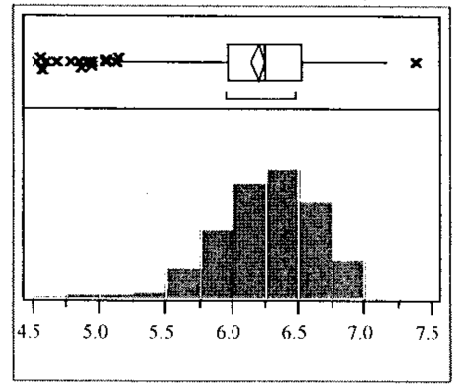
Quantiles

maximum	100.0%	1750.0
	99.5%	1737.8
	97.5%	1529.7
	90.0%	1438.0
quartile	75.0%	1280.0
median	50.0%	1200.0
quartile	25.0%	1102.5
	10.0%	1050.0
	2.5%	980.0
	0.5%	915.1
minimum	0.0%	894.0

Moments

Mean	1213.521
Std Dev	144.528
Std Error Mean	8.637
Upper 95% Mean	1230.524
Lower 95% Mean	1196.519
N	280.000
Sum Weights	280.000

Aluminum (wt%)



Quantiles

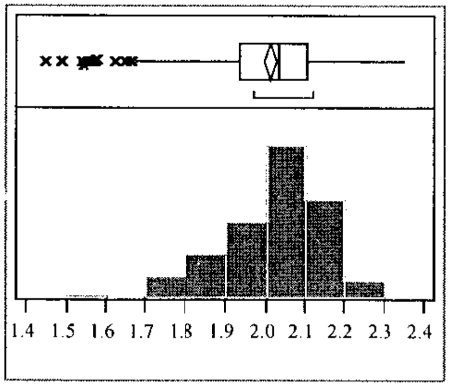
maximum	100.0%	7.3900
	99.5%	7.2287
	97.5%	6.9400
	90.0%	6.7180
quartile	75.0%	6.5410
median	50.0%	6.2620
quartile	25.0%	5.9840
	10.0%	5.6970
	2.5%	4.9063
	0.5%	4.5633
minimum	0.0%	4.5460

Moments

Mean	6.2141
Std Dev	0.4701
Std Error Mean	0.0252
Upper 95% Mean	6.2636
Lower 95% Mean	6.1646
N	349.0000
Sum Weights	349.0000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Calcium (wt%)



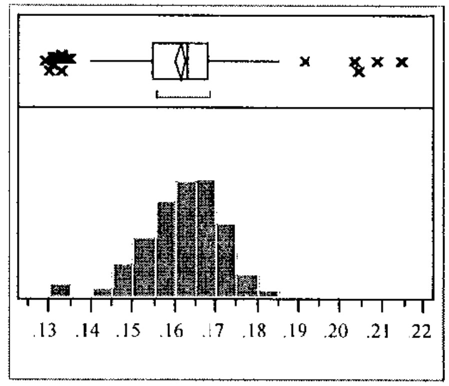
Quantiles

maximum	100.0%	2.3500
	99.5%	2.3478
	97.5%	2.2508
	90.0%	2.1710
quartile	75.0%	2.1100
median	50.0%	2.0360
quartile	25.0%	1.9365
	10.0%	1.8100
	2.5%	1.6140
	0.5%	1.4770
minimum	0.0%	1.4500

Moments

Mean	2.0118
Std Dev	0.1493
Std Error Mean	0.0080
Upper 95% Mean	2.0275
Lower 95% Mean	1.9961
N	349.0000
Sum Weights	349.0000

Chromium (wt%)



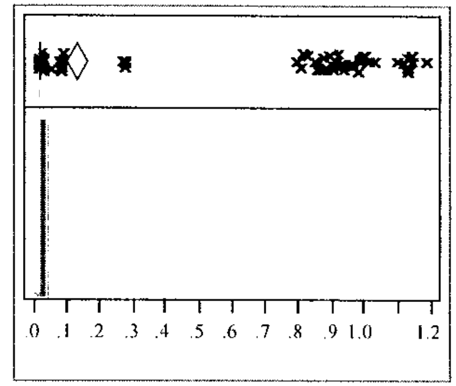
Quantiles

maximum	100.0%	0.21500
	99.5%	0.21050
	97.5%	0.18100
	90.0%	0.17400
quartile	75.0%	0.16800
median	50.0%	0.16300
quartile	25.0%	0.15500
	10.0%	0.14800
	2.5%	0.13300
	0.5%	0.12975
minimum	0.0%	0.12900

Moments

Mean	0.1617
Std Dev	0.0116
Std Error Mean	0.0006
Upper 95% Mean	0.1629
Lower 95% Mean	0.1604
N	349.0000
Sum Weights	349.0000

Copper (wt%)



Quantiles

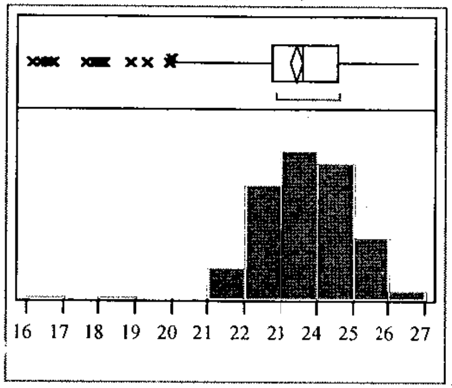
maximum	100.0%	1.1850
	99.5%	1.1527
	97.5%	1.1075
	90.0%	0.8580
quartile	75.0%	0.0250
median	50.0%	0.0240
quartile	25.0%	0.0220
	10.0%	0.0210
	2.5%	0.0180
	0.5%	0.0160
minimum	0.0%	0.0160

Moments

Mean	0.1352
Std Dev	0.3025
Std Error Mean	0.0162
Upper 95% Mean	0.167[illegible]
Lower 95% Mean	0.1034
N	349.0000
Sum Weights	349.0000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Iron (wt%)



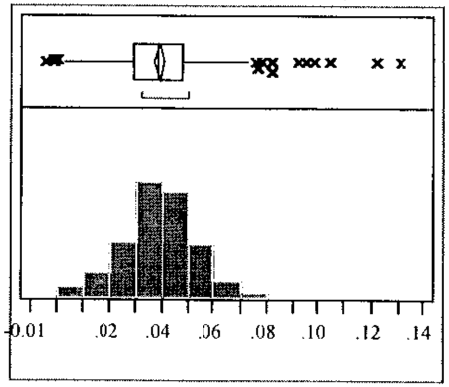
Quantiles

maximum	100.0%	26.802
	99.5%	26.585
	97.5%	25.981
	90.0%	25.344
quartile	75.0%	24.560
median	50.0%	23.641
quartile	25.0%	22.741
	10.0%	21.818
	2.5%	18.041
	0.5%	16.320
minimum	0.0%	16.163

Moments

Mean	23.4736
Std Dev	1.6782
Std Error Mean	0.0898
Upper 95% Mean	23.6502
Lower 95% Mean	23.2969
N	349.0000
Sum Weights	349.0000

Potassium (wt%)



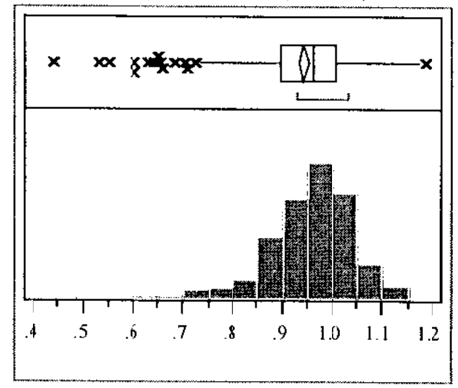
Quantiles

maximum	100.0%	0.13100
	99.5%	0.12425
	97.5%	0.07900
	90.0%	0.05900
quartile	75.0%	0.04800
median	50.0%	0.03900
quartile	25.0%	0.03000
	10.0%	0.01800
	2.5%	0.00600
	0.5%	-0.0018
minimum	0.0%	-0.004

Moments

Mean	0.0395
Std Dev	0.0178
Std Error Mean	0.0010
Upper 95% Mean	0.0414
Lower 95% Mean	0.0377
N	349.0000
Sum Weights	349.0000

Magnesium (wt%)



Quantiles

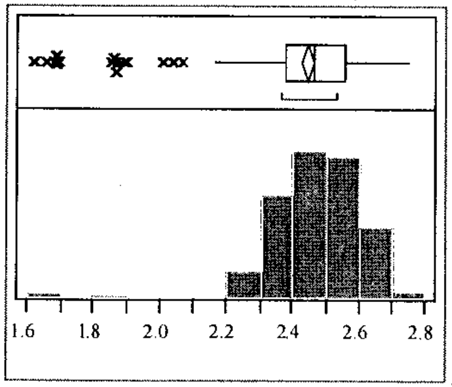
maximum	100.0%	1.1850
	99.5%	1.1753
	97.5%	1.1107
	90.0%	1.0530
quartile	75.0%	1.0125
median	50.0%	0.9650
quartile	25.0%	0.9000
	10.0%	0.8120
	2.5%	0.6518
	0.5%	0.5082
minimum	0.0%	0.4430

Moments

Mean	0.9454
Std Dev	0.1054
Std Error Mean	0.0056
Upper 95% Mean	0.9565
Lower 95% Mean	0.9343
N	349.0000
Sum Weights	349.0000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Manganese (wt%)



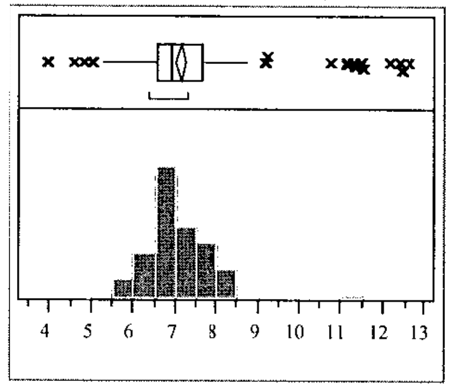
Quantiles

maximum	100.0%	2.7540
	99.5%	2.7293
	97.5%	2.6975
	90.0%	2.6320
quartile	75.0%	2.5630
median	50.0%	2.4710
quartile	25.0%	2.3825
	10.0%	2.2940
	2.5%	1.8680
	0.5%	1.6475
minimum	0.0%	1.6220

Moments

Mean	2.4496
Std Dev	0.1765
Std Error Mean	0.0095
Upper 95% Mean	2.4682
Lower 95% Mean	2.4310
N	349.0000
Sum Weights	349.0000

Sodium (wt%)



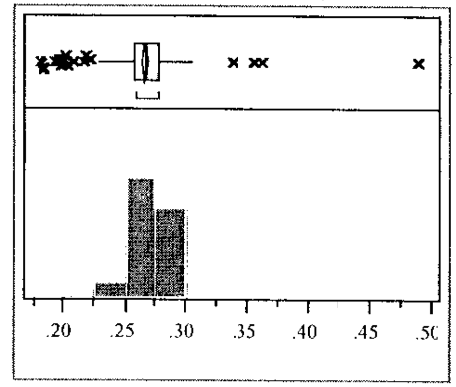
Quantiles

maximum	100.0%	12.652
	99.5%	12.492
	97.5%	11.304
	90.0%	8.197
quartile	75.0%	7.634
median	50.0%	6.928
quartile	25.0%	6.615
	10.0%	6.142
	2.5%	5.517
	0.5%	4.434
minimum	0.0%	3.961

Moments

Mean	7.1680
Std Dev	1.1349
Std Error Mean	0.0608
Upper 95% Mean	7.2874
Lower 95% Mean	7.0485
N	349.0000
Sum Weights	349.0000

Nickel (wt%)



Quantiles

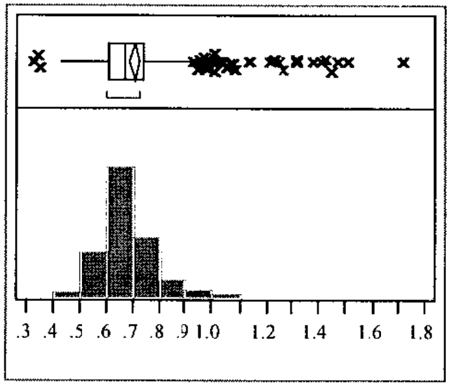
maximum	100.0%	0.48900
	99.5%	0.39450
	97.5%	0.29850
	90.0%	0.28800
quartile	75.0%	0.27900
median	50.0%	0.26900
quartile	25.0%	0.25850
	10.0%	0.24800
	2.5%	0.20050
	0.5%	0.18150
minimum	0.0%	0.18000

Moments

Mean	0.2680
Std Dev	0.0245
Std Error Mean	0.0013
Upper 95% Mean	0.2705
Lower 95% Mean	0.2654
N	349.0000
Sum Weights	349.0000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Silicon (wt%)



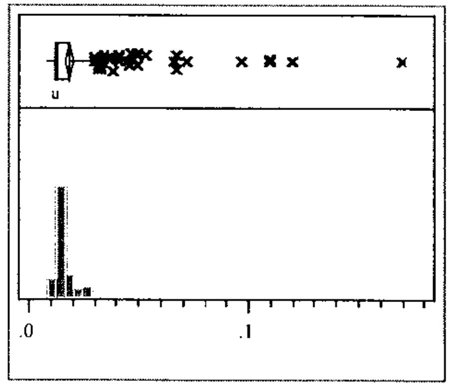
Quantiles

maximum	100.0%	1.7220
	99.5%	1.5608
	97.5%	1.3175
	90.0%	0.9250
quartile	75.0%	0.7435
median	50.0%	0.6750
quartile	25.0%	0.6155
	10.0%	0.5610
	2.5%	0.4635
	0.5%	0.3362
minimum	0.0%	0.3280

Moments

Mean	0.7114
Std Dev	0.1818
Std Error Mean	0.0097
Upper 95% Mean	0.7306
Lower 95% Mean	0.6923
N	349.0000
Sum Weights	349.0000

Titanium (wt%)



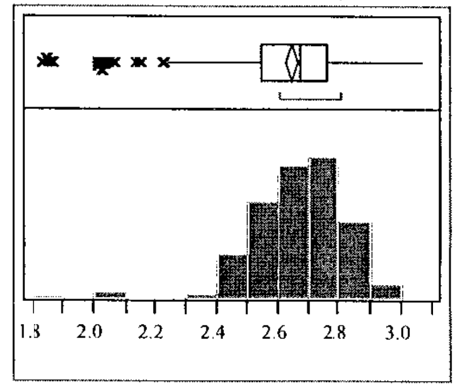
Quantiles

maximum	100.0%	0.17000
	99.5%	0.13250
	97.5%	0.06625
	90.0%	0.03000
quartile	75.0%	0.01900
median	50.0%	0.01300
quartile	25.0%	0.01200
	10.0%	0.01100
	2.5%	0.01100
	0.5%	0.00900
minimum	0.0%	0.00900

Moments

Mean	0.0189
Std Dev	0.0159
Std Error Mean	0.0009
Upper 95% Mean	0.0206
Lower 95% Mean	0.0172
N	349.0000
Sum Weights	349.0000

Uranium (wt%)



Quantiles

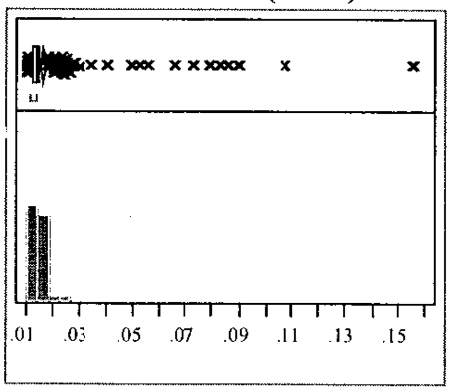
maximum	100.0%	3.0710
	99.5%	3.0312
	97.5%	2.9240
	90.0%	2.8420
quartile	75.0%	2.7640
median	50.0%	2.6760
quartile	25.0%	2.5525
	10.0%	2.4740
	2.5%	2.0340
	0.5%	1.8450
minimum	0.0%	1.8390

Moments

Mean	2.6474
Std Dev	0.1890
Std Error Mean	0.0101
Upper 95% Mean	2.6673
Lower 95% Mean	2.6275
N	349.0000
Sum Weights	349.0000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

Zirconium (wt%)



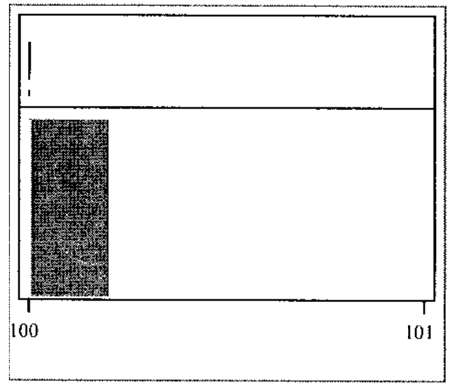
Quantiles

maximum	100.0%	0.15600
	99.5%	0.11925
	97.5%	0.05850
	90.0%	0.02200
quartile	75.0%	0.01500
median	50.0%	0.01400
quartile	25.0%	0.01300
	10.0%	0.01200
	2.5%	0.01075
	0.5%	0.01000
minimum	0.0%	0.01000

Moments

Mean	0.0168
Std Dev	0.0133
Std Error Mean	0.0007
Upper 95% Mean	0.0182
Lower 95% Mean	0.0154
N	349.0000
Sum Weights	349.0000

Mercury (ppm)



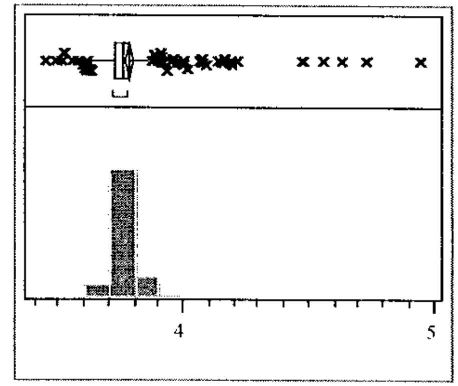
Quantiles

maximum	100.0%	100.00
	99.5%	100.00
	97.5%	100.00
	90.0%	100.00
quartile	75.0%	100.00
median	50.0%	100.00
quartile	25.0%	100.00
	10.0%	100.00
	2.5%	100.00
	0.5%	100.00
minimum	0.0%	100.00

Moments

Mean	100.0000
Std Dev	0.0000
Std Error Mean	0.0000
Upper 95% Mean	100.0000
Lower 95% Mean	100.0000
N	6.0000
Sum Weights	6.0000

Fe/Al



Quantiles

maximum	100.0%	4.9447
	99.5%	4.7920
	97.5%	4.1682
	90.0%	3.8625
quartile	75.0%	3.7864
median	50.0%	3.7564
quartile	25.0%	3.7254
	10.0%	3.6990
	2.5%	3.6097
	0.5%	3.4802
minimum	0.0%	3.4495

Moments

Mean	3.7809
Std Dev	0.1443
Std Error Mean	0.0077
Upper 95% Mean	3.7961
Lower 95% Mean	3.7657
N	349.0000
Sum Weights	349.0000

Exhibit 2: Summary Statistics for SRAT Product Measurements (continued)

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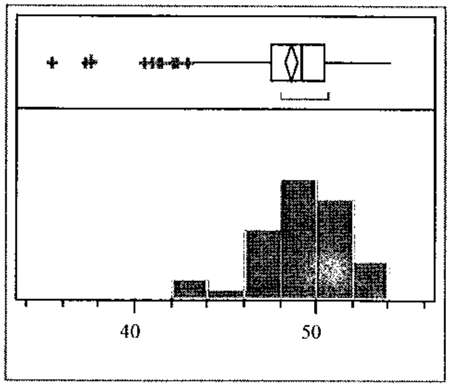
Exhibit 3: Summary Statistics for SME Measurements

Total Solids (wt%)



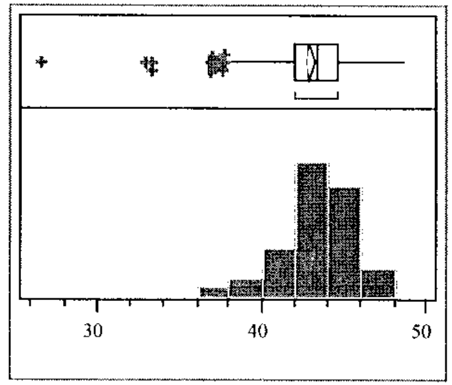
Quantiles

maximum	100.0%	54.140
	99.5%	53.854
	97.5%	53.075
	90.0%	52.070
quartile	75.0%	50.510
median	50.0%	49.280
quartile	25.0%	47.485
	10.0%	44.960
	2.5%	41.388
	0.5%	36.450
minimum	0.0%	35.400

Moments

Mean	48.7632
Std Dev	2.8614
Std Error Mean	0.1628
Upper 95% Mean	49.0835
Lower 95% Mean	48.4429
N	309.0000
Sum Weights	309.0000

Calcined Solids (wt%)



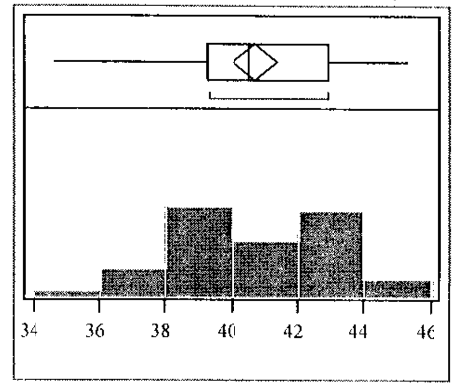
Quantiles

maximum	100.0%	48.590
	99.5%	48.480
	97.5%	47.295
	90.0%	45.990
quartile	75.0%	44.760
median	50.0%	43.570
quartile	25.0%	42.020
	10.0%	39.250
	2.5%	37.032
	0.5%	30.128
minimum	0.0%	26.630

Moments

Mean	43.0703
Std Dev	2.7289
Std Error Mean	0.1552
Upper 95% Mean	43.3758
Lower 95% Mean	42.7648
N	309.0000
Sum Weights	309.0000

Insoluble Solids (wt%)



Quantiles

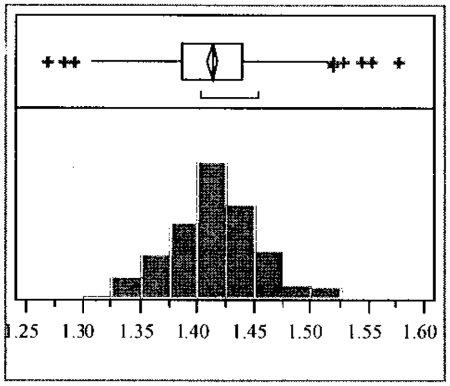
maximum	100.0%	45.300
	99.5%	45.300
	97.5%	45.160
	90.0%	43.952
quartile	75.0%	42.927
median	50.0%	40.600
quartile	25.0%	39.275
	10.0%	37.169
	2.5%	34.932
	0.5%	34.720
minimum	0.0%	34.720

Moments

Mean	40.76357
Std Dev	2.57862
Std Error Mean	0.34453
Upper 95% Mean	41.45413
Lower 95% Mean	40.07301
N	56.00000
Sum Weights	56.00000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

Density (g/mL)



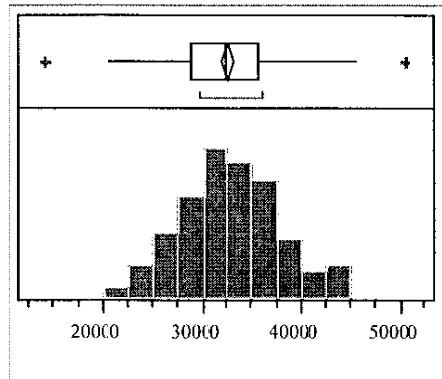
Quantiles

maximum	100.0%	1.5790
	99.5%	1.5657
	97.5%	1.5131
	90.0%	1.4619
quartile	75.0%	1.4400
median	50.0%	1.4160
quartile	25.0%	1.3870
	10.0%	1.3620
	2.5%	1.3285
	0.5%	1.2763
minimum	0.0%	1.2680

Moments

Mean	1.4145
Std Dev	0.0445
Std Error Mean	0.0025
Upper 95% Mean	1.4195
Lower 95% Mean	1.4095
N	310.0000
Sum Weights	310.0000

Formate (ppm)



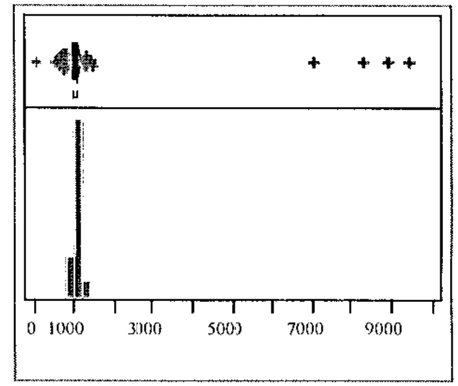
Quantiles

maximum	100.0%	50500
	99.5%	47563
	97.5%	43388
	90.0%	39700
quartile	75.0%	35900
median	50.0%	32500
quartile	25.0%	28950
	10.0%	26050
	2.5%	22725
	0.5%	18263
minimum	0.0%	14200

Moments

Mean	32735.19
Std Dev	5289.21
Std Error Mean	293.85
Upper 95% Mean	33313.29
Lower 95% Mean	32157.08
N	324.00
Sum Weights	324.00

Chloride (ppm)



Quantiles

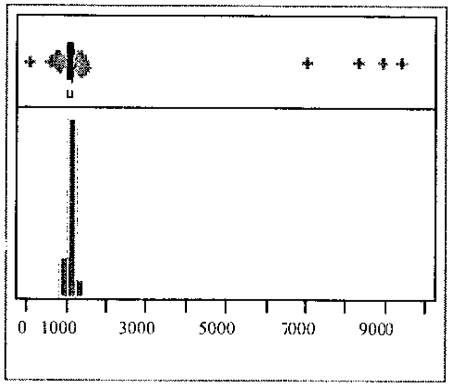
maximum	100.0%	9430.0
	99.5%	9105.0
	97.5%	1411.3
	90.0%	1205.0
quartile	75.0%	1130.0
median	50.0%	1070.0
quartile	25.0%	1020.0
	10.0%	954.0
	2.5%	806.6
	0.5%	411.4
minimum	0.0%	102.0

Moments

Mean	1159.614
Std Dev	828.718
Std Error Mean	46.040
Upper 95% Mean	1250.191
Lower 95% Mean	1069.037
N	324.000
Sum Weights	324.000

Fluoride (ppm)

Exhibit 3: Summary Statistics for SME Measurements (Continued)



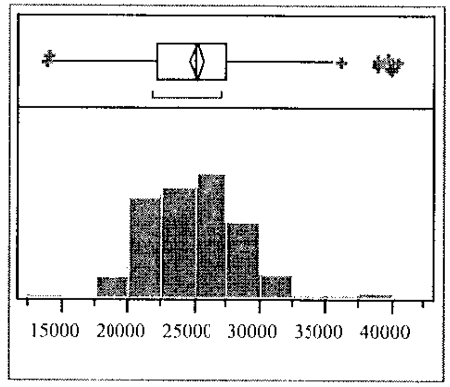
Quantiles

maximum	100.0%	9430.0
	99.5%	9105.0
	97.5%	1412.5
	90.0%	1210.0
quartile	75.0%	1130.0
median	50.0%	1070.0
quartile	25.0%	1020.0
	10.0%	954.0
	2.5%	806.6
	0.5%	411.4
minimum	0.0%	102.0

Moments

Mean	1160.750
Std Dev	828.740
Std Error Mean	46.041
Upper 95% Mean	1251.330
Lower 95% Mean	1070.170
N	324.000
Sum Weights	324.000

Nitrate (ppm)



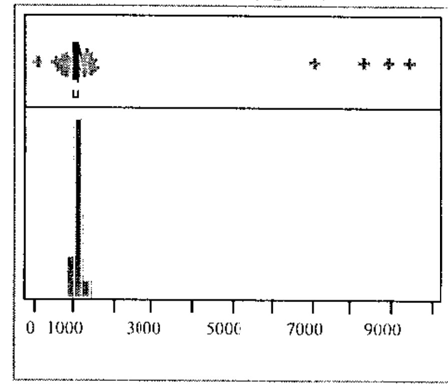
Quantiles

maximum	100.0%	40400
	99.5%	40150
	97.5%	38563
	90.0%	30200
quartile	75.0%	27575
median	50.0%	25200
quartile	25.0%	22200
	10.0%	20400
	2.5%	18125
	0.5%	14025
minimum	0.0%	13900

Moments

Mean	25244.14
Std Dev	4400.65
Std Error Mean	244.48
Upper 95% Mean	25725.12
Lower 95% Mean	24763.15
N	324.00
Sum Weights	324.00

Nitrite (ppm)



Quantiles

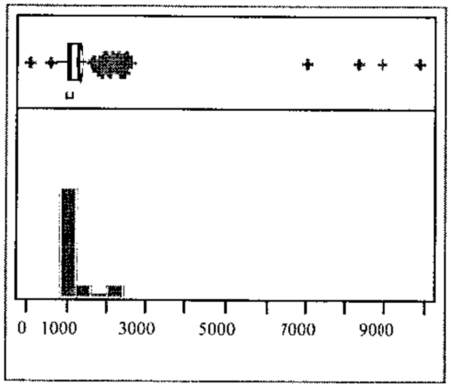
maximum	100.0%	9430.0
	99.5%	9105.0
	97.5%	1411.3
	90.0%	1205.0
quartile	75.0%	1130.0
median	50.0%	1070.0
quartile	25.0%	1020.0
	10.0%	954.0
	2.5%	806.6
	0.5%	411.4
minimum	0.0%	102.0

Moments

Mean	1159.614
Std Dev	828.718
Std Error Mean	46.040
Upper 95% Mean	1250.191
Lower 95% Mean	1069.037
N	324.000
Sum Weights	324.000

Phosphate (ppm)

Exhibit 3: Summary Statistics for SME Measurements (Continued)



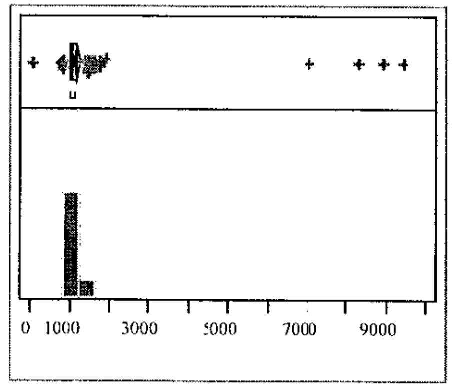
Quantiles

maximum	100.0%	9870.0
	99.5%	9270.0
	97.5%	2483.8
	90.0%	2115.0
quartile	75.0%	1285.0
median	50.0%	1100.0
quartile	25.0%	1050.0
	10.0%	967.0
	2.5%	843.1
	0.5%	411.4
minimum	0.0%	102.0

Moments

Mean	1358.256
Std Dev	913.670
Std Error Mean	50.759
Upper 95% Mean	1458.118
Lower 95% Mean	1258.394
N	324.000
Sum Weights	324.000

Sulfate (ppm)



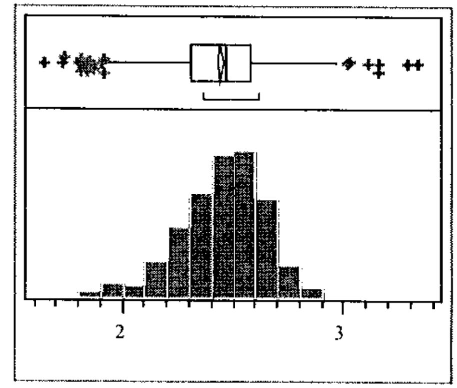
Quantiles

maximum	100.0%	9430.0
	99.5%	9105.0
	97.5%	1738.8
	90.0%	1300.0
quartile	75.0%	1167.5
median	50.0%	1090.0
quartile	25.0%	1040.0
	10.0%	976.0
	2.5%	884.0
	0.5%	530.1
minimum	0.0%	102.0

Moments

Mean	1205.448
Std Dev	830.197
Std Error Mean	46.122
Upper 95% Mean	1296.186
Lower 95% Mean	1114.709
N	324.000
Sum Weights	324.000

Aluminum (wt%)



Quantiles

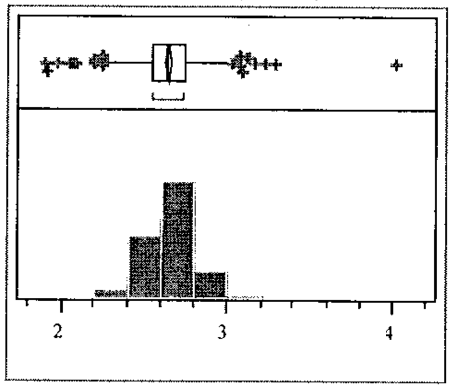
maximum	100.0%	3.3310
	99.5%	3.1597
	97.5%	2.8320
	90.0%	2.6848
quartile	75.0%	2.5840
median	50.0%	2.4640
quartile	25.0%	2.3180
	10.0%	2.1666
	2.5%	1.9237
	0.5%	1.7843
minimum	0.0%	1.6490

Moments

Mean	2.4445
Std Dev	0.2211
Std Error Mean	0.0082
Upper 95% Mean	2.4606
Lower 95% Mean	2.4284
N	731.0000
Sum Weights	731.0000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

Boron (wt%)



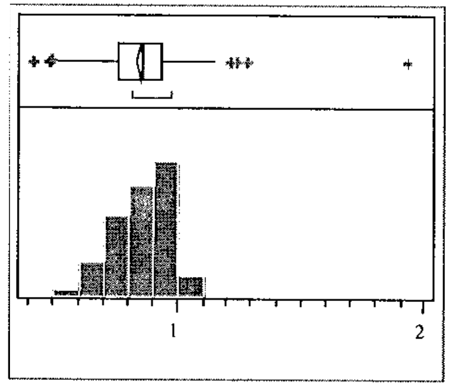
Quantiles

maximum	100.0%	4.0200
	99.5%	3.2781
	97.5%	3.0666
	90.0%	2.8517
quartile	75.0%	2.7490
median	50.0%	2.6405
quartile	25.0%	2.5633
	10.0%	2.4591
	2.5%	2.2556
	0.5%	1.9251
minimum	0.0%	1.8990

Moments

Mean	2.6508
Std Dev	0.1935
Std Error Mean	0.0094
Upper 95% Mean	2.6693
Lower 95% Mean	2.6322
N	420.0000
Sum Weights	420.0000

Calcium (wt%)



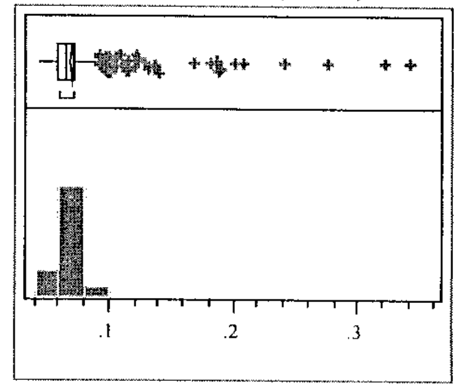
Quantiles

maximum	100.0%	1.9330
	99.5%	1.2295
	97.5%	1.0624
	90.0%	0.9888
quartile	75.0%	0.9400
median	50.0%	0.8680
quartile	25.0%	0.7650
	10.0%	0.6822
	2.5%	0.5943
	0.5%	0.5069
minimum	0.0%	0.4210

Moments

Mean	0.8535
Std Dev	0.1299
Std Error Mean	0.0048
Upper 95% Mean	0.8629
Lower 95% Mean	0.8440
N	731.0000
Sum Weights	731.0000

Chromium (wt%)



Quantiles

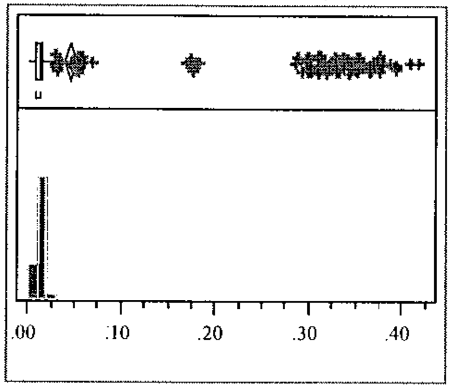
maximum	100.0%	0.34100
	99.5%	0.25256
	97.5%	0.12070
	90.0%	0.08400
quartile	75.0%	0.07300
median	50.0%	0.06700
quartile	25.0%	0.06100
	10.0%	0.05700
	2.5%	0.04900
	0.5%	0.04400
minimum	0.0%	0.04400

Moments

Mean	0.0711
Std Dev	0.0241
Std Error Mean	0.0009
Upper 95% Mean	0.0729
Lower 95% Mean	0.0694
N	731.0000
Sum Weights	731.0000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

Copper (wt%)



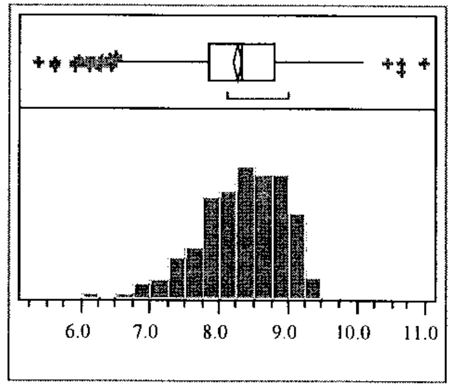
Quantiles

maximum	100.0%	0.41800
	99.5%	0.39500
	97.5%	0.35910
	90.0%	0.17740
quartile	75.0%	0.01700
median	50.0%	0.01300
quartile	25.0%	0.01000
	10.0%	0.00800
	2.5%	0.00600
	0.5%	0.00400
minimum	0.0%	0.00400

Moments

Mean	0.0462
Std Dev	0.0973
Std Error Mean	0.0036
Upper 95% Mean	0.0533
Lower 95% Mean	0.0392
N	731.0000
Sum Weights	731.0000

Iron (wt%)



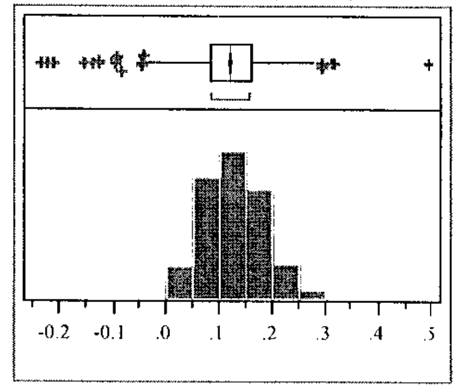
Quantiles

maximum	100.0%	10.974
	99.5%	10.491
	97.5%	9.352
	90.0%	9.107
quartile	75.0%	8.796
median	50.0%	8.357
quartile	25.0%	7.891
	10.0%	7.340
	2.5%	6.466
	0.5%	5.806
minimum	0.0%	5.391

Moments

Mean	8.2914
Std Dev	0.7339
Std Error Mean	0.0271
Upper 95% Mean	8.3447
Lower 95% Mean	8.2381
N	731.0000
Sum Weights	731.0000

Potassium (wt%)



Quantiles

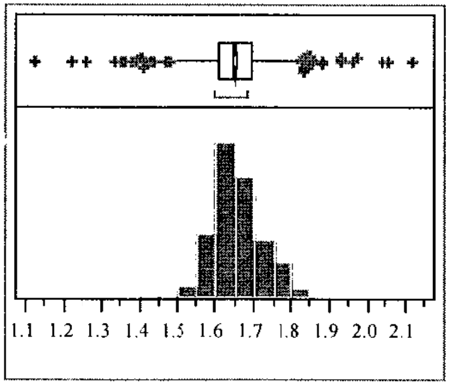
maximum	100.0%	0.49500
	99.5%	0.30180
	97.5%	0.25070
	90.0%	0.20360
quartile	75.0%	0.16400
median	50.0%	0.12400
quartile	25.0%	0.08400
	10.0%	0.05020
	2.5%	0.00060
	0.5%	-0.1717
minimum	0.0%	-0.231

Moments

Mean	0.1237
Std Dev	0.0688
Std Error Mean	0.0025
Upper 95% Mean	0.1287
Lower 95% Mean	0.1187
N	731.0000
Sum Weights	731.0000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

Lithium (wt%)



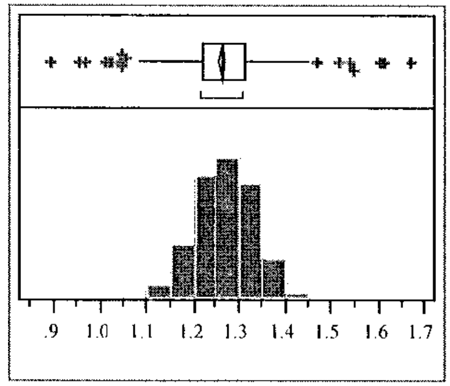
Quantiles

maximum	100.0%	2.1190
	99.5%	1.9935
	97.5%	1.8347
	90.0%	1.7618
quartile	75.0%	1.6970
median	50.0%	1.6480
quartile	25.0%	1.6100
	10.0%	1.5690
	2.5%	1.4803
	0.5%	1.3118
minimum	0.0%	1.1250

Moments

Mean	1.6536
Std Dev	0.0892
Std Error Mean	0.0033
Upper 95% Mean	1.6601
Lower 95% Mean	1.6472
N	731.0000
Sum Weights	731.0000

Magnesium (wt%)



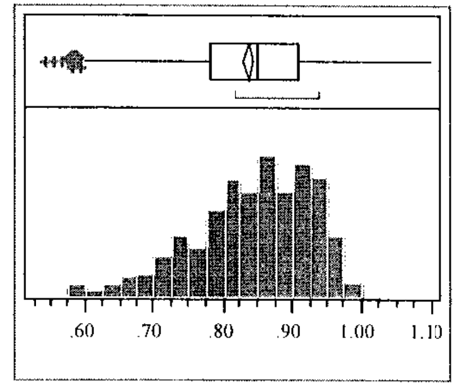
Quantiles

maximum	100.0%	1.6720
	99.5%	1.5657
	97.5%	1.4145
	90.0%	1.3558
quartile	75.0%	1.3160
median	50.0%	1.2680
quartile	25.0%	1.2220
	10.0%	1.1782
	2.5%	1.1163
	0.5%	0.9967
minimum	0.0%	0.8940

Moments

Mean	1.2675
Std Dev	0.0786
Std Error Mean	0.0029
Upper 95% Mean	1.2732
Lower 95% Mean	1.2618
N	731.0000
Sum Weights	731.0000

Manganese (wt%)



Quantiles

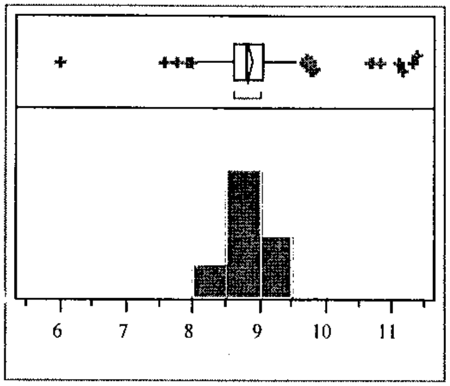
maximum	100.0%	1.0990
	99.5%	1.0547
	97.5%	0.9777
	90.0%	0.9440
quartile	75.0%	0.9100
median	50.0%	0.8520
quartile	25.0%	0.7830
	10.0%	0.7122
	2.5%	0.6129
	0.5%	0.5723
minimum	0.0%	0.5440

Moments

Mean	0.8387
Std Dev	0.0930
Std Error Mean	0.0034
Upper 95% Mean	0.8455
Lower 95% Mean	0.8320
N	731.0000
Sum Weights	731.0000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

Sodium (wt%)



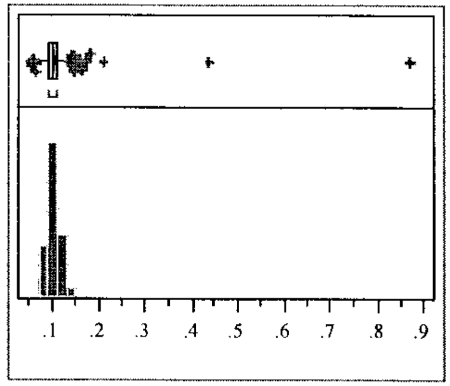
Quantiles

maximum	100.0%	11.390
	99.5%	11.319
	97.5%	9.806
	90.0%	9.229
quartile	75.0%	9.056
median	50.0%	8.818
quartile	25.0%	8.640
	10.0%	8.409
	2.5%	8.112
	0.5%	7.596
minimum	0.0%	5.990

Moments

Mean	8.8563
Std Dev	0.4651
Std Error Mean	0.0225
Upper 95% Mean	8.9005
Lower 95% Mean	8.8121
N	428.0000
Sum Weights	428.0000

Nickel (wt%)



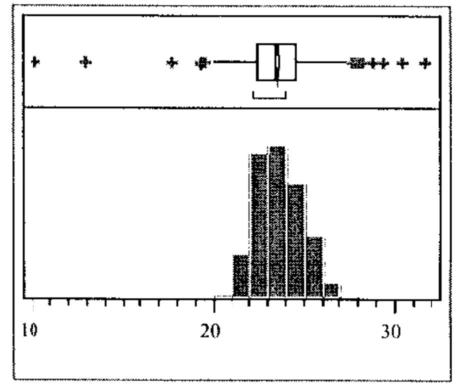
Quantiles

maximum	100.0%	0.87800
	99.5%	0.19254
	97.5%	0.14870
	90.0%	0.12000
quartile	75.0%	0.11100
median	50.0%	0.10200
quartile	25.0%	0.09300
	10.0%	0.08400
	2.5%	0.07500
	0.5%	0.06264
minimum	0.0%	0.05600

Moments

Mean	0.1042
Std Dev	0.0354
Std Error Mean	0.0013
Upper 95% Mean	0.1068
Lower 95% Mean	0.1017
N	731.0000
Sum Weights	731.0000

Silicon (wt%)



Quantiles

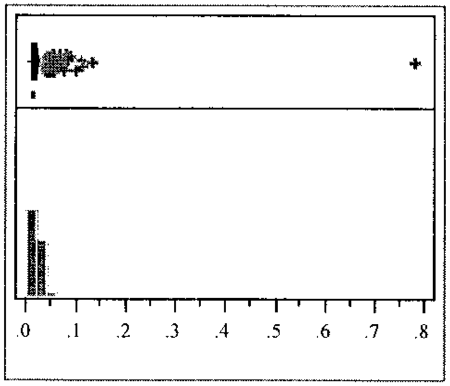
maximum	100.0%	31.580
	99.5%	29.036
	97.5%	26.709
	90.0%	25.348
quartile	75.0%	24.579
median	50.0%	23.477
quartile	25.0%	22.554
	10.0%	21.988
	2.5%	21.028
	0.5%	18.764
minimum	0.0%	10.160

Moments

Mean	23.5925
Std Dev	1.5992
Std Error Mean	0.0591
Upper 95% Mean	23.7087
Lower 95% Mean	23.4764
N	731.0000
Sum Weights	731.0000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

Titanium (wt%)



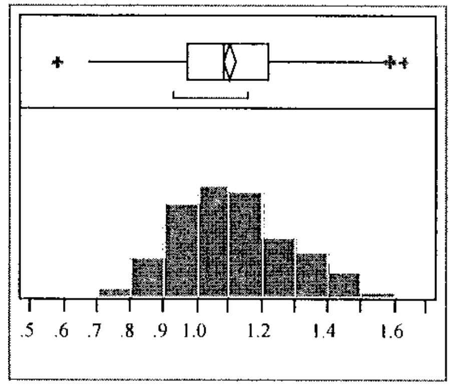
Quantiles

maximum	100.0%	0.78100
	99.5%	0.11304
	97.5%	0.05570
	90.0%	0.03300
quartile	75.0%	0.02400
median	50.0%	0.01900
quartile	25.0%	0.01600
	10.0%	0.01400
	2.5%	0.01000
	0.5%	0.00800
minimum	0.0%	0.00800

Moments

Mean	0.0233
Std Dev	0.0308
Std Error Mean	0.0011
Upper 95% Mean	0.0255
Lower 95% Mean	0.0210
N	731.0000
Sum Weights	731.0000

Uranium (wt%)



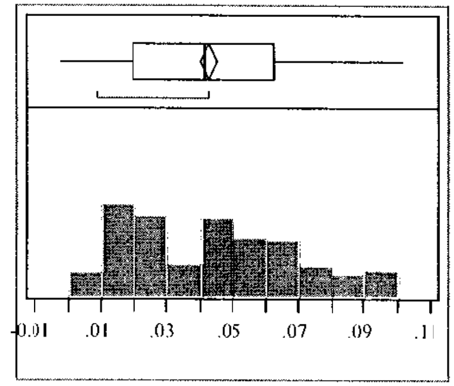
Quantiles

maximum	100.0%	1.6320
	99.5%	1.5904
	97.5%	1.4916
	90.0%	1.3572
quartile	75.0%	1.2215
median	50.0%	1.0890
quartile	25.0%	0.9783
	10.0%	0.8925
	2.5%	0.7756
	0.5%	0.6821
minimum	0.0%	0.5830

Moments

Mean	1.1103
Std Dev	0.1807
Std Error Mean	0.0087
Upper 95% Mean	1.1275
Lower 95% Mean	1.0932
N	428.0000
Sum Weights	428.0000

Zirconium (wt%)



Quantiles

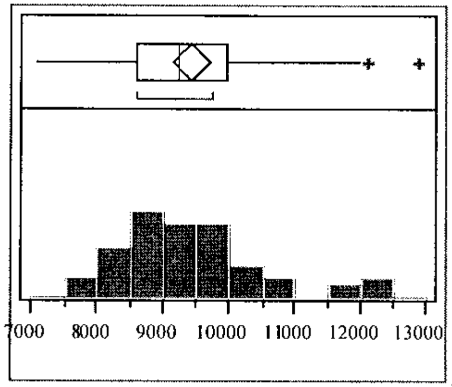
maximum	100.0%	0.10200
	99.5%	0.09900
	97.5%	0.09327
	90.0%	0.08200
quartile	75.0%	0.06275
median	50.0%	0.04200
quartile	25.0%	0.02000
	10.0%	0.01100
	2.5%	0.00773
	0.5%	-0.0007
minimum	0.0%	-0.002

Moments

Mean	0.0429
Std Dev	0.0256
Std Error Mean	0.0012
Upper 95% Mean	0.0454
Lower 95% Mean	0.0405
N	428.0000
Sum Weights	428.0000

Exhibit 3: Summary Statistics for SME Measurements (Continued)

TOC (ppm)



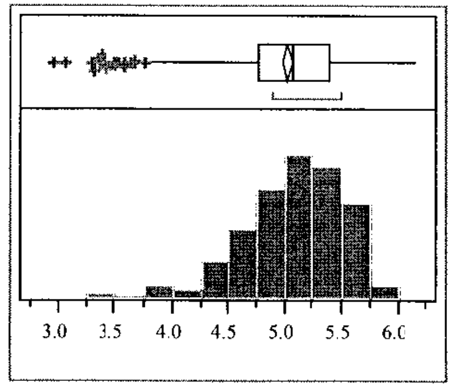
Quantiles

maximum	100.0%	12900
	99.5%	12900
	97.5%	12220
	90.0%	11500
quartile	75.0%	9990
median	50.0%	9250
quartile	25.0%	8625
	10.0%	8024
	2.5%	7578
	0.5%	7110
minimum	0.0%	7110

Moments

Mean	9457.808
Std Dev	1192.245
Std Error Mean	139.542
Upper 95% Mean	9735.980
Lower 95% Mean	9179.636
N	73.000
Sum Weights	73.000

Fe/Li



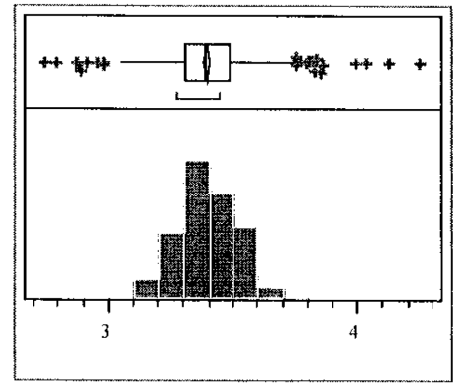
Quantiles

maximum	100.0%	6.1768
	99.5%	5.9559
	97.5%	5.7576
	90.0%	5.6042
quartile	75.0%	5.4092
median	50.0%	5.0812
quartile	25.0%	4.7676
	10.0%	4.3699
	2.5%	3.6744
	0.5%	3.2980
minimum	0.0%	2.9572

Moments

Mean	5.0291
Std Dev	0.5117
Std Error Mean	0.0189
Upper 95% Mean	5.0663
Lower 95% Mean	4.9920
N	731.0000
Sum Weights	731.0000

Fe/Al



Quantiles

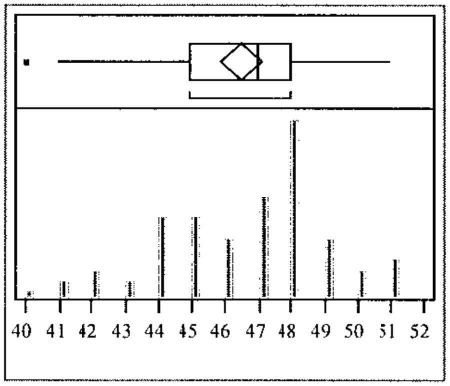
maximum	100.0%	4.2496
	99.5%	4.0084
	97.5%	3.7030
	90.0%	3.5673
quartile	75.0%	3.4880
median	50.0%	3.3892
quartile	25.0%	3.3094
	10.0%	3.2245
	2.5%	3.1057
	0.5%	2.8836
minimum	0.0%	2.7408

Moments

Mean	3.3956
Std Dev	0.1530
Std Error Mean	0.0057
Upper 95% Mean	3.4067
Lower 95% Mean	3.3845
N	731.0000
Sum Weights	731.0000

Exhibit 4: Summary Statistics for MFT Measurements

Total Solids (wt%)



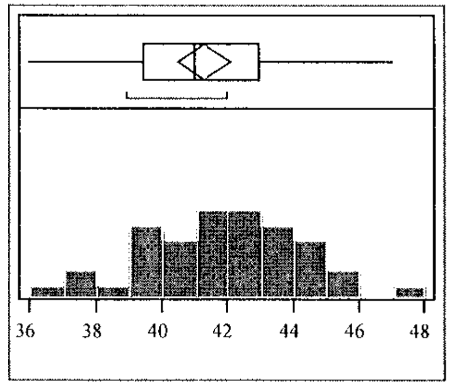
Quantiles

maximum	100.0%	51.000
	99.5%	51.000
	97.5%	51.000
	90.0%	49.900
quartile	75.0%	48.000
median	50.0%	47.000
quartile	25.0%	45.000
	10.0%	43.000
	2.5%	40.775
	0.5%	40.000
minimum	0.0%	40.000

Moments

Mean	46.51429
Std Dev	2.56364
Std Error Mean	0.30641
Upper 95% Mean	47.12557
Lower 95% Mean	45.90301
N	70.00000
Sum Weights	70.00000

Calcined Solids (wt%)



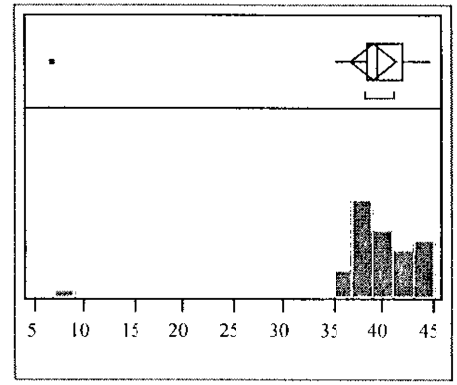
Quantiles

maximum	100.0%	47.000
	99.5%	47.000
	97.5%	47.000
	90.0%	44.200
quartile	75.0%	43.000
median	50.0%	41.000
quartile	25.0%	39.500
	10.0%	37.800
	2.5%	36.000
	0.5%	36.000
minimum	0.0%	36.000

Moments

Mean	41.32432
Std Dev	2.45010
Std Error Mean	0.40279
Upper 95% Mear	42.14122
Lower 95% Mean	40.50742
N	37.00000
Sum Weights	37.00000

Insoluble Solids (wt%)



Quantiles

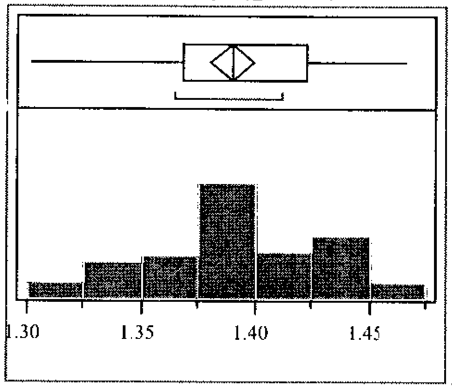
maximum	100.0%	44.790
	99.5%	44.790
	97.5%	44.790
	90.0%	44.239
quartile	75.0%	41.970
median	50.0%	39.740
quartile	25.0%	38.665
	10.0%	36.334
	2.5%	7.010
	0.5%	7.010
minimum	0.0%	7.010

Moments

Mean	39.23875
Std Dev	6.37903
Std Error Mean	1.12765
Upper 95% Mean	41.53862
Lower 95% Mean	36.93888
N	32.00000
Sum Weights	32.00000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Density (g/mL)



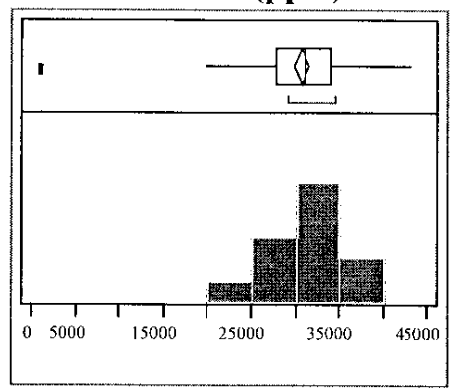
Quantiles

maximum	100.0%	1.4670
	99.5%	1.4670
	97.5%	1.4614
	90.0%	1.4388
quartile	75.0%	1.4230
median	50.0%	1.3910
quartile	25.0%	1.3690
	10.0%	1.3328
	2.5%	1.3052
	0.5%	1.3020
minimum	0.0%	1.3020

Moments

Mean	1.39037
Std Dev	0.03905
Std Error Mean	0.00463
Upper 95% Mean	1.39961
Lower 95% Mean	1.38112
N	71.00000
Sum Weights	71.00000

Formate (ppm)



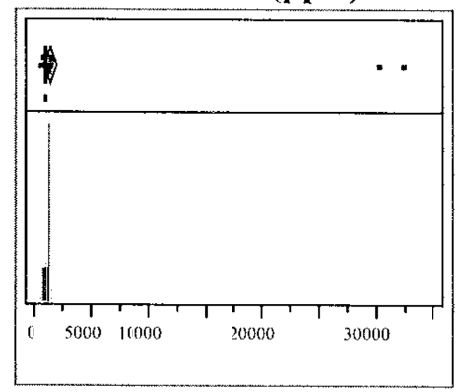
Quantiles

maximum	100.0%	43300
	99.5%	43300
	97.5%	38800
	90.0%	36950
quartile	75.0%	34175
median	50.0%	31350
quartile	25.0%	27925
	10.0%	24800
	2.5%	20563
	0.5%	995
minimum	0.0%	995

Moments

Mean	30804.34
Std Dev	5622.60
Std Error Mean	468.55
Upper 95% Mean	31730.53
Lower 95% Mean	29878.15
N	144.00
Sum Weights	144.00

Chloride (ppm)



Quantiles

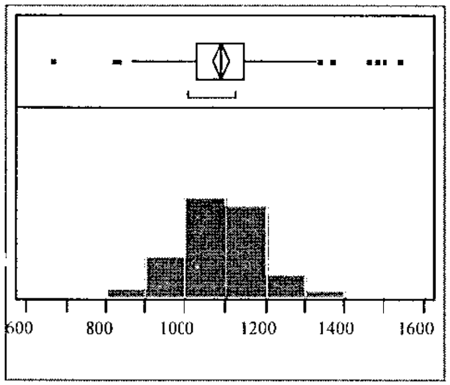
maximum	100.0%	32500
	99.5%	32500
	97.5%	1515
	90.0%	1255
quartile	75.0%	1150
median	50.0%	1090
quartile	25.0%	1030
	10.0%	968
	2.5%	873
	0.5%	670
minimum	0.0%	670

Moments

Mean	1518.021
Std Dev	3568.948
Std Error Mean	297.412
Upper 95% Mean	2105.919
Lower 95% Mean	930.123
N	144.000
Sum Weights	144.000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Fluoride (ppm)



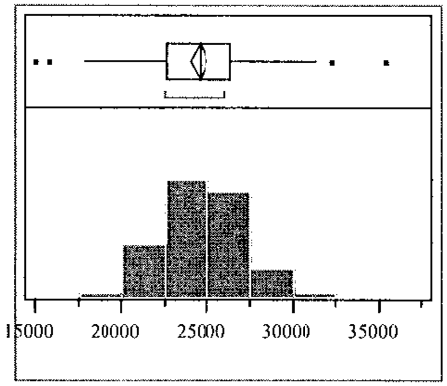
Quantiles

maximum	100.0%	1540.0
	99.5%	1540.0
	97.5%	1467.5
	90.0%	1245.0
quartile	75.0%	1150.0
median	50.0%	1090.0
quartile	25.0%	1030.0
	10.0%	957.0
	2.5%	857.1
	0.5%	670.0
minimum	0.0%	670.0

Moments

Mean	1092.694
Std Dev	126.290
Std Error Mean	10.524
Upper 95% Mean	1113.498
Lower 95% Mean	1071.891
N	144.000
Sum Weights	144.000

Nitrate (ppm)



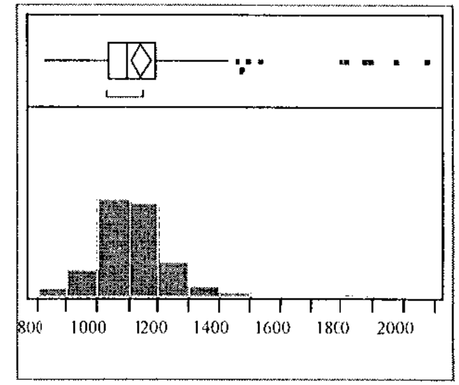
Quantiles

maximum	100.0%	35400
	99.5%	35400
	97.5%	31213
	90.0%	28300
quartile	75.0%	26375
median	50.0%	24600
quartile	25.0%	22700
	10.0%	21250
	2.5%	18025
	0.5%	15100
minimum	0.0%	15100

Moments

Mean	24556.94
Std Dev	2973.30
Std Error Mean	247.77
Upper 95% Mean	25046.72
Lower 95% Mean	24067.17
N	144.00
Sum Weights	144.00

Sulfate (ppm)



Quantiles

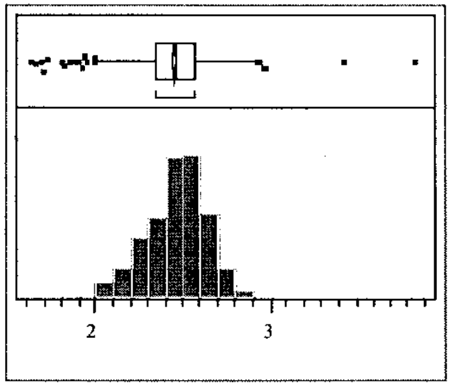
maximum	100.0%	2080.0
	99.5%	2080.0
	97.5%	1887.5
	90.0%	1325.0
quartile	75.0%	1197.5
median	50.0%	1100.0
quartile	25.0%	1040.0
	10.0%	969.5
	2.5%	872.9
	0.5%	833.0
minimum	0.0%	833.0

Moments

Mean	1147.583
Std Dev	205.984
Std Error Mean	17.165
Upper 95% Mean	1181.514
Lower 95% Mean	1113.652
N	144.000
Sum Weights	144.000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Aluminum (wt%)



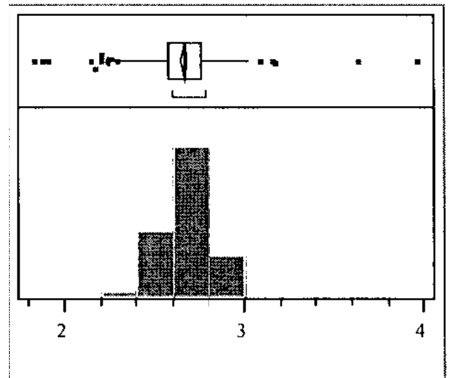
Quantiles

maximum	100.0%	3.8490
	99.5%	2.9725
	97.5%	2.8157
	90.0%	2.6726
quartile	75.0%	2.5810
median	50.0%	2.4690
quartile	25.0%	2.3550
	10.0%	2.1886
	2.5%	1.9998
	0.5%	1.6875
minimum	0.0%	1.6330

Moments

Mean	2.4541
Std Dev	0.2104
Std Error Mean	0.0081
Upper 95% Mean	2.4701
Lower 95% Mean	2.4382
N	673.0000
Sum Weights	673.0000

Boron (wt%)



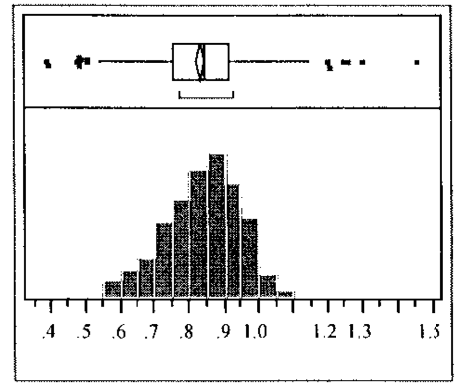
Quantiles

maximum	100.0%	3.9740
	99.5%	3.6693
	97.5%	2.9939
	90.0%	2.8580
quartile	75.0%	2.7630
median	50.0%	2.6700
quartile	25.0%	2.5818
	10.0%	2.4816
	2.5%	2.2493
	0.5%	1.8831
minimum	0.0%	1.8410

Moments

Mean	2.6689
Std Dev	0.1880
Std Error Mean	0.0096
Upper 95% Mean	2.6878
Lower 95% Mean	2.6499
N	382.0000
Sum Weights	382.0000

Calcium (wt%)



Quantiles

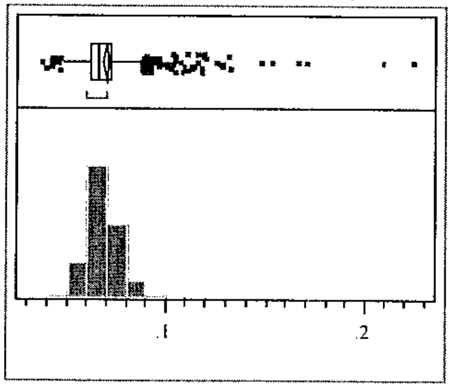
maximum	100.0%	1.4560
	99.5%	1.2615
	97.5%	1.0458
	90.0%	0.9740
quartile	75.0%	0.9160
median	50.0%	0.8460
quartile	25.0%	0.7595
	10.0%	0.6714
	2.5%	0.5840
	0.5%	0.4815
minimum	0.0%	0.3910

Moments

Mean	0.8349
Std Dev	0.1234
Std Error Mean	0.0048
Upper 95% Mean	0.8442
Lower 95% Mean	0.8256
N	673.0000
Sum Weights	673.0000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Chromium (wt%)



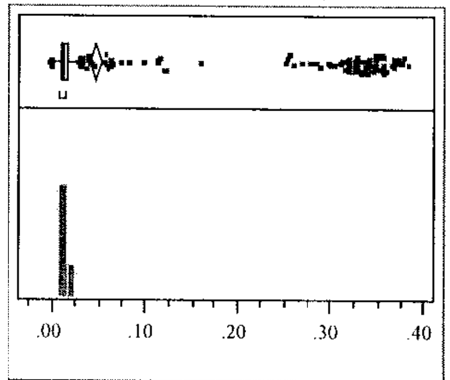
Quantiles

maximum	100.0%	0.22400
	99.5%	0.16952
	97.5%	0.11800
	90.0%	0.08564
quartile	75.0%	0.07300
median	50.0%	0.06700
quartile	25.0%	0.06300
	10.0%	0.05800
	2.5%	0.04900
	0.5%	0.04300
minimum	0.0%	0.03800

Moments

Mean	0.0705
Std Dev	0.0170
Std Error Mean	0.0007
Upper 95% Mean	0.0718
Lower 95% Mean	0.0693
N	673.0000
Sum Weights	673.0000

Copper (wt%)



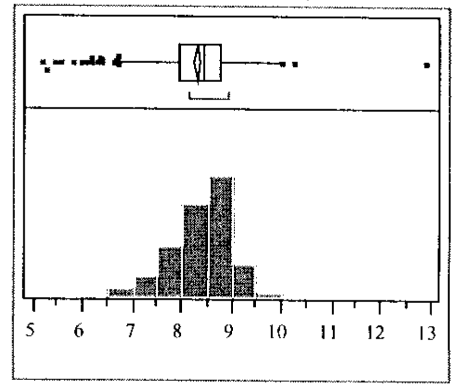
Quantiles

maximum	100.0%	0.38400
	99.5%	0.37489
	97.5%	0.35330
	90.0%	0.25160
quartile	75.0%	0.01600
median	50.0%	0.01300
quartile	25.0%	0.01000
	10.0%	0.00900
	2.5%	0.00500
	0.5%	0.00037
minimum	0.0%	-0.003

Moments

Mean	0.0470
Std Dev	0.0970
Std Error Mean	0.0037
Upper 95% Mean	0.0543
Lower 95% Mean	0.0396
N	673.0000
Sum Weights	673.0000

Iron (wt%)



Quantiles

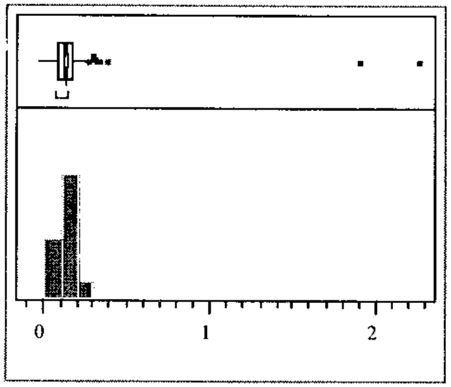
maximum	100.0%	12.881
	99.5%	10.026
	97.5%	9.508
	90.0%	9.057
quartile	75.0%	8.776
median	50.0%	8.447
quartile	25.0%	7.952
	10.0%	7.333
	2.5%	6.704
	0.5%	5.509
minimum	0.0%	5.242

Moments

Mean	8.3168
Std Dev	0.7403
Std Error Mean	0.0285
Upper 95% Mean	8.3728
Lower 95% Mean	8.2607
N	673.0000
Sum Weights	673.0000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Potassium (wt%)



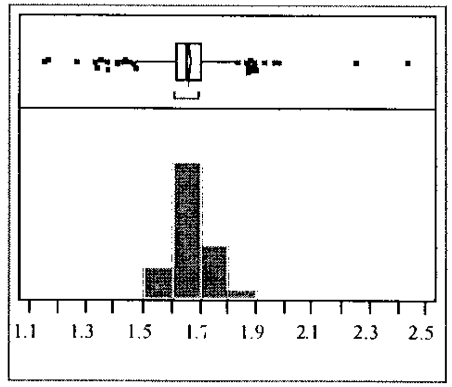
Quantiles

maximum	100.0%	2.2650
	99.5%	0.3757
	97.5%	0.2420
	90.0%	0.2026
quartile	75.0%	0.1670
median	50.0%	0.1260
quartile	25.0%	0.0930
	10.0%	0.0670
	2.5%	0.0396
	0.5%	0.0001
minimum	0.0%	-0.0170

Moments

Mean	0.1365
Std Dev	0.1197
Std Error Mean	0.0046
Upper 95% Mean	0.1456
Lower 95% Mean	0.1274
N	673.0000
Sum Weights	673.0000

Lithium (wt%)



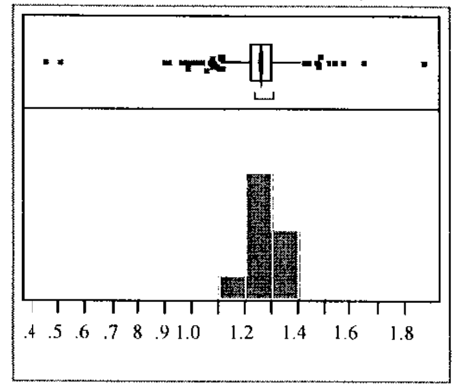
Quantiles

maximum	100.0%	2.4380
	99.5%	1.9771
	97.5%	1.8298
	90.0%	1.7678
quartile	75.0%	1.7070
median	50.0%	1.6560
quartile	25.0%	1.6180
	10.0%	1.5708
	2.5%	1.4852
	0.5%	1.2900
minimum	0.0%	1.1560

Moments

Mean	1.6615
Std Dev	0.0953
Std Error Mean	0.0037
Upper 95% Mean	1.6687
Lower 95% Mean	1.6542
N	673.0000
Sum Weights	673.0000

Magnesium (wt%)



Quantiles

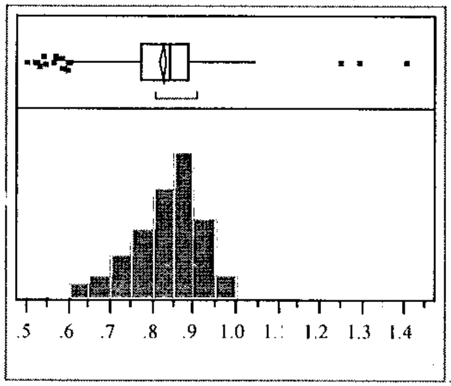
maximum	100.0%	1.8770
	99.5%	1.5652
	97.5%	1.4013
	90.0%	1.3506
quartile	75.0%	1.3090
median	50.0%	1.2700
quartile	25.0%	1.2330
	10.0%	1.1894
	2.5%	1.0902
	0.5%	0.9126
minimum	0.0%	0.4590

Moments

Mean	1.2673
Std Dev	0.0891
Std Error Mean	0.0034
Upper 95% Mean	1.2741
Lower 95% Mean	1.2606
N	673.0000
Sum Weights	673.0000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Manganese (wt%)



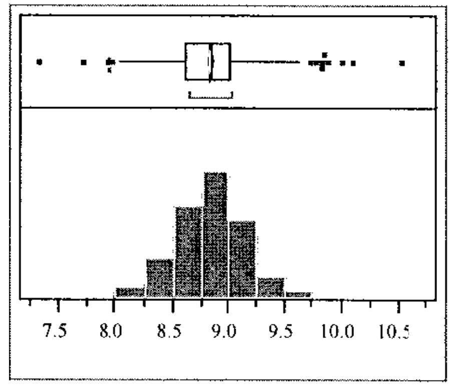
Quantiles

maximum	100.0%	1.4110
	99.5%	1.1757
	97.5%	0.9743
	90.0%	0.9270
quartile	75.0%	0.8905
median	50.0%	0.8430
quartile	25.0%	0.7760
	10.0%	0.6916
	2.5%	0.6061
	0.5%	0.5282
minimum	0.0%	0.5010

Moments

Mean	0.8284
Std Dev	0.0966
Std Error Mean	0.0037
Upper 95% Mean	0.8357
Lower 95% Mean	0.8211
N	673.0000
Sum Weights	673.0000

Sodium (wt%)



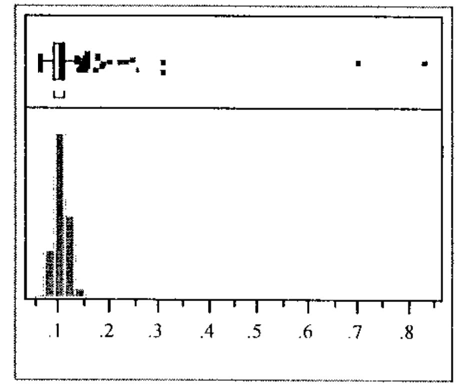
Quantiles

maximum	100.0%	10.523
	99.5%	10.171
	97.5%	9.706
	90.0%	9.286
quartile	75.0%	9.031
median	50.0%	8.870
quartile	25.0%	8.627
	10.0%	8.399
	2.5%	8.156
	0.5%	7.660
minimum	0.0%	7.338

Moments

Mean	8.8462
Std Dev	0.3741
Std Error Mean	0.0195
Upper 95% Mean	8.8846
Lower 95% Mean	8.8079
N	368.0000
Sum Weights	368.0000

Nickel (wt%)



Quantiles

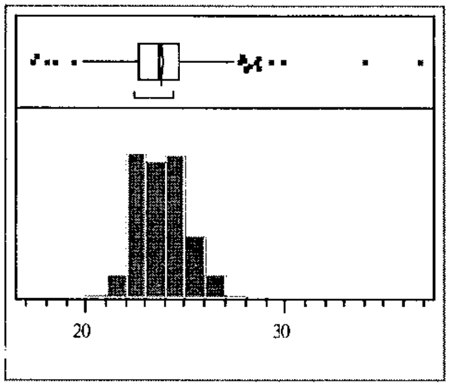
maximum	100.0%	0.83300
	99.5%	0.31026
	97.5%	0.15800
	90.0%	0.12100
quartile	75.0%	0.11200
median	50.0%	0.10300
quartile	25.0%	0.09400
	10.0%	0.08300
	2.5%	0.07000
	0.5%	0.06300
minimum	0.0%	0.06000

Moments

Mean	0.1066
Std Dev	0.0430
Std Error Mean	0.0017
Upper 95% Mean	0.1098
Lower 95% Mean	0.1033
N	673.0000
Sum Weights	673.0000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Silicon (wt%)



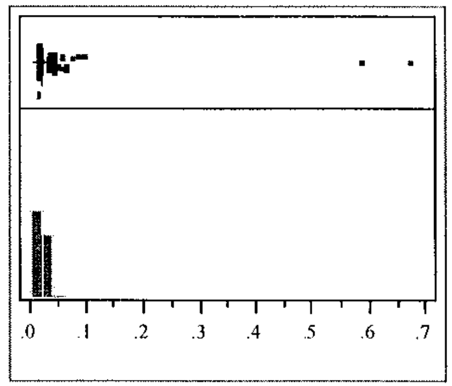
Quantiles

maximum	100.0%	36.834
	99.5%	29.731
	97.5%	27.122
	90.0%	25.555
quartile	75.0%	24.703
median	50.0%	23.746
quartile	25.0%	22.754
	10.0%	22.183
	2.5%	21.253
	0.5%	18.221
minimum	0.0%	17.323

Moments

Mean	23.8259
Std Dev	1.6225
Std Error Mean	0.0625
Upper 95% Mean	23.9487
Lower 95% Mean	23.7031
N	673.0000
Sum Weights	673.0000

Titanium (wt%)



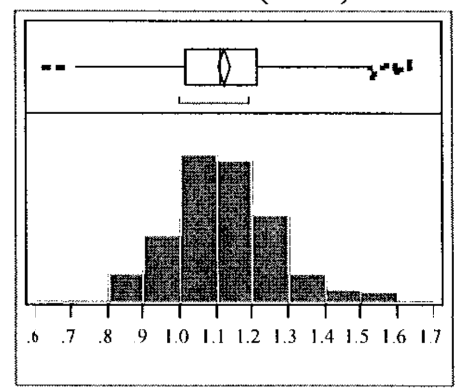
Quantiles

maximum	100.0%	0.67800
	99.5%	0.09319
	97.5%	0.04500
	90.0%	0.03300
quartile	75.0%	0.02400
median	50.0%	0.01900
quartile	25.0%	0.01700
	10.0%	0.01440
	2.5%	0.01200
	0.5%	0.00900
minimum	0.0%	0.00800

Moments

Mean	0.0235
Std Dev	0.0346
Std Error Mean	0.0013
Upper 95% Mean	0.0261
Lower 95% Mean	0.0209
N	673.0000
Sum Weights	673.0000

Uranium (wt%)



Quantiles

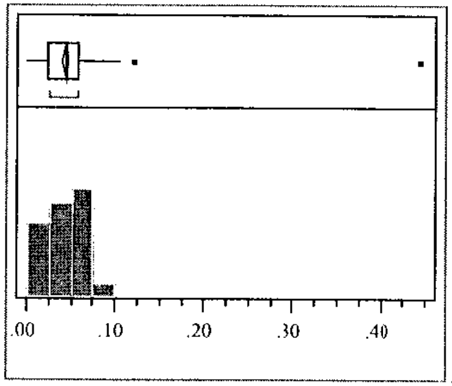
maximum	100.0%	1.6350
	99.5%	1.6350
	97.5%	1.5391
	90.0%	1.3258
quartile	75.0%	1.2207
median	50.0%	1.1135
quartile	25.0%	1.0173
	10.0%	0.9229
	2.5%	0.7941
	0.5%	0.6403
minimum	0.0%	0.6310

Moments

Mean	1.1236
Std Dev	0.1748
Std Error Mean	0.0091
Upper 95% Mean	1.1415
Lower 95% Mean	1.1056
N	368.0000
Sum Weights	368.0000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

Zirconium (wt%)



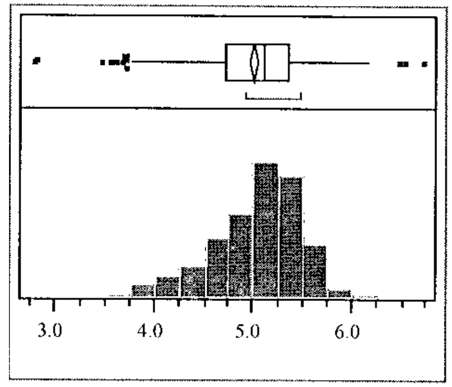
Quantiles

maximum	100.0%	0.44500
	99.5%	0.17206
	97.5%	0.08200
	90.0%	0.07300
quartile	75.0%	0.05900
median	50.0%	0.04400
quartile	25.0%	0.02400
	10.0%	0.01100
	2.5%	0.00722
	0.5%	0.00200
minimum	0.0%	0.00200

Moments

Mean	0.0439
Std Dev	0.0309
Std Error Mean	0.0016
Upper 95% Mean	0.0470
Lower 95% Mean	0.0407
N	368.0000
Sum Weights	368.0000

Fe/Li



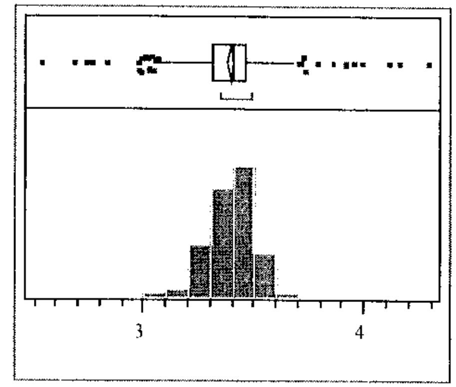
Quantiles

maximum	100.0%	6.7457
	99.5%	6.3742
	97.5%	5.8446
	90.0%	5.5644
quartile	75.0%	5.3700
median	50.0%	5.1207
quartile	25.0%	4.7314
	10.0%	4.3070
	2.5%	3.8635
	0.5%	3.4922
minimum	0.0%	2.8002

Moments

Mean	5.0206
Std Dev	0.5094
Std Error Mean	0.0196
Upper 95% Mean	5.0592
Lower 95% Mean	4.9821
N	673.0000
Sum Weights	673.0000

Fe/Al



Quantiles

maximum	100.0%	4.2904
	99.5%	4.0696
	97.5%	3.6524
	90.0%	3.5408
quartile	75.0%	3.4694
median	50.0%	3.4010
quartile	25.0%	3.3139
	10.0%	3.2366
	2.5%	3.0424
	0.5%	2.7492
minimum	0.0%	2.5379

Moments

Mean	3.3911
Std Dev	0.1539
Std Error Mean	0.0059
Upper 95% Mean	3.4027
Lower 95% Mean	3.3794
N	673.0000
Sum Weights	673.0000

Exhibit 4: Summary Statistics for MFT Measurements (Continued)

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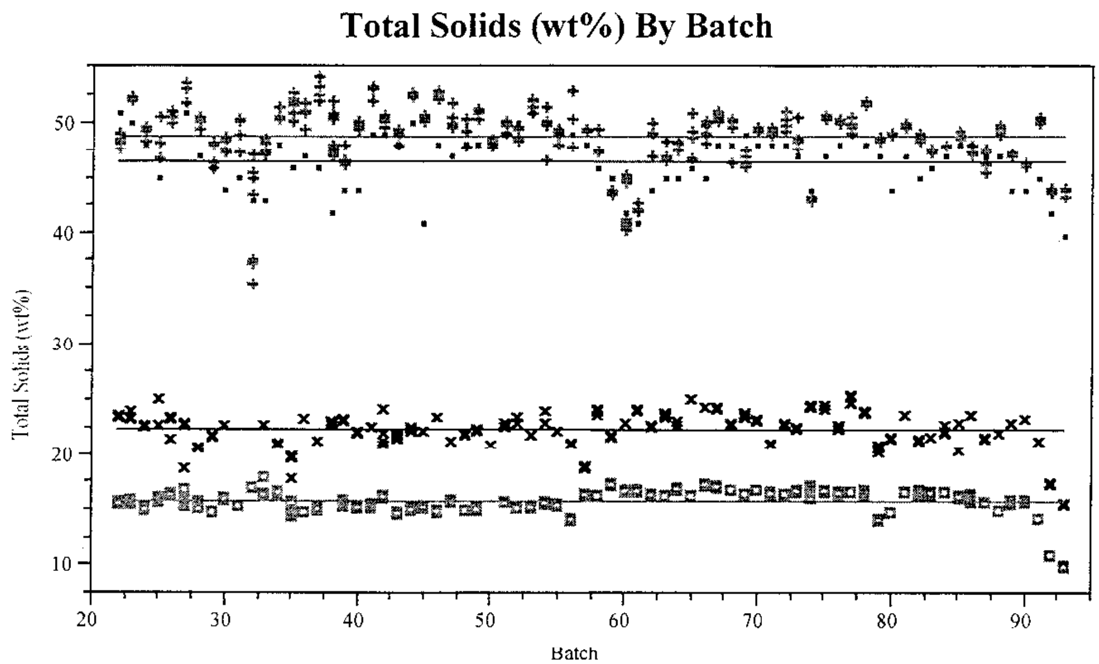
Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product



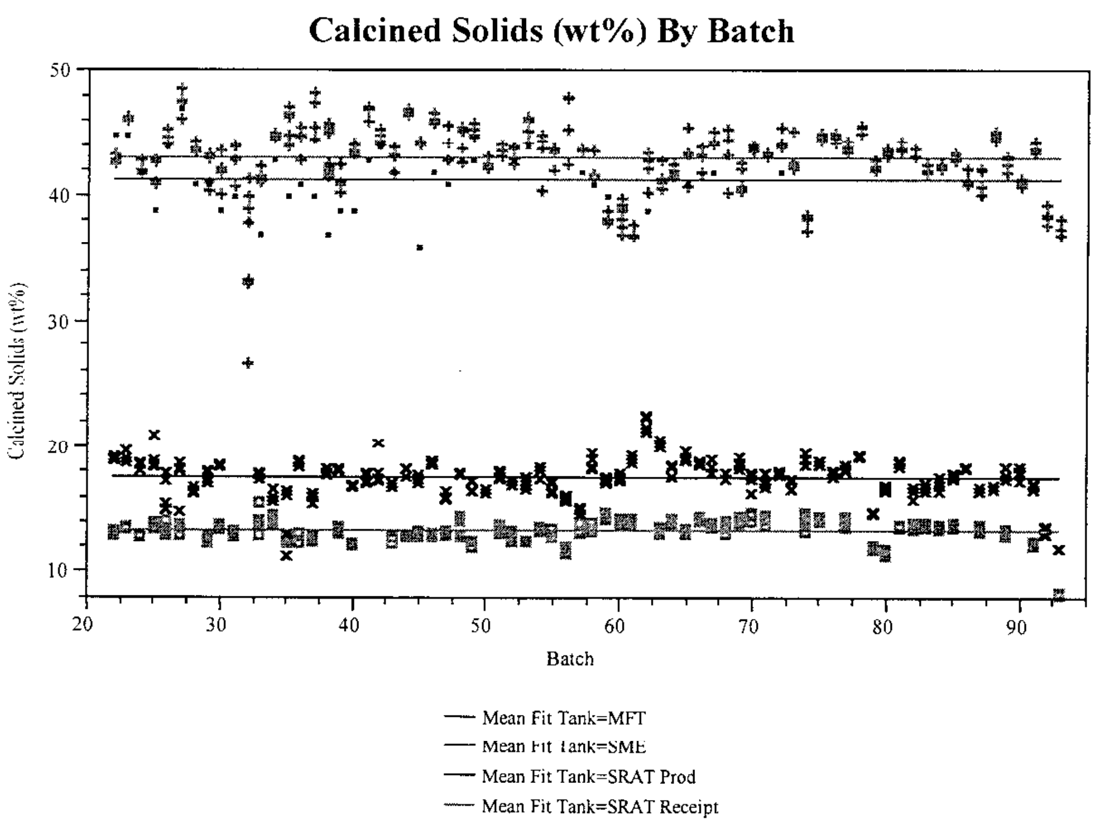
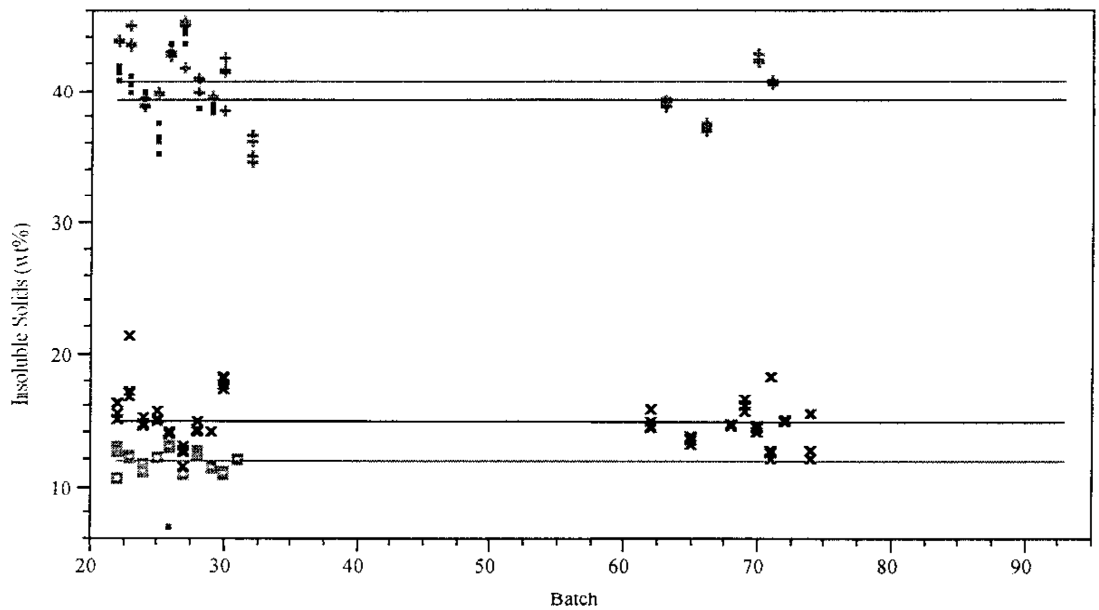


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product (Continued)

Insoluble Solids (wt%) By Batch



Density (g/mL) By Batch

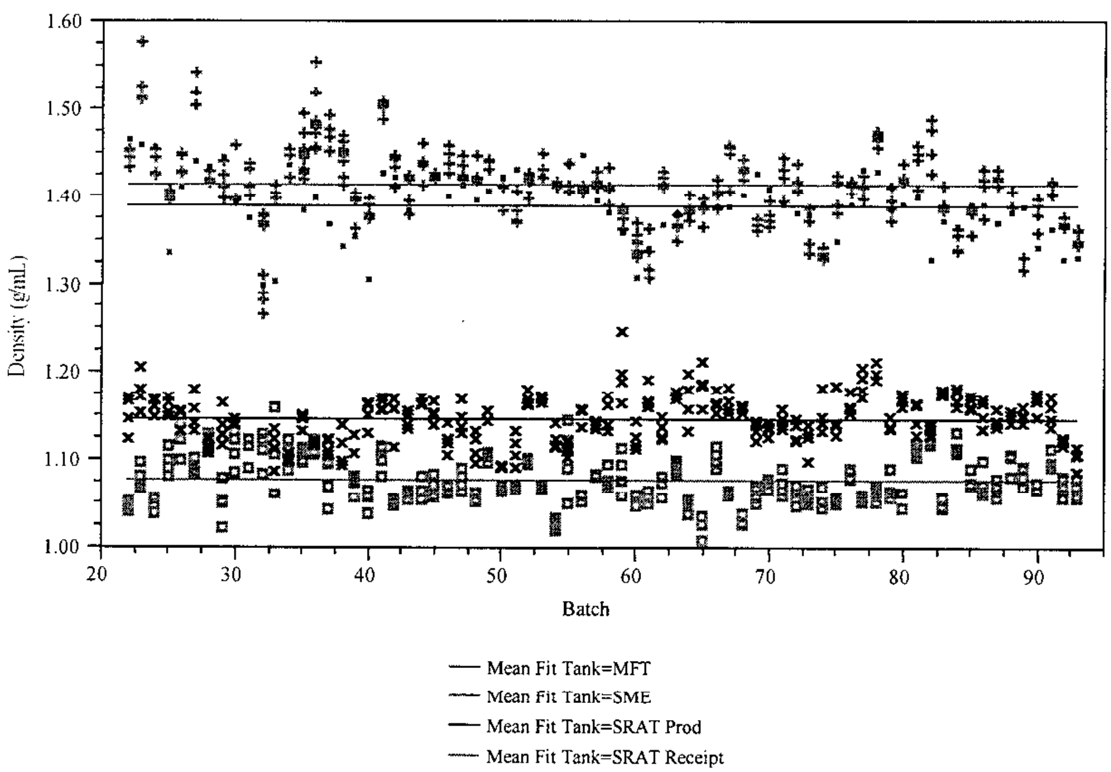
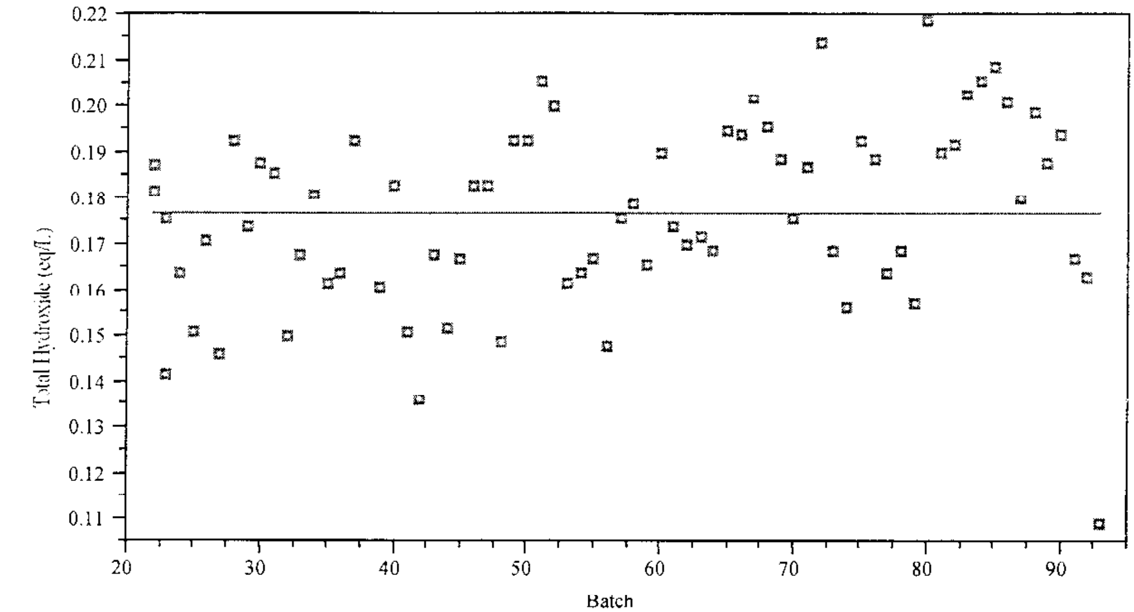
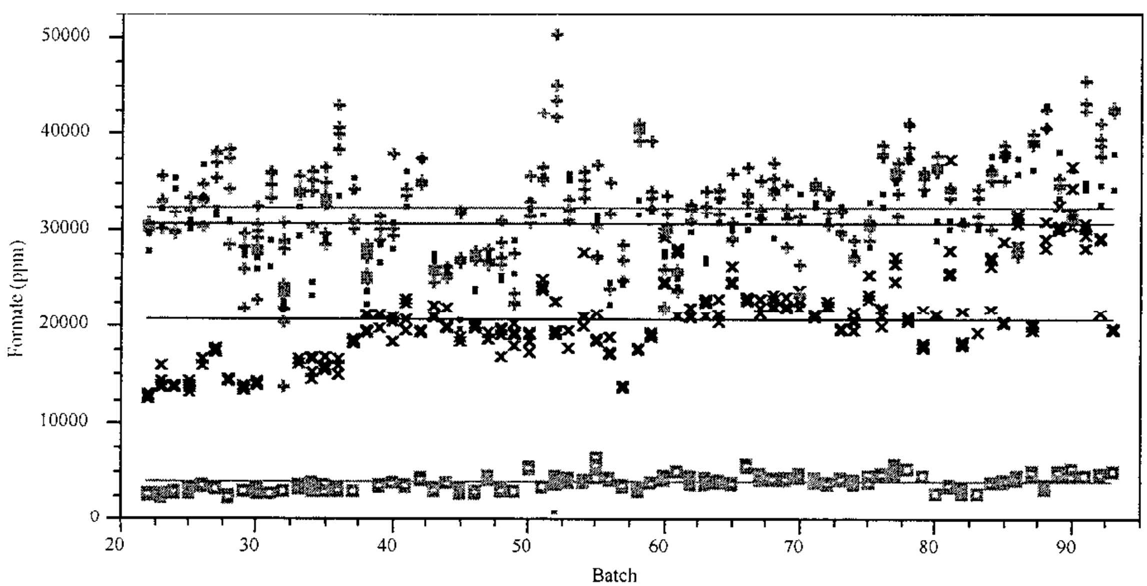


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

Total Hydroxide (eq/L) By Batch

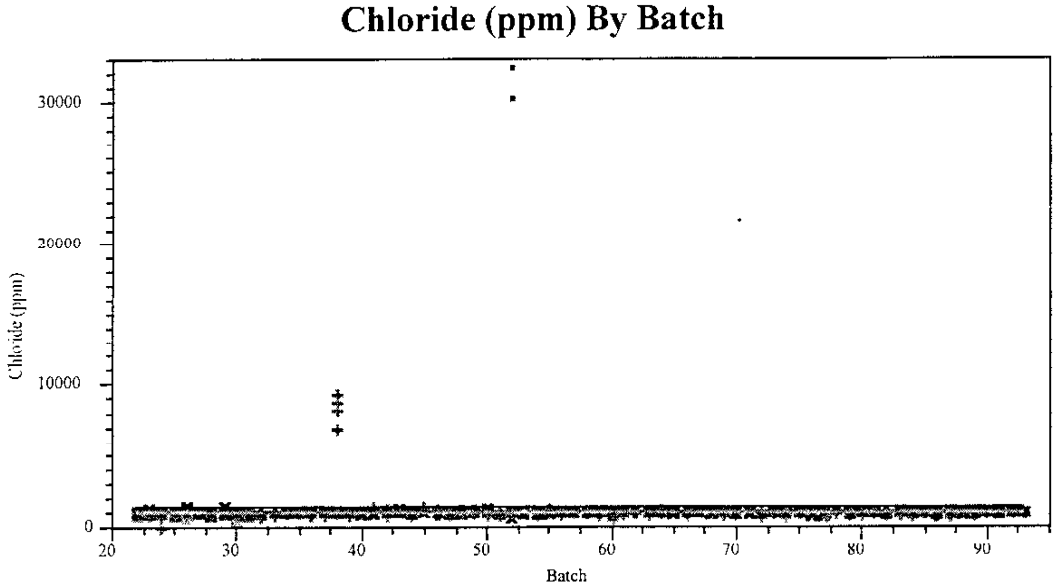


Formate (ppm) By Batch



— Mean Fit Tank=MFT
— Mean Fit Tank=SME
— Mean Fit Tank=SRAT Prod
— Mean Fit Tank=SRAT Receipt

Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product (Continued)



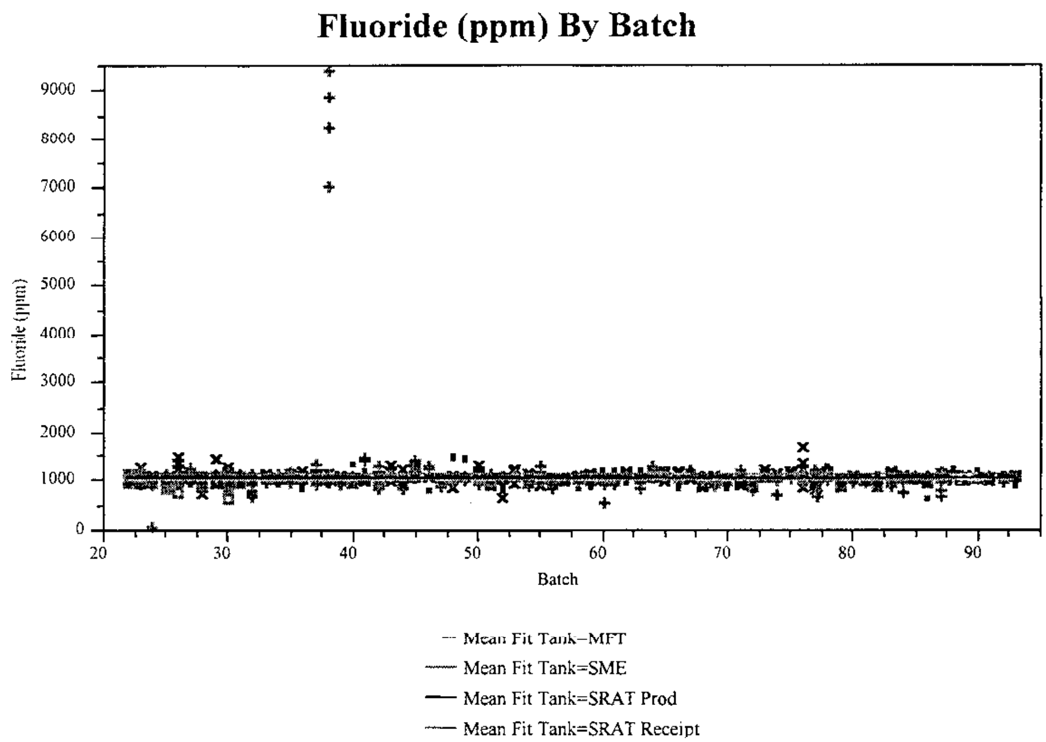
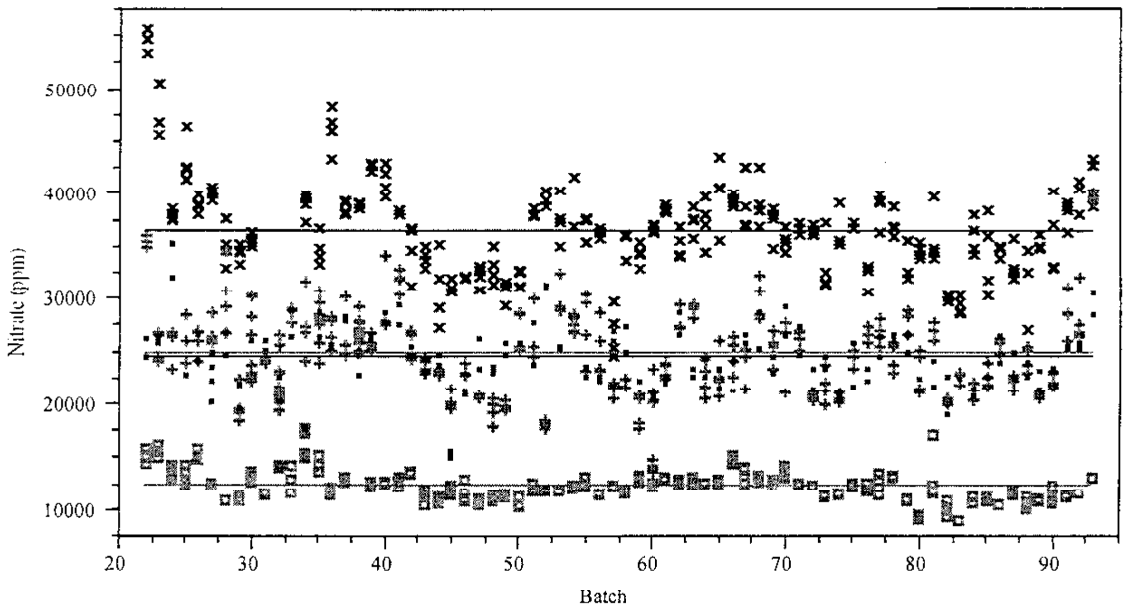


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

Nitrate (ppm) By Batch



Nitrite (ppm) By Batch

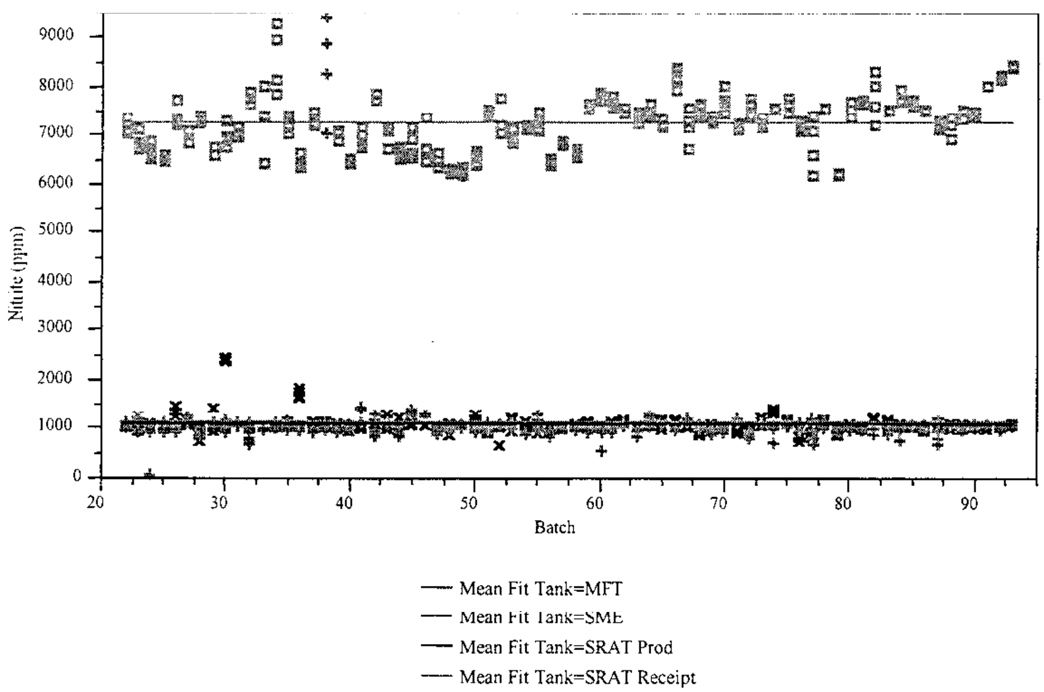
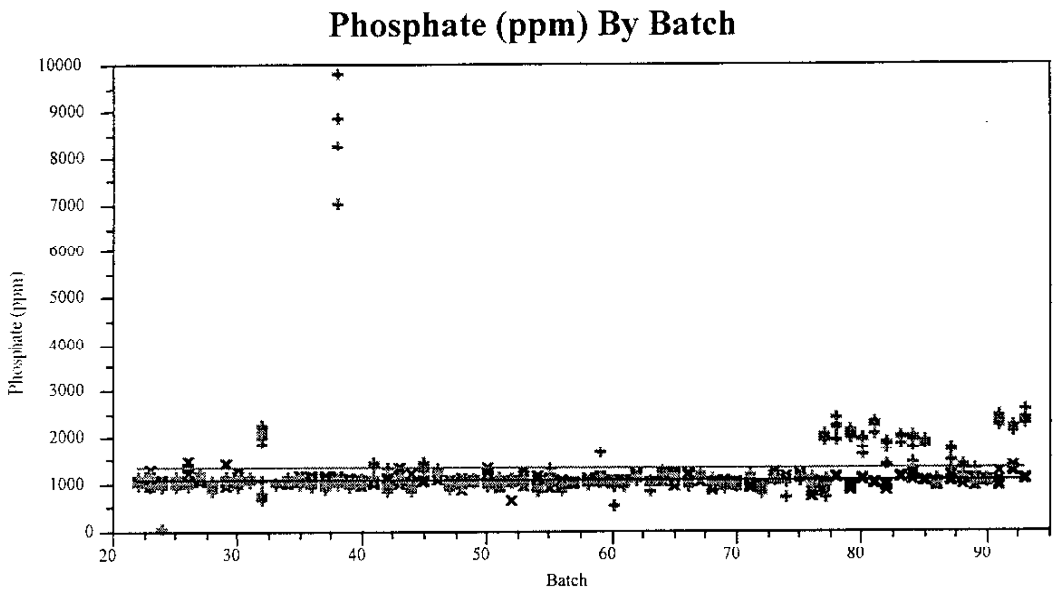


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product (Continued)



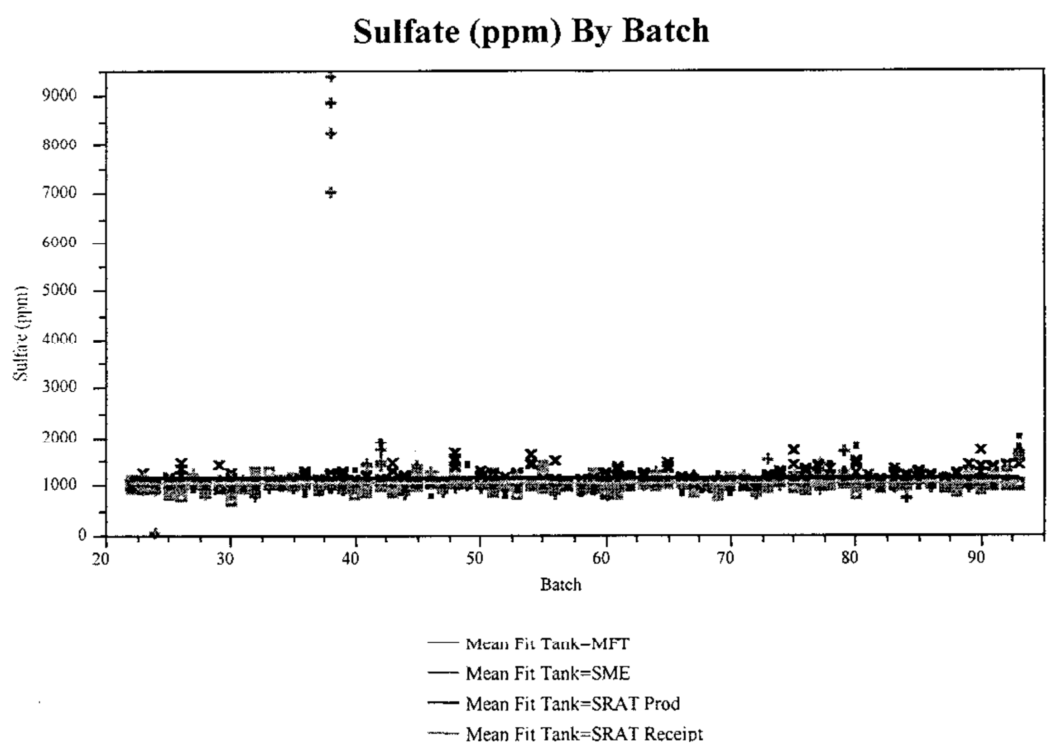
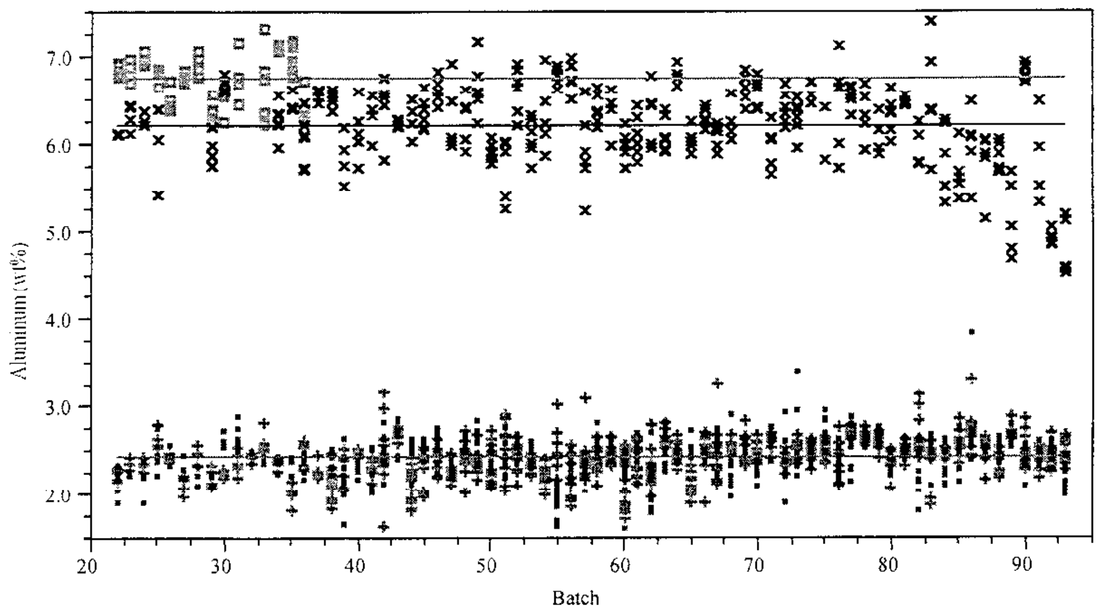


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

Aluminum (wt%) By Batch



Boron (wt%) By Batch

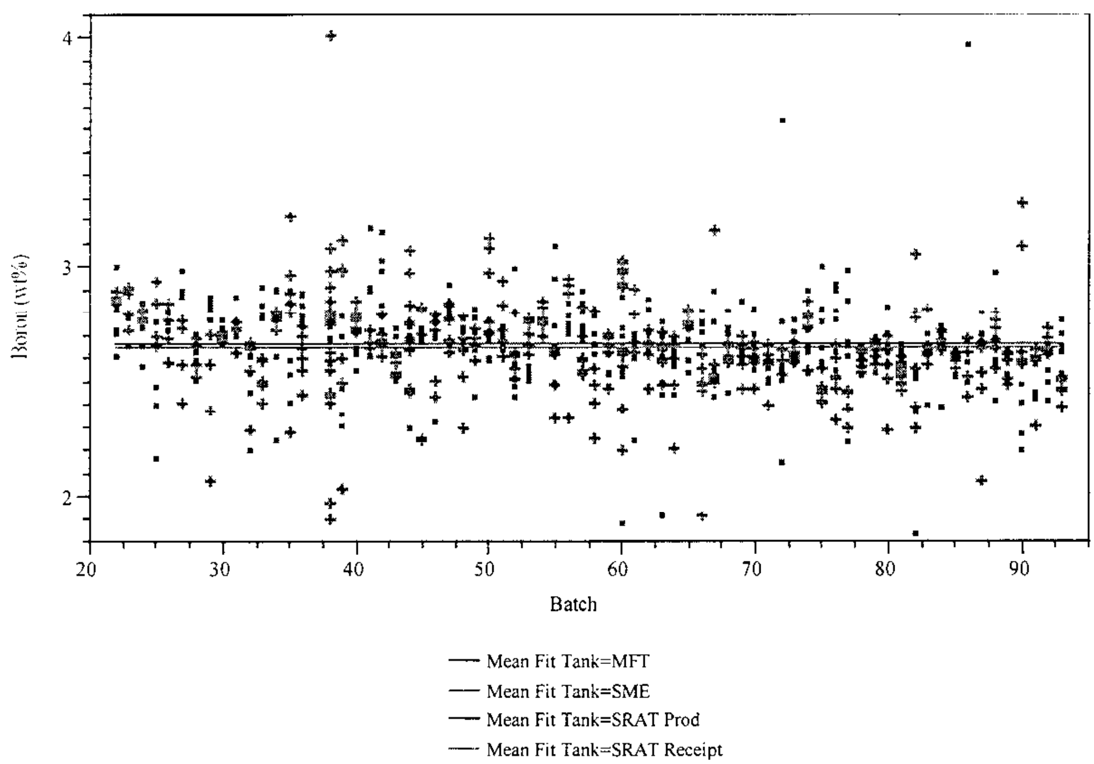
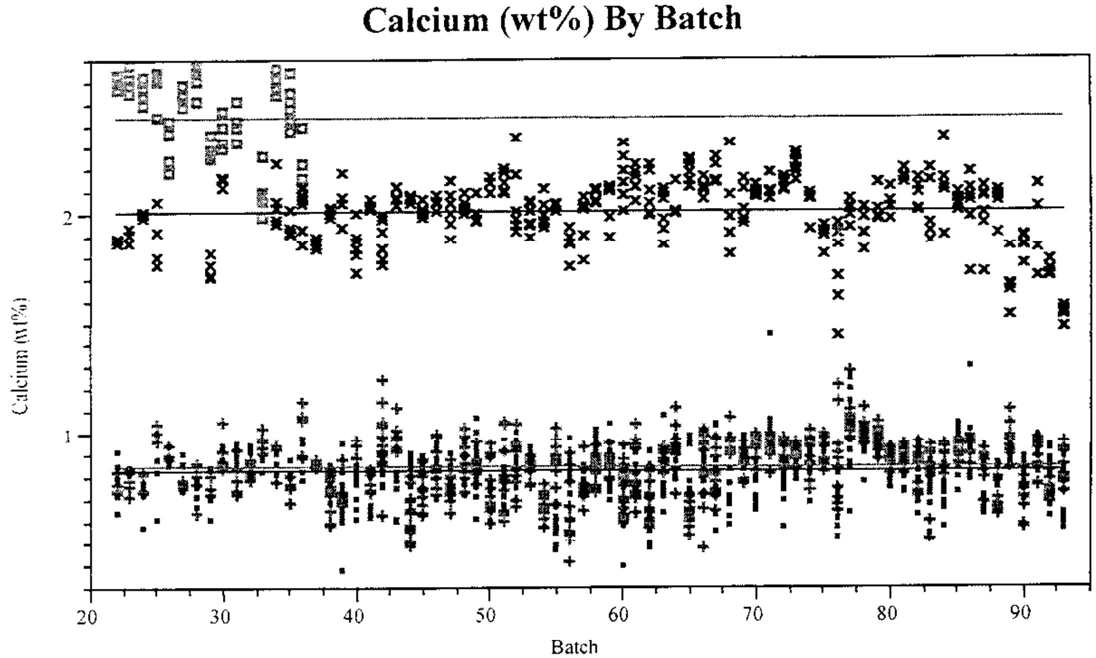


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)



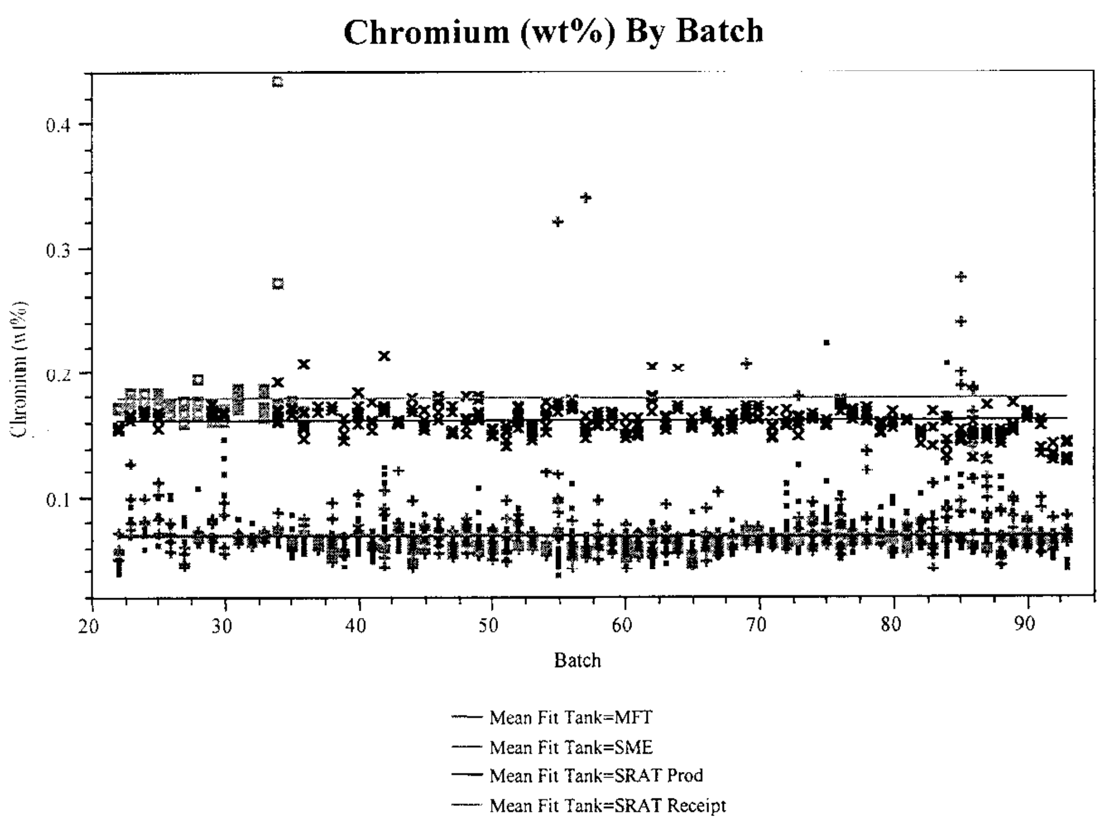
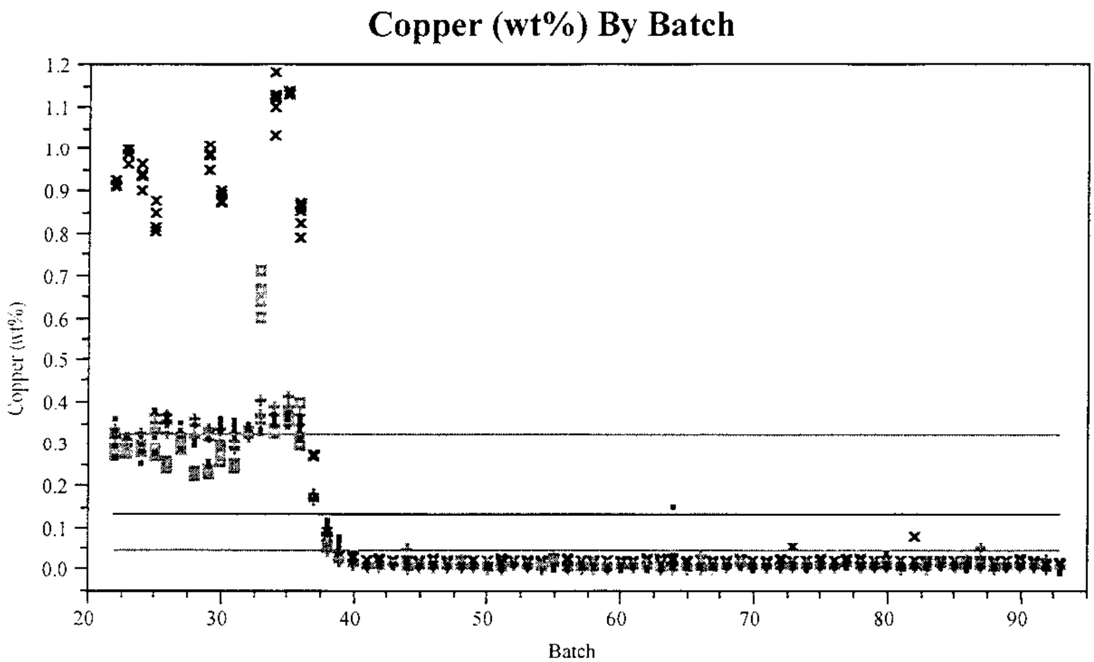


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)



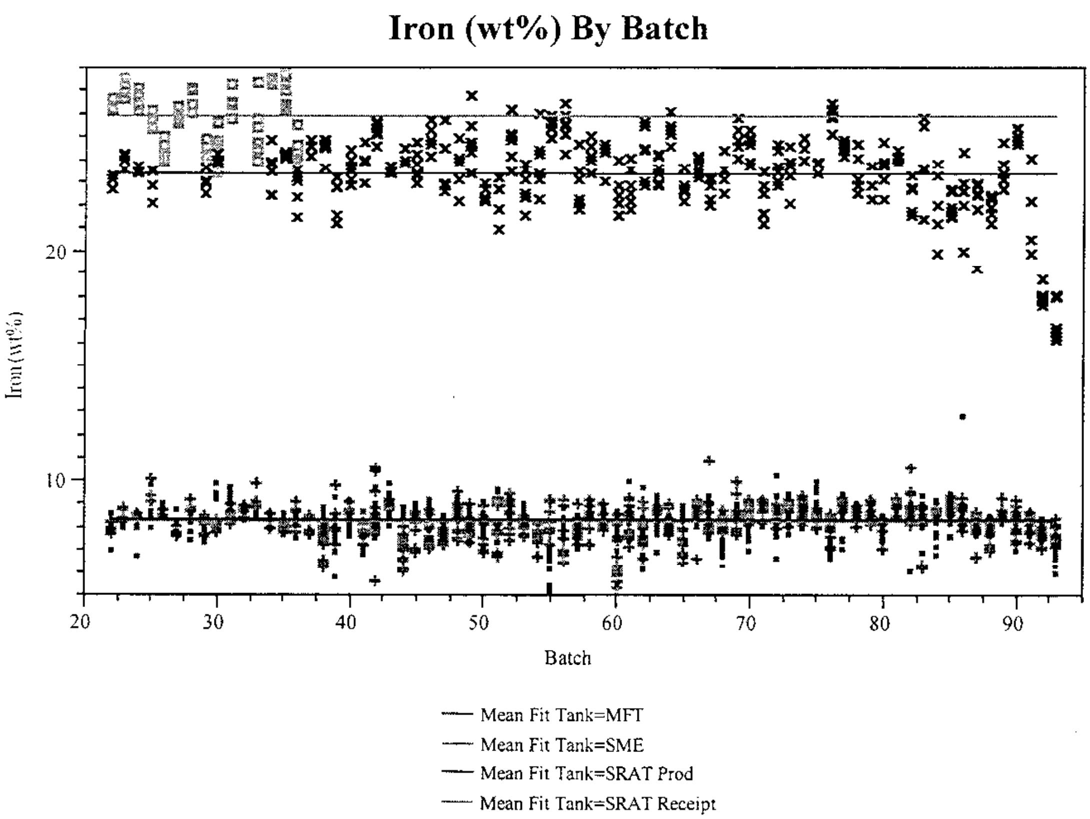
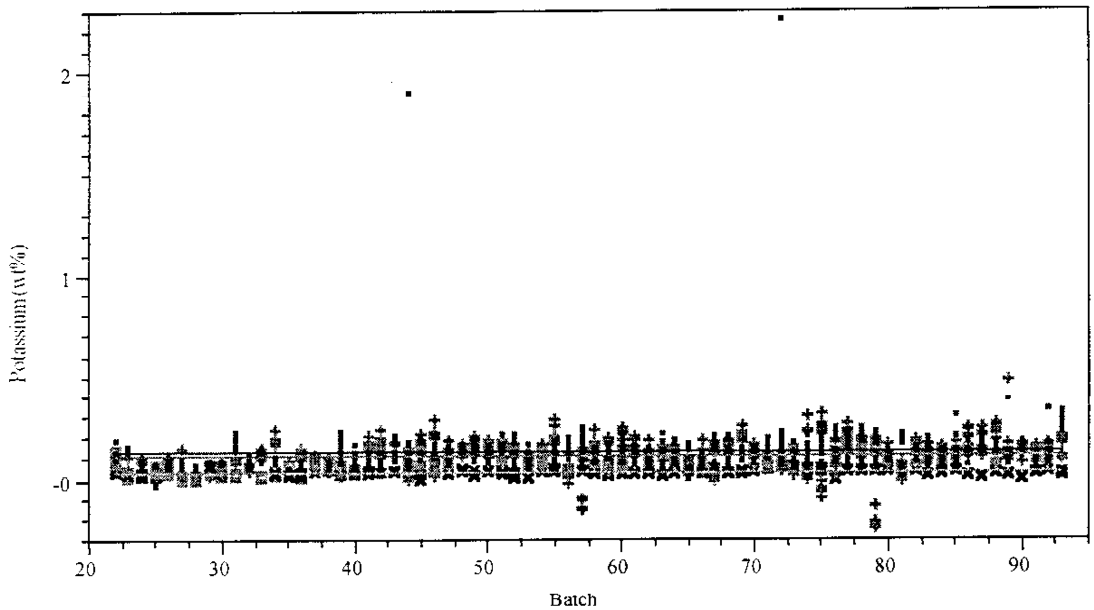


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

Potassium (wt%) By Batch



Lithium (wt%) By Batch

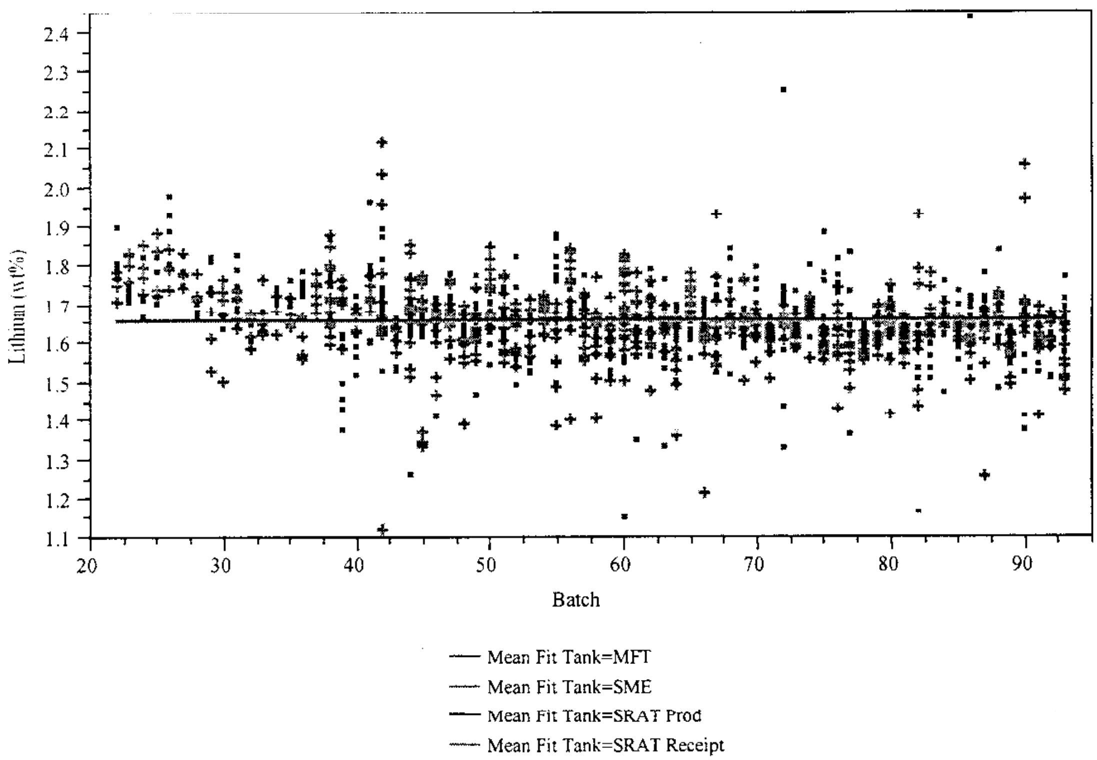
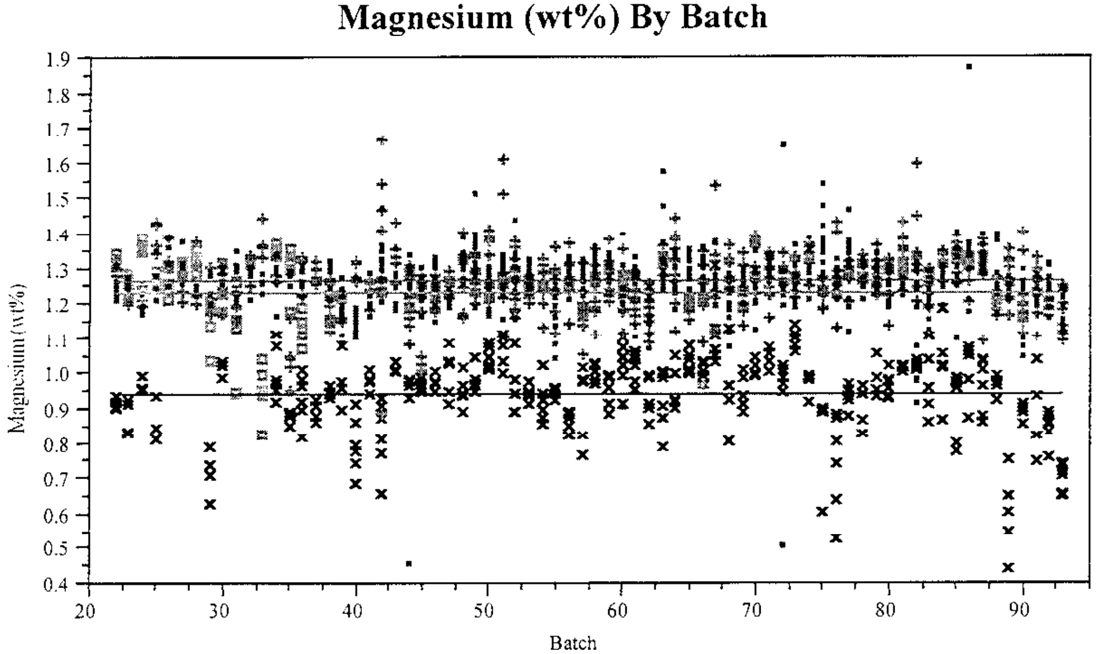


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product (Continued)



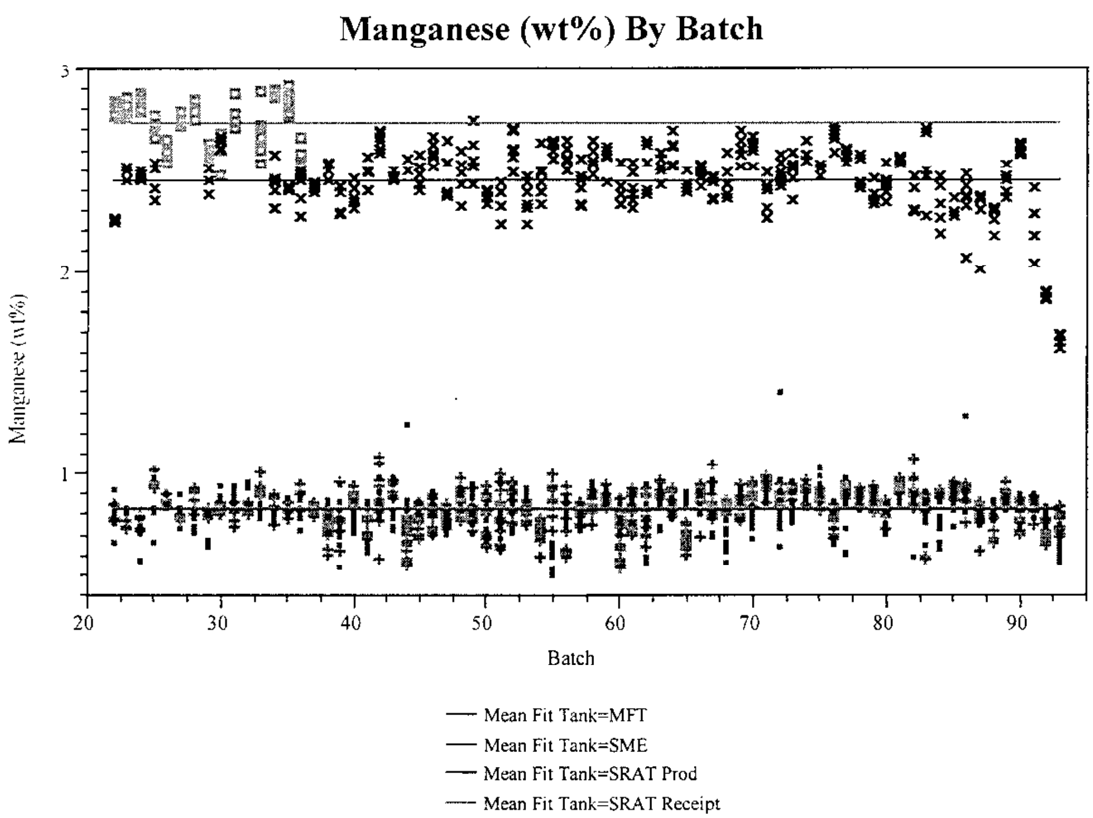
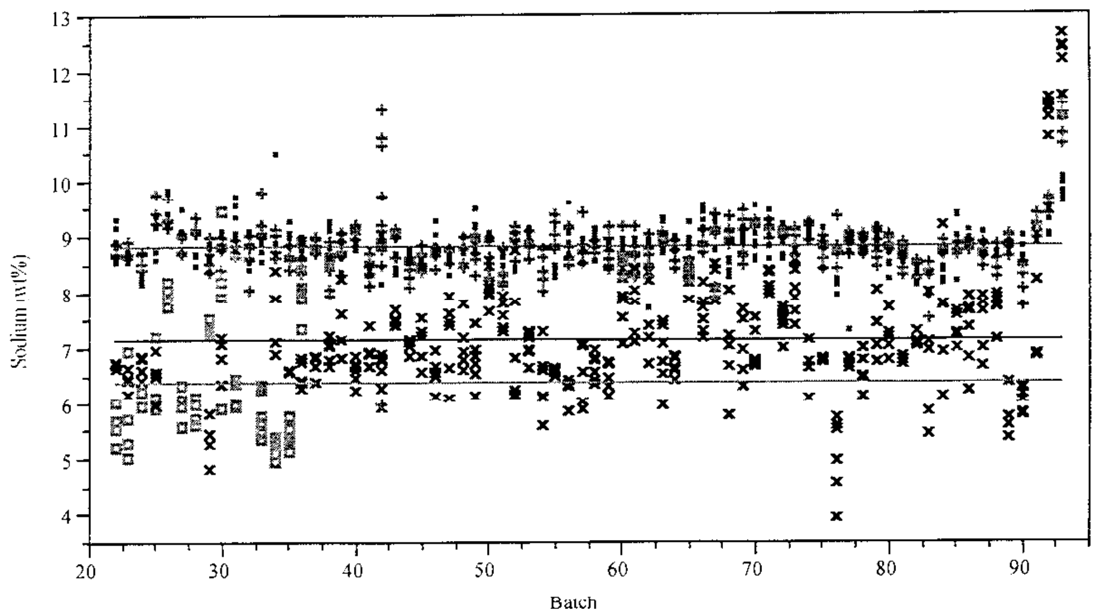


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

Sodium (wt%) By Batch



Nickel (wt%) By Batch

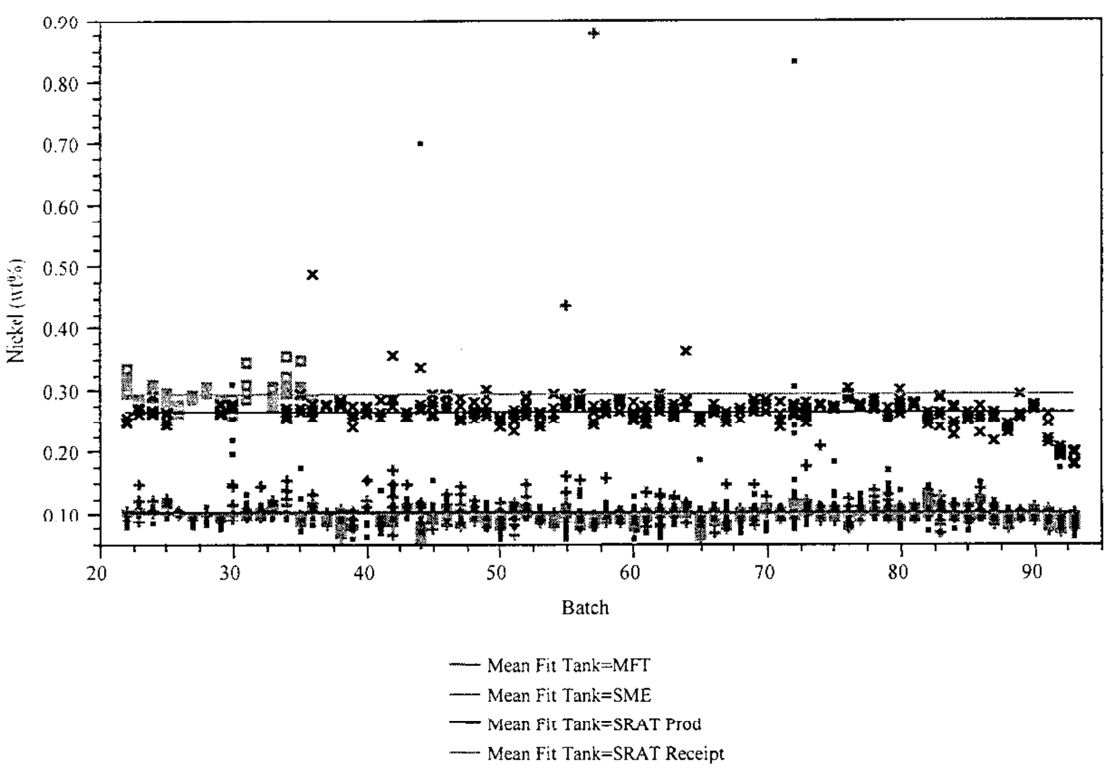
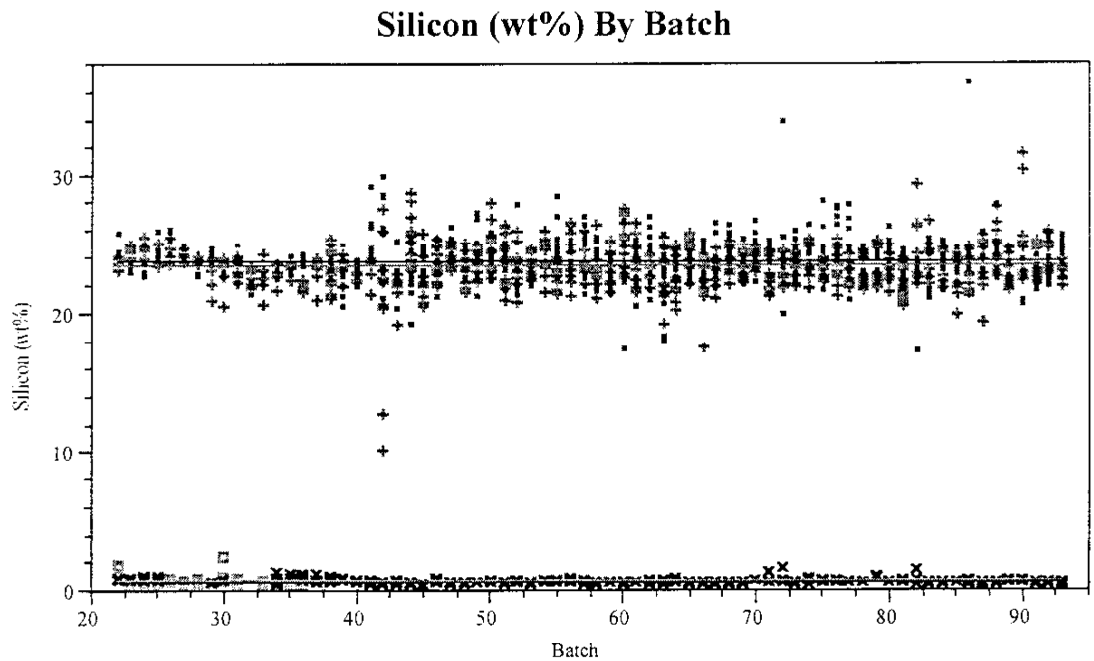


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)



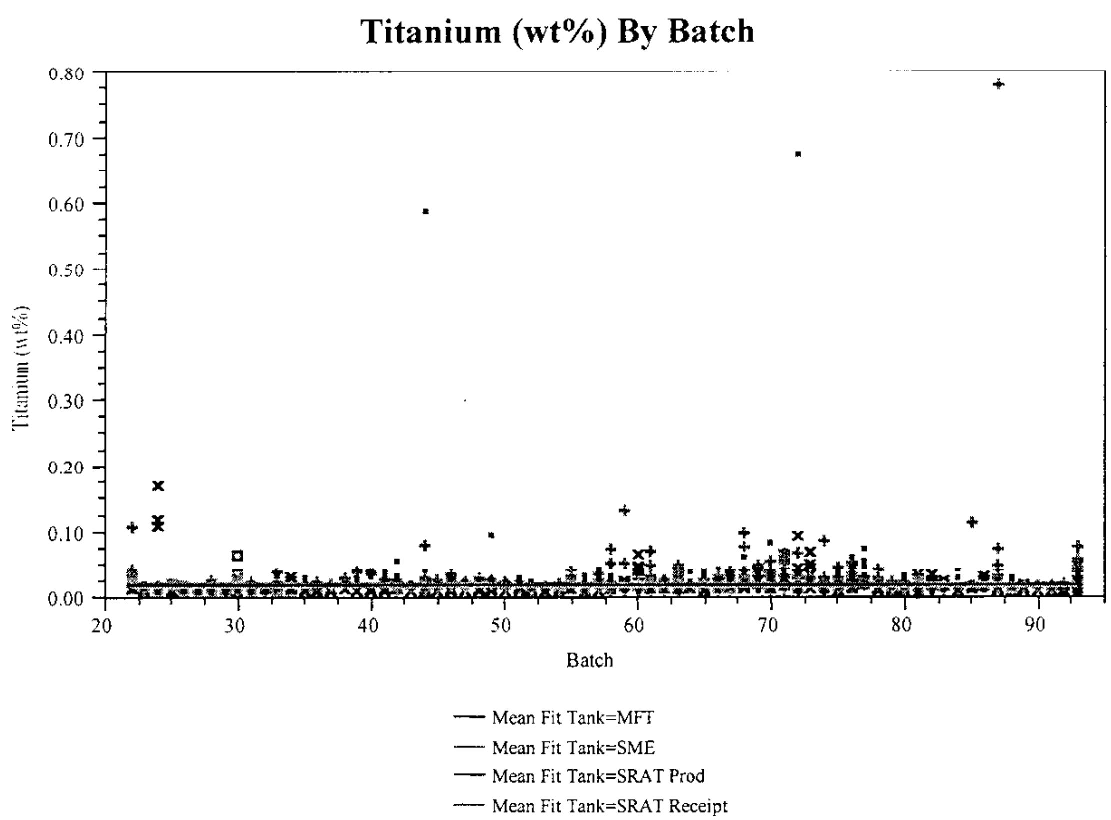
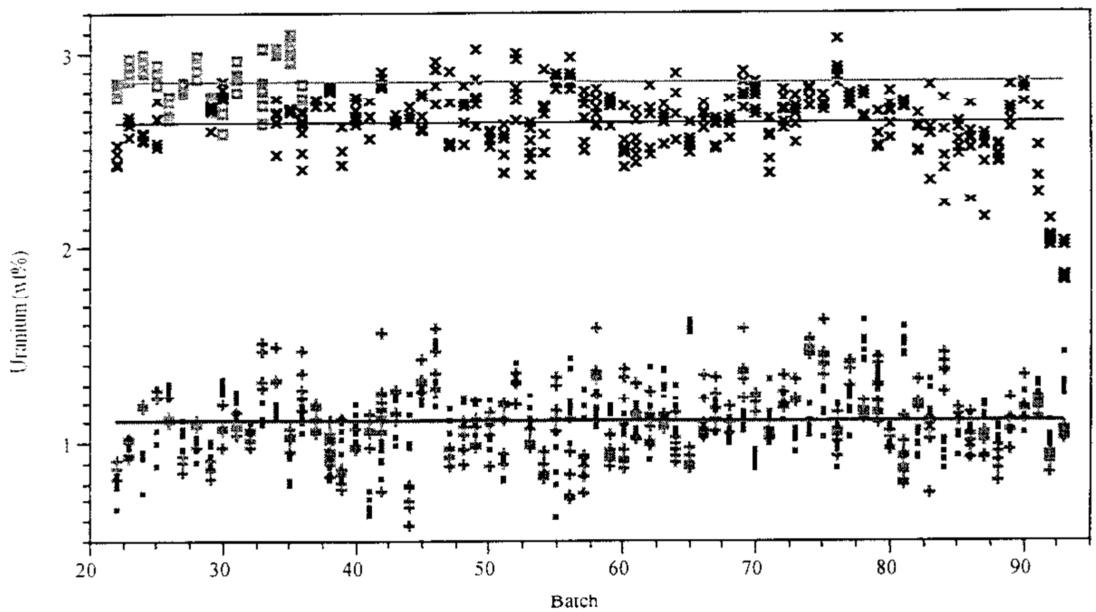


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product (Continued)

Uranium (wt%) By Batch



Zirconium (wt%) By Batch

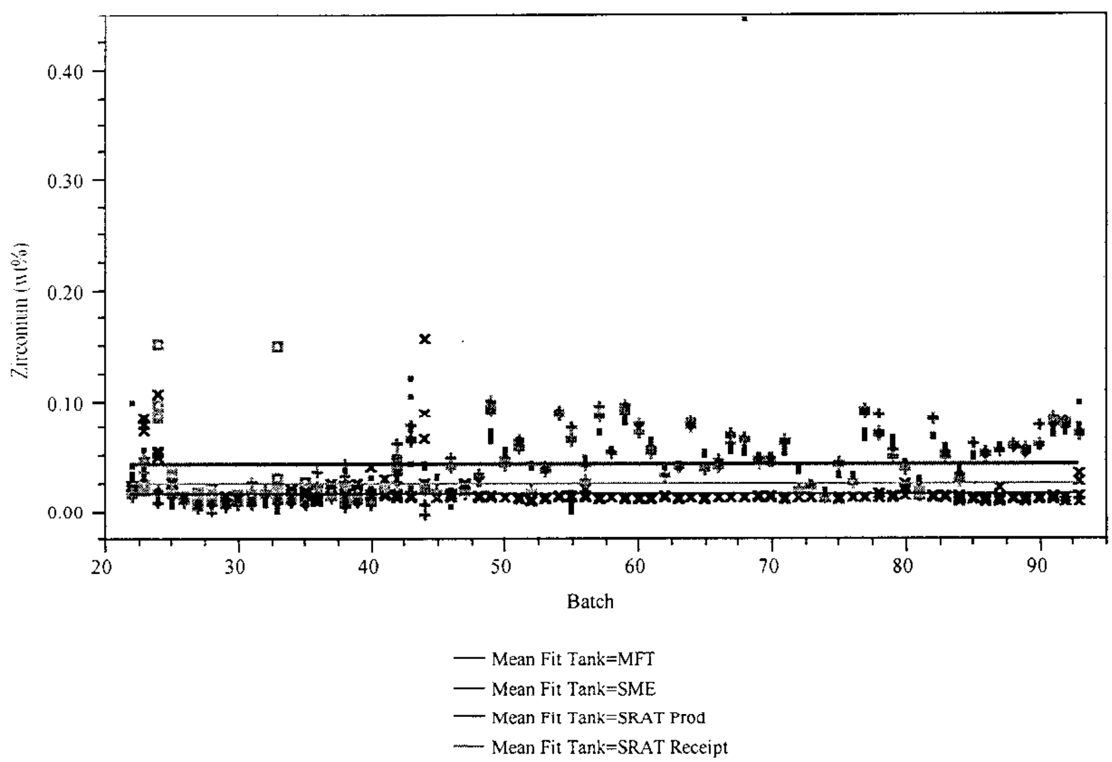
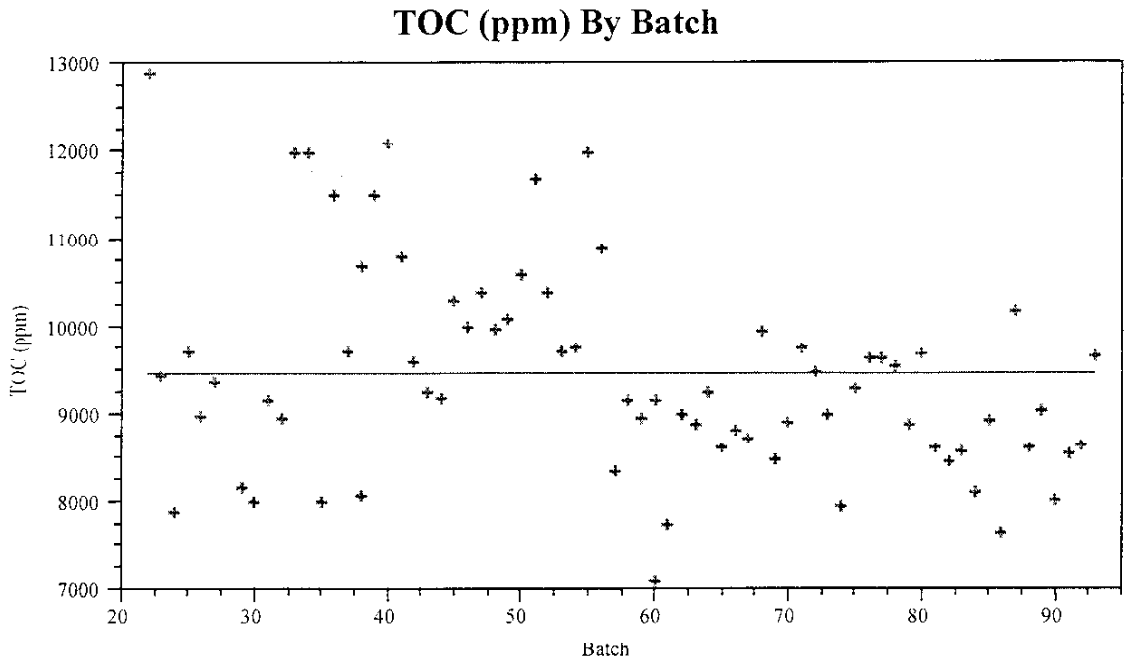


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)



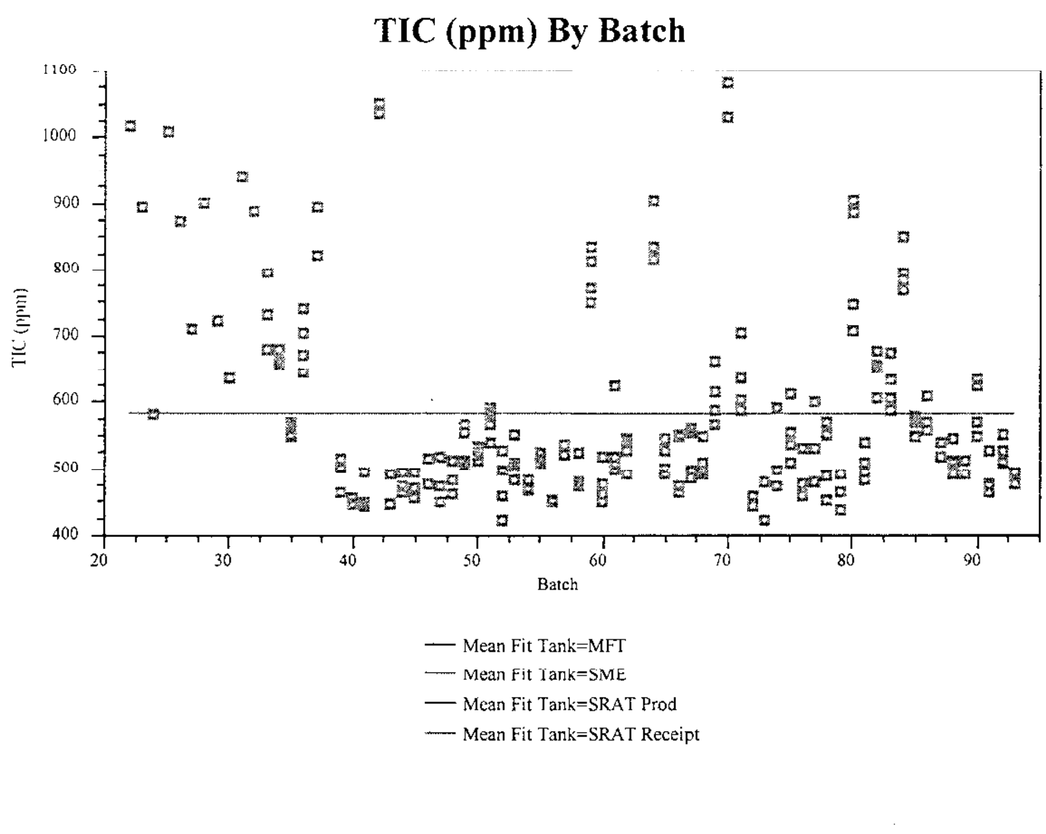
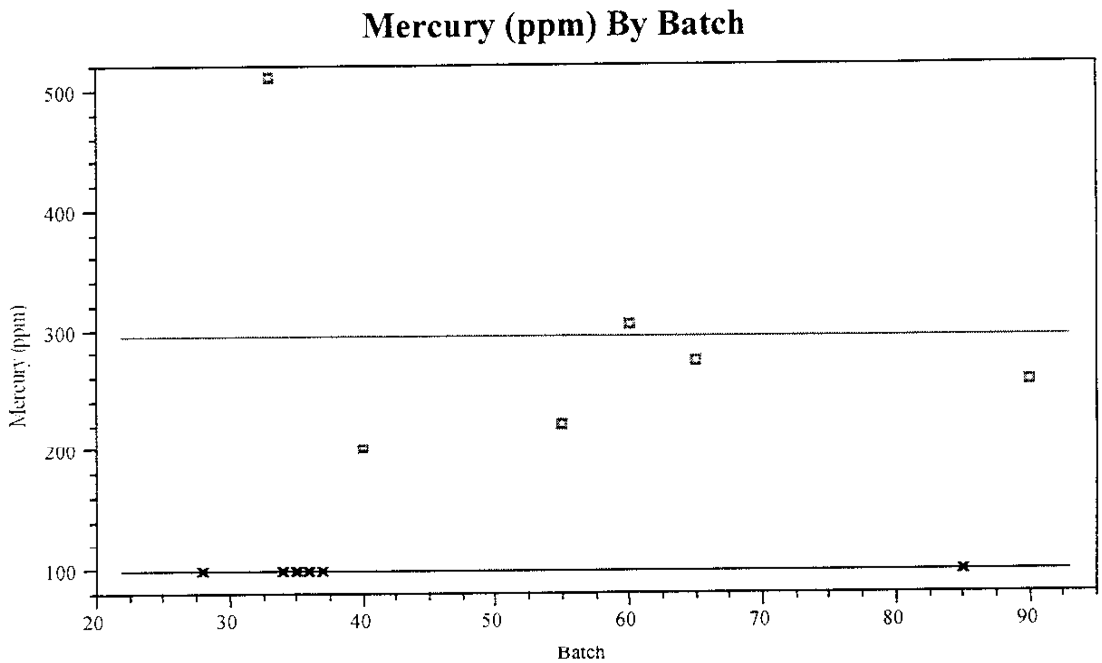


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)



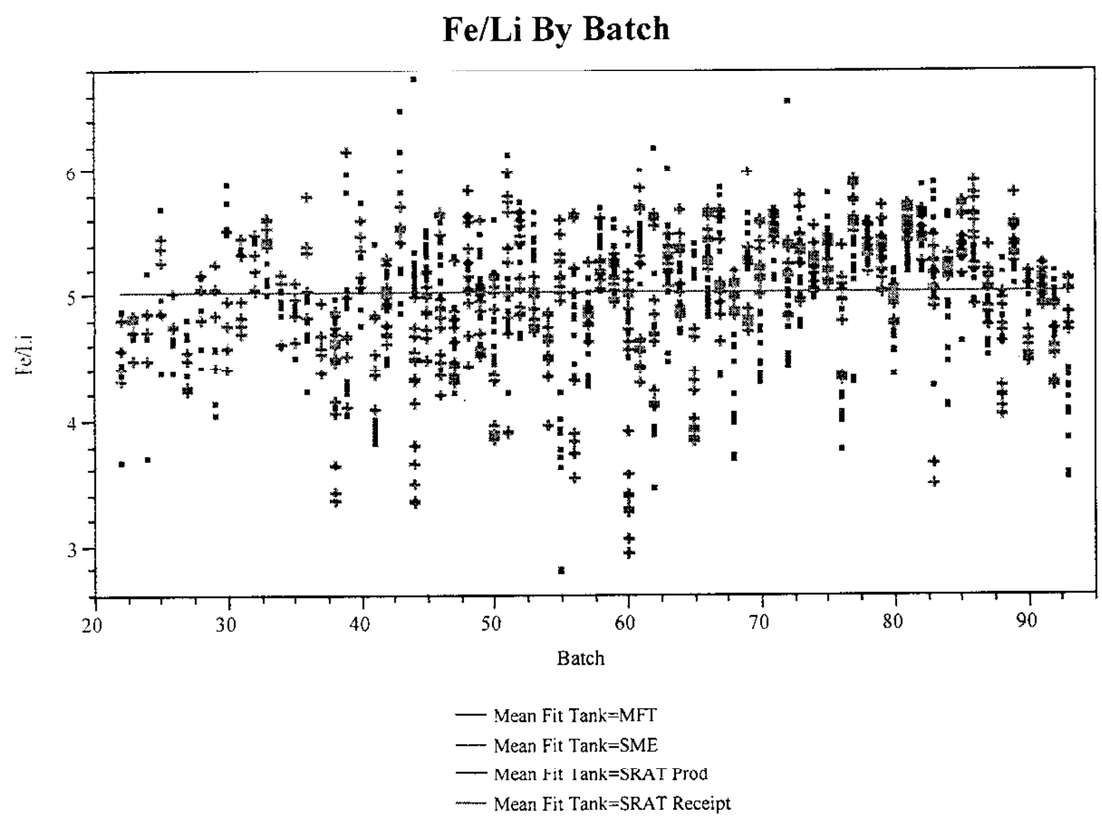


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

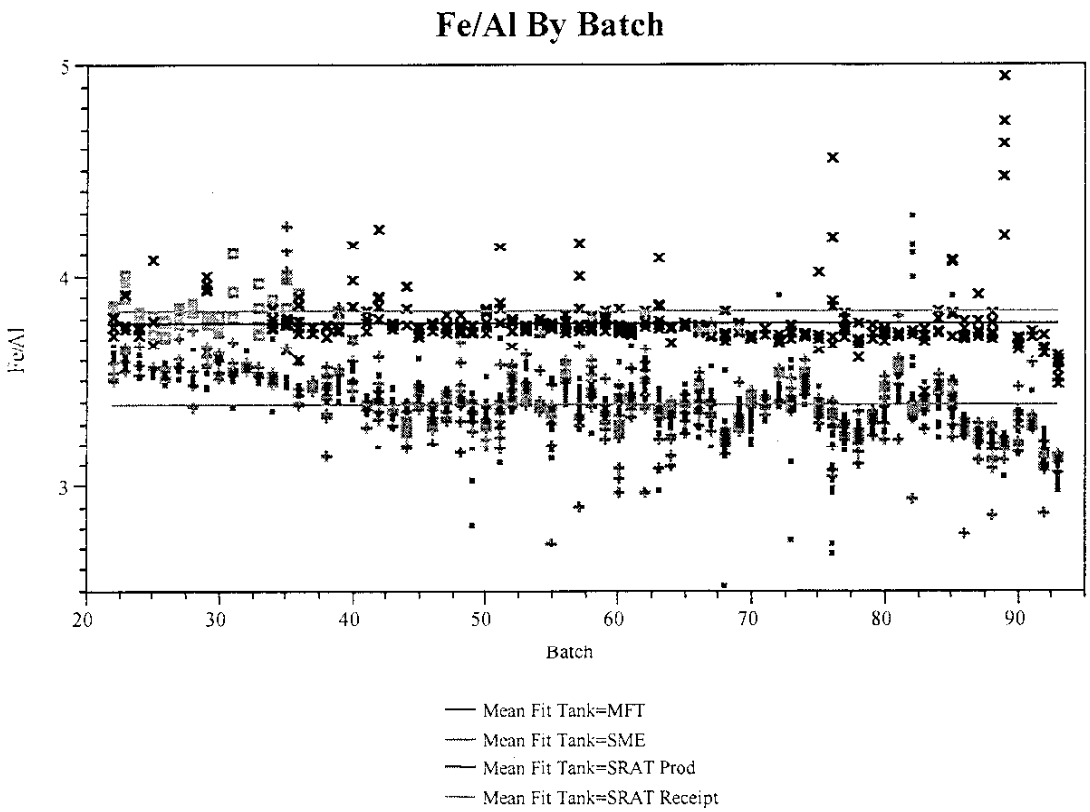


Exhibit 5: Charts of Sample Measurements by Batch by Vessel
Small Box – MFT; Plus – SME; Open Box – SRAT Receipt; x's – SRAT Product
(Continued)

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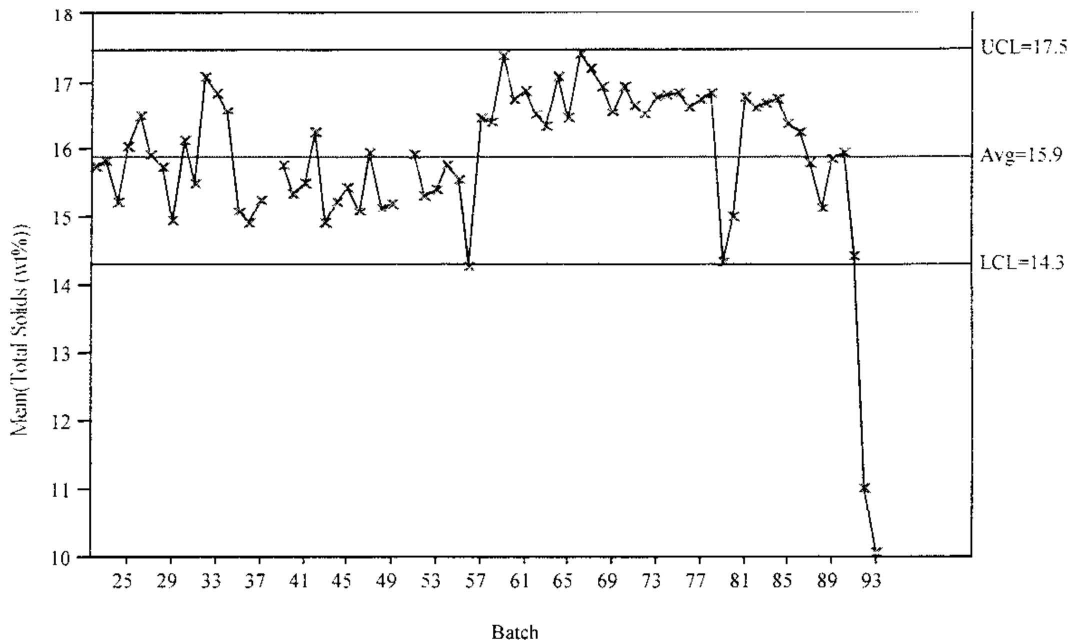
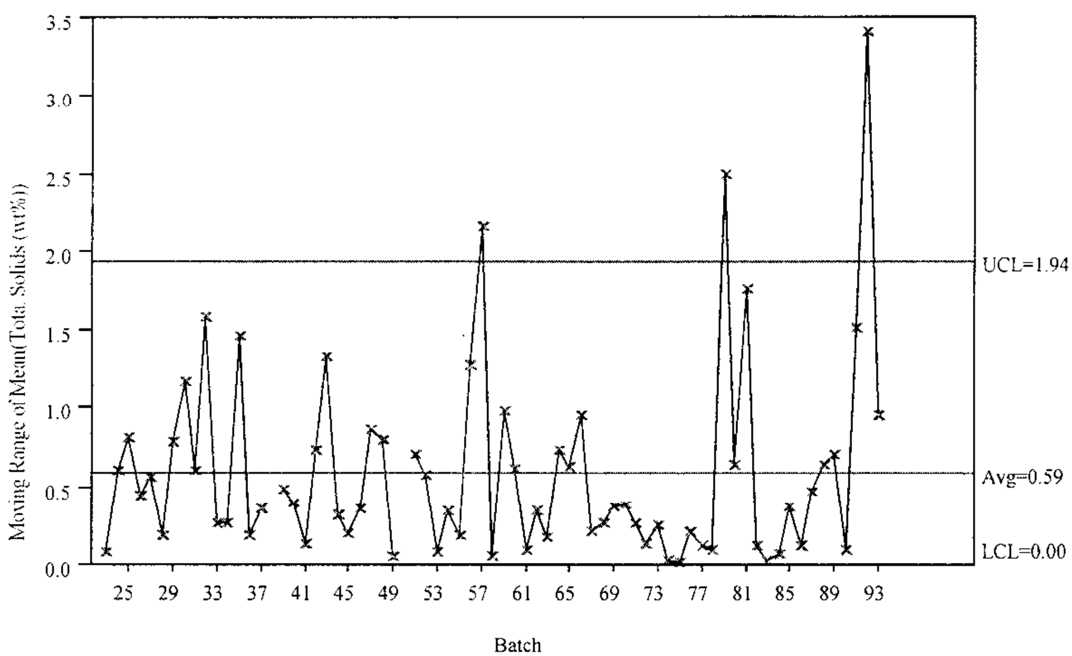
Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

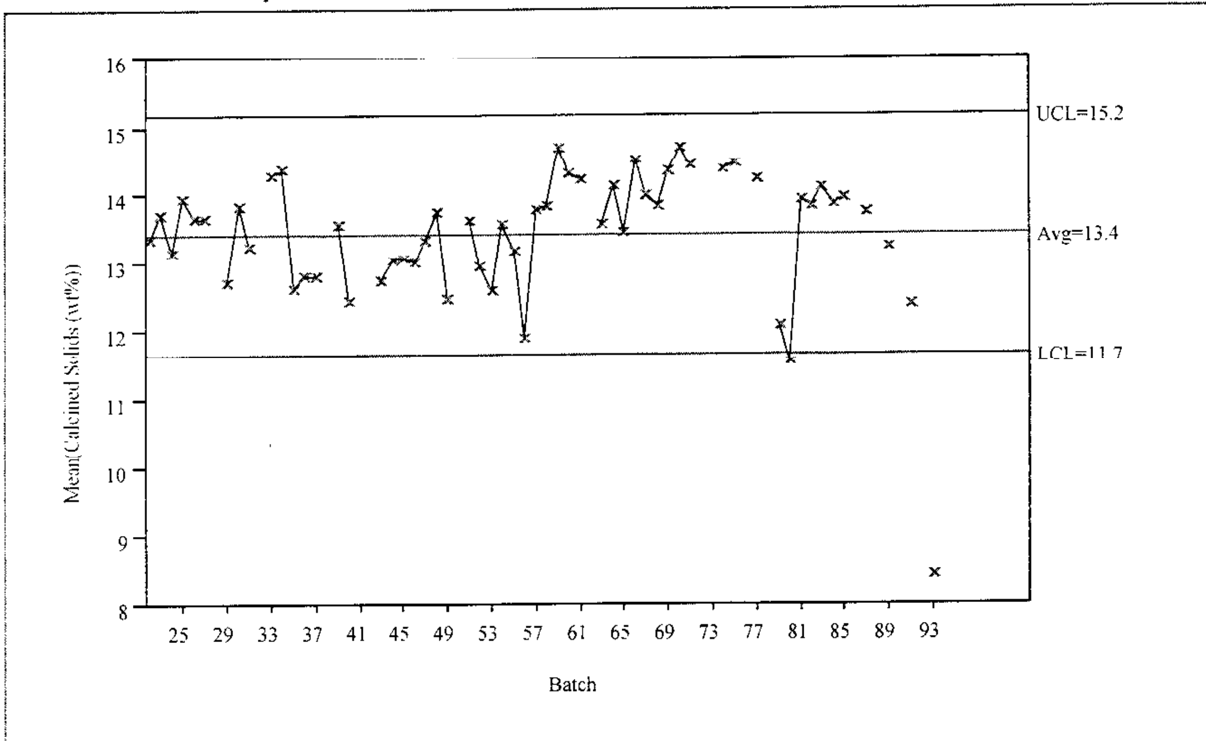


Mean(Total Solids (wt%))

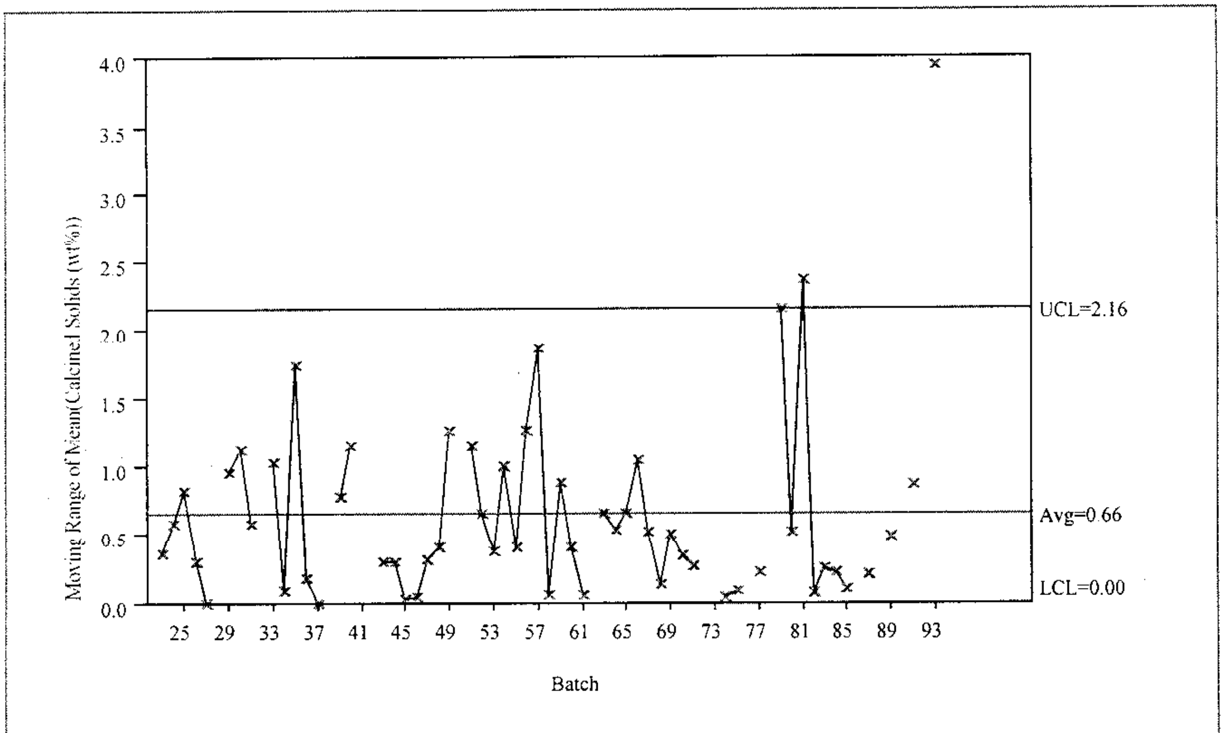


Moving Range of Mean(Total Solids (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

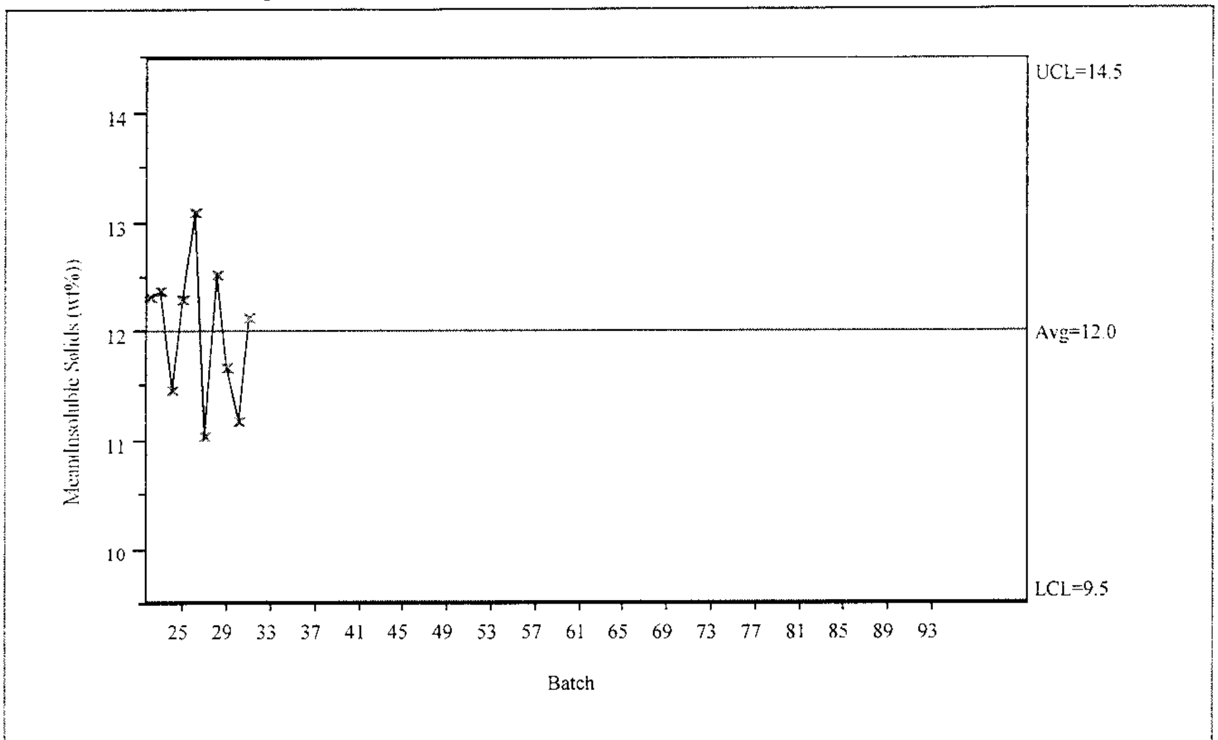


Mean(Calcined Solids (wt%))

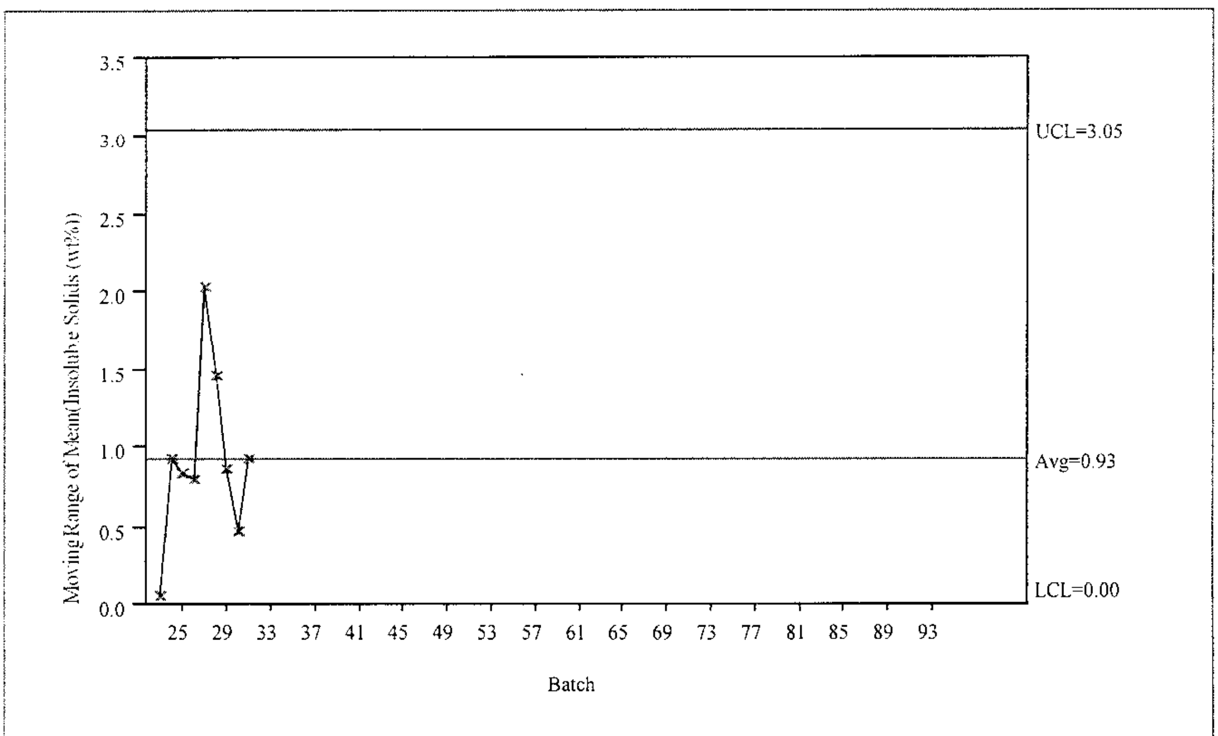


Moving Range of Mean(Calcined Solids (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

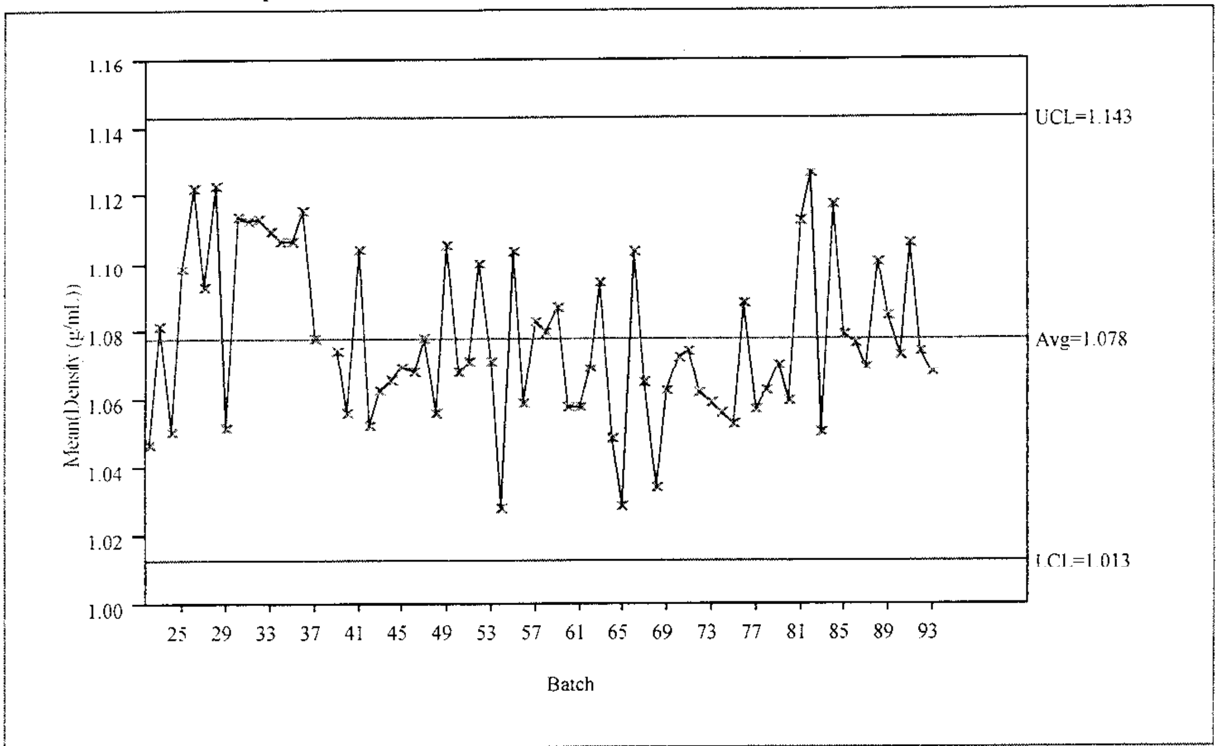


Mean(Insoluble Solids (wt%))

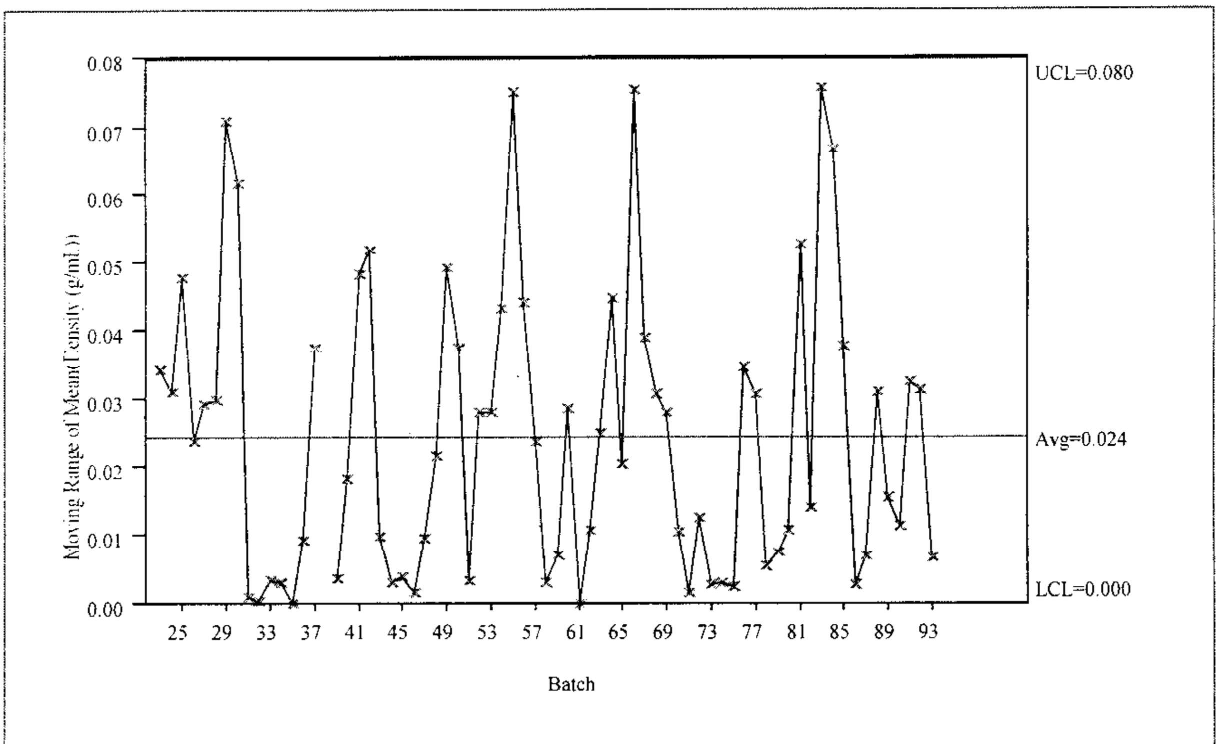


Moving Range of Mean(Insoluble Solids (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

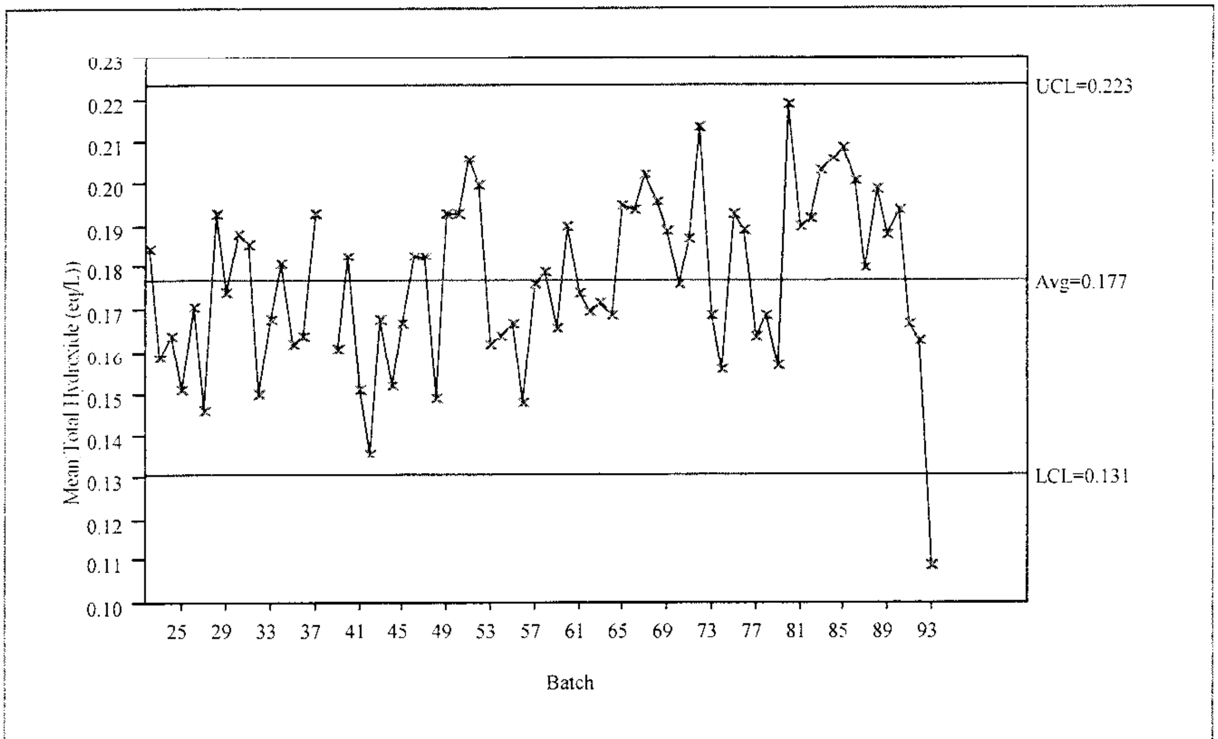


Mean(Density (g/mL))

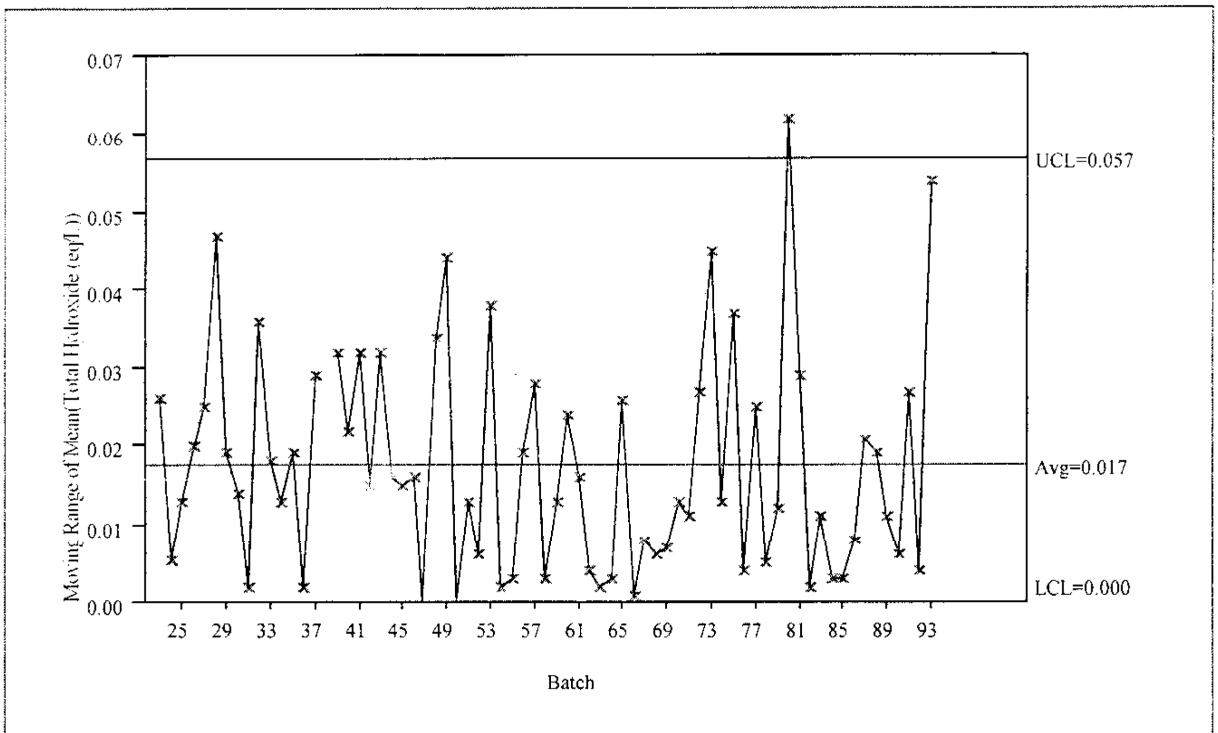


Moving Range of Mean(Density (g/mL))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

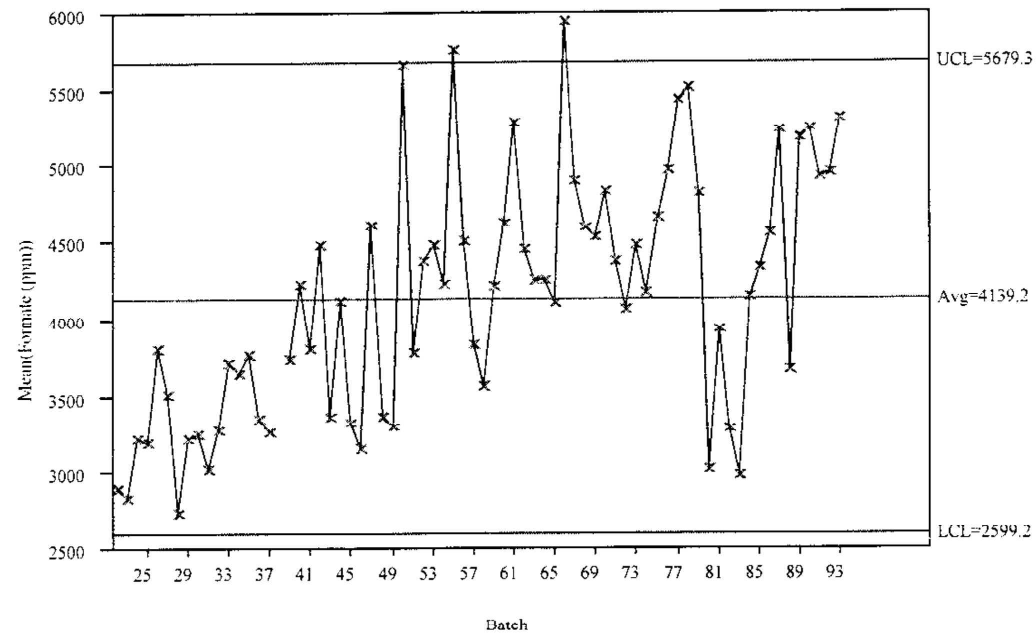


Mean(Total Hydroxide (eq/L))

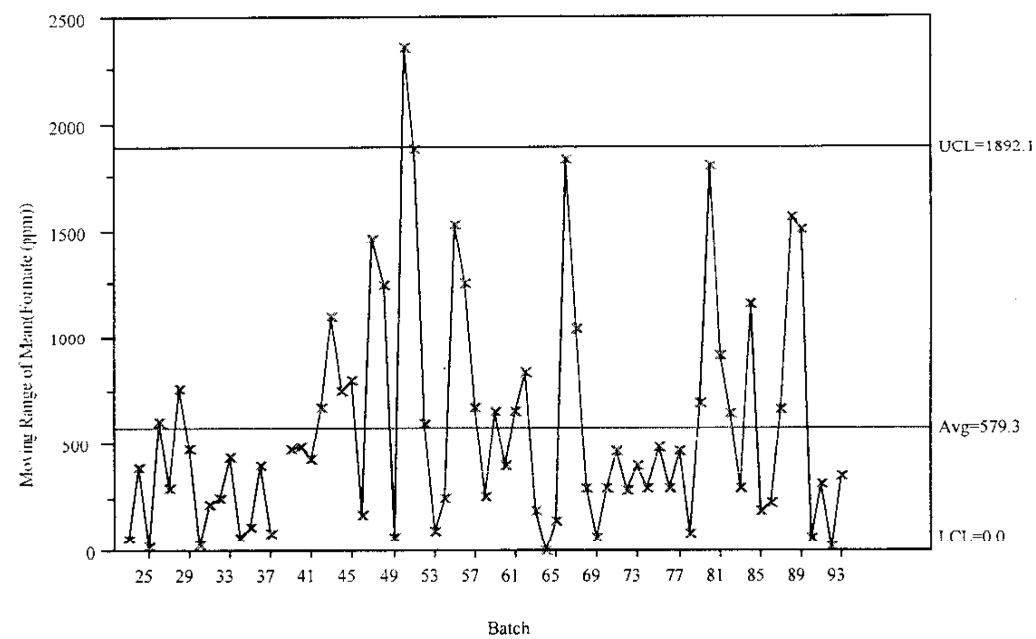


Moving Range of Mean(Total Hydroxide (eq/L))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

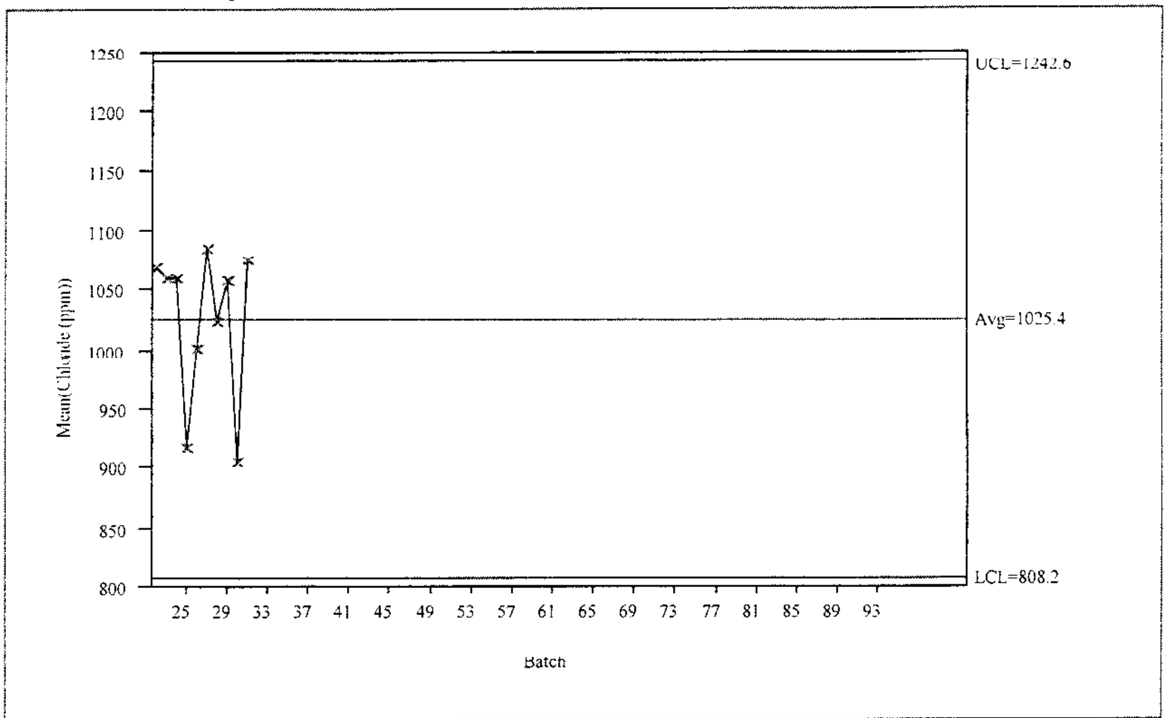


Mean(Formate (ppm))

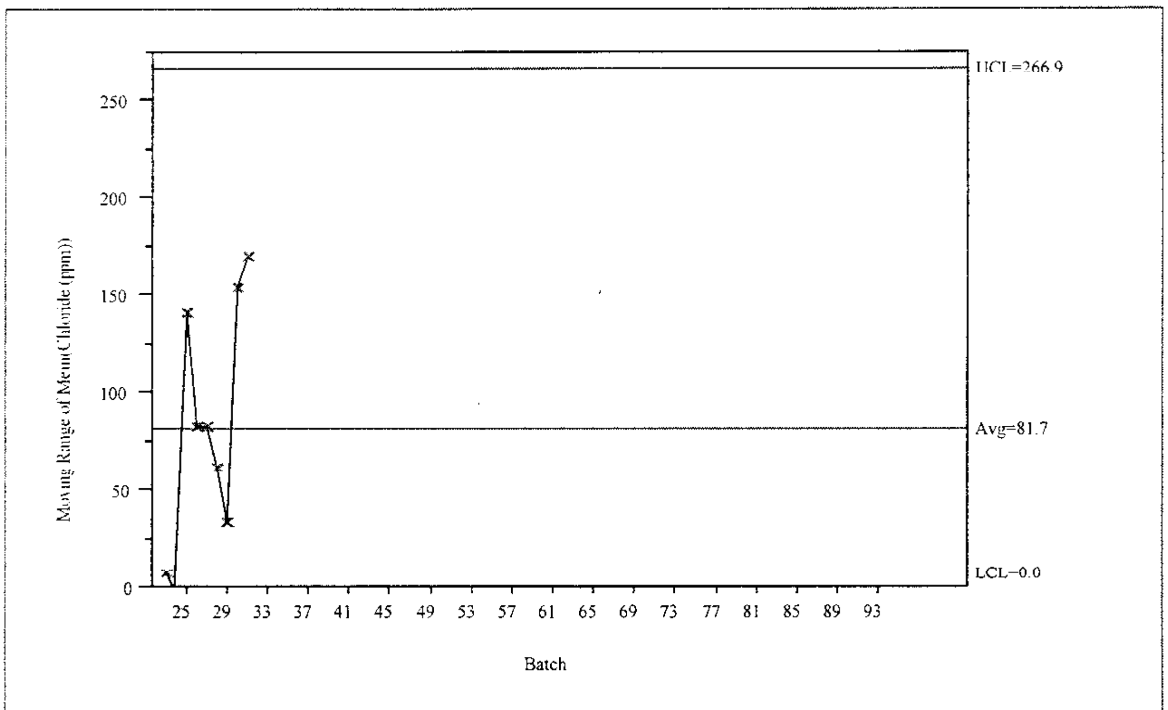


Moving Range of Mean(Formate (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

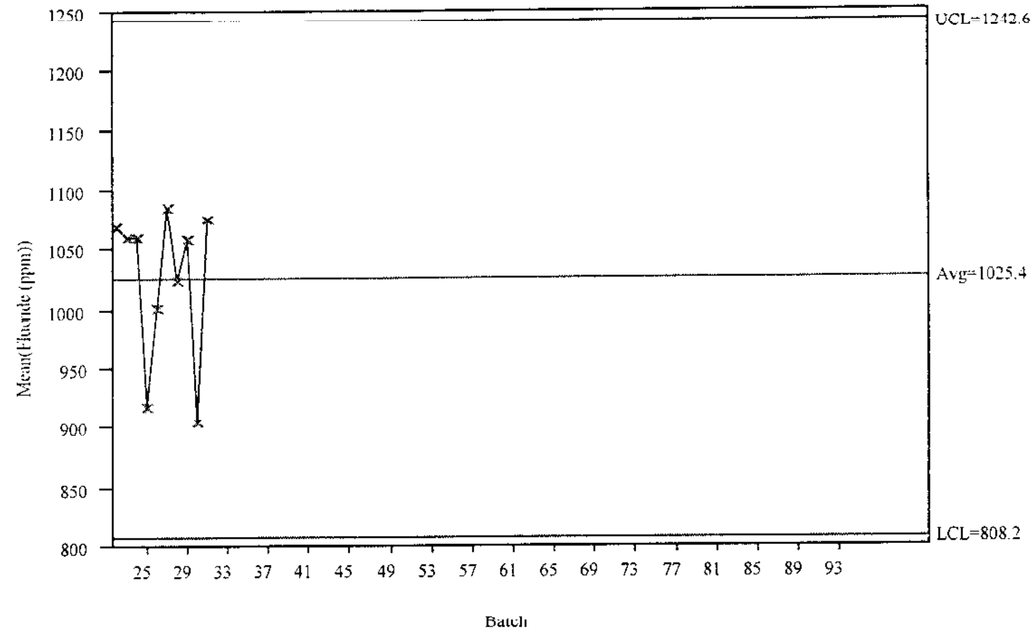


Mean(Chloride (ppm))

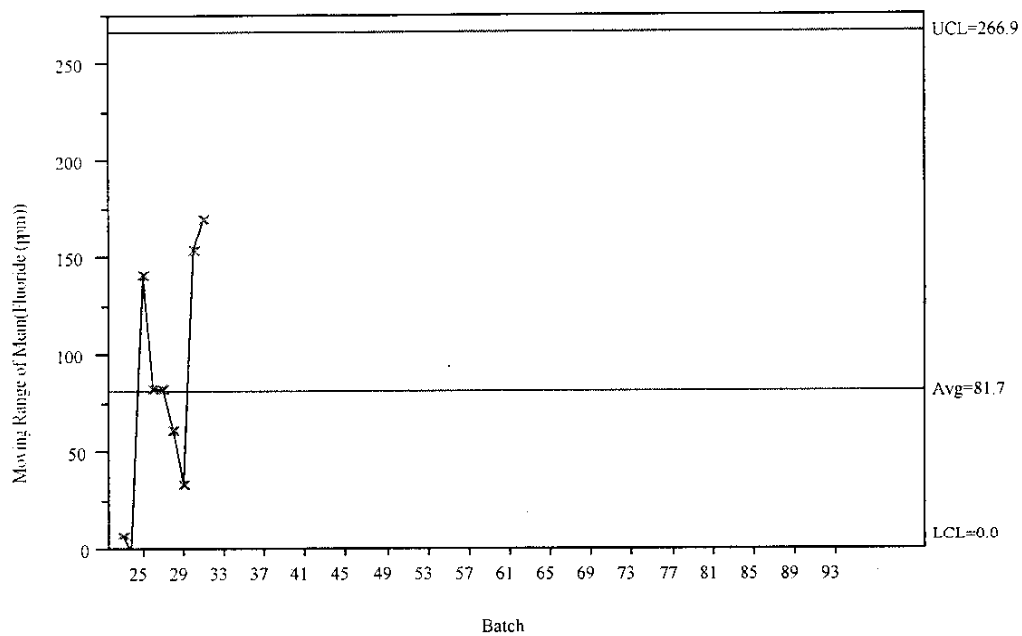


Moving Range of Mean(Chloride (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

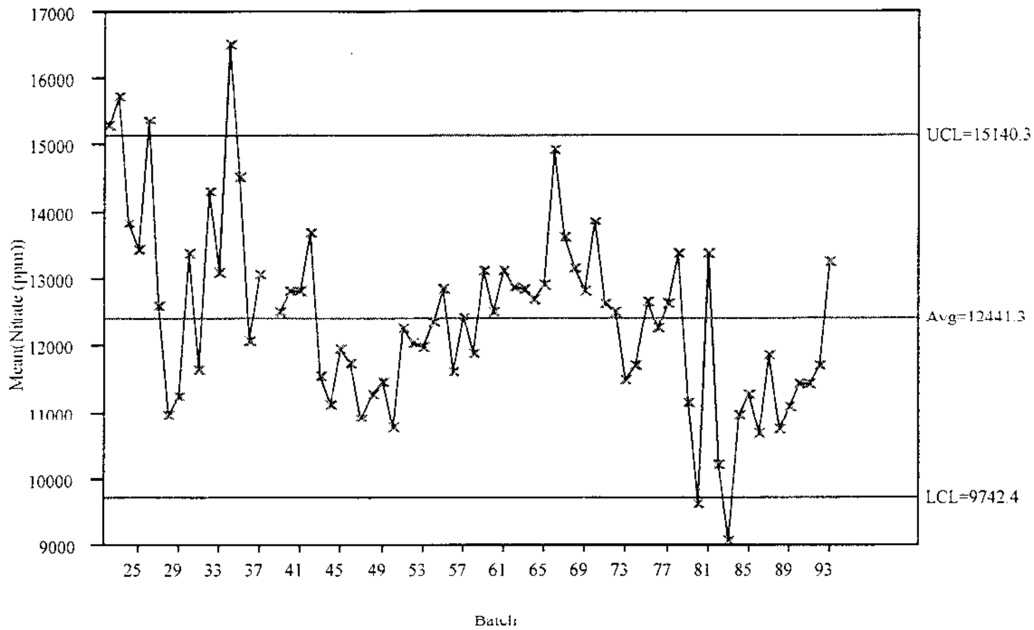


Mean(Fluoride (ppm))

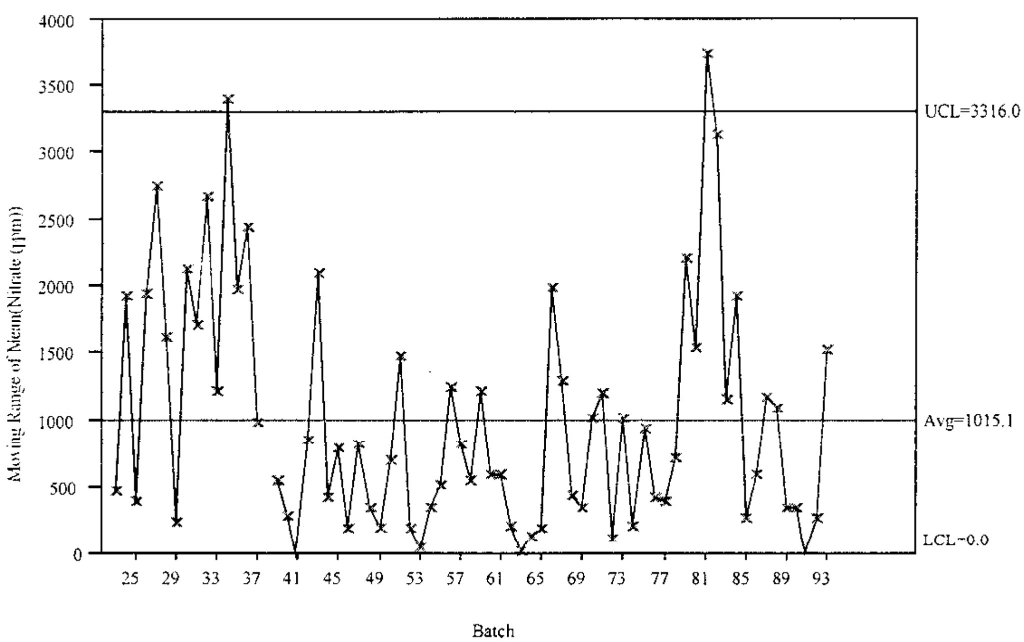


Moving Range of Mean(Fluoride (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

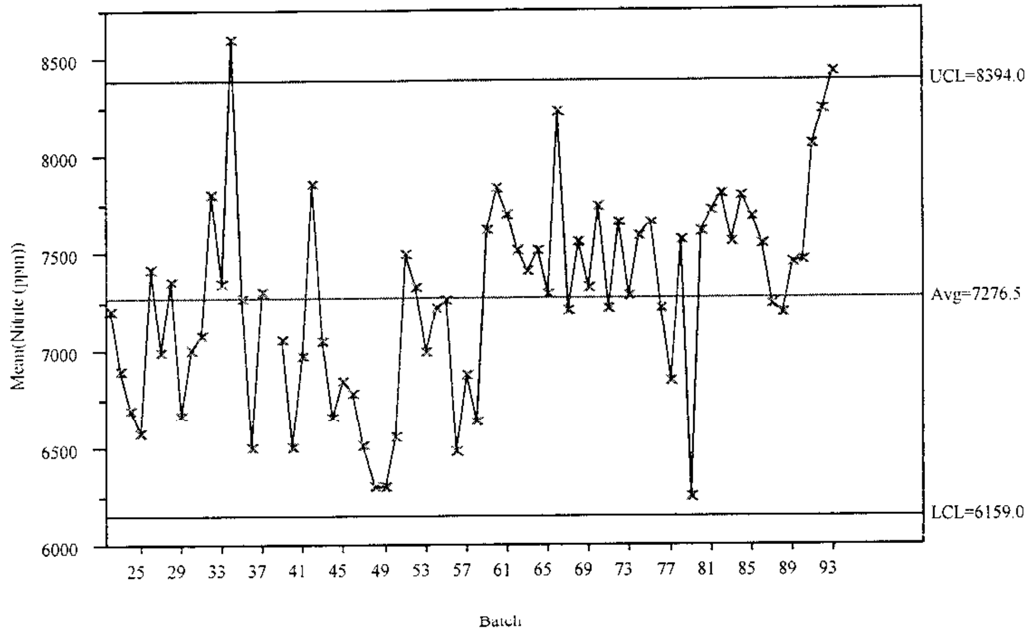


Mean(Nitrate (ppm))

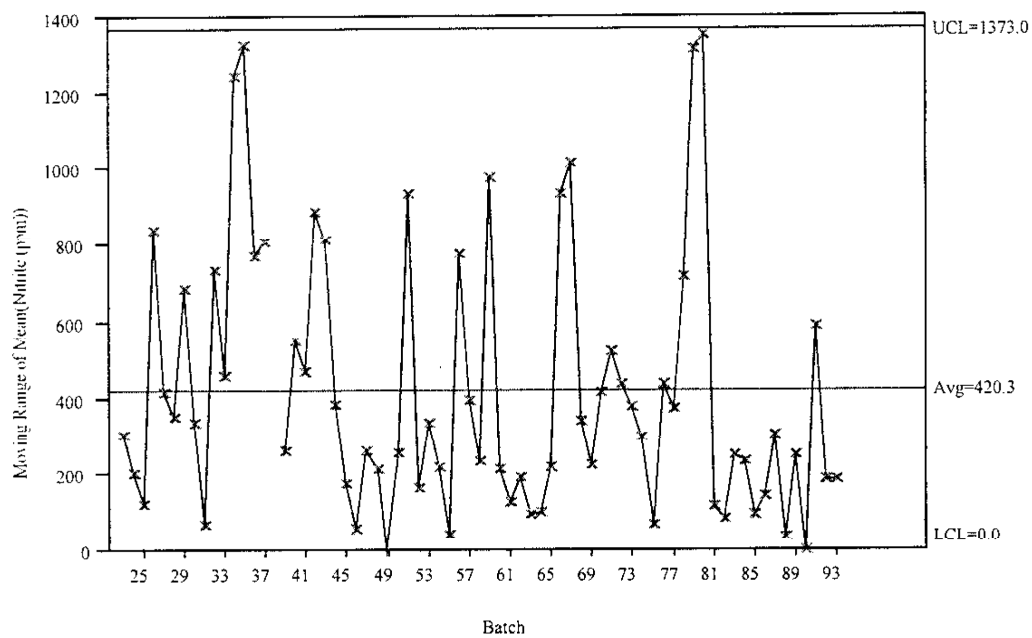


Moving Range of Mean(Nitrate (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

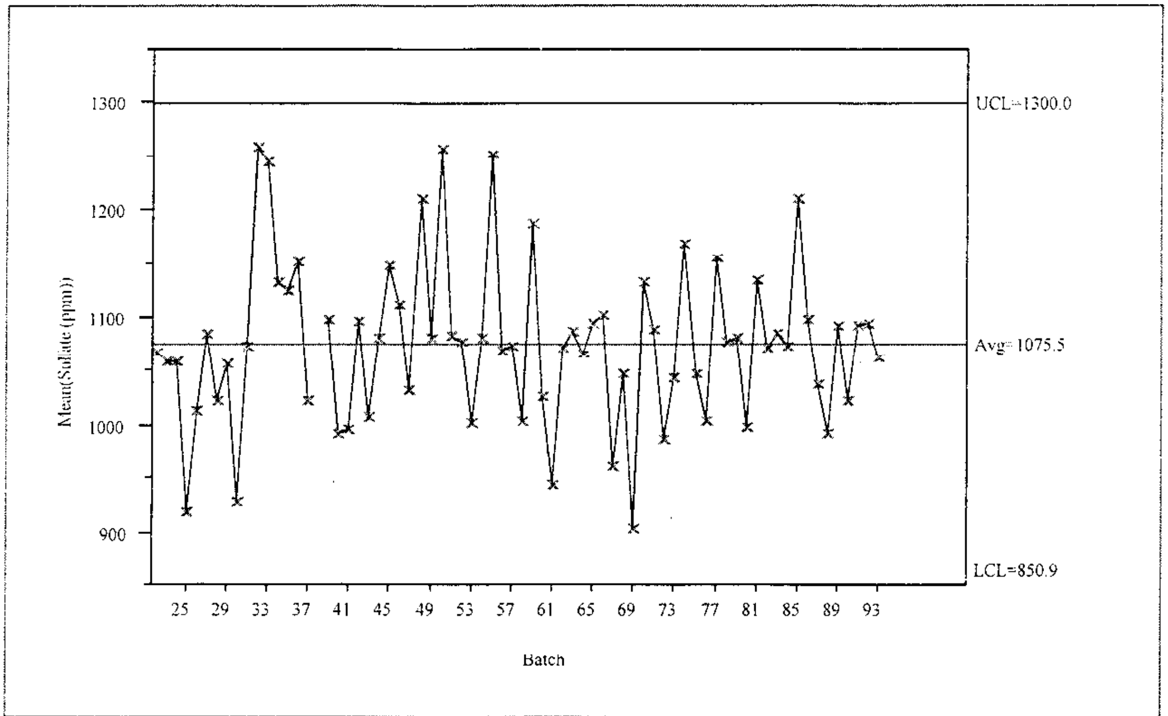


Mean(Nitrite (ppm))

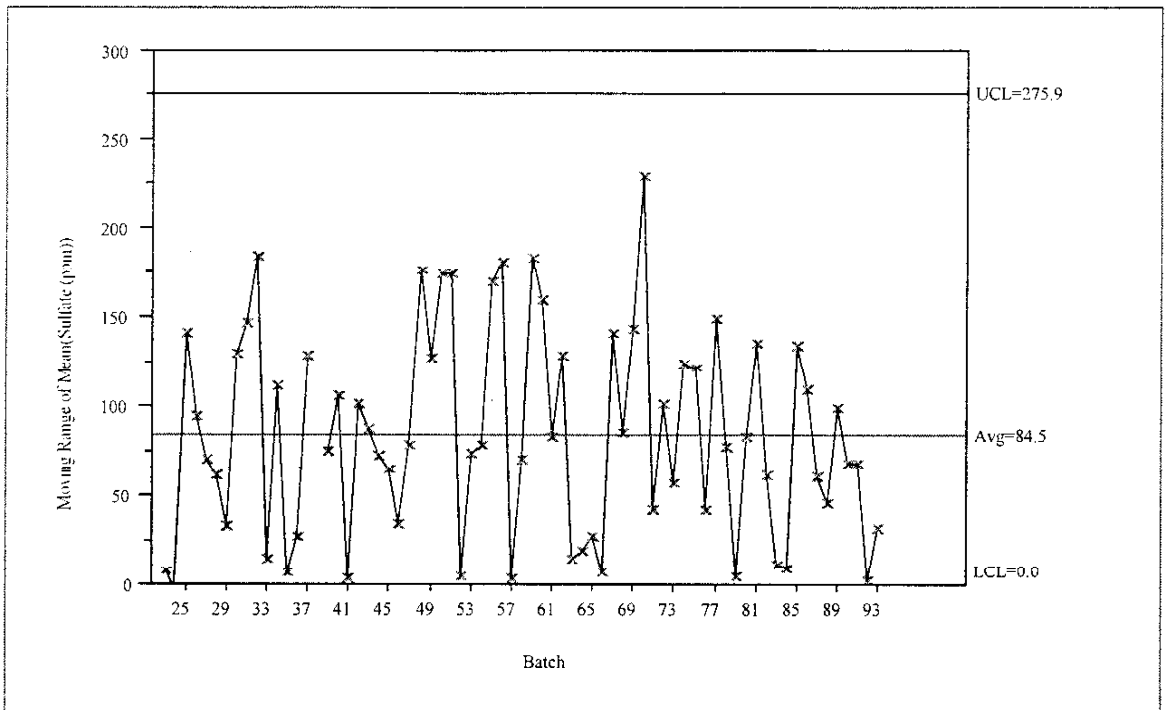


Moving Range of Mean(Nitrite (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

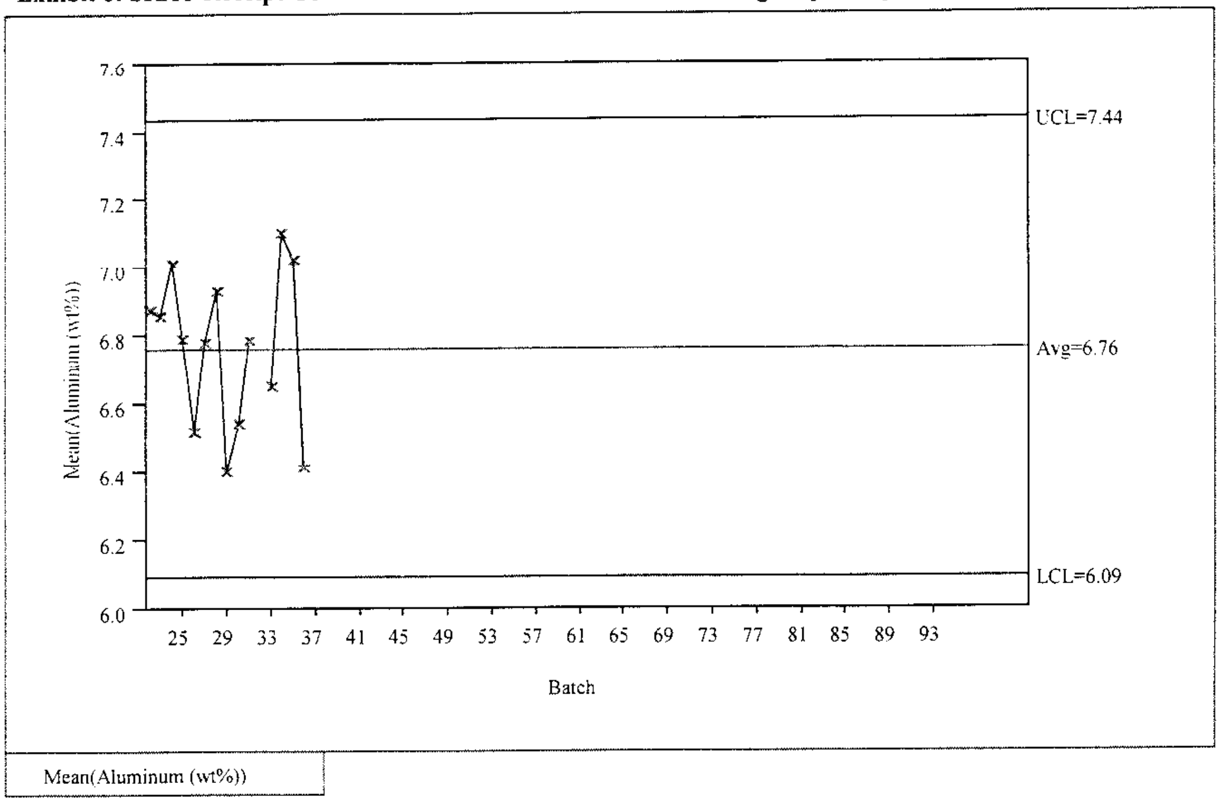


Mean(Sulfate (ppm))



Moving Range of Mean(Sulfate (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte



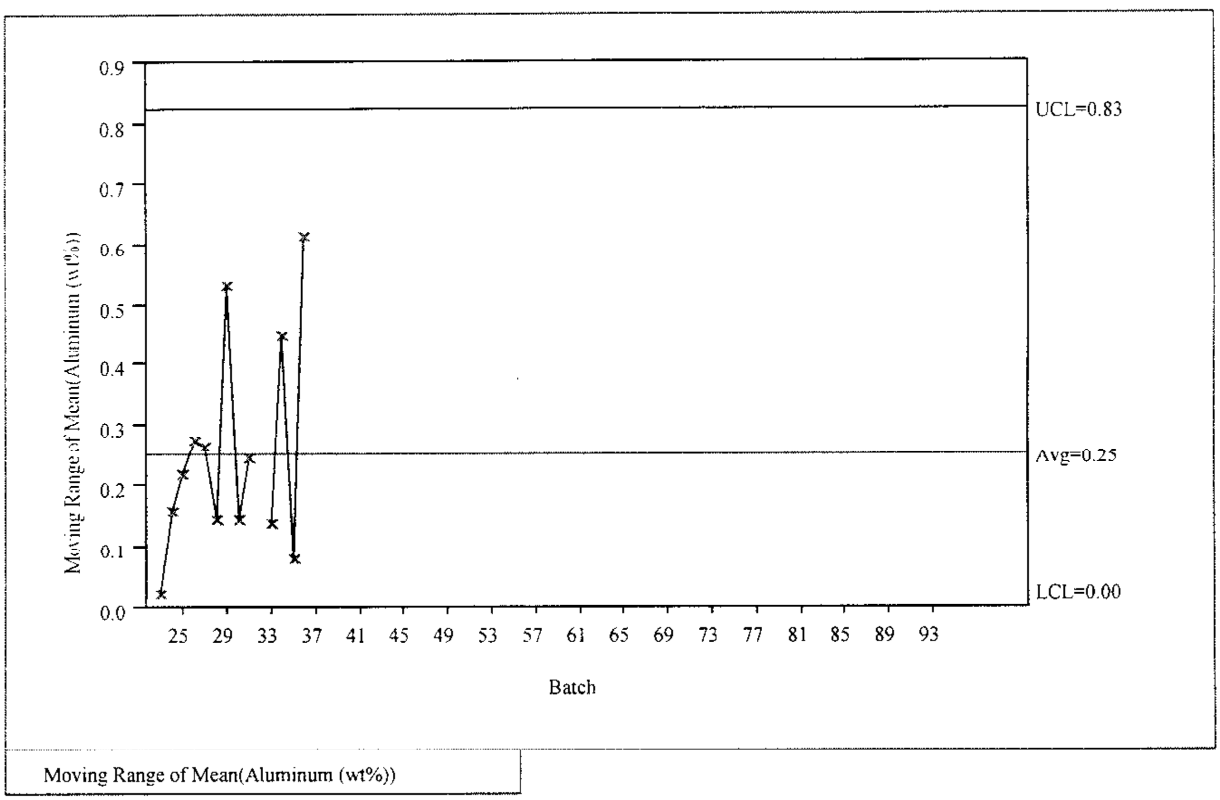
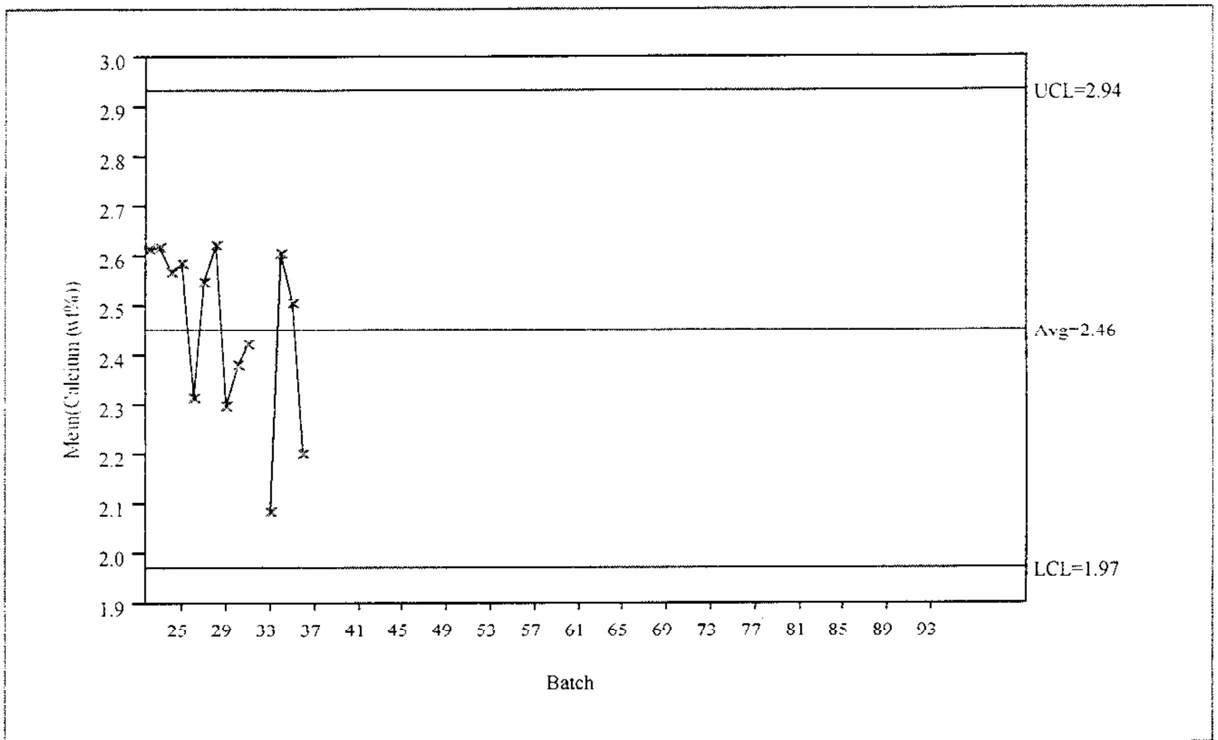
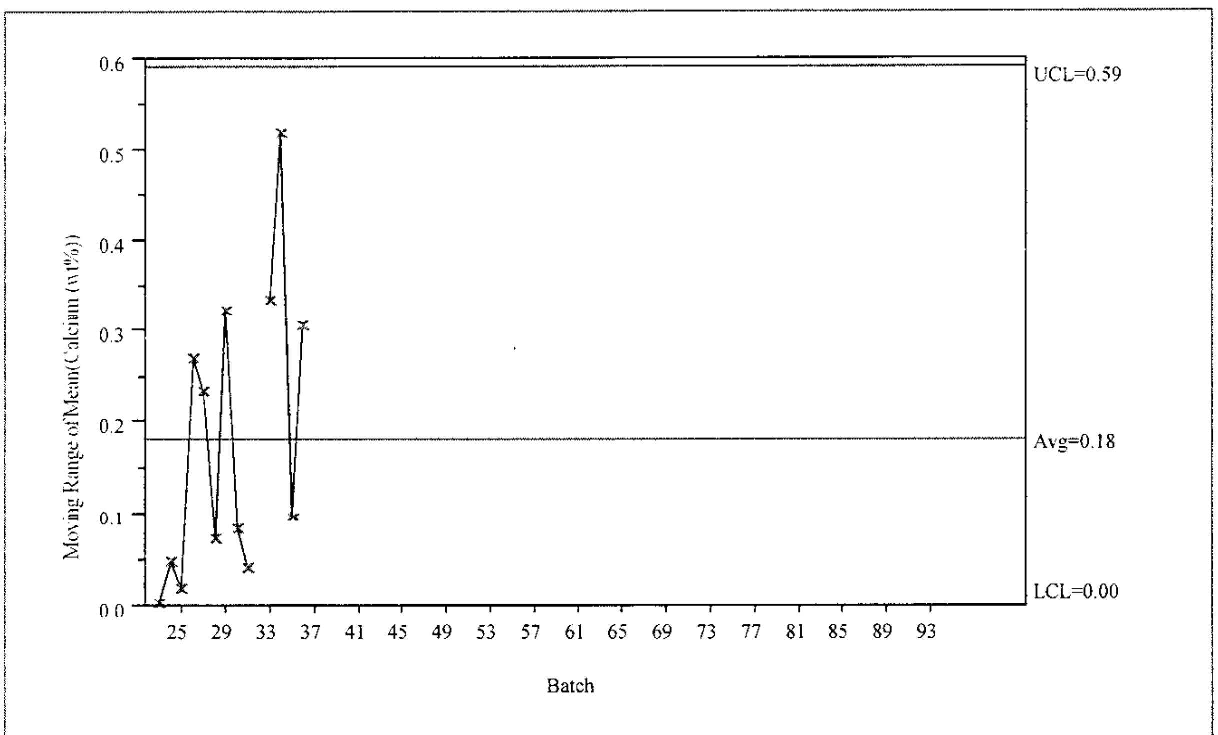


Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

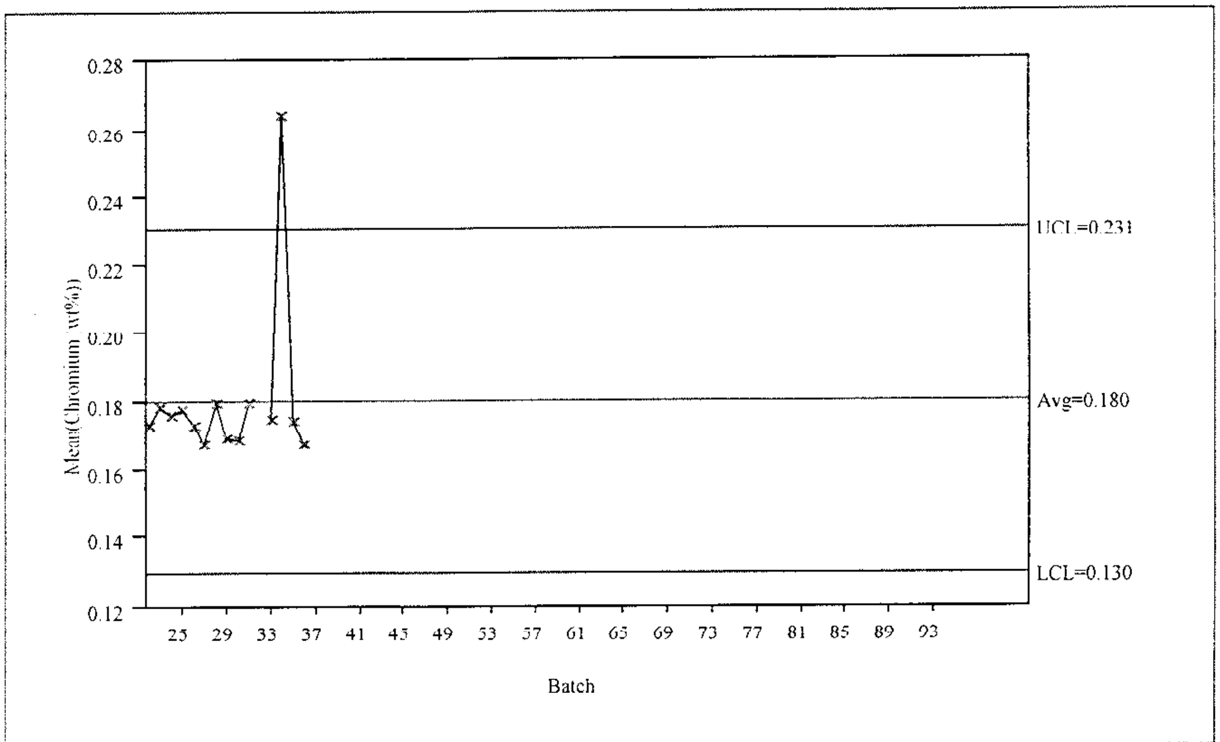


Mean(Calcium (wt%))

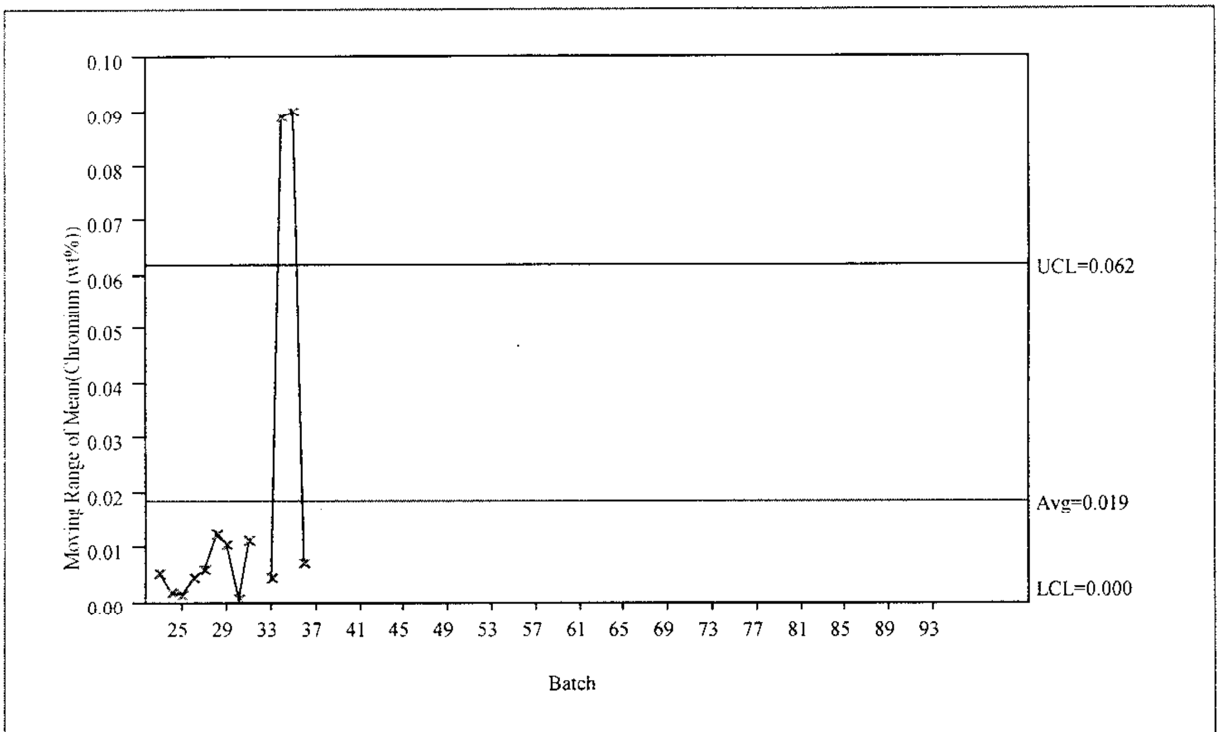


Moving Range of Mean(Calcium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

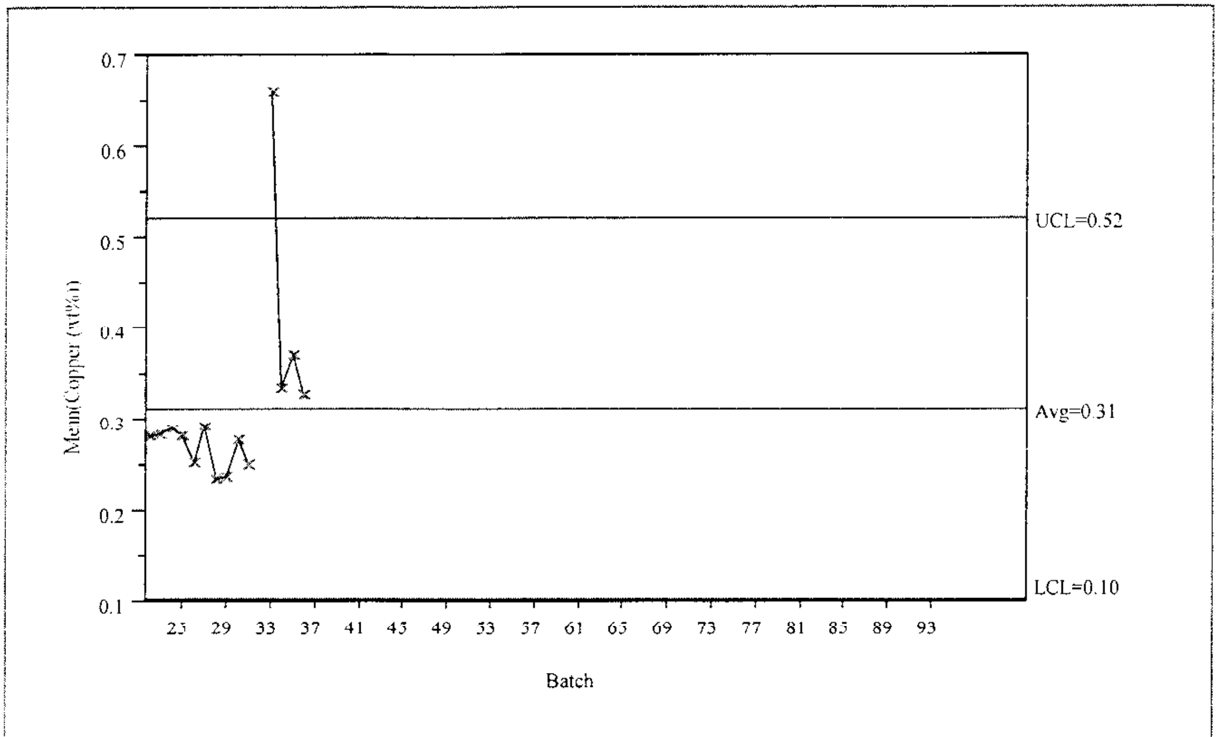


Mean(Chromium (wt%))

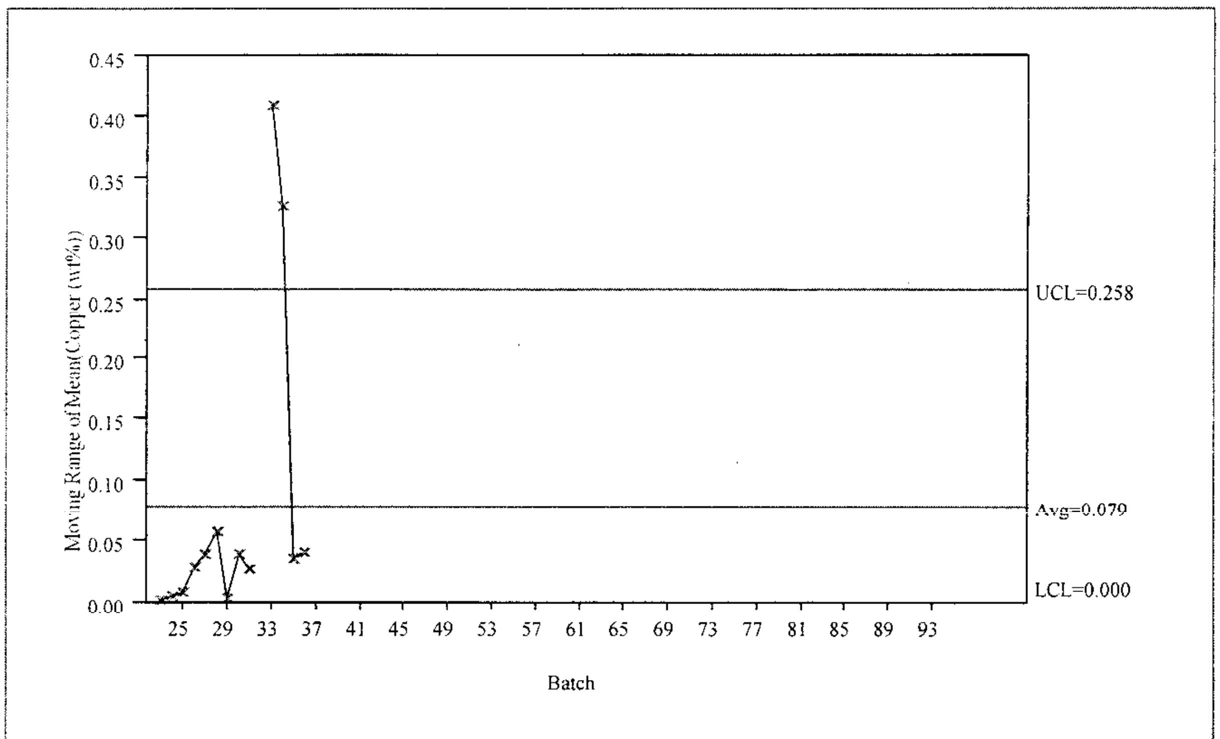


Moving Range of Mean(Chromium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

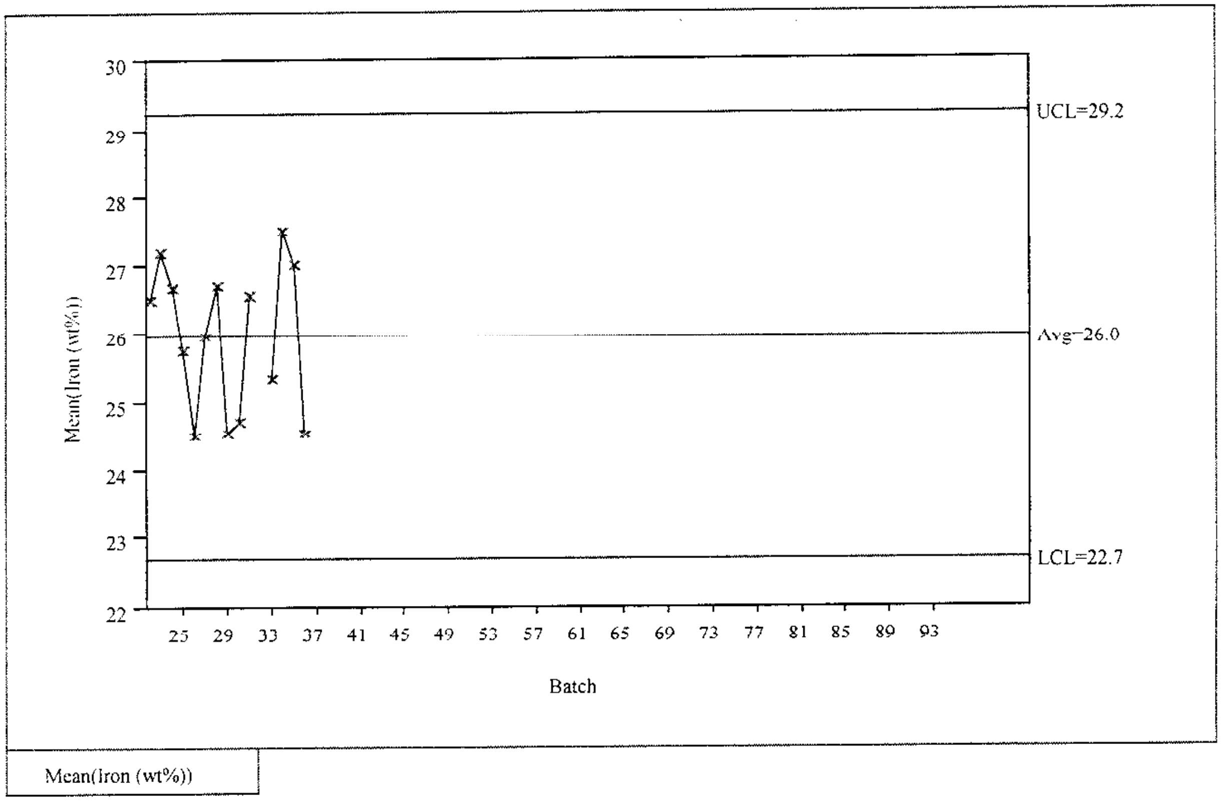


Mean(Copper (wt%))



Moving Range of Mean(Copper (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte



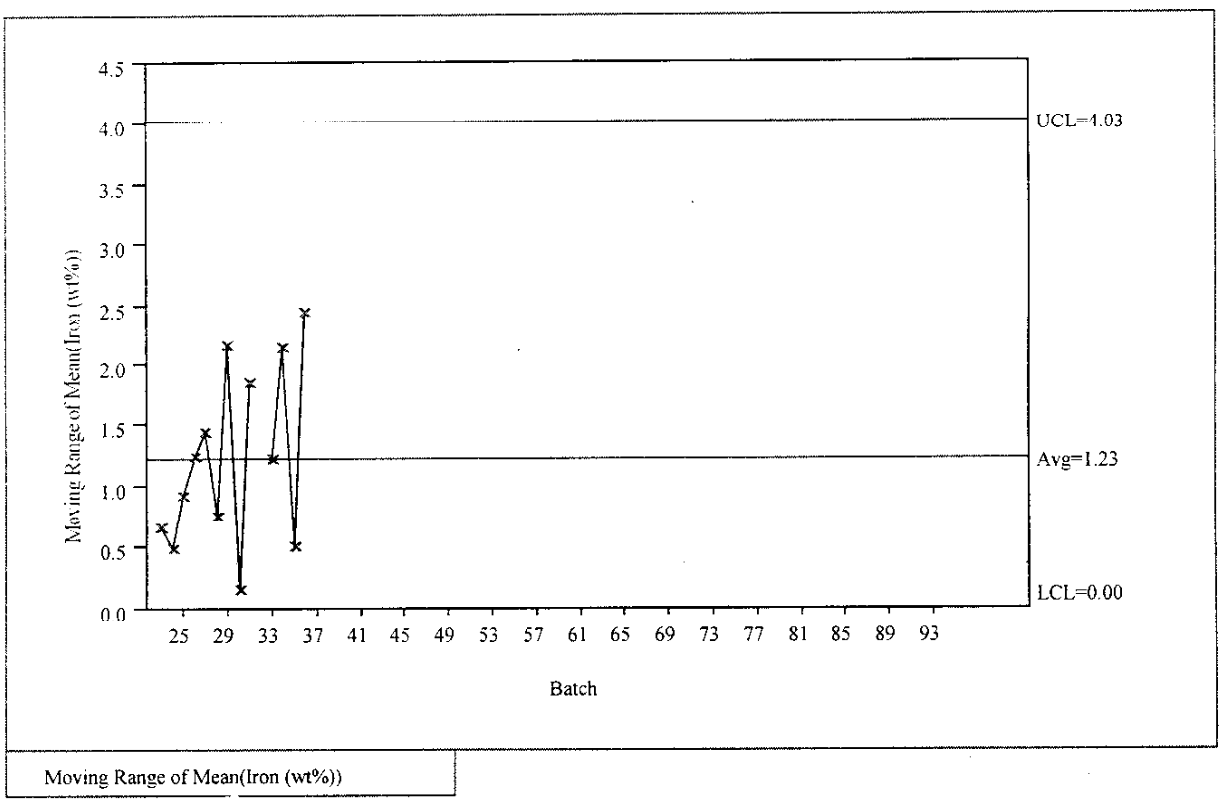
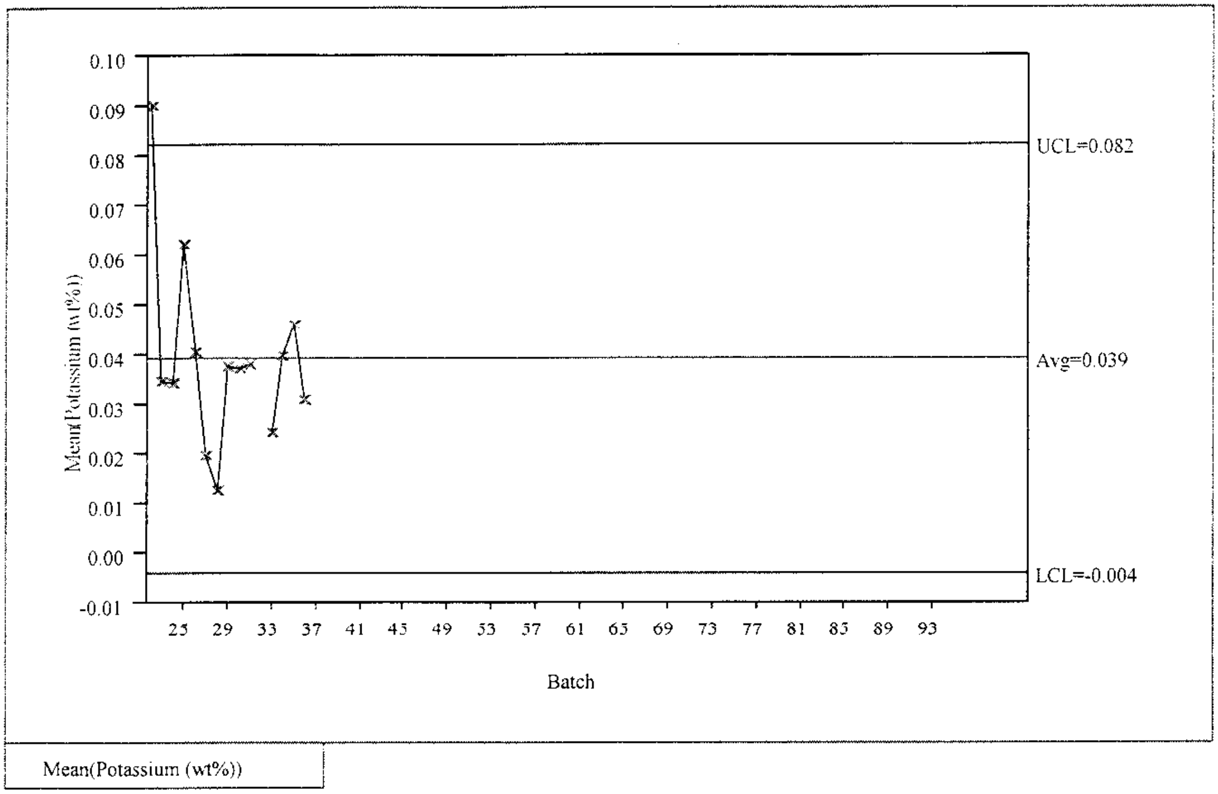


Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte



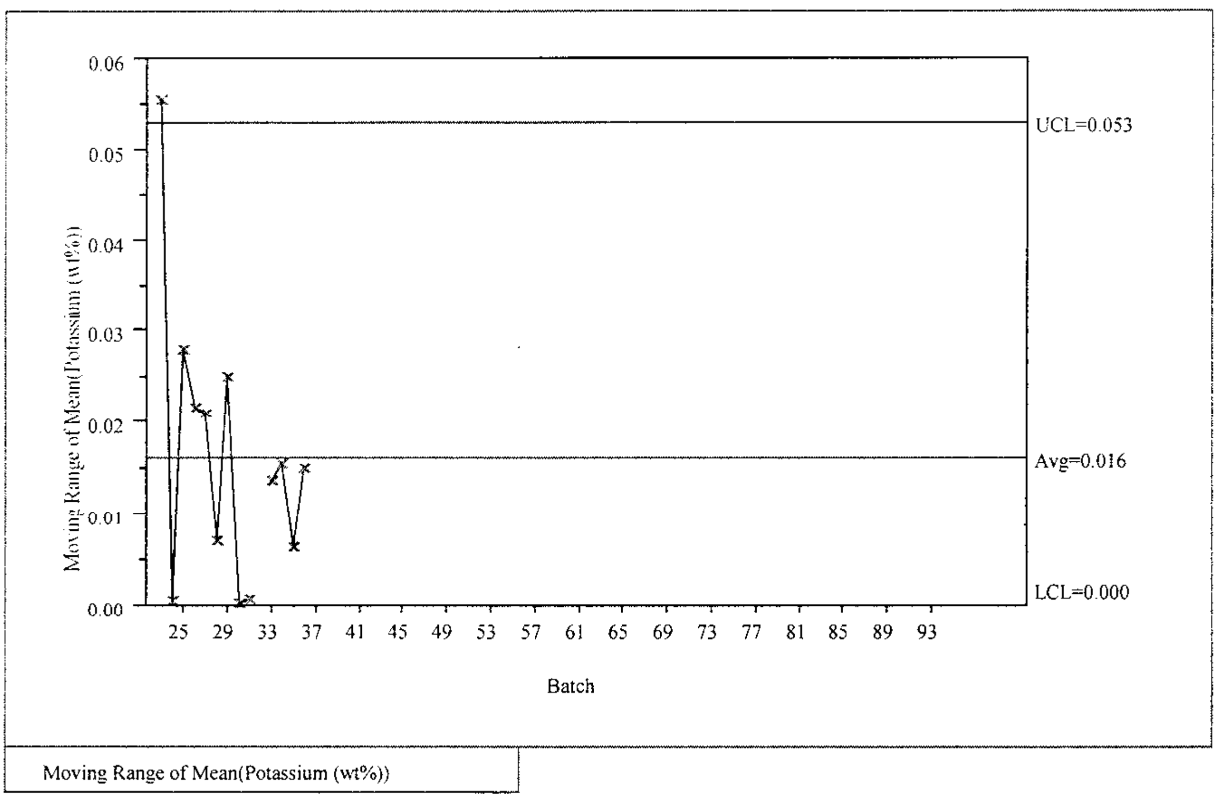
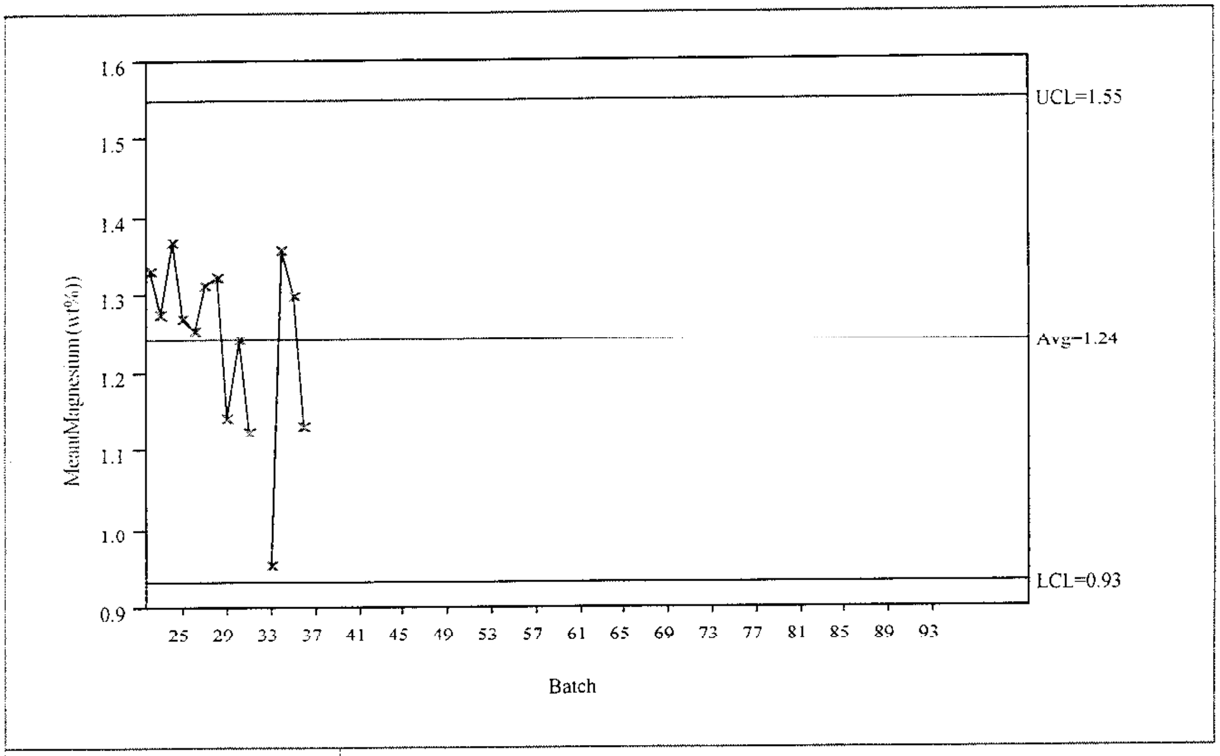
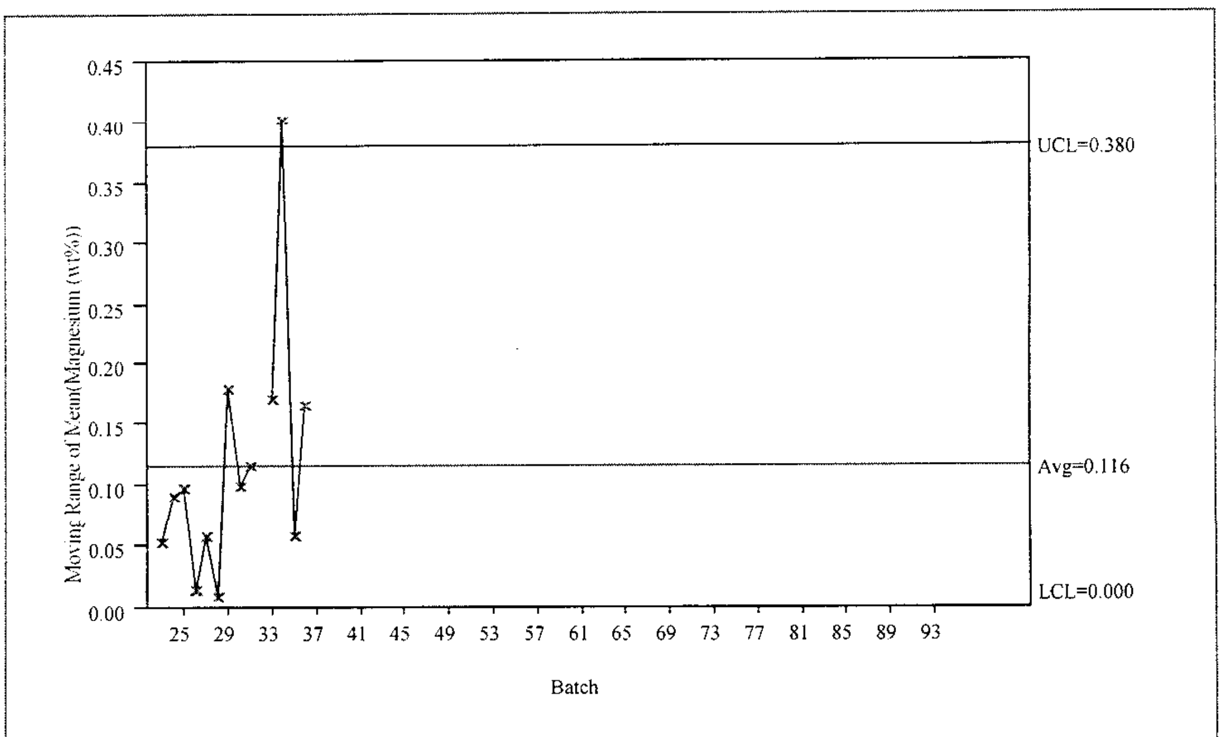


Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

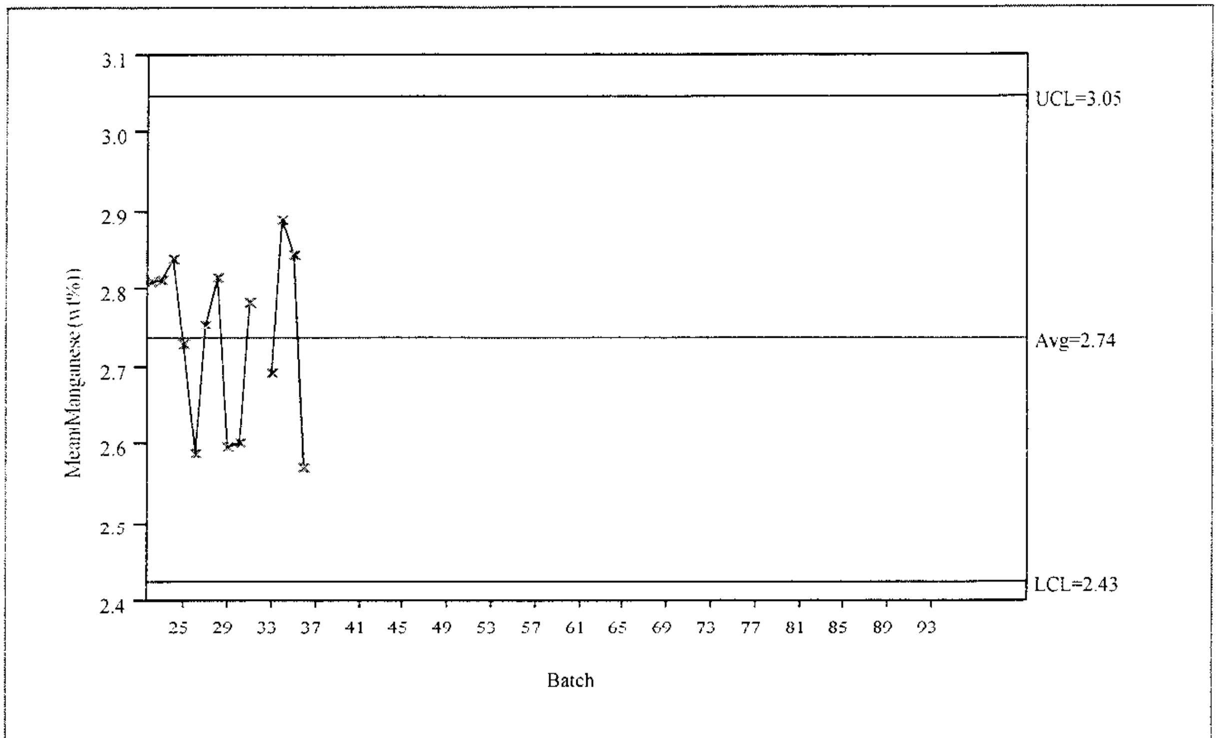


Mean(Magnesium (wt%))

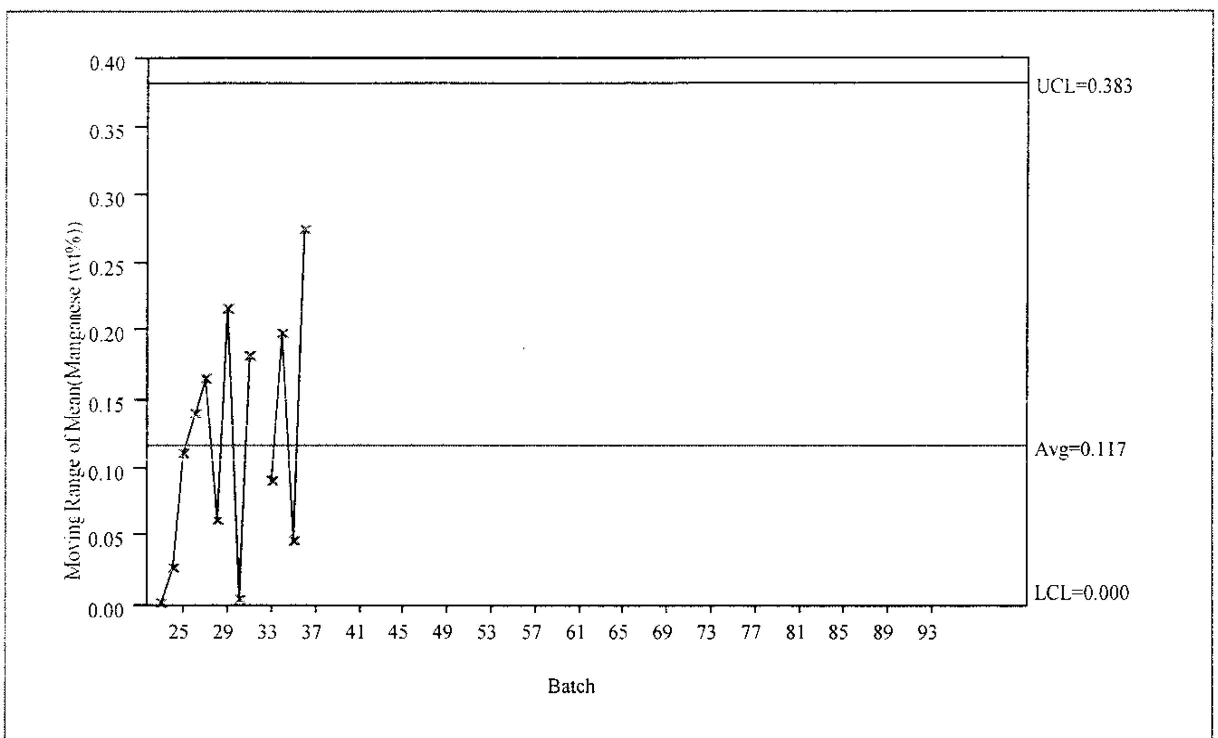


Moving Range of Mean(Magnesium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

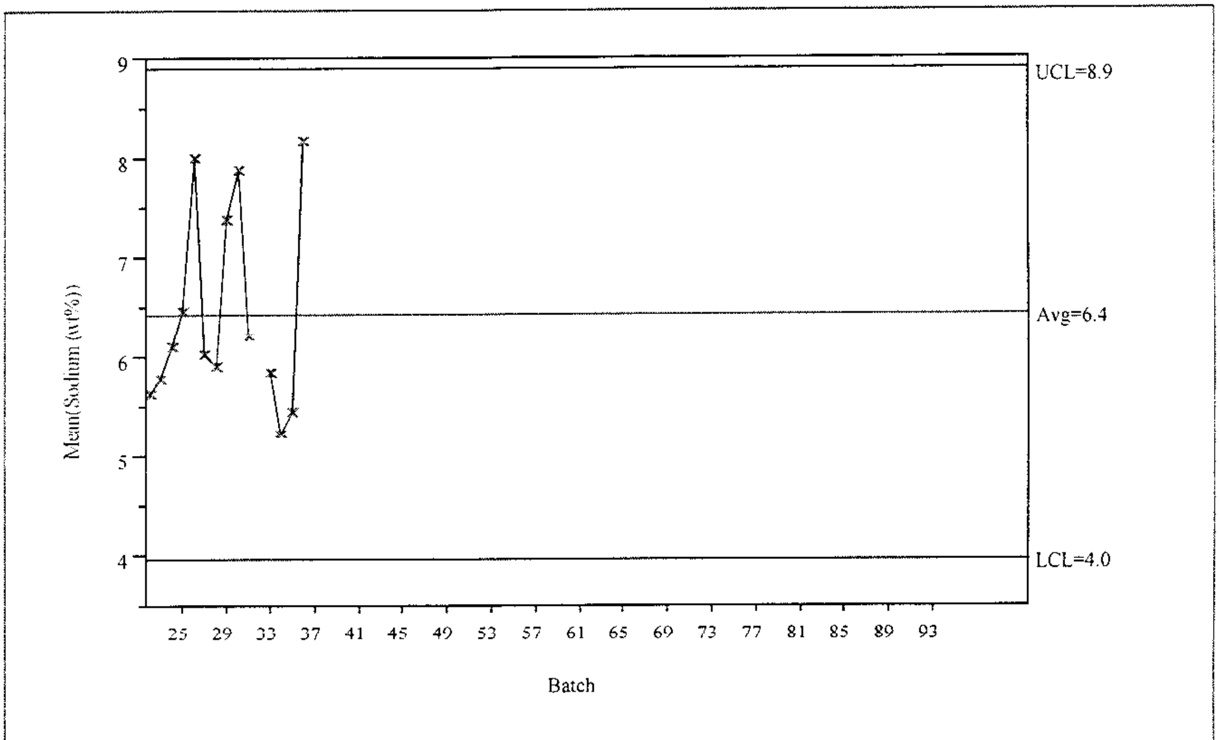


Mean(Manganese (wt%))

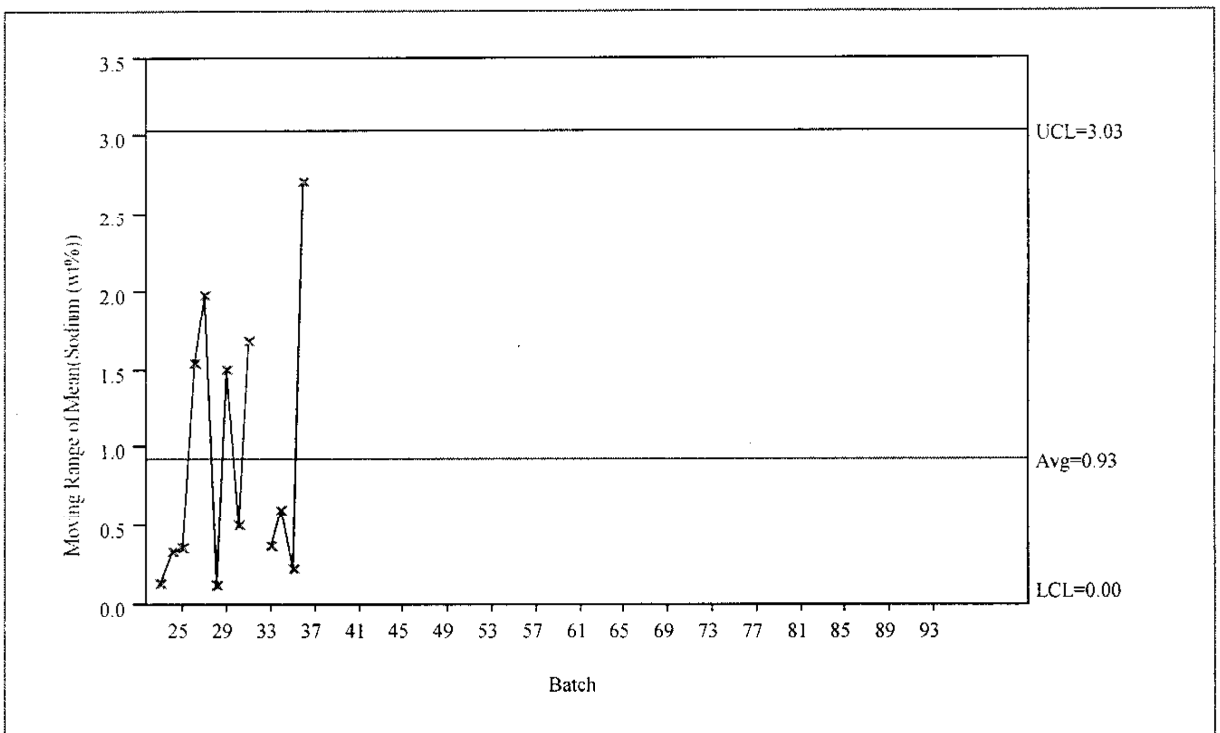


Moving Range of Mean(Manganese (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

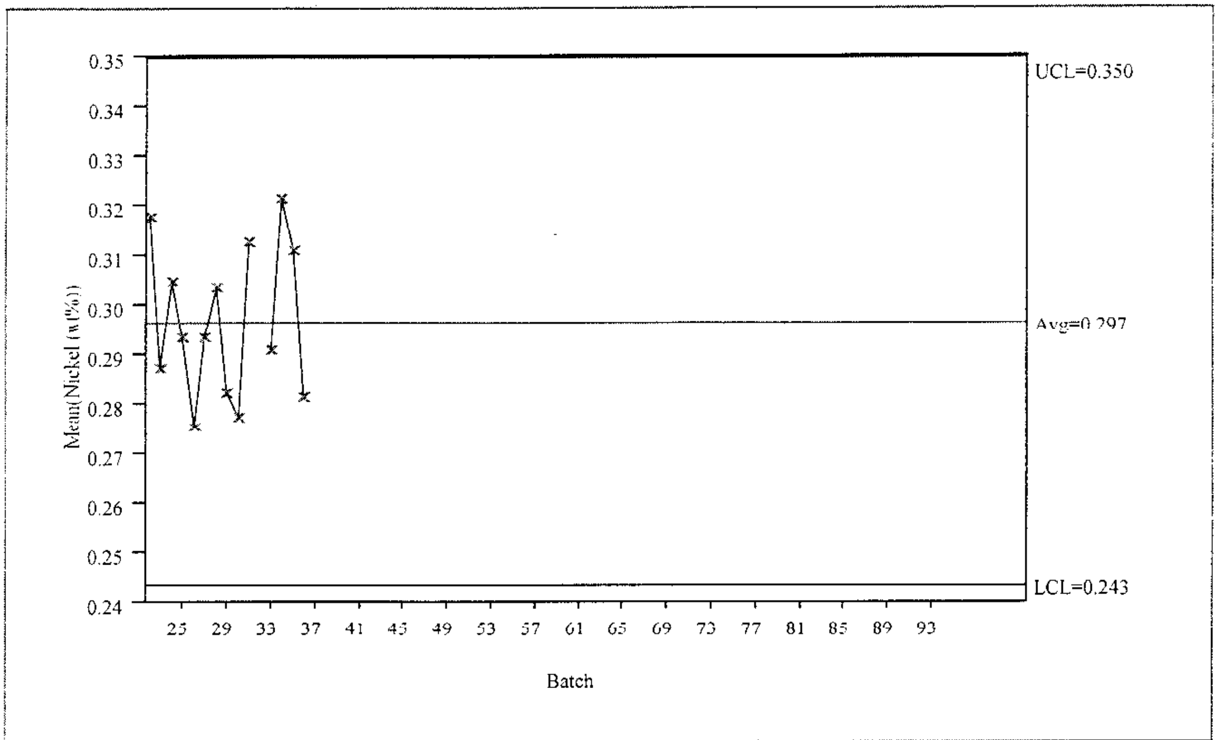


Mean(Sodium (wt%))

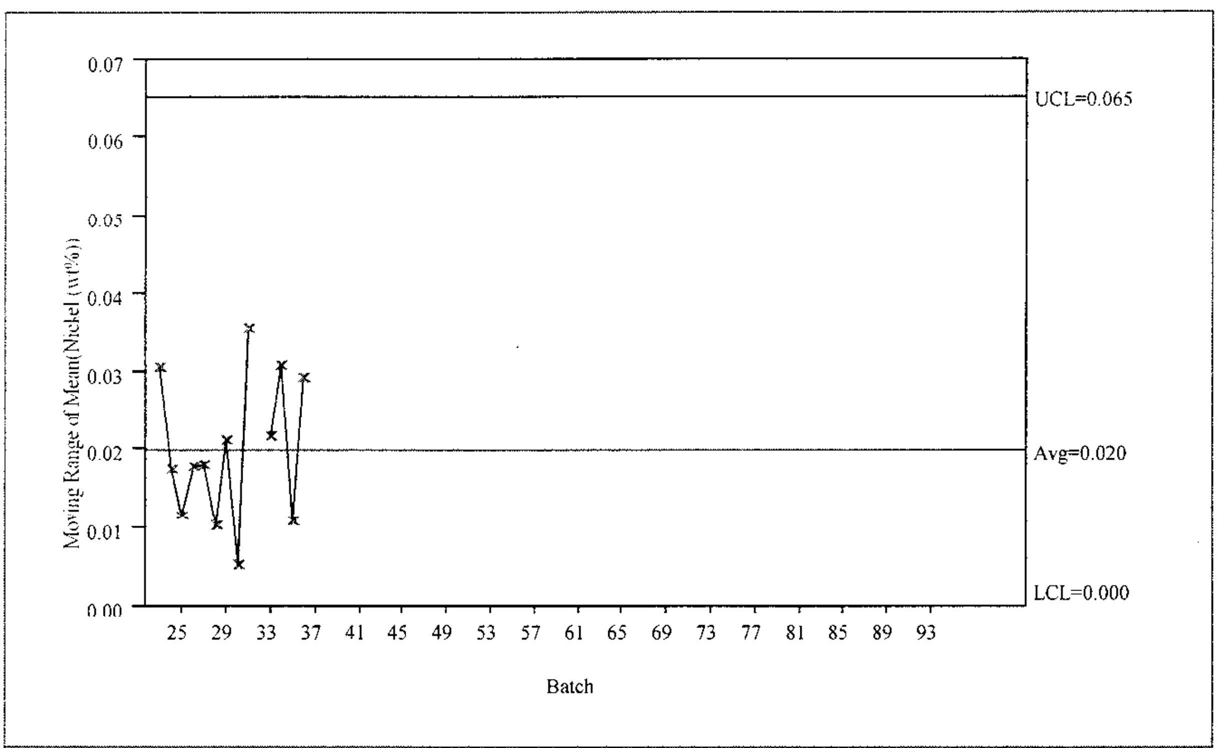


Moving Range of Mean(Sodium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

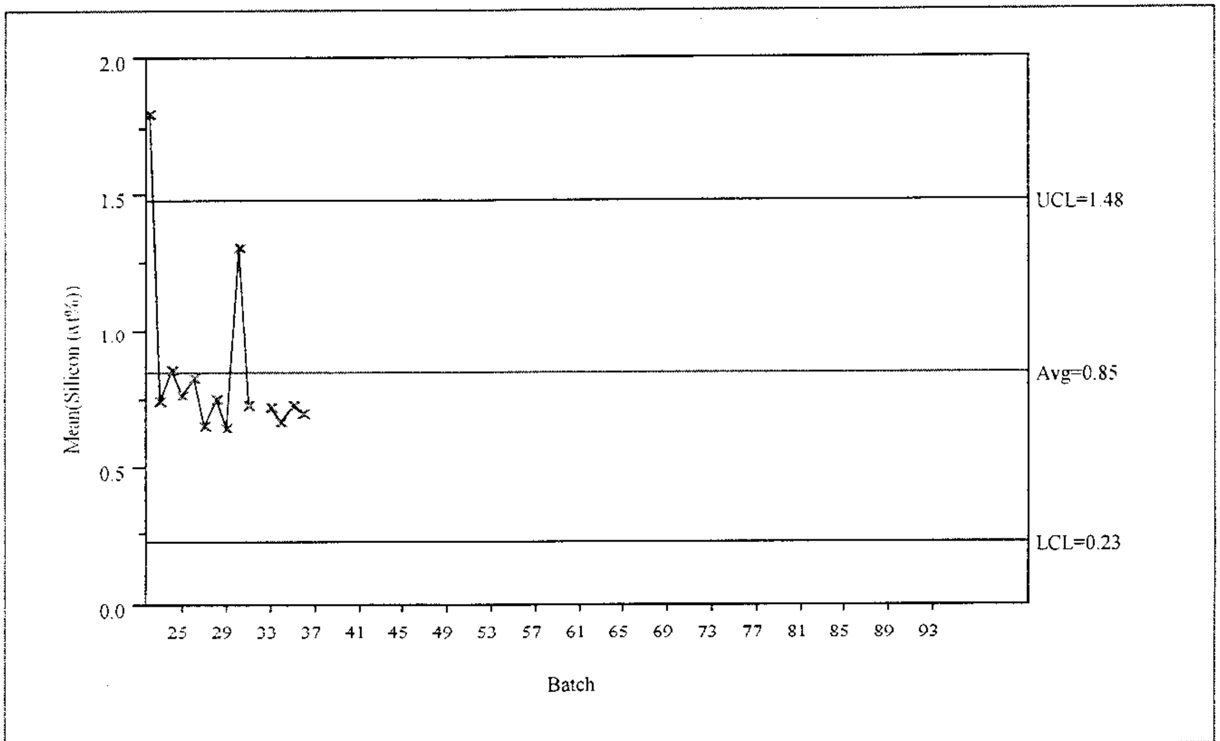


Mean(Nickel (wt%))

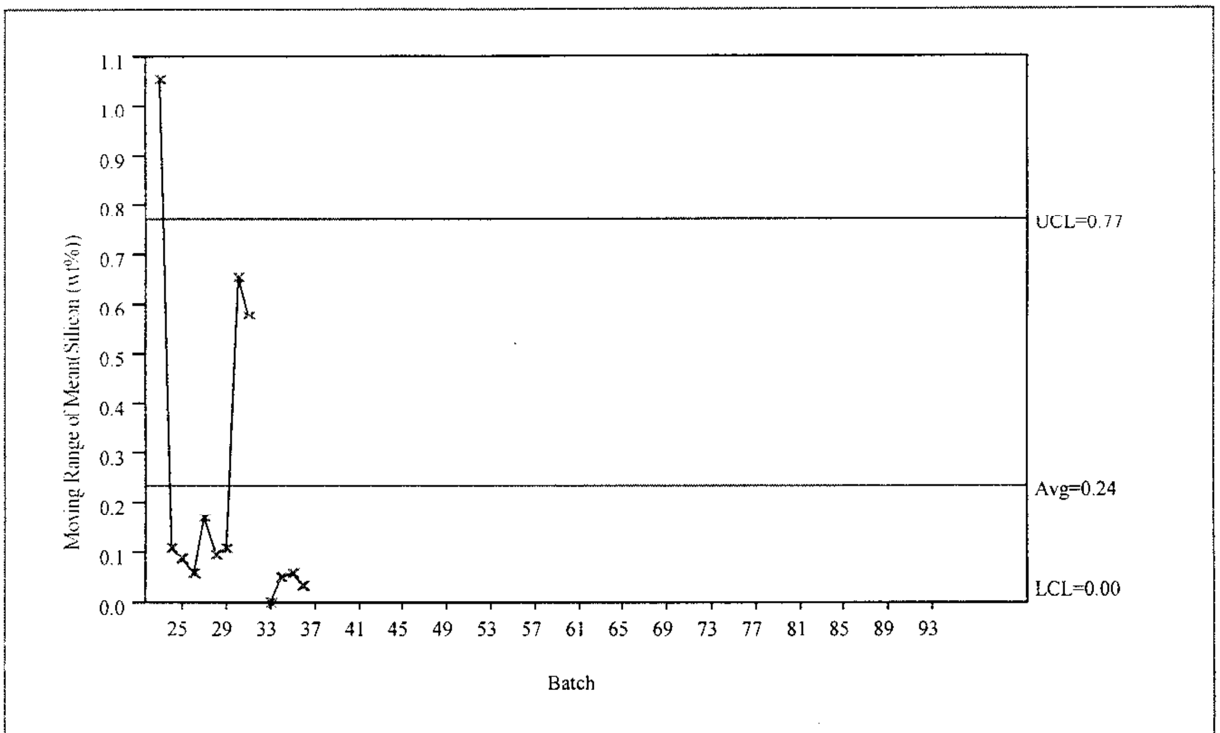


Moving Range of Mean(Nickel (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

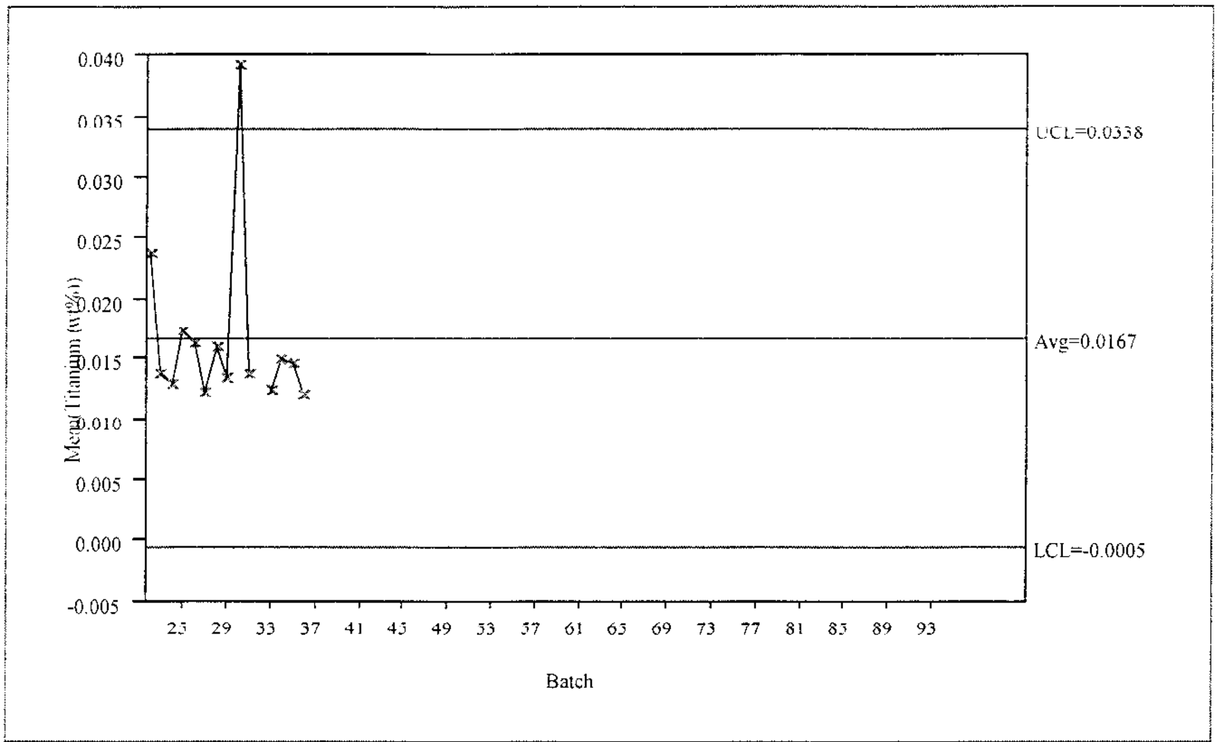


Mean(Silicon (wt%))

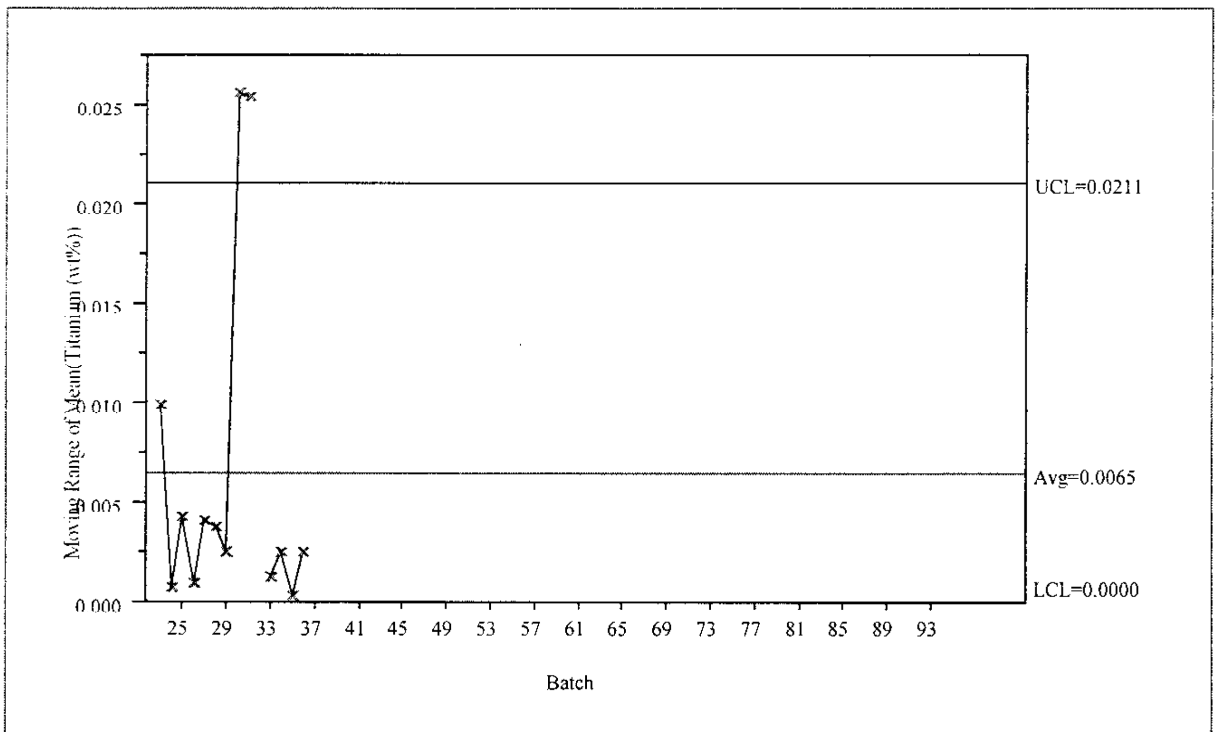


Moving Range of Mean(Silicon (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

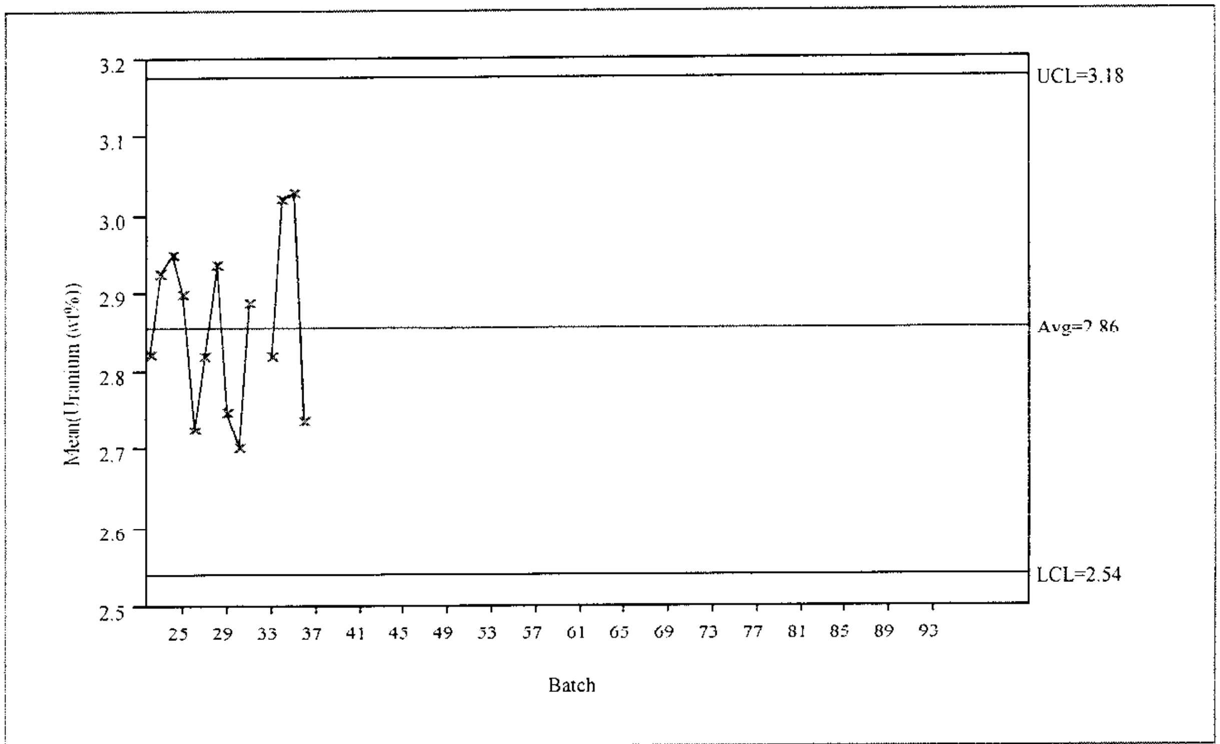


Mean(Titanium (wt%))

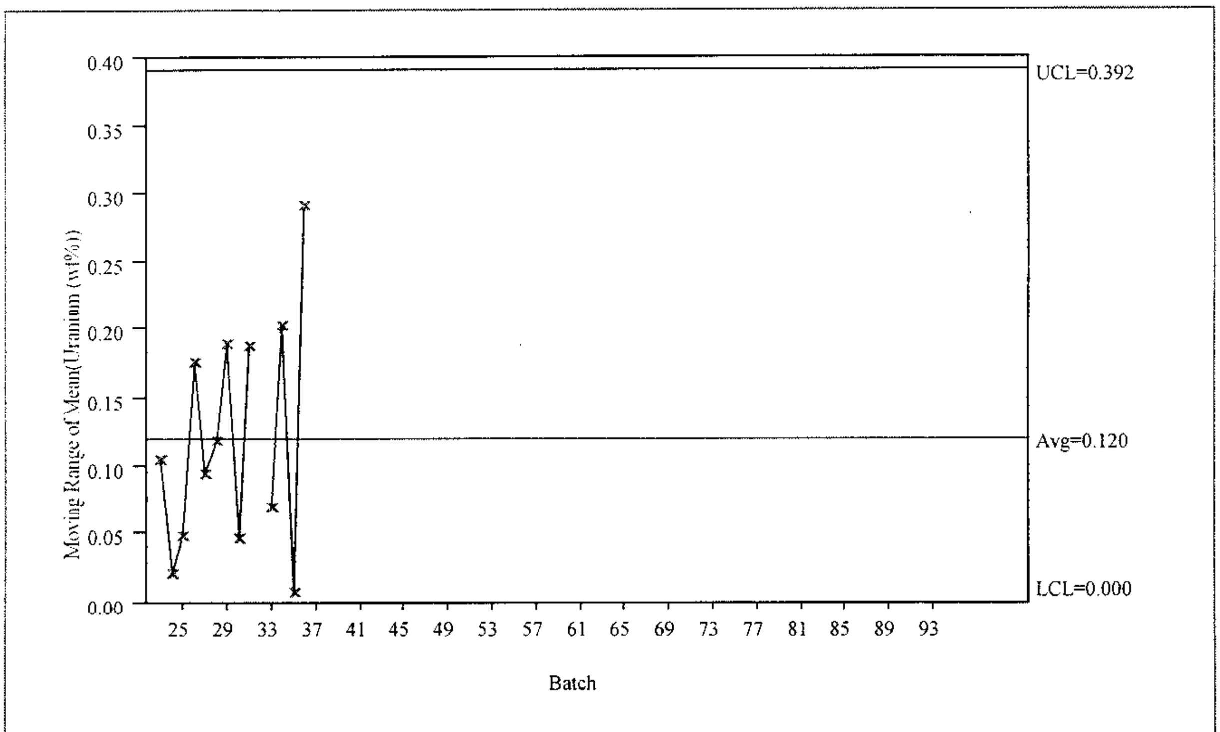


Moving Range of Mean(Titanium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

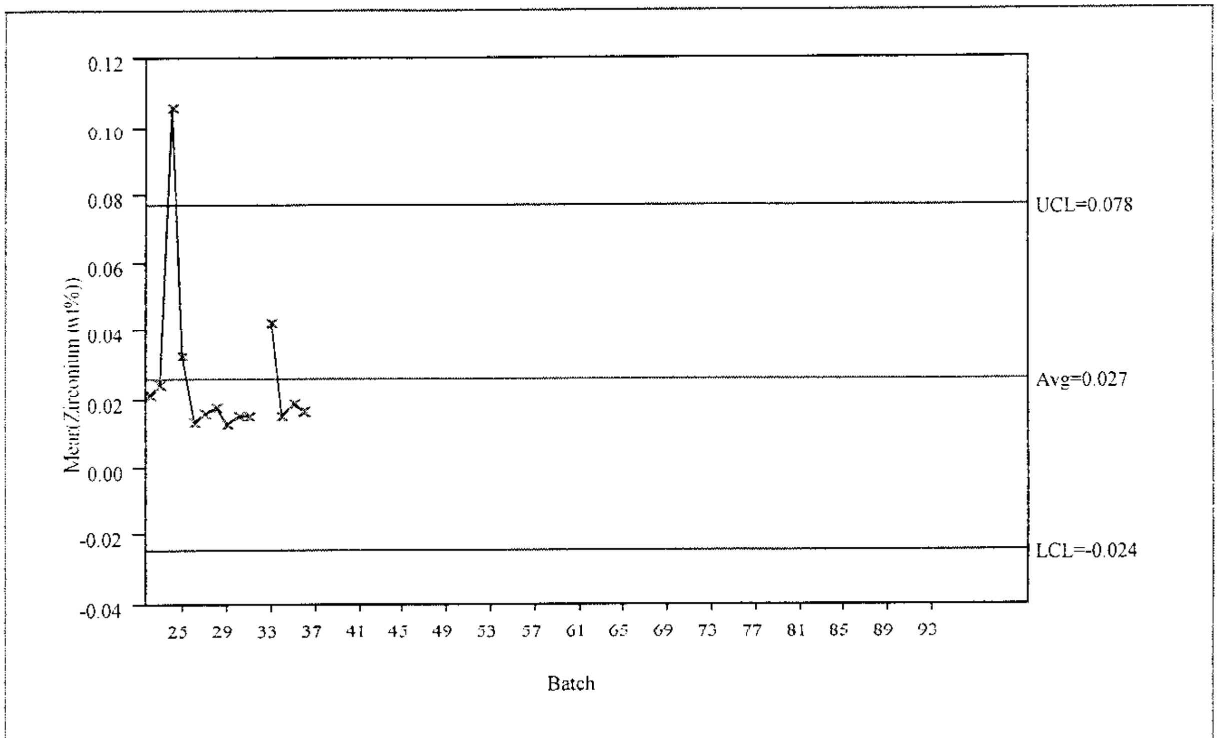


Mean(Uranium (wt%))

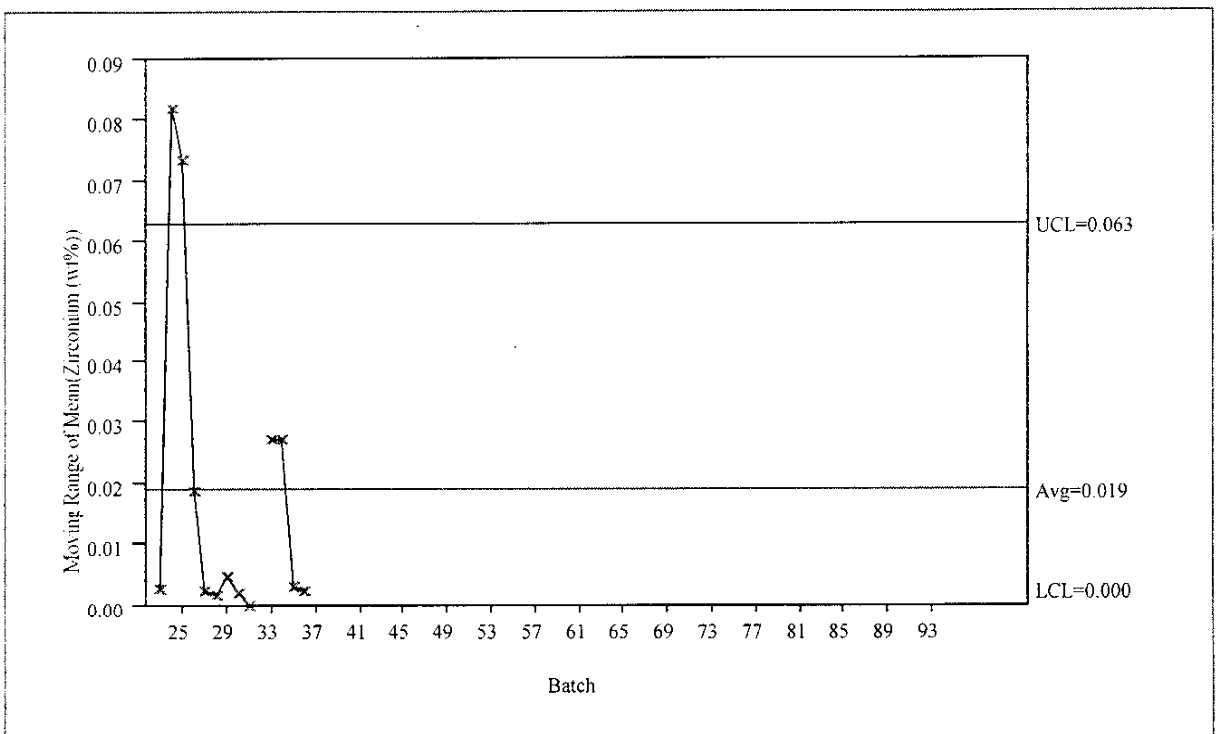


Moving Range of Mean(Uranium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

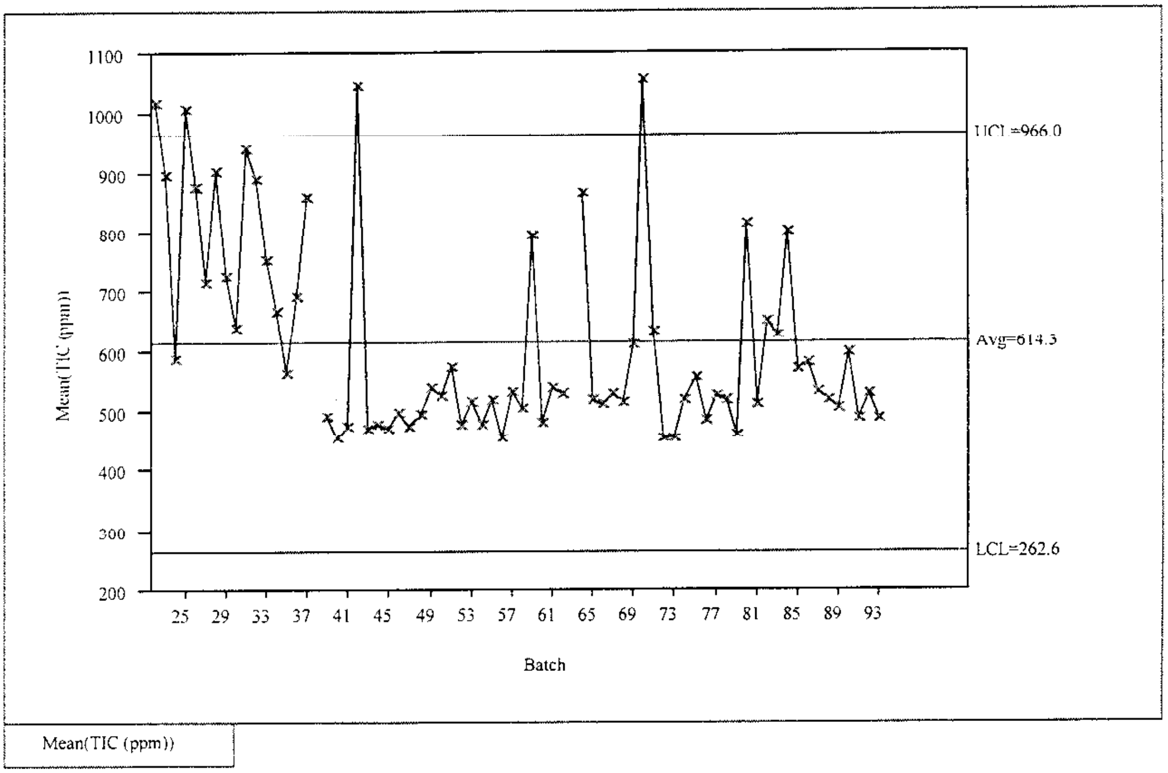


Mean(Zirconium (wt%))



Moving Range of Mean(Zirconium (wt%))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte



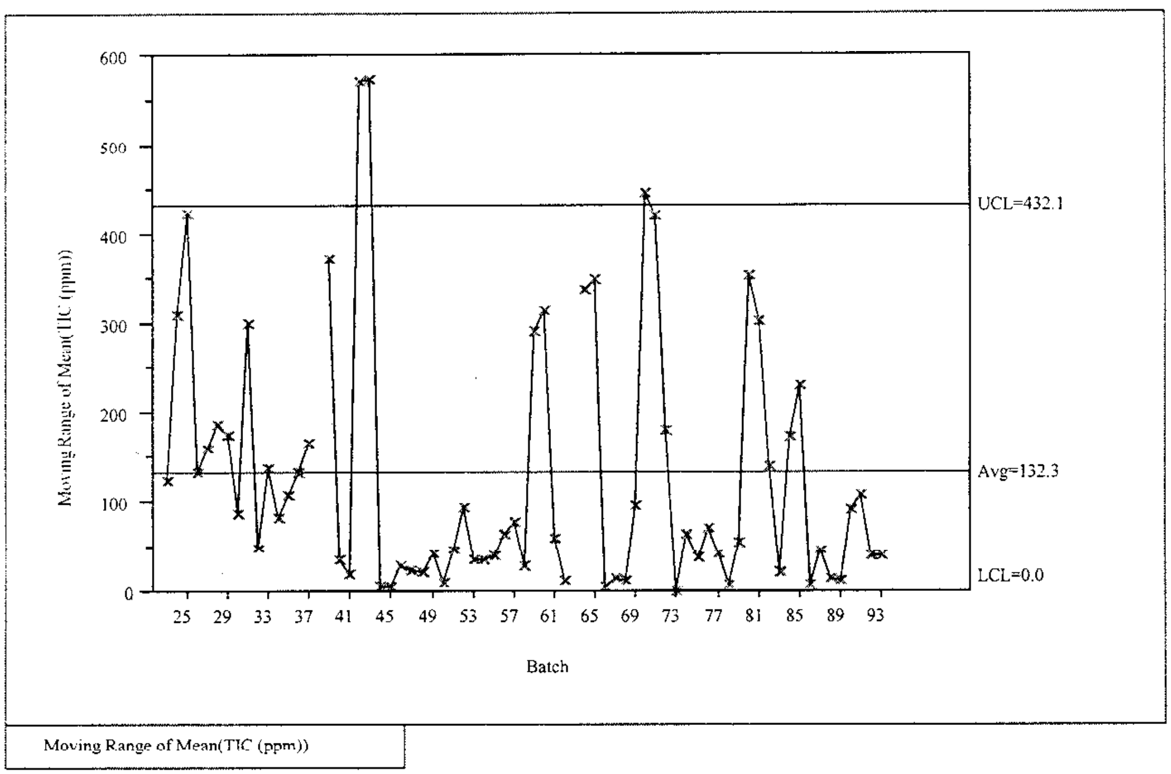
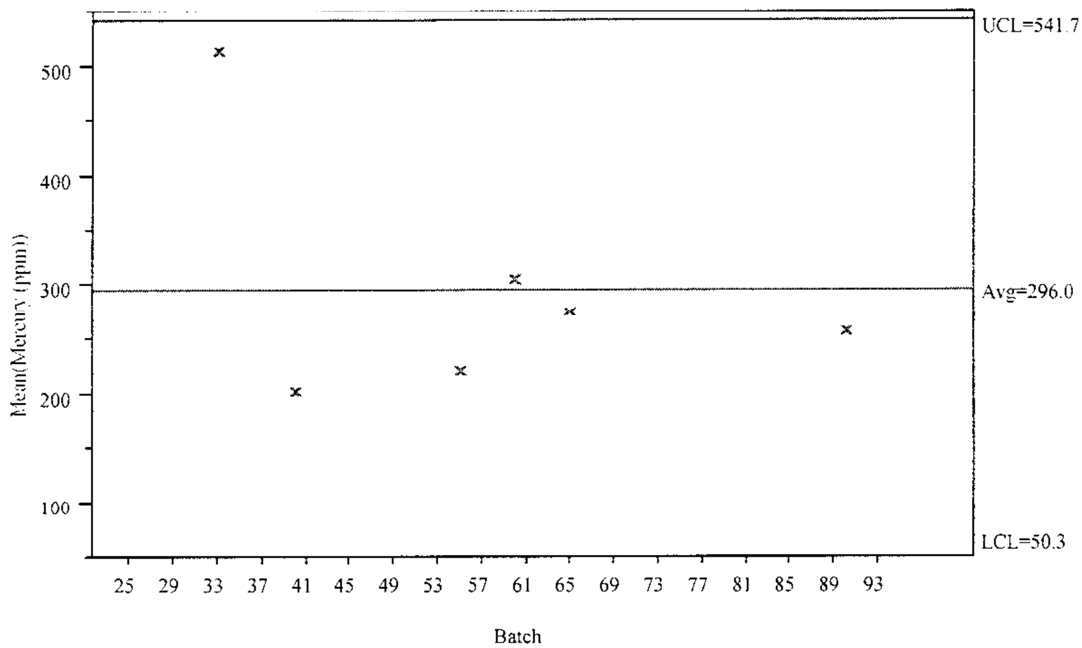
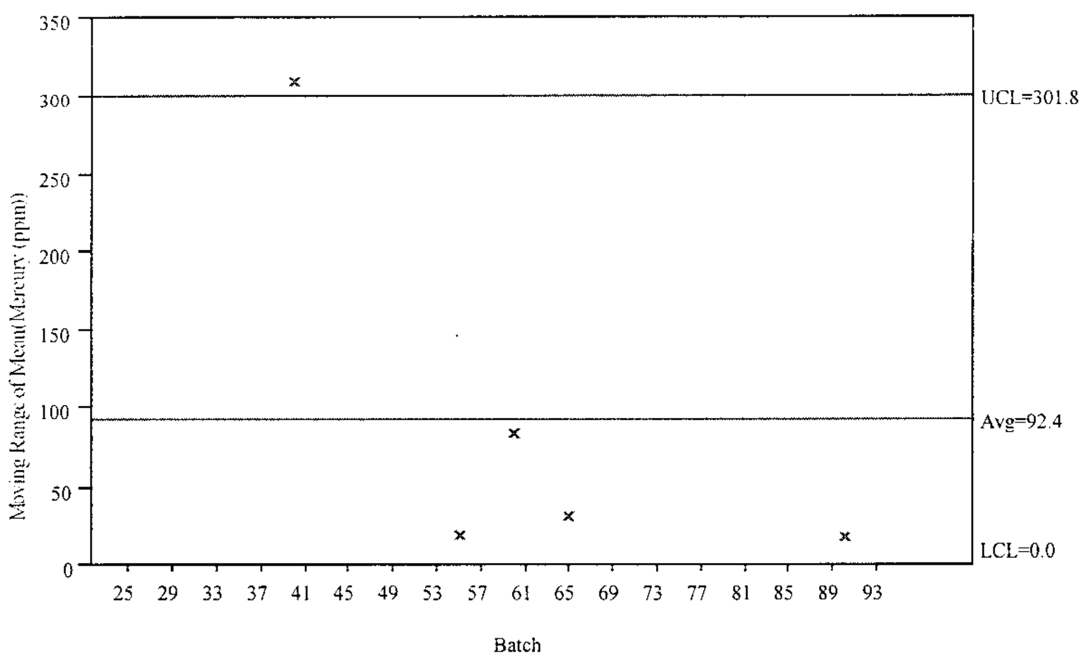


Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte

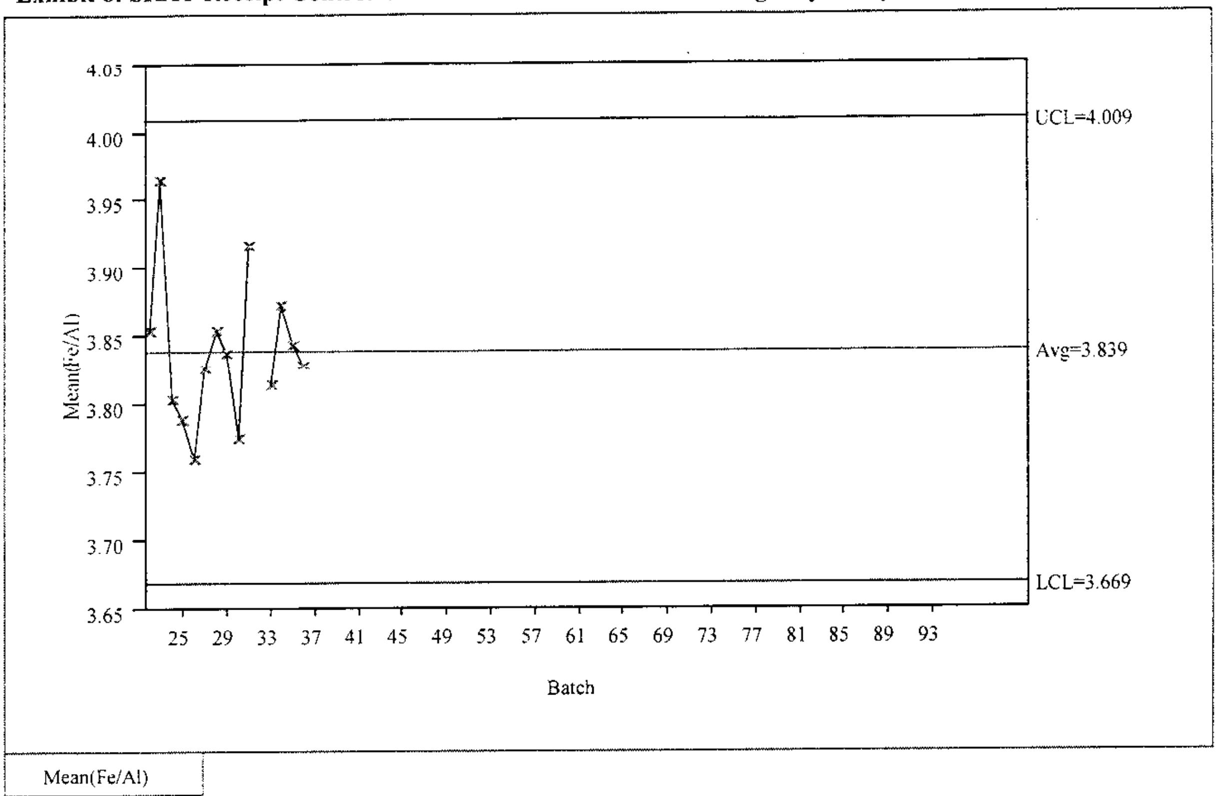


Mean(Mercury (ppm))



Moving Range of Mean(Mercury (ppm))

Exhibit 6: SRAT Receipt Control Charts for Individual Batch Averages by Analyte



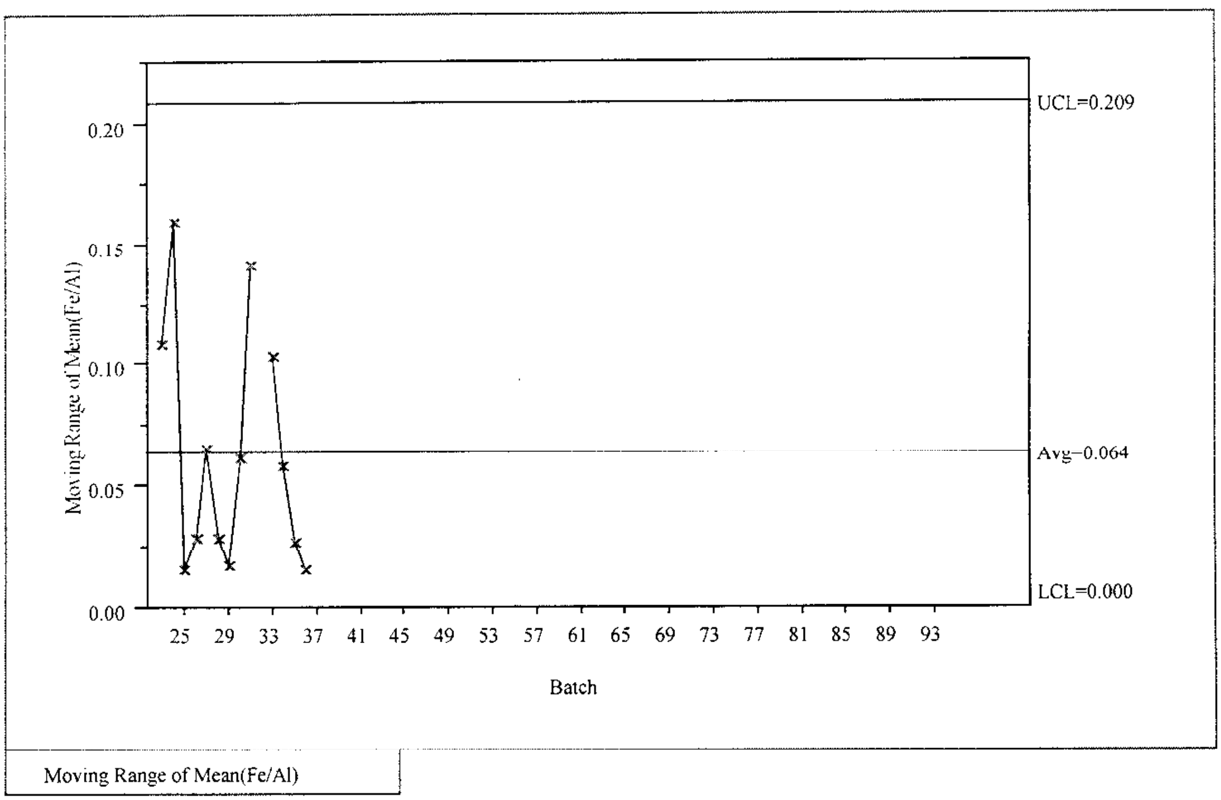
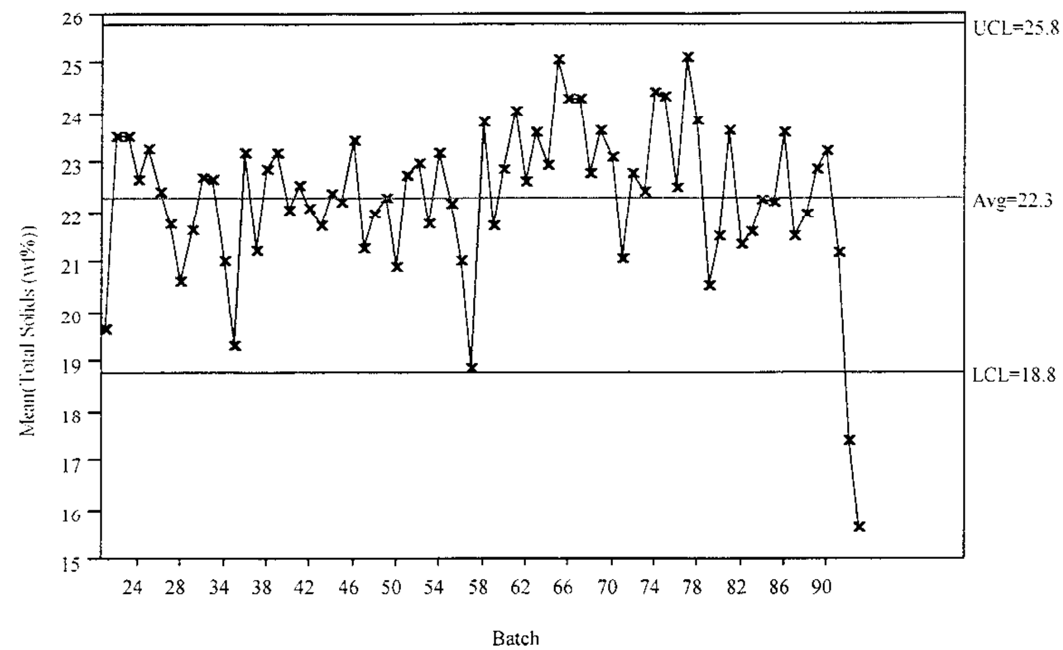
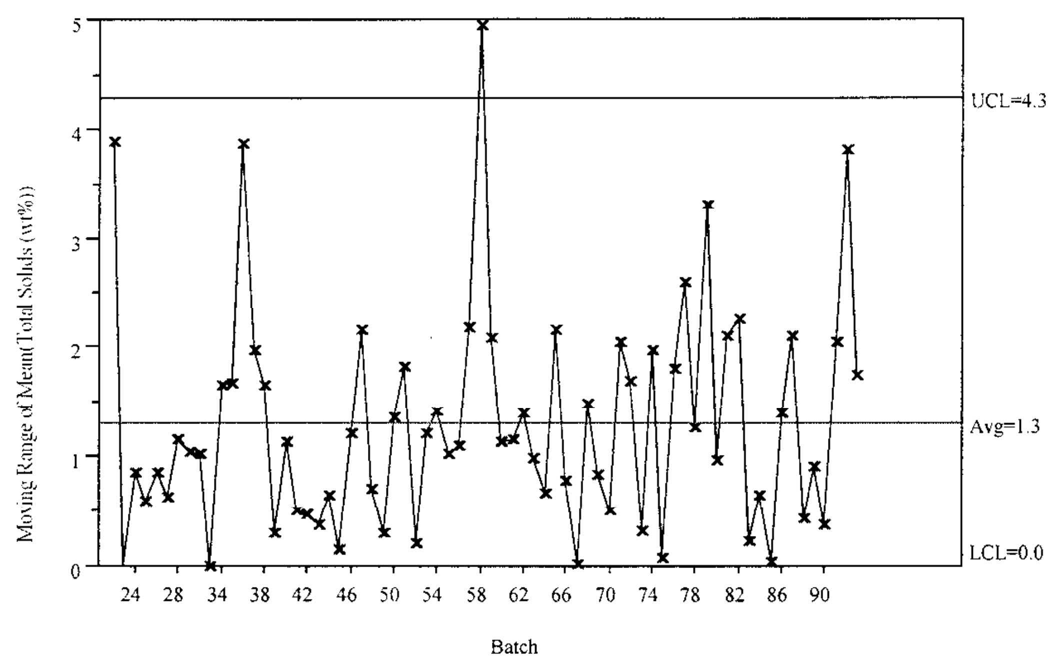


Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

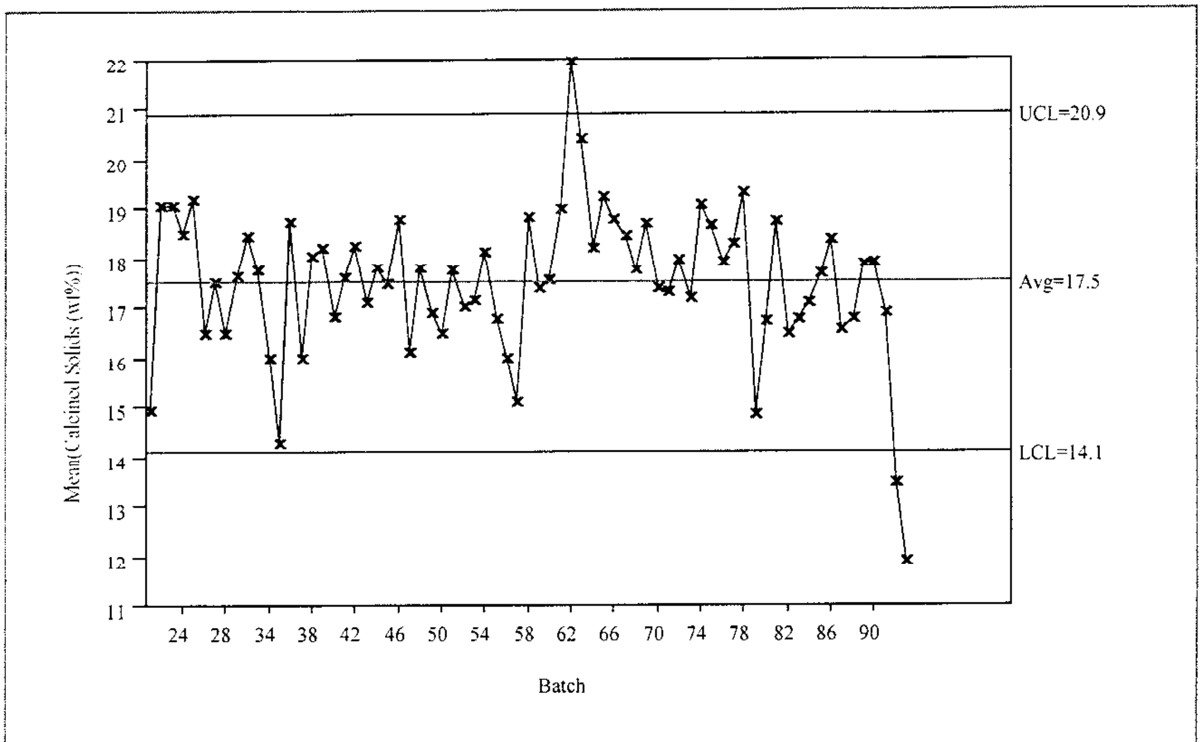


Mean(Total Solids (wt%))

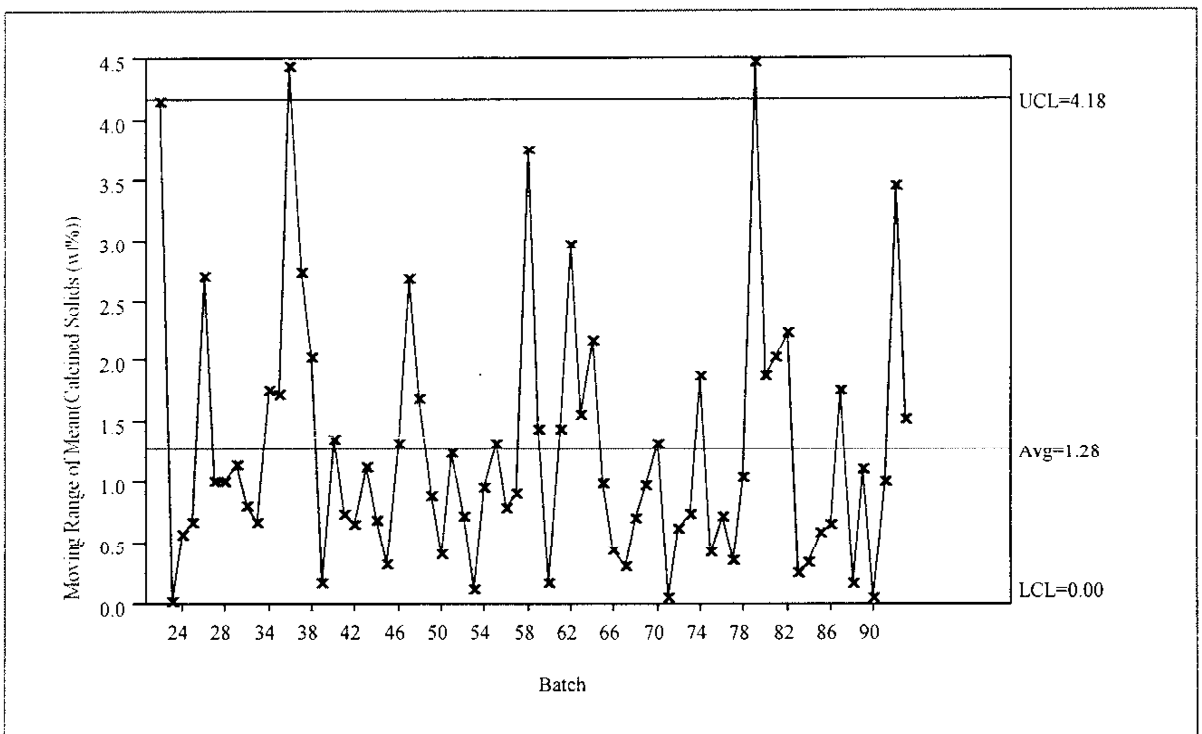


Moving Range of Mean(Total Solids (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

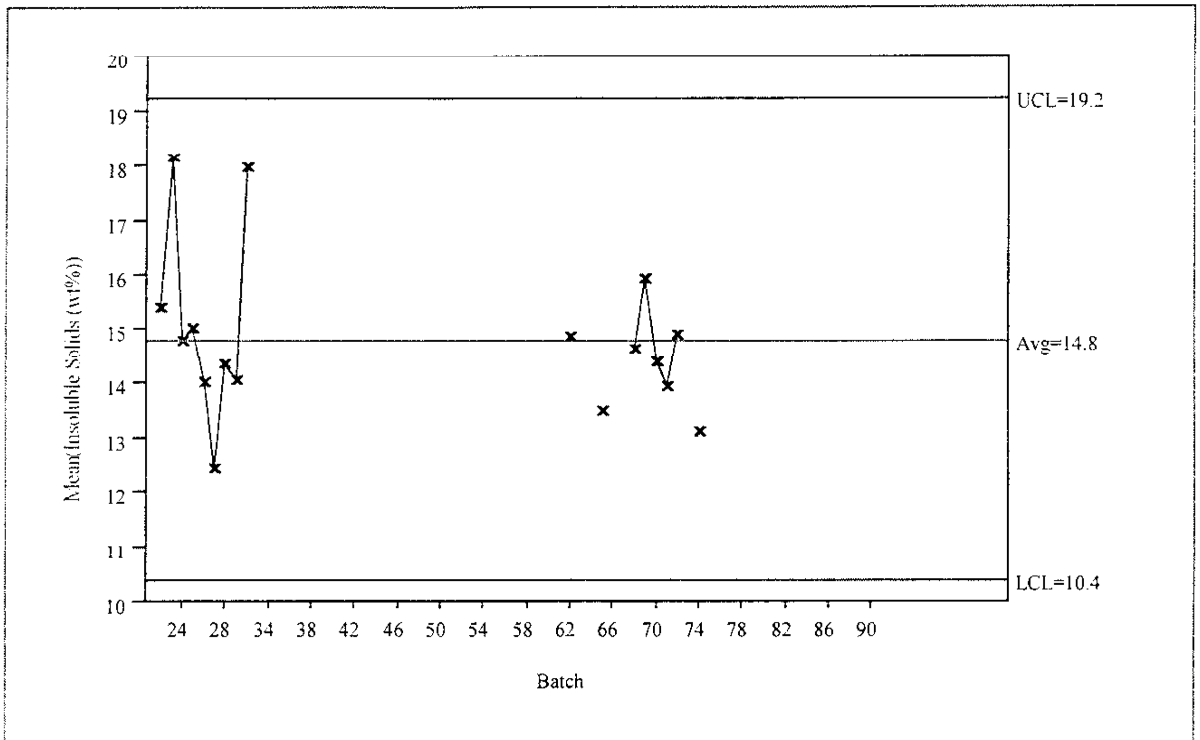


Mean(Calcined Solids (wt%))

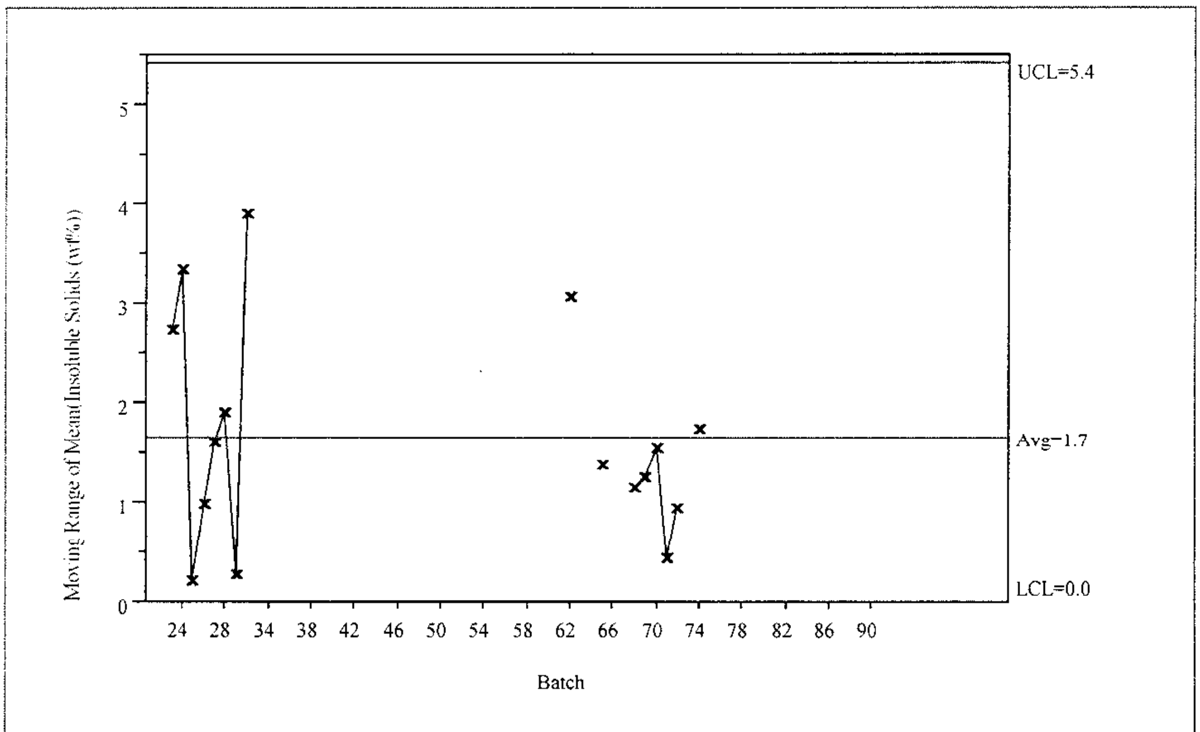


Moving Range of Mean(Calcined Solids (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

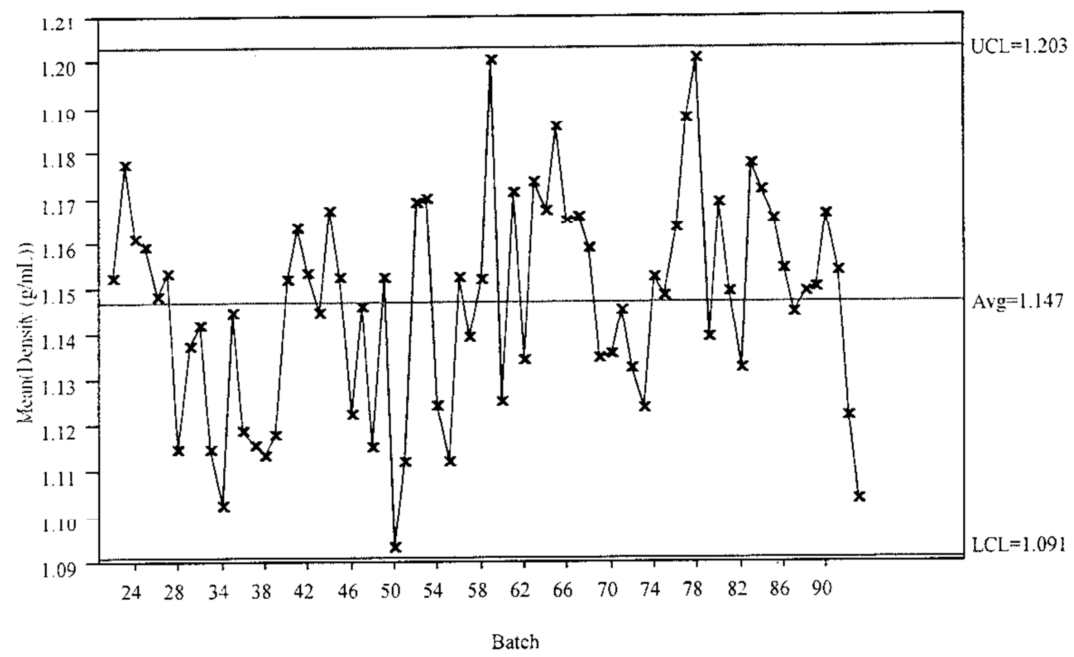


Mean(Insoluble Solids (wt%))

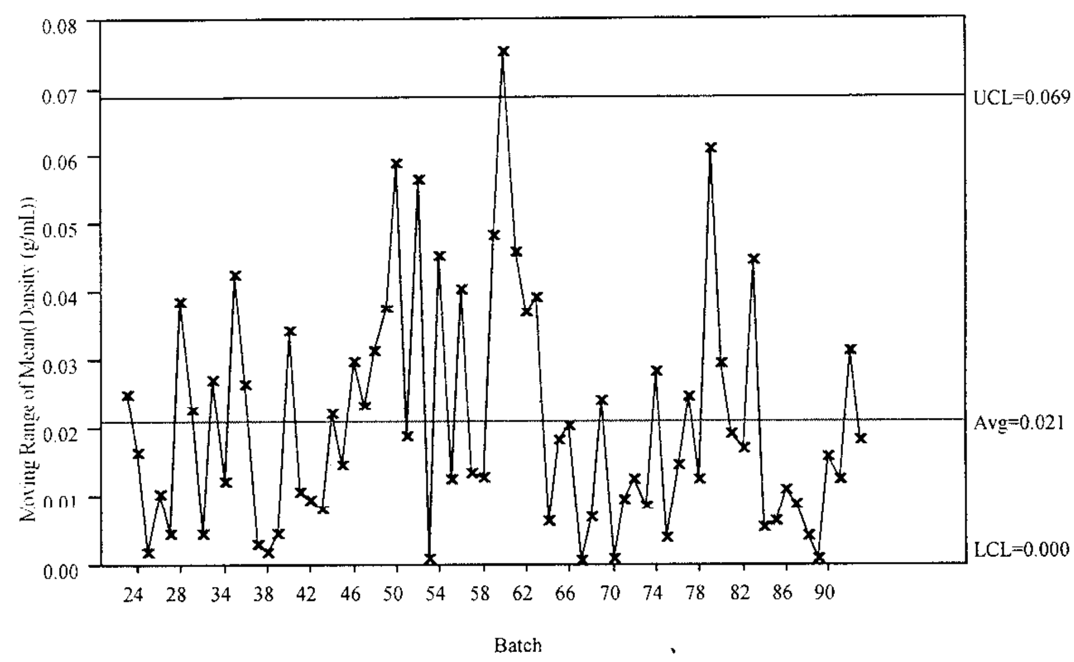


Moving Range of Mean(Insoluble Solids (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

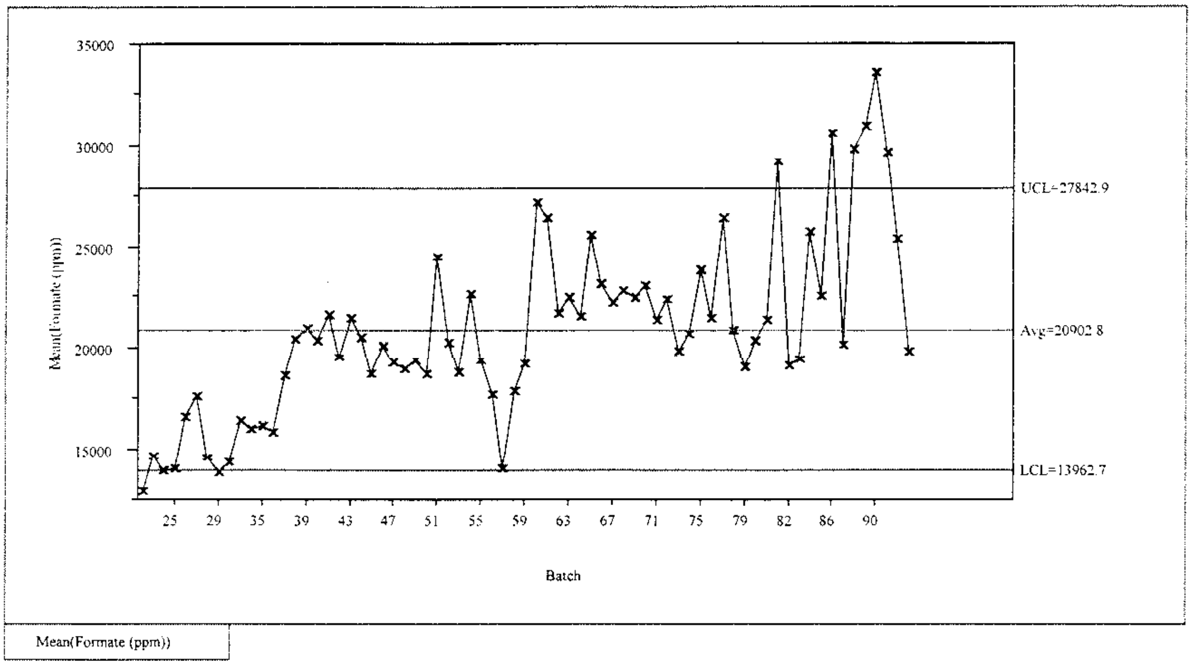


Mean(Density (g/mL))



Moving Range of Mean(Density (g/mL))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte



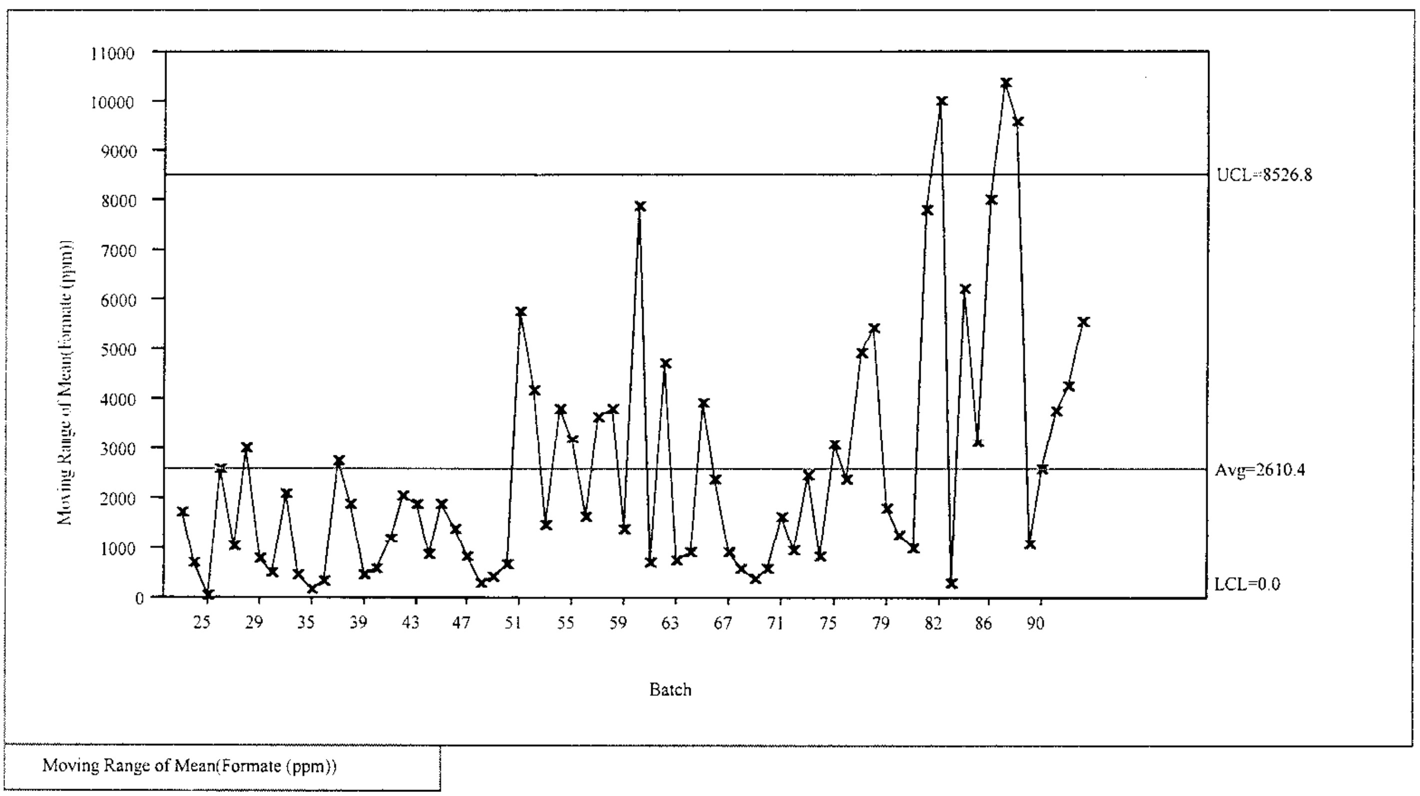
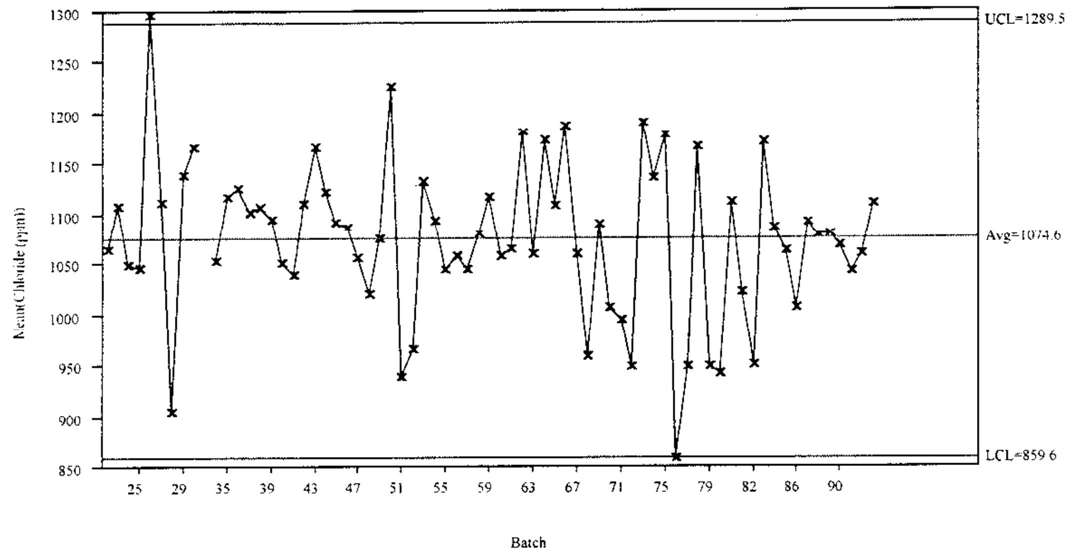
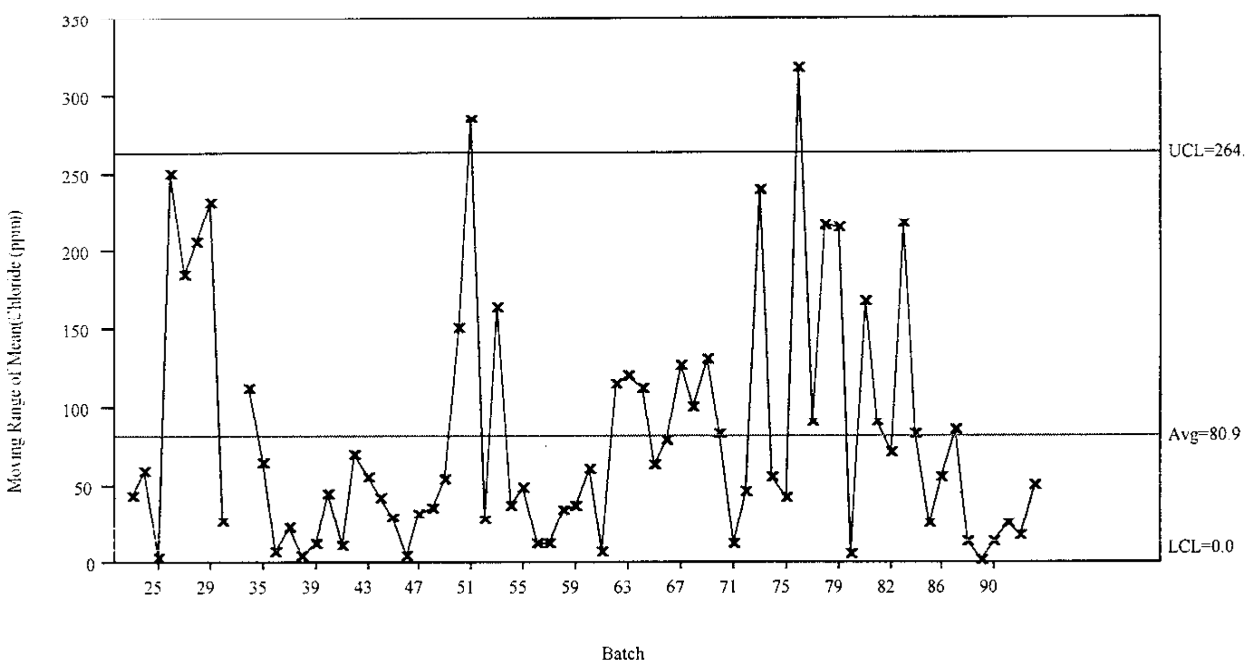


Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

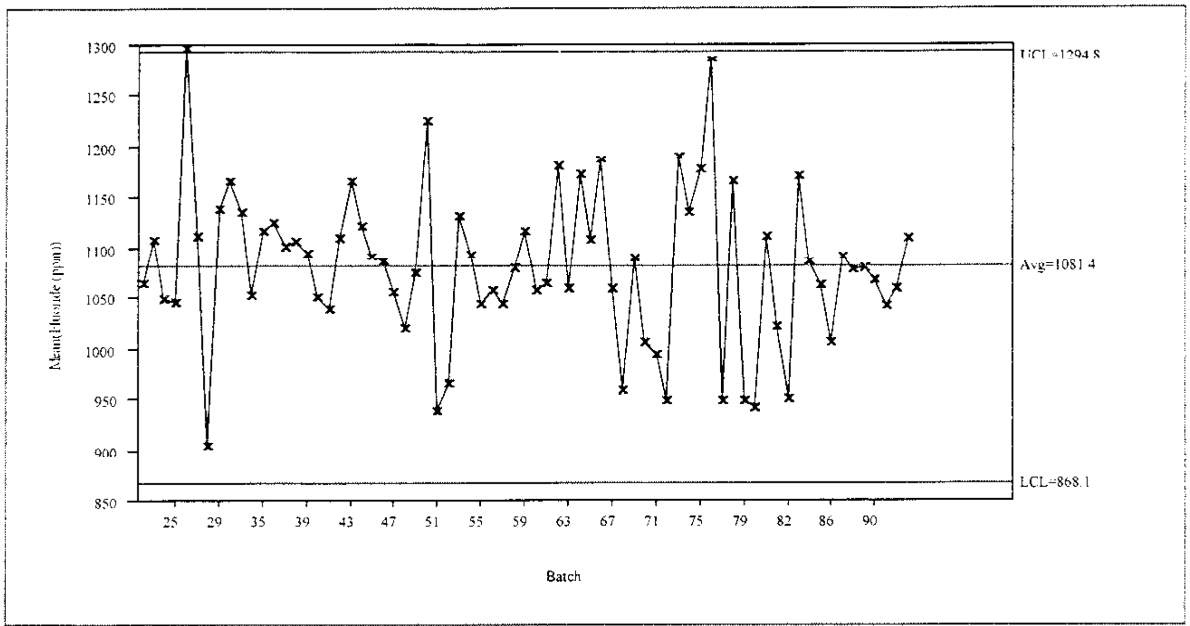


Mean(Chloride (ppm))

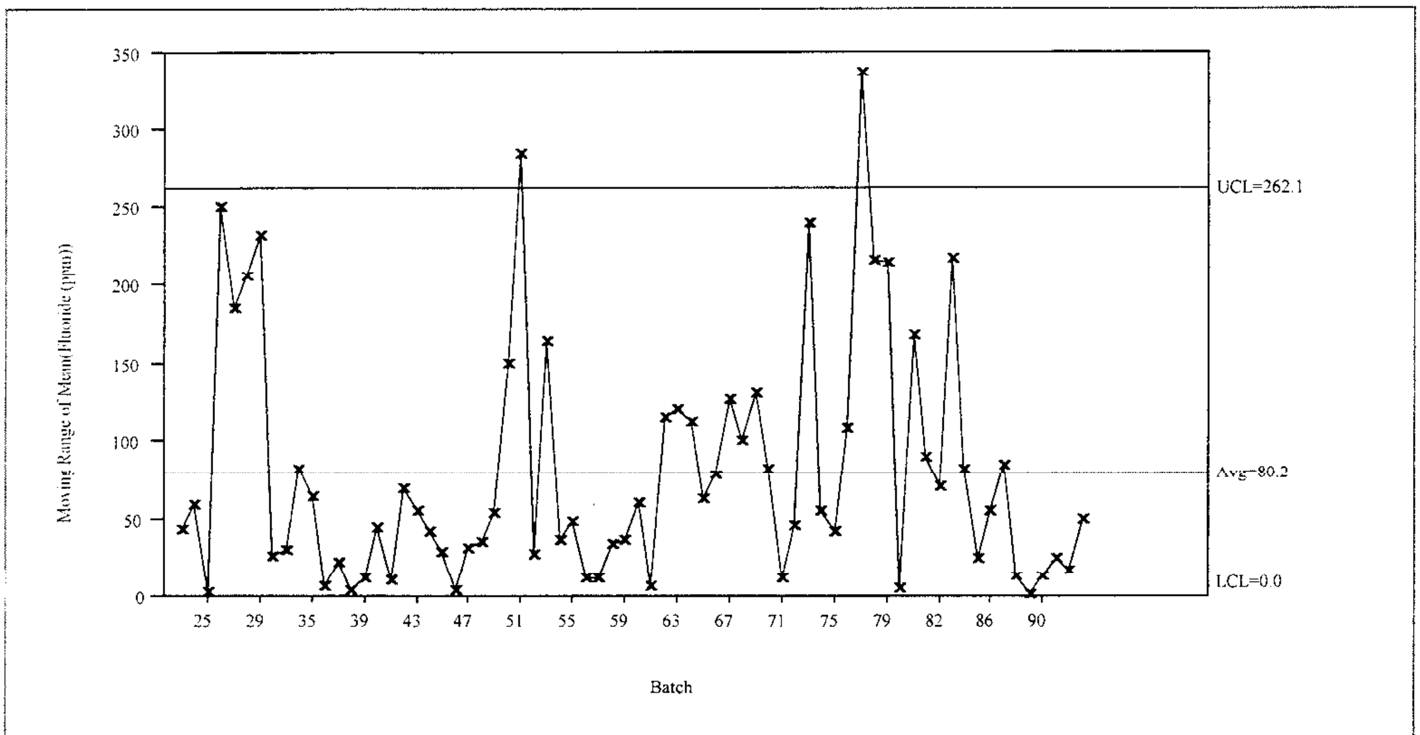


Moving Range of Mean(Chloride (ppm))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

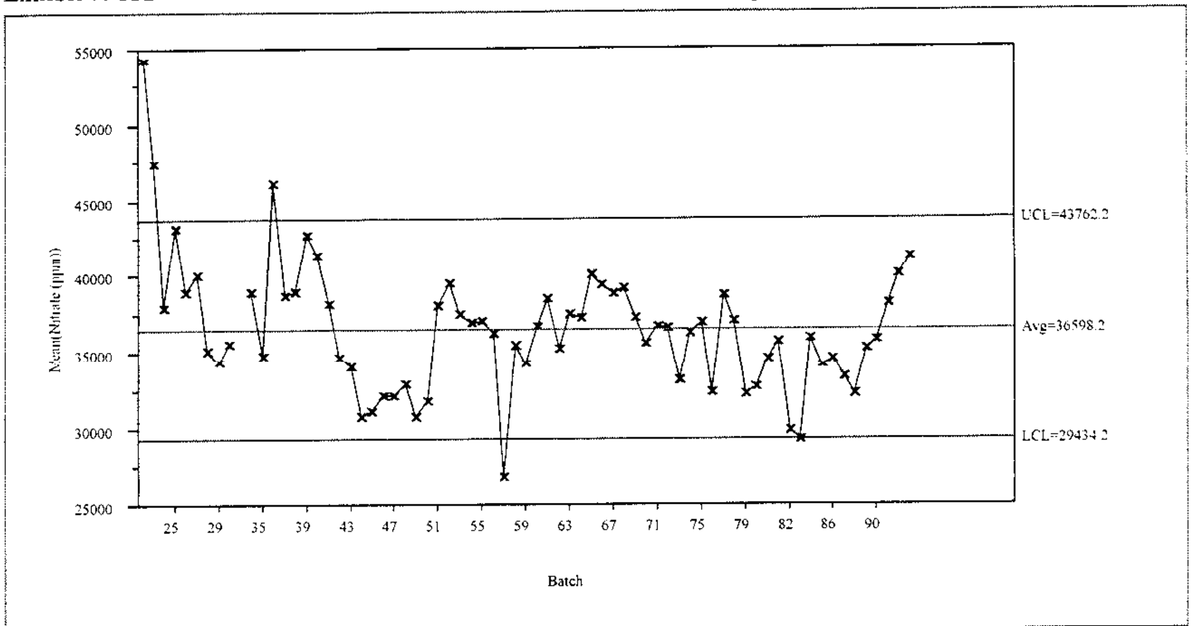


Mean(Fluoride (ppm))

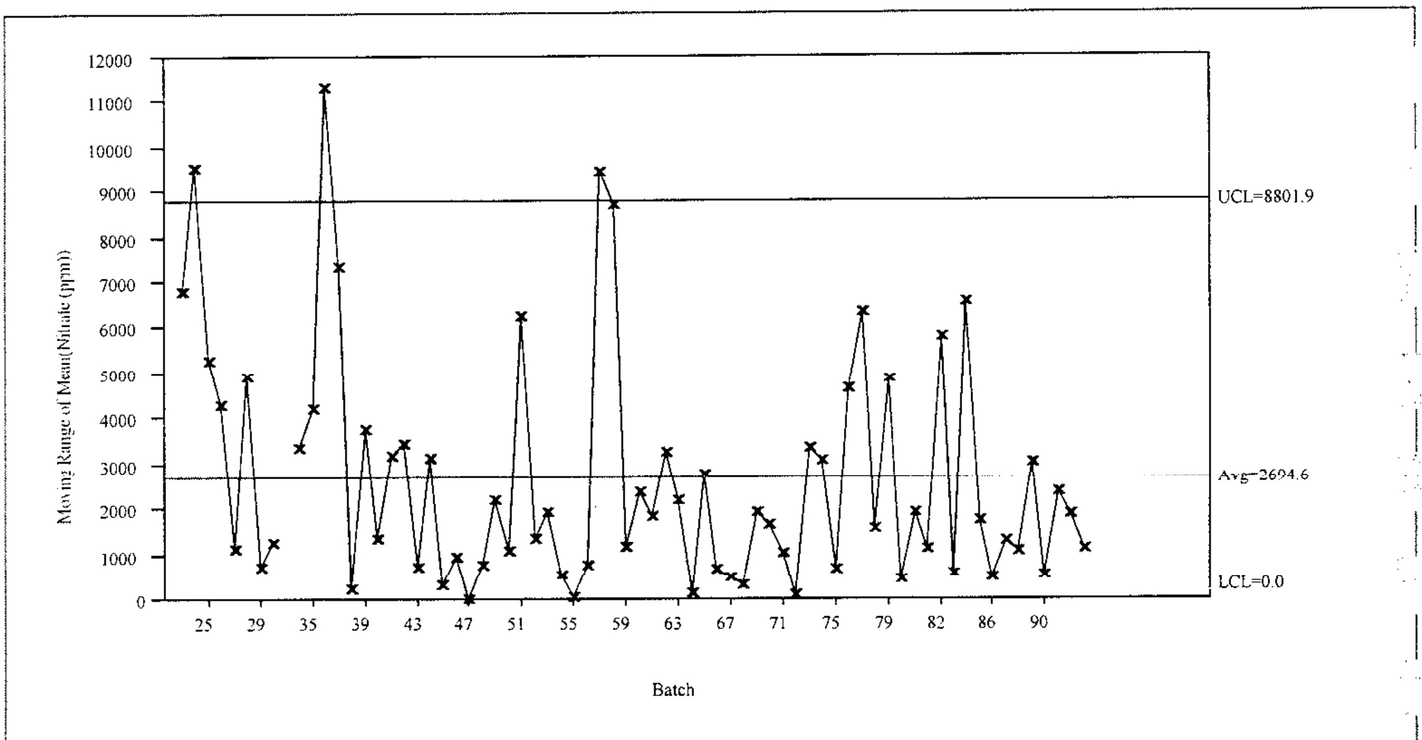


Moving Range of Mean(Fluoride (ppm))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

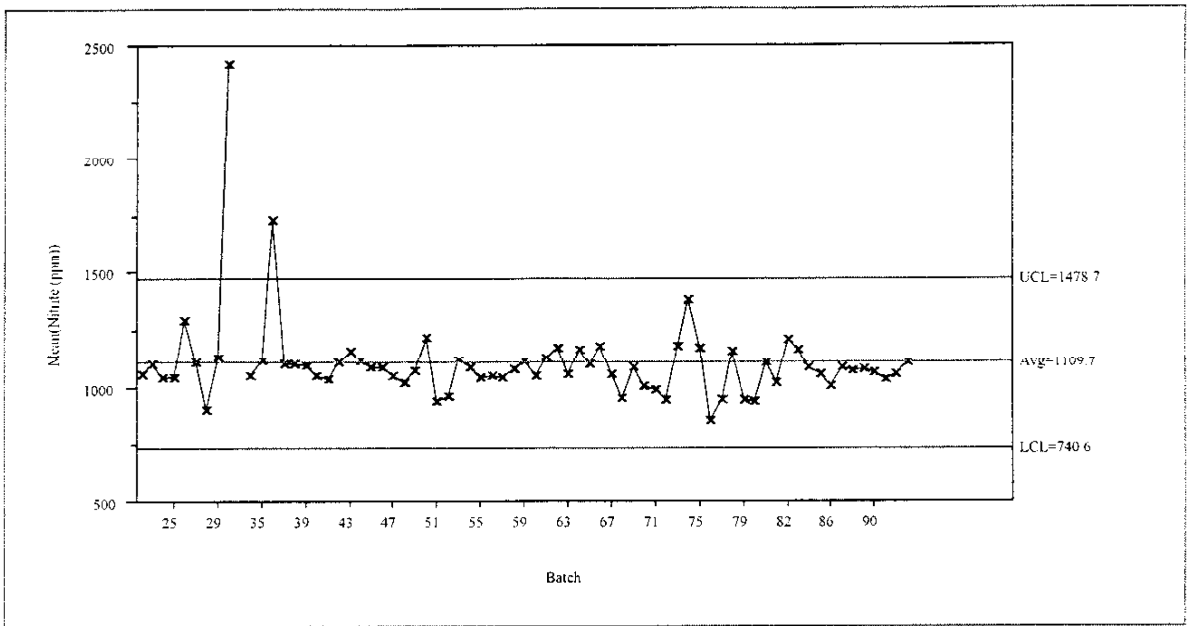


Mean(Nitrate (ppm))

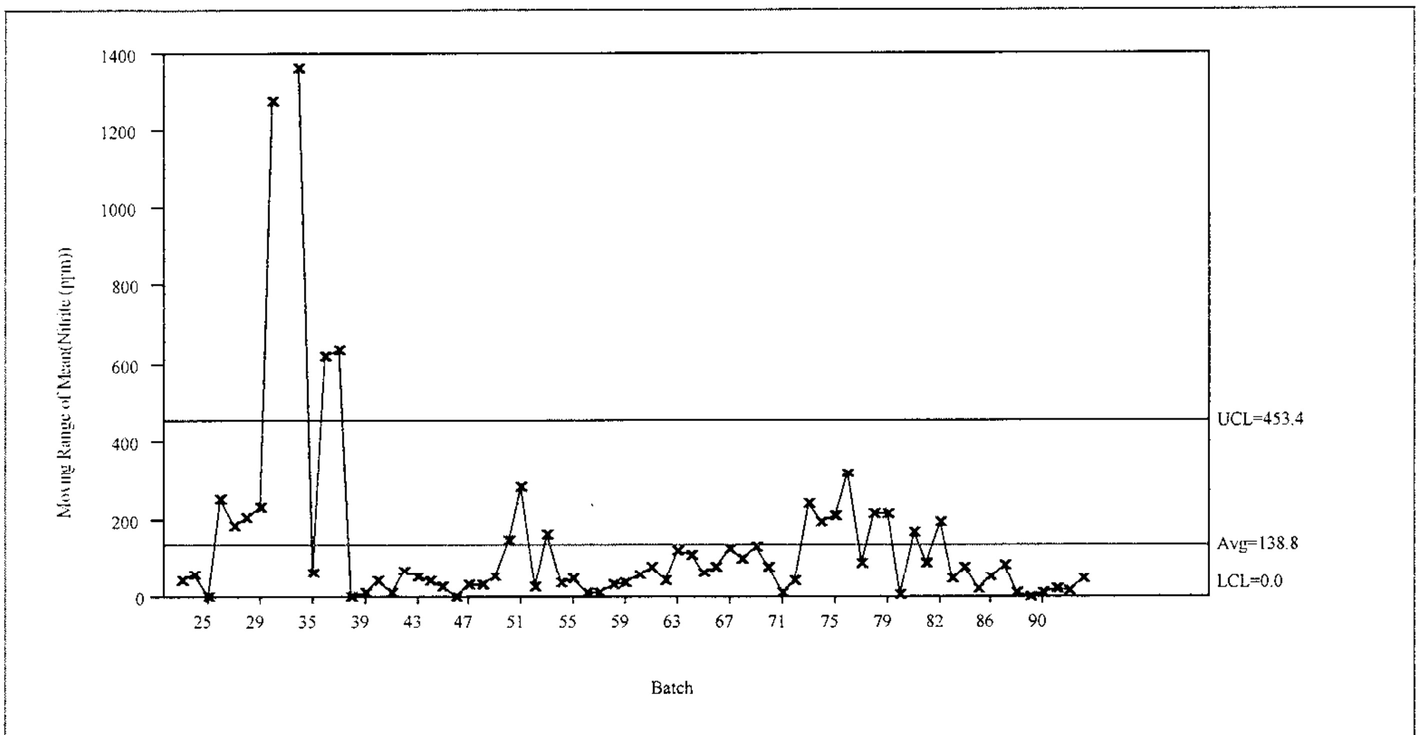


Moving Range of Mean(Nitrate (ppm))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

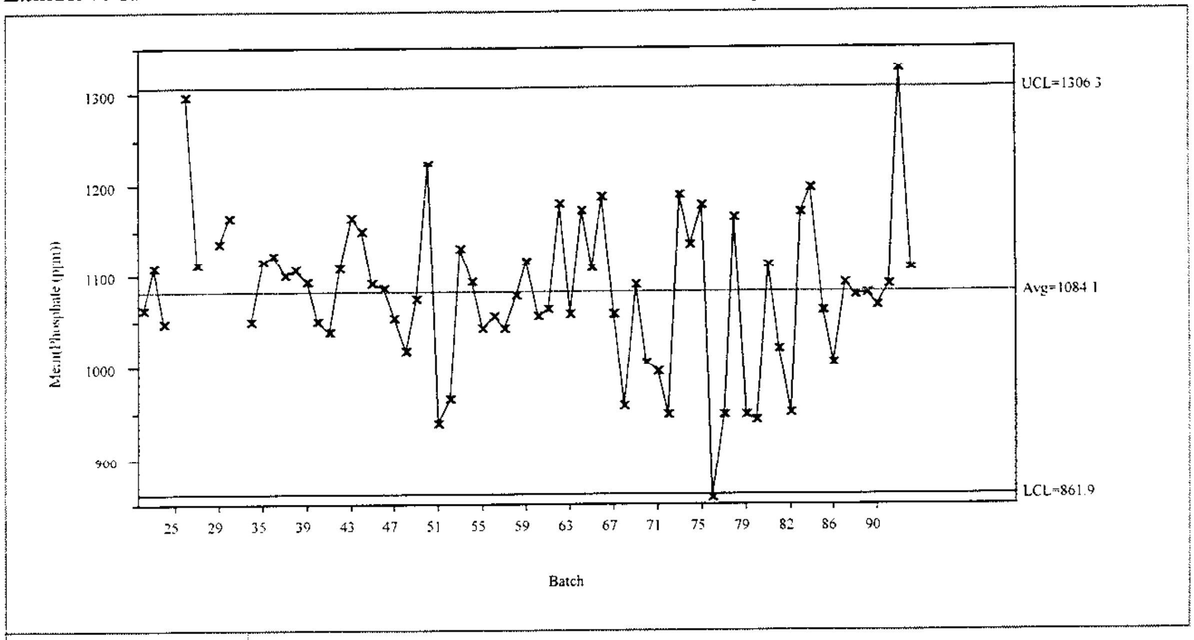


Mean(Nitrite (ppm))

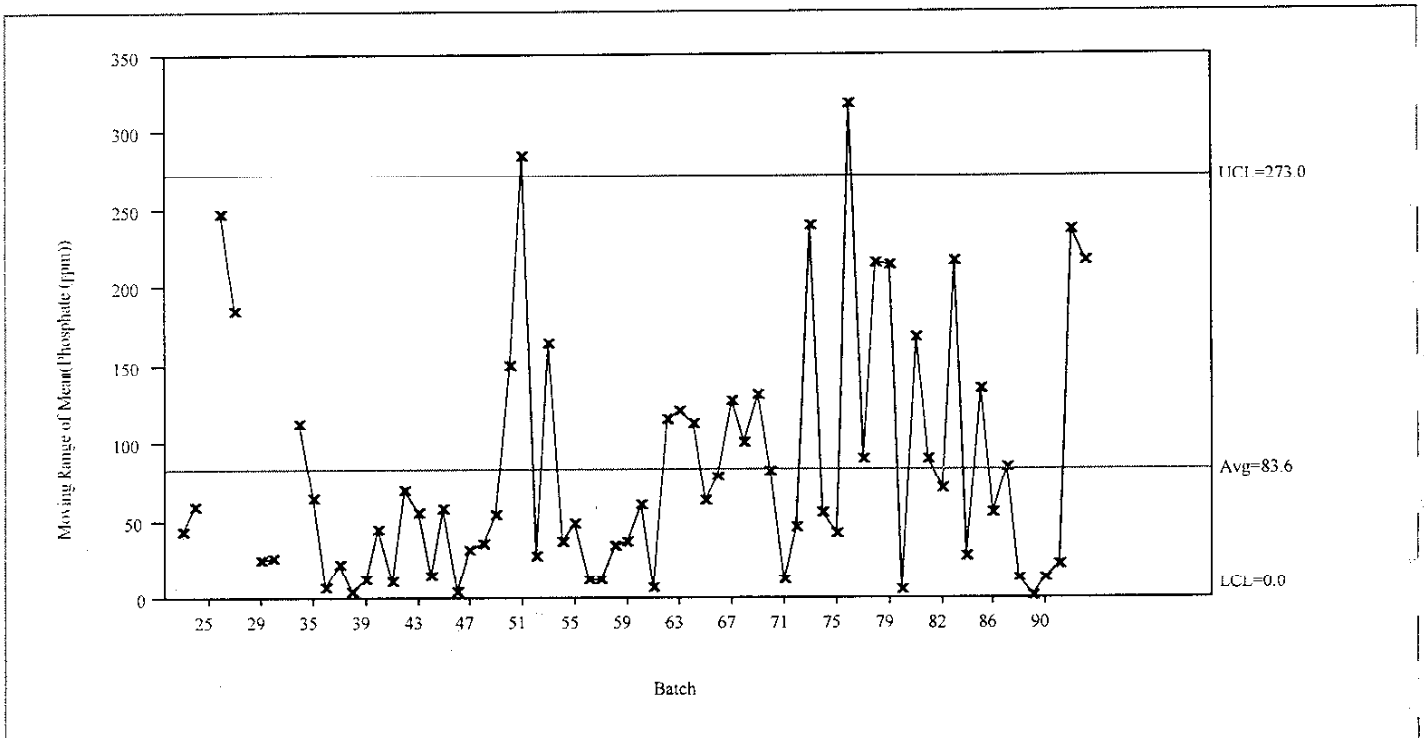


Moving Range of Mean(Nitrite (ppm))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

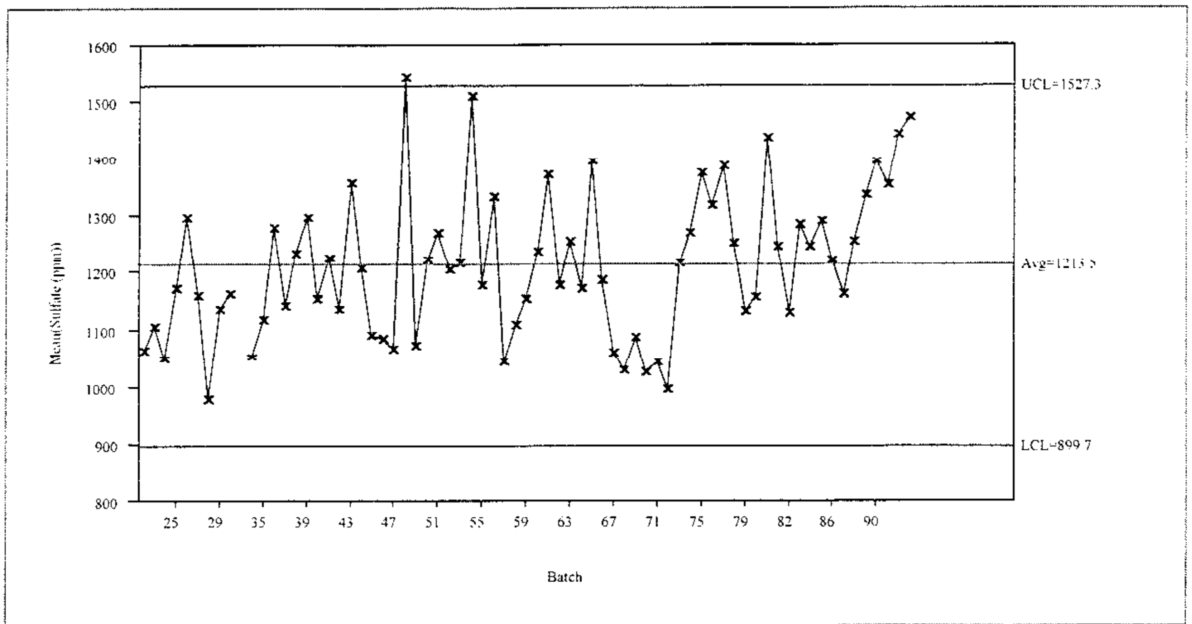


Mean(Phosphate (ppm))

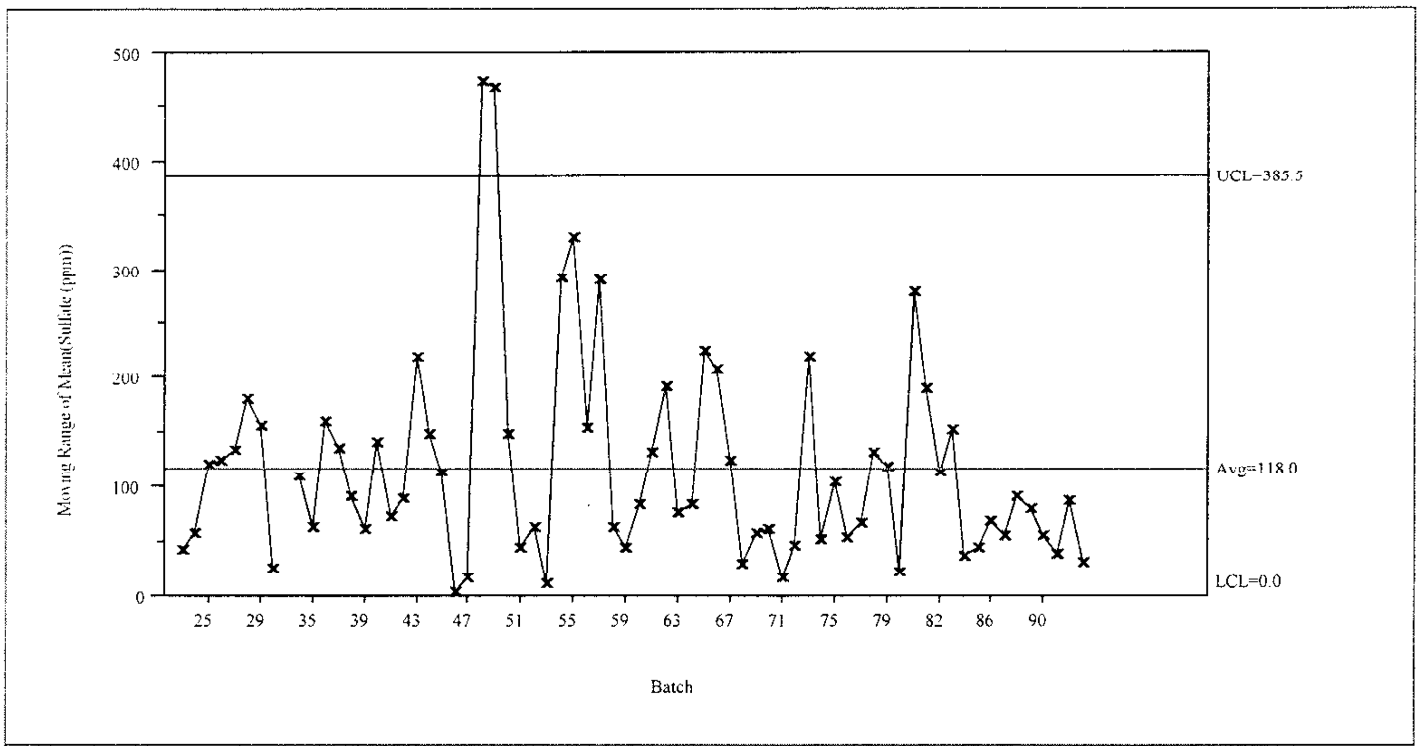


Moving Range of Mean(Phosphate (ppm))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

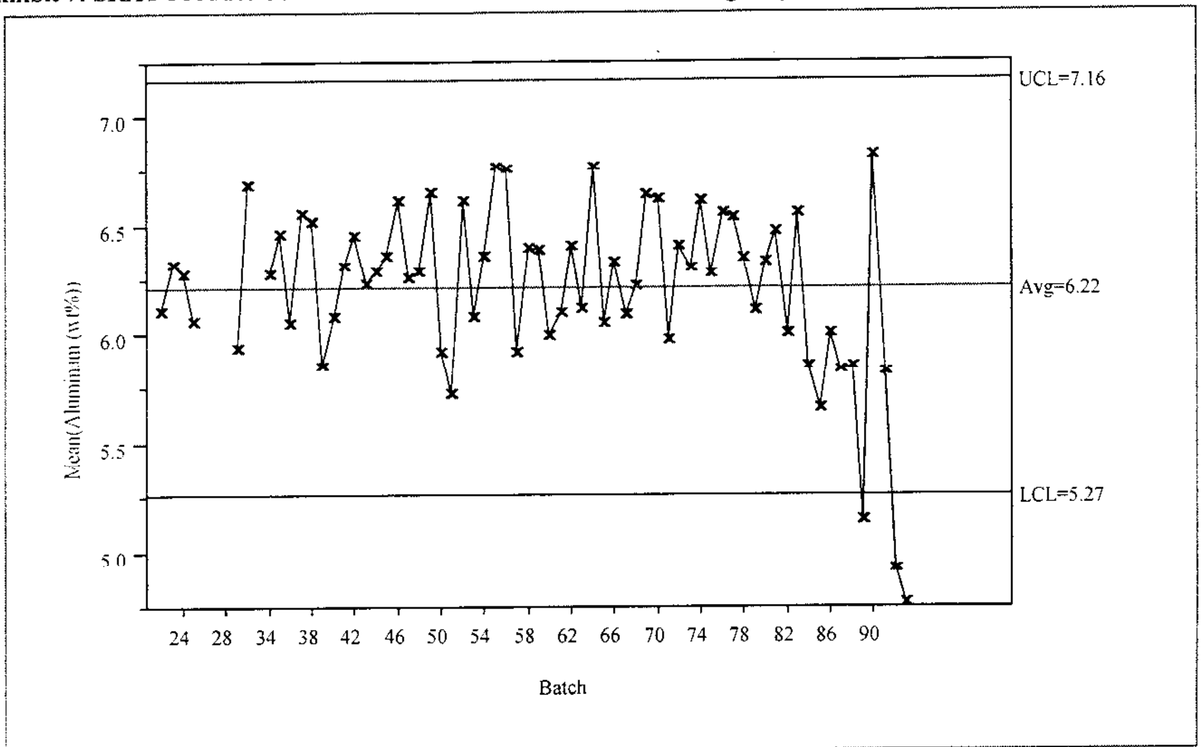


Mean(Sulfate (ppm))

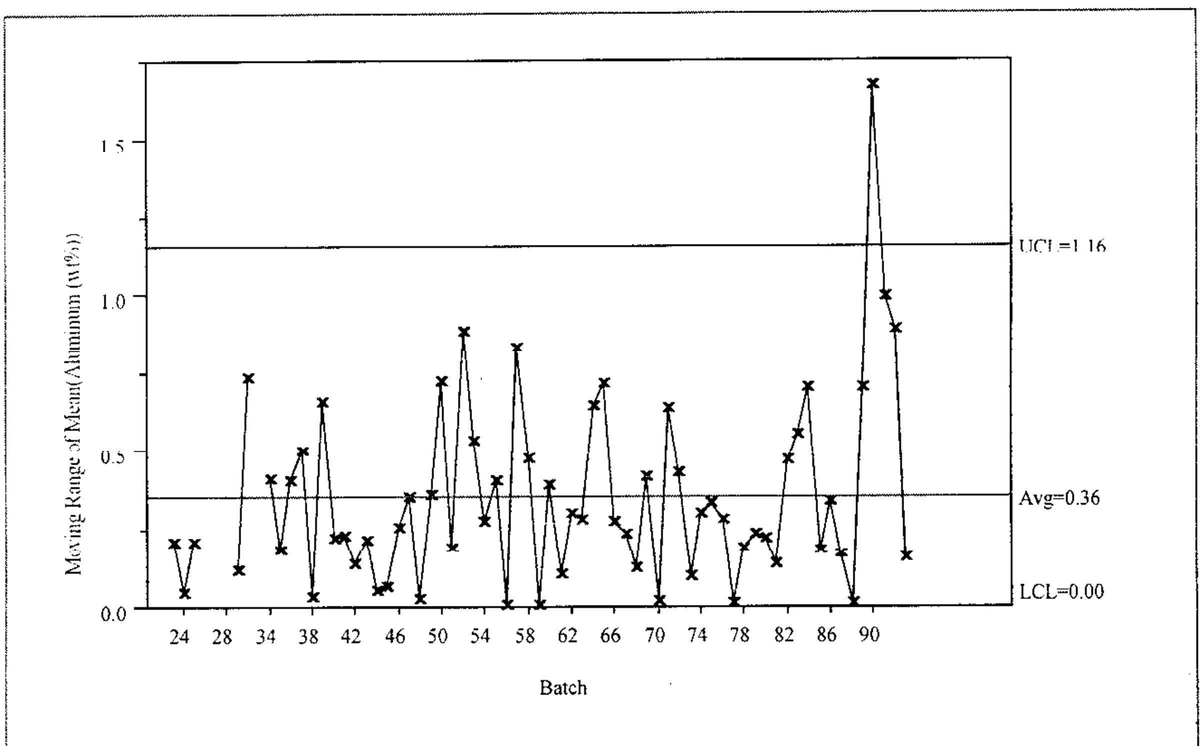


Moving Range of Mean(Sulfate (ppm))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

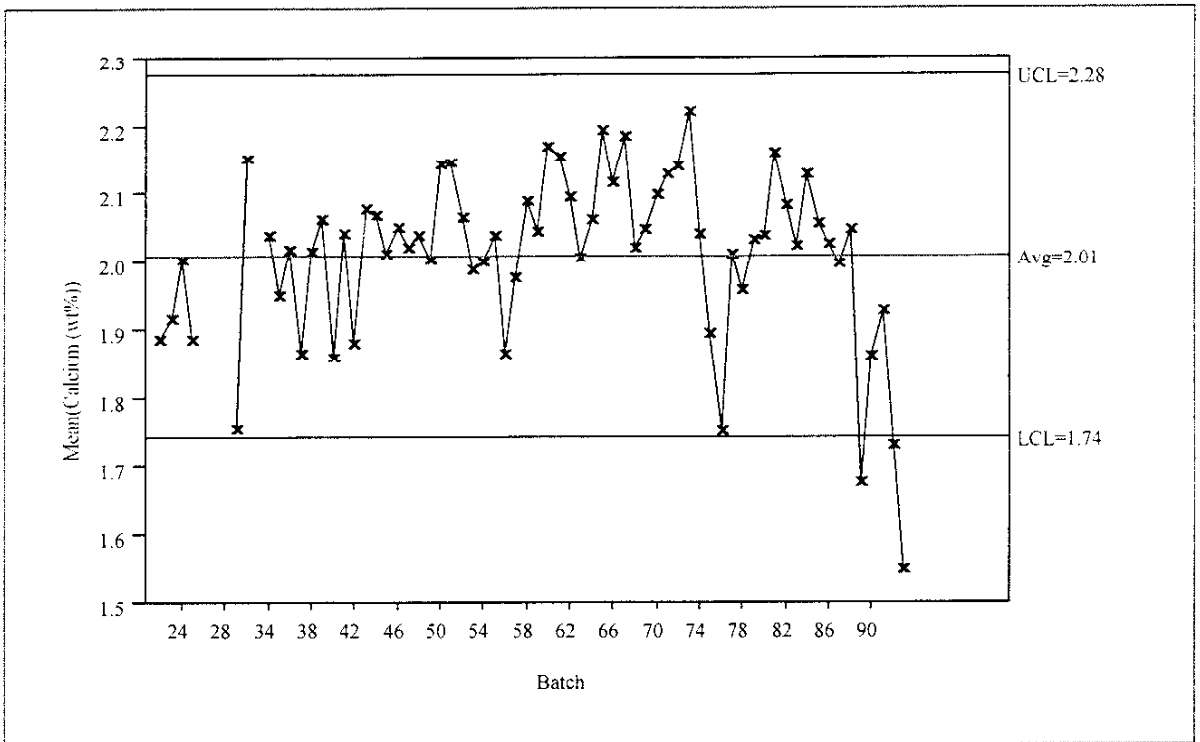


Mean(Aluminum (wt%))

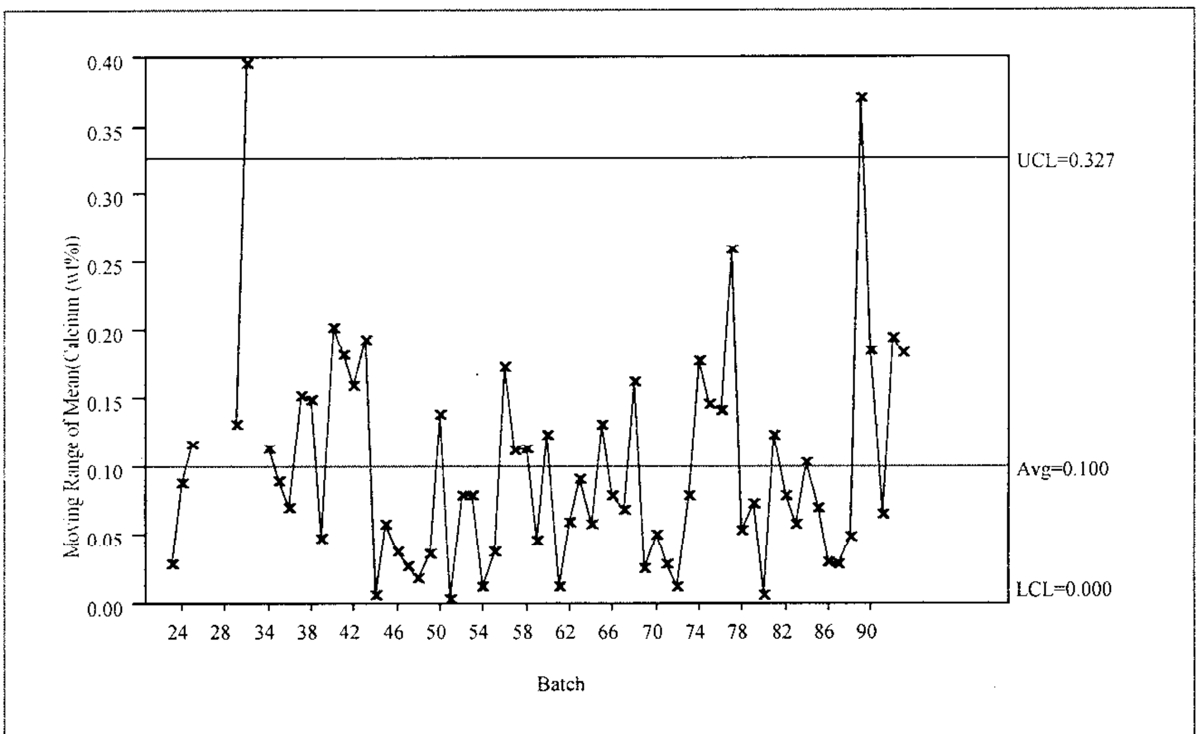


Moving Range of Mean(Aluminum (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

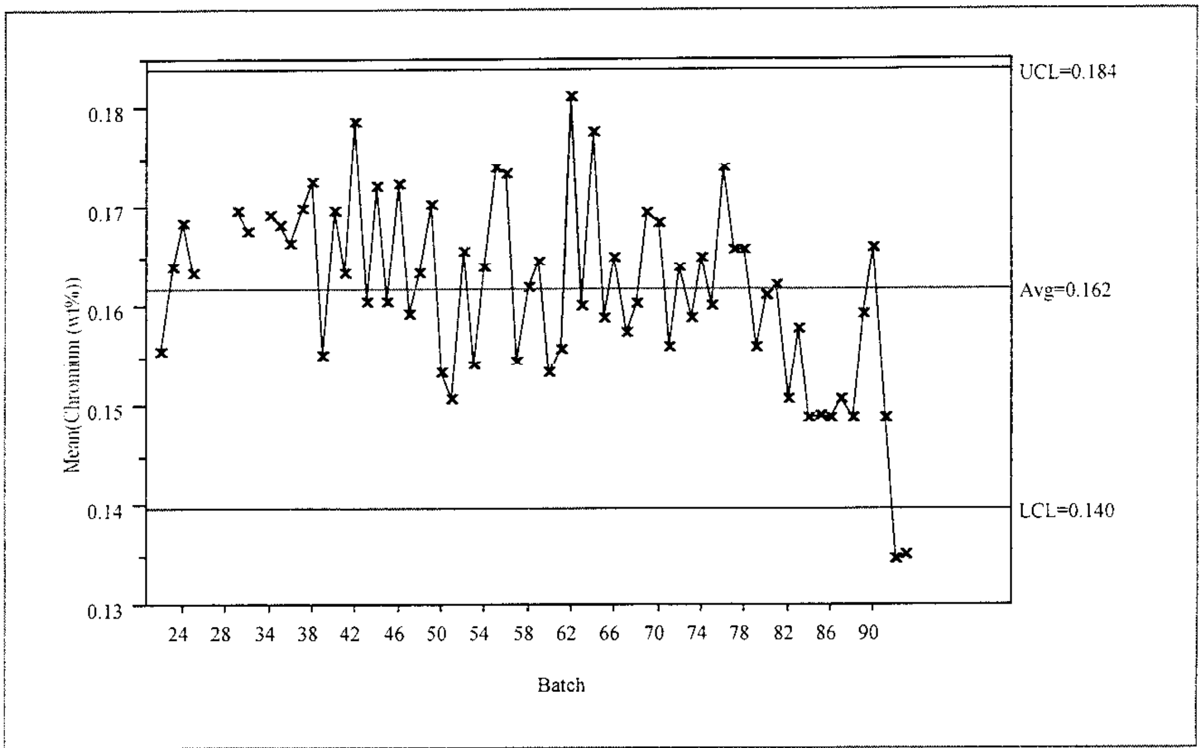


Mean(Calcium (wt%))

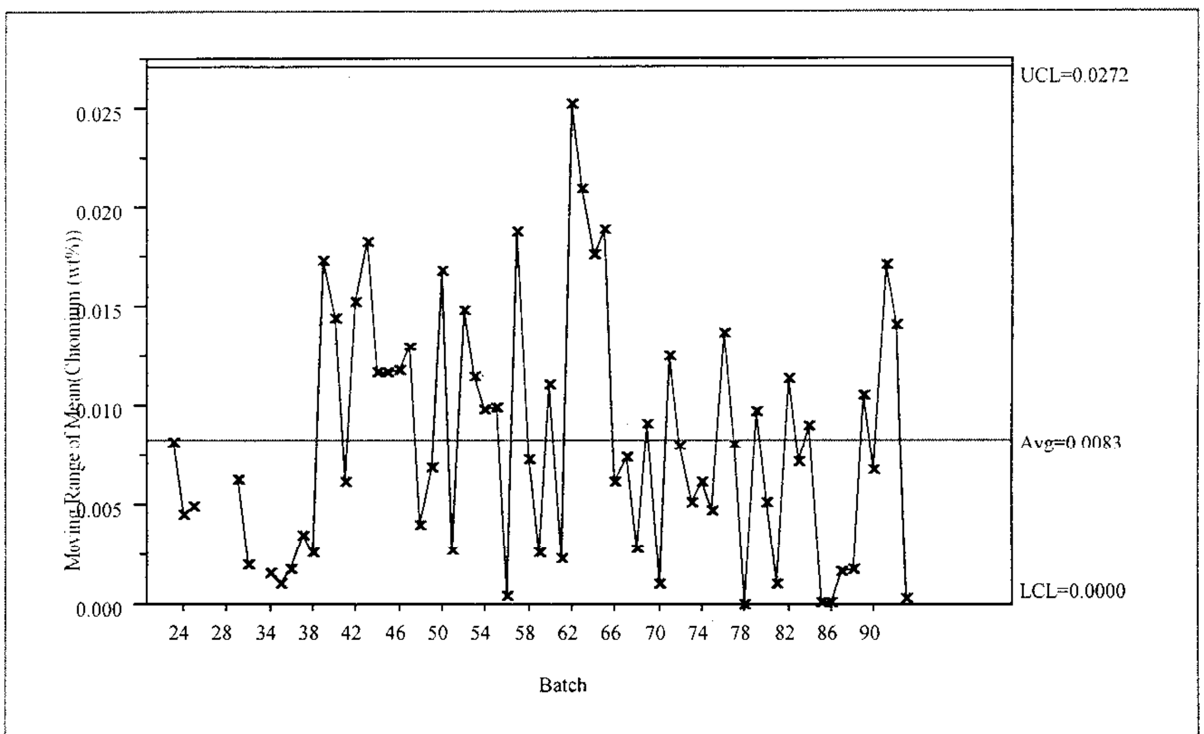


Moving Range of Mean(Calcium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

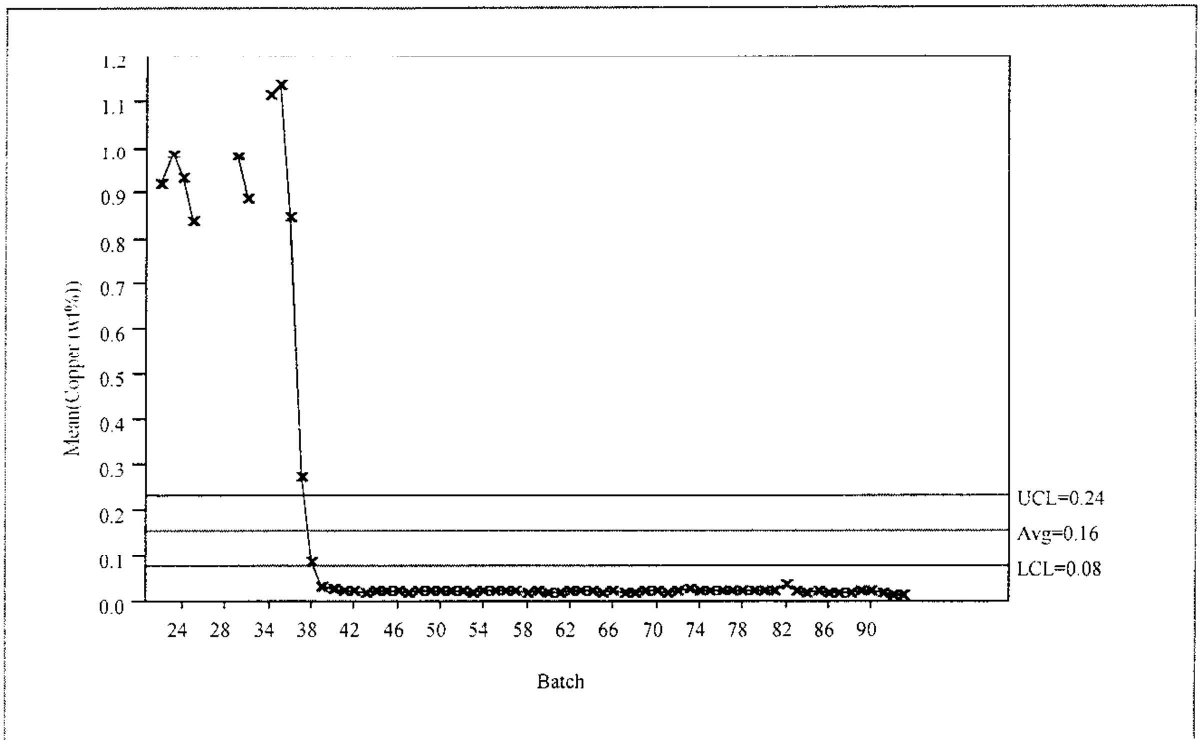


Mean(Chromium (wt%))

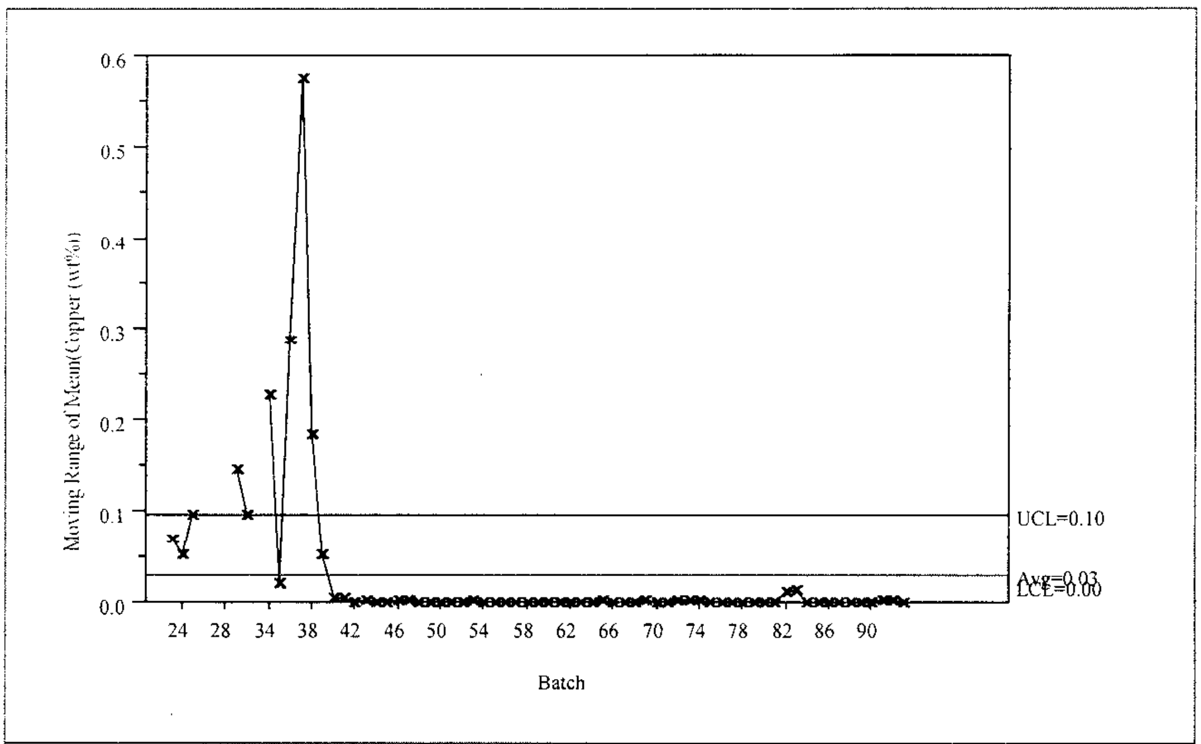


Moving Range of Mean(Chromium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

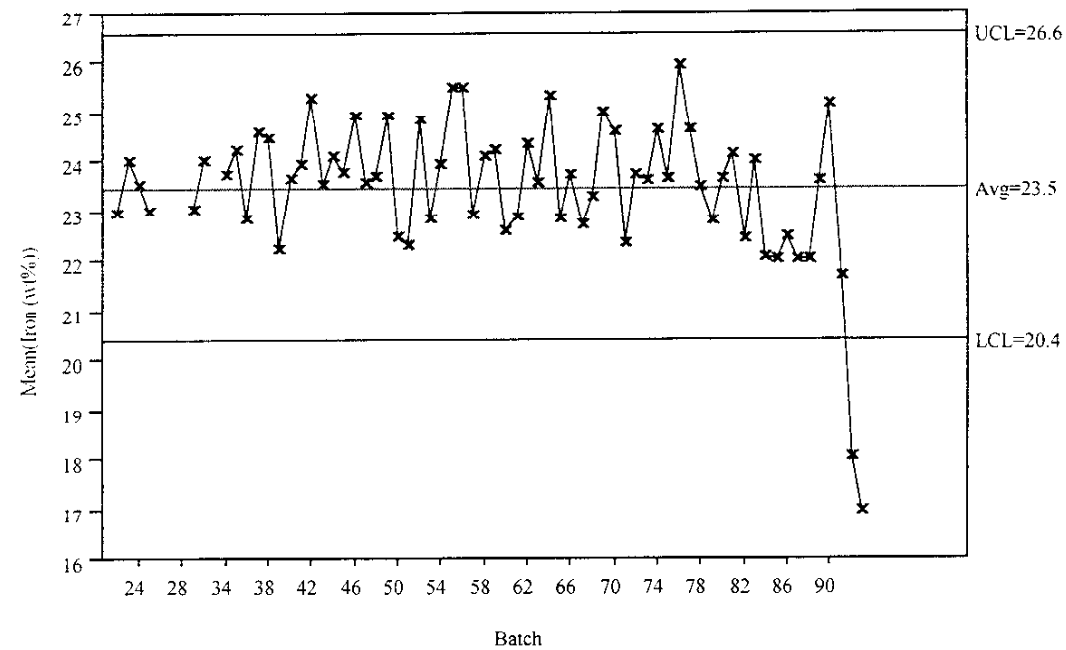


Mean(Copper (wt%))

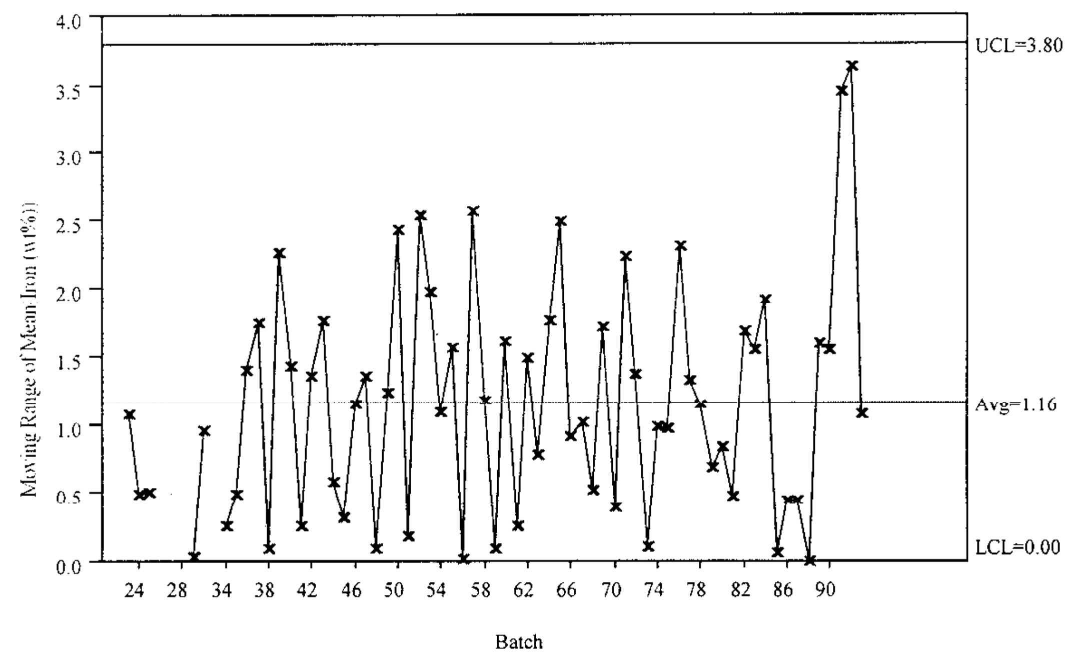


Moving Range of Mean(Copper (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

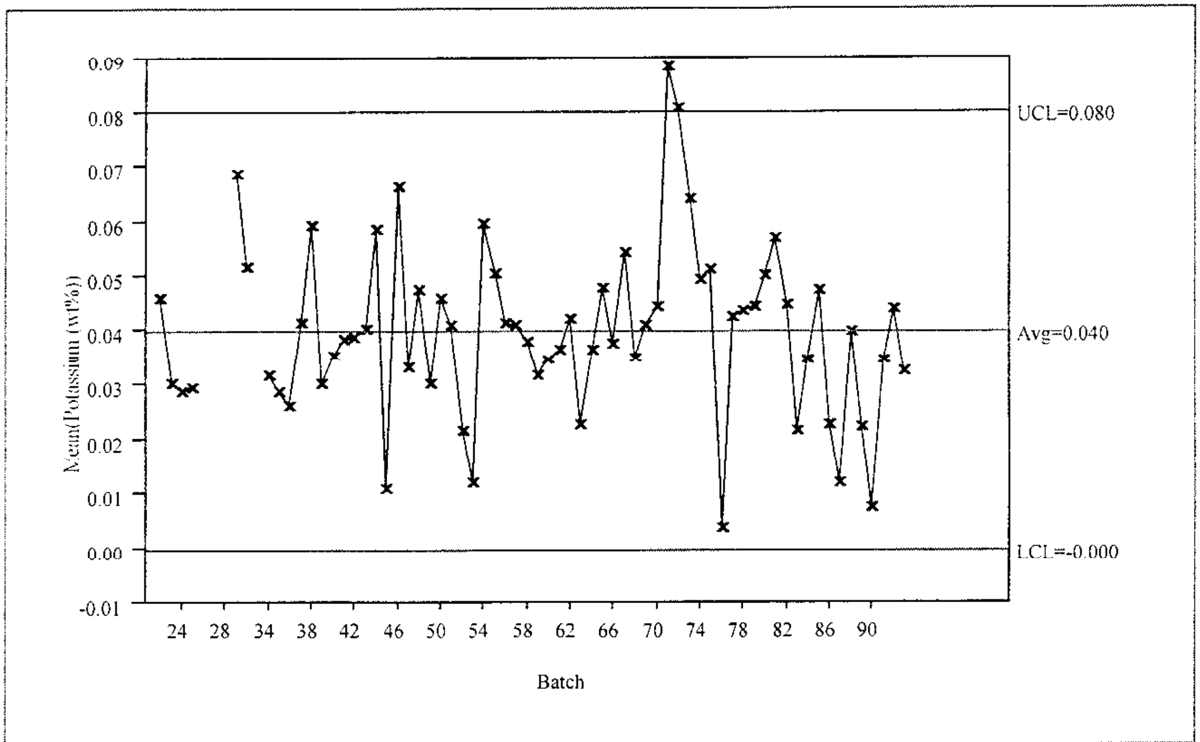


Mean(Iron (wt%))

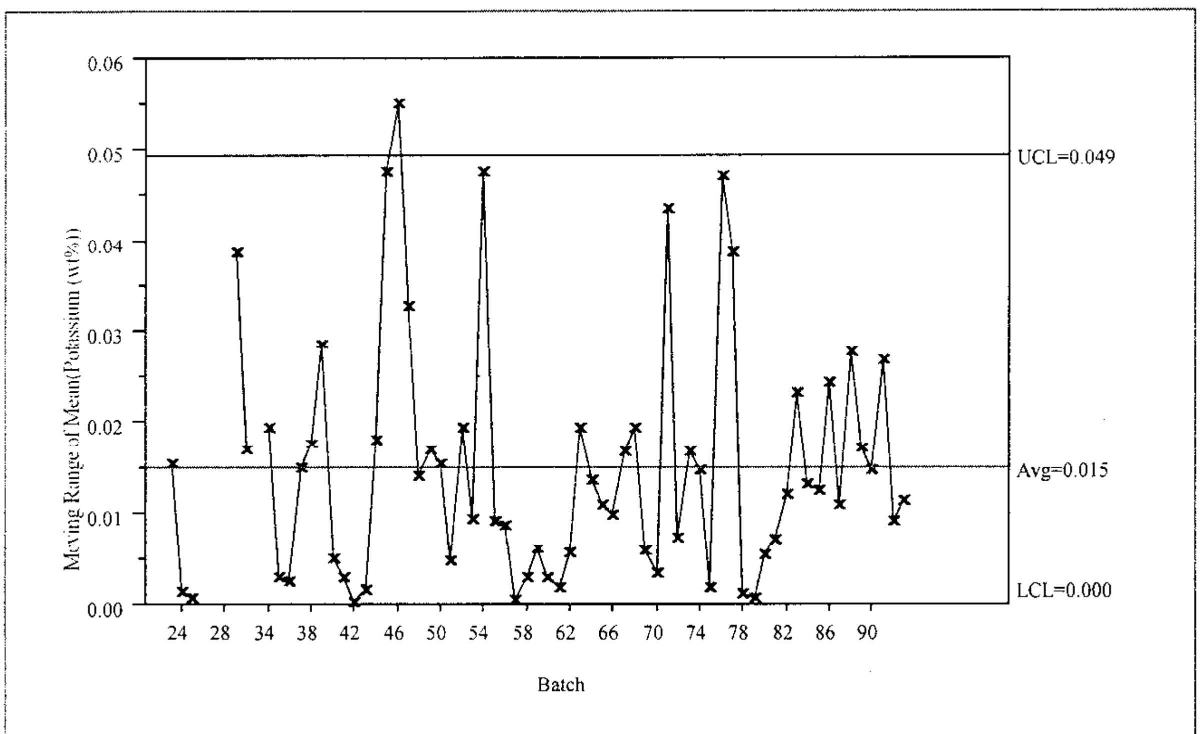


Moving Range of Mean(Iron (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

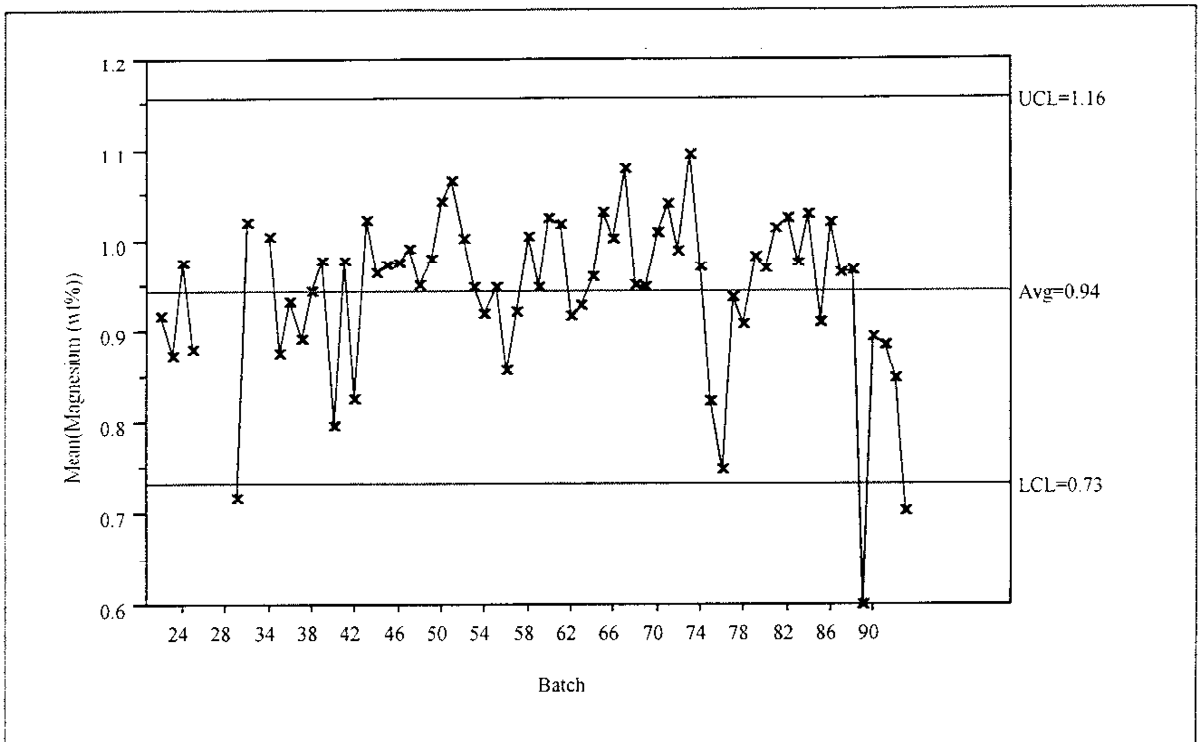


Mean(Potassium (wt%))

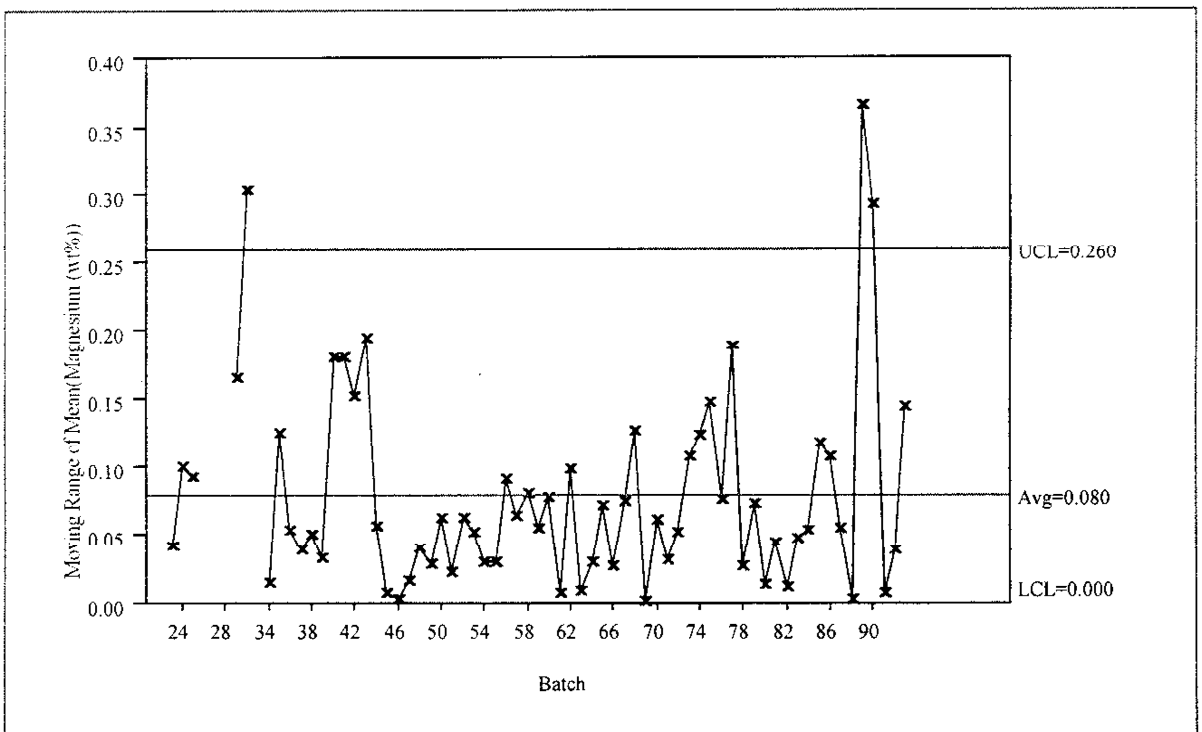


Moving Range of Mean(Potassium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

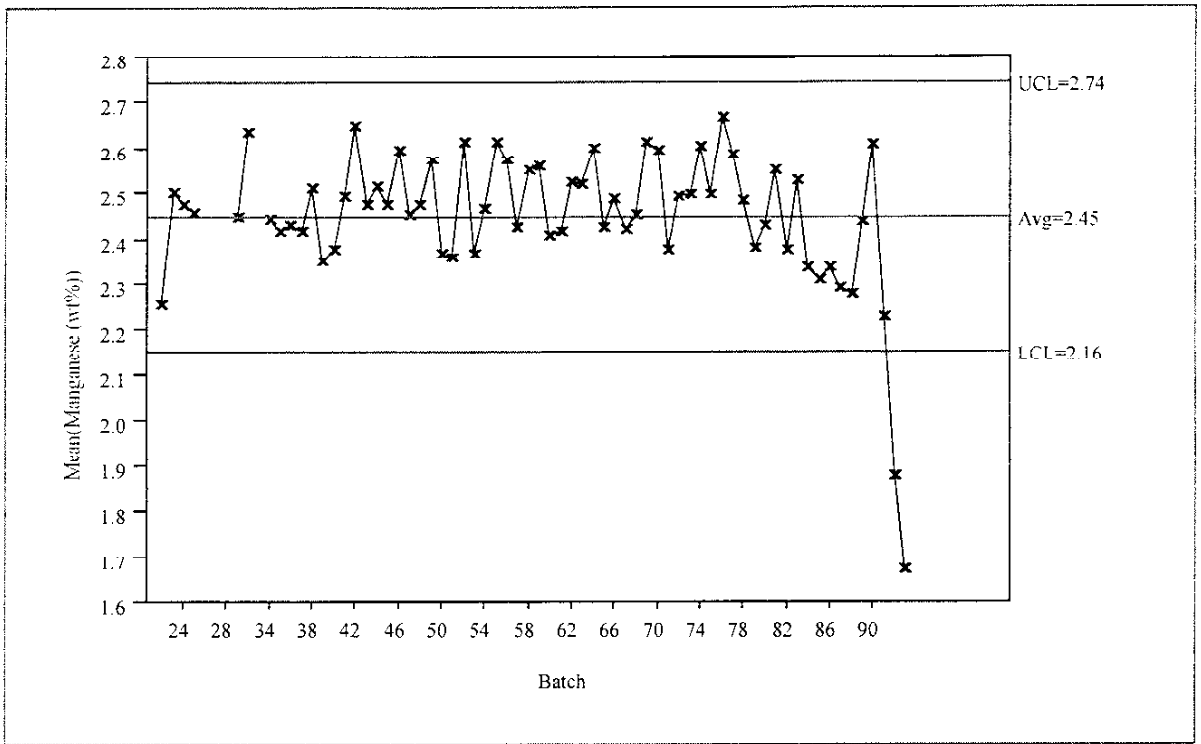


Mean(Magnesium (wt%))

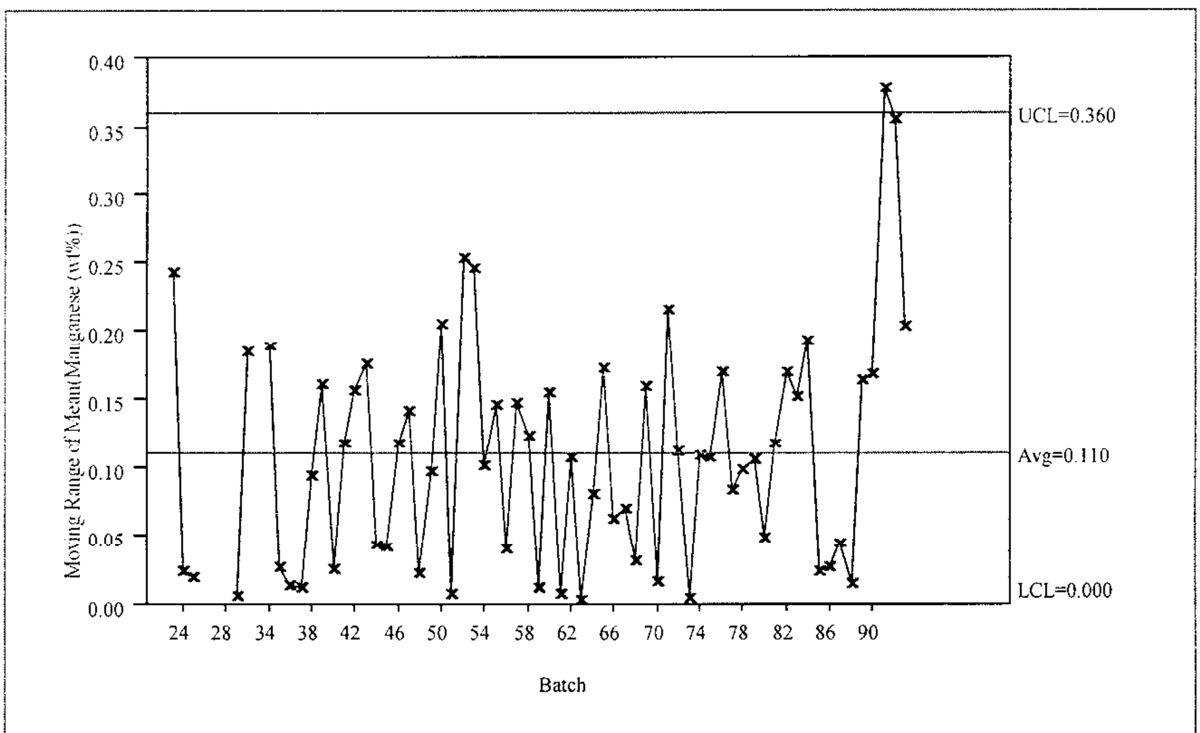


Moving Range of Mean(Magnesium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

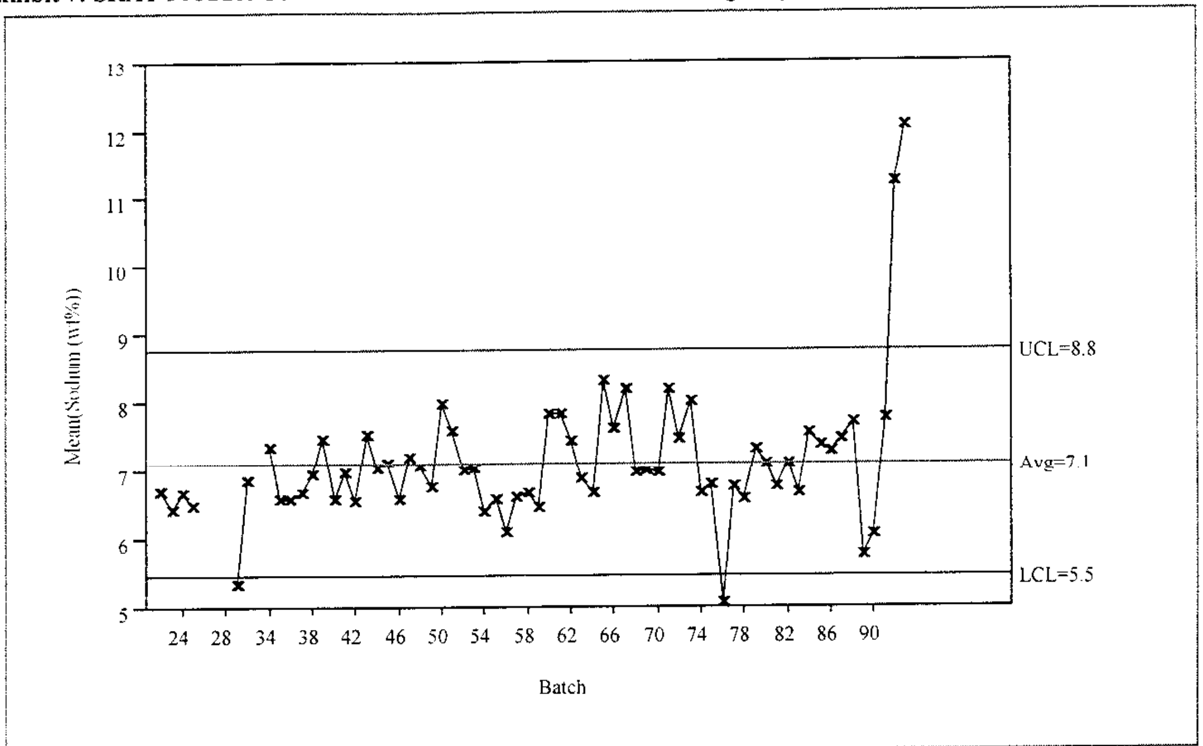


Mean(Manganese (wt%))

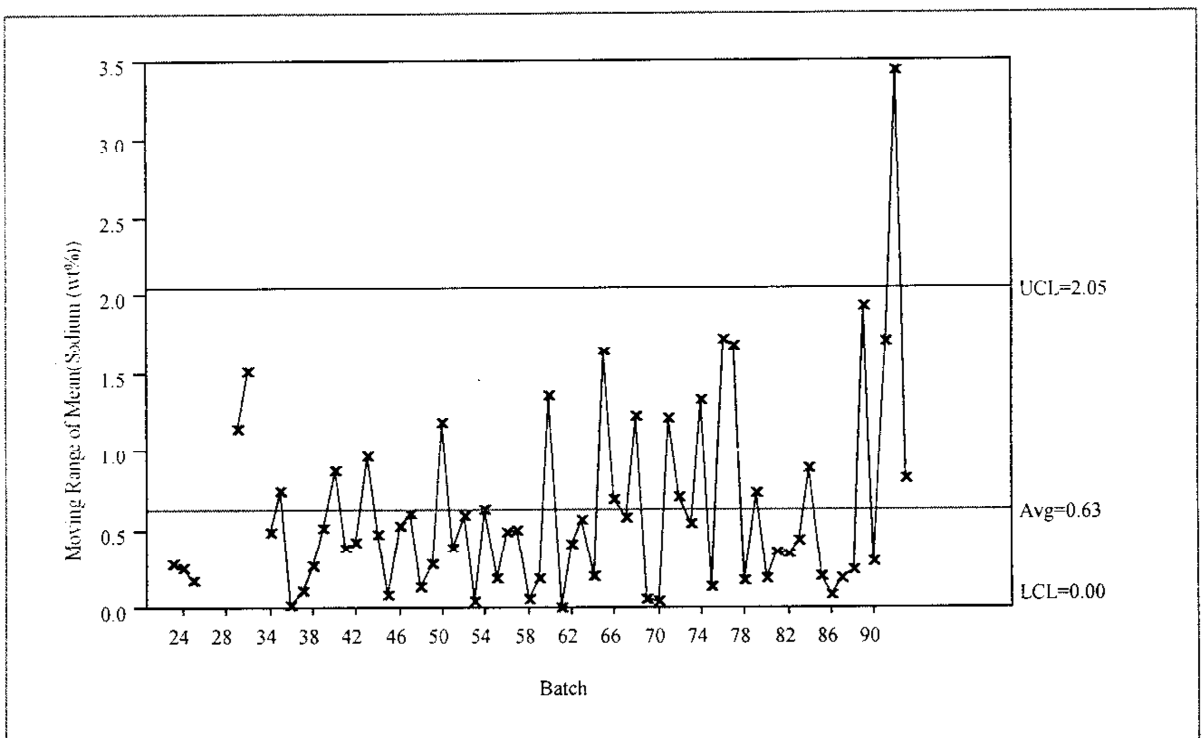


Moving Range of Mean(Manganese (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

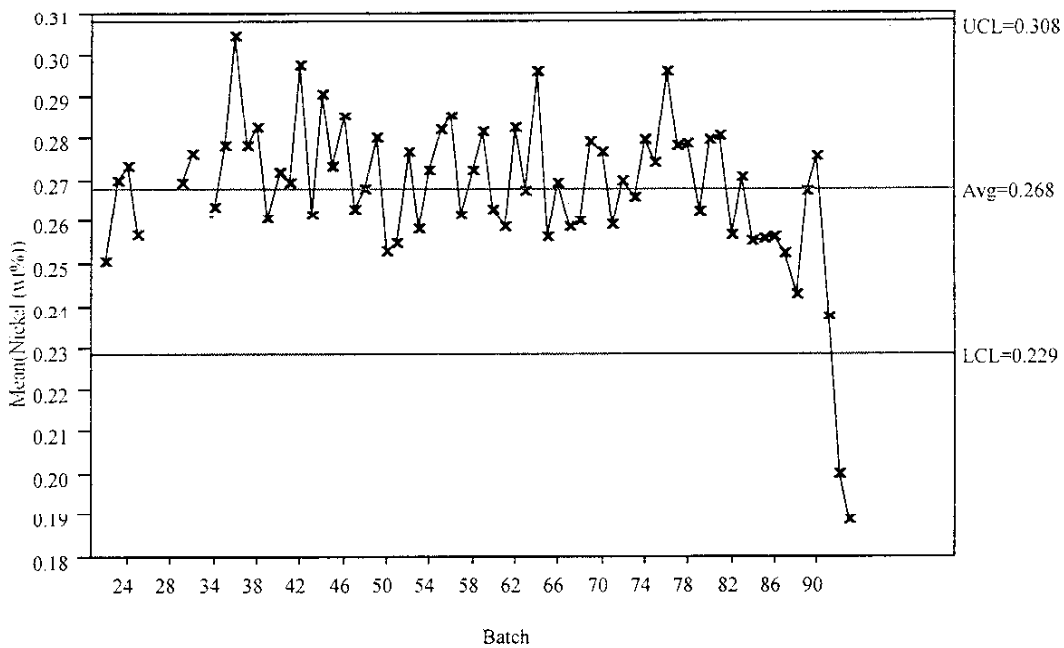


Mean(Sodium (wt%))

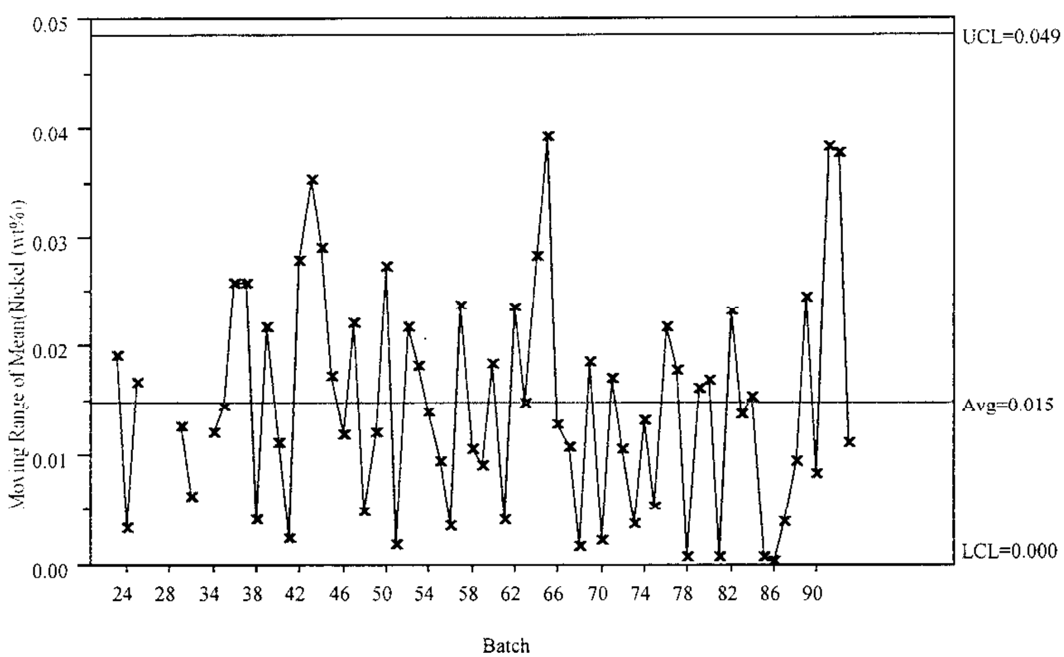


Moving Range of Mean(Sodium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

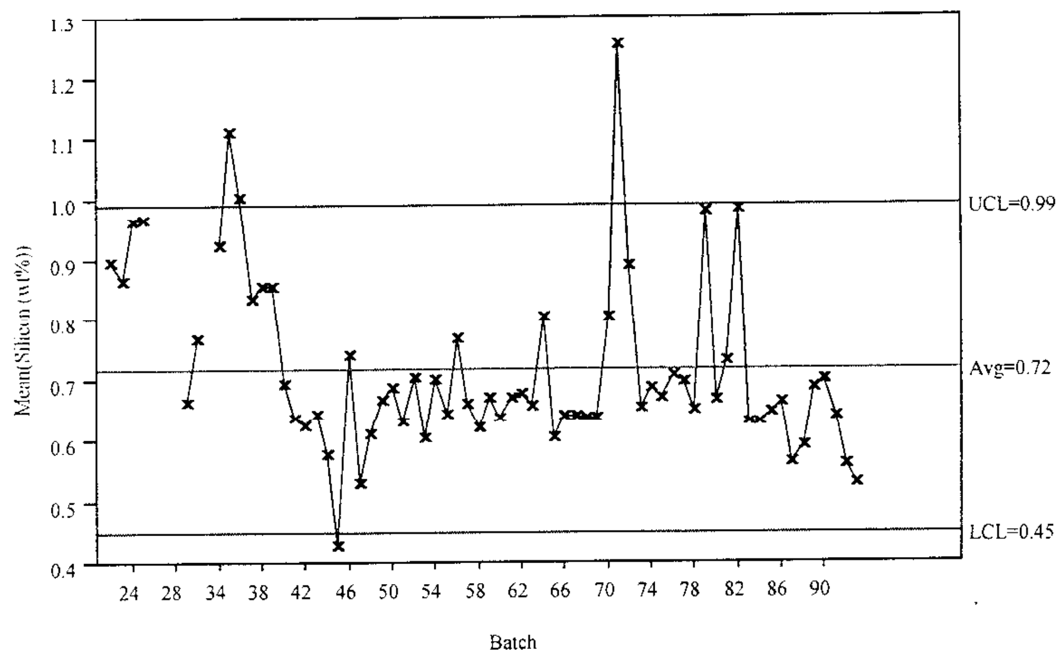


Mean(Nickel (wt%))

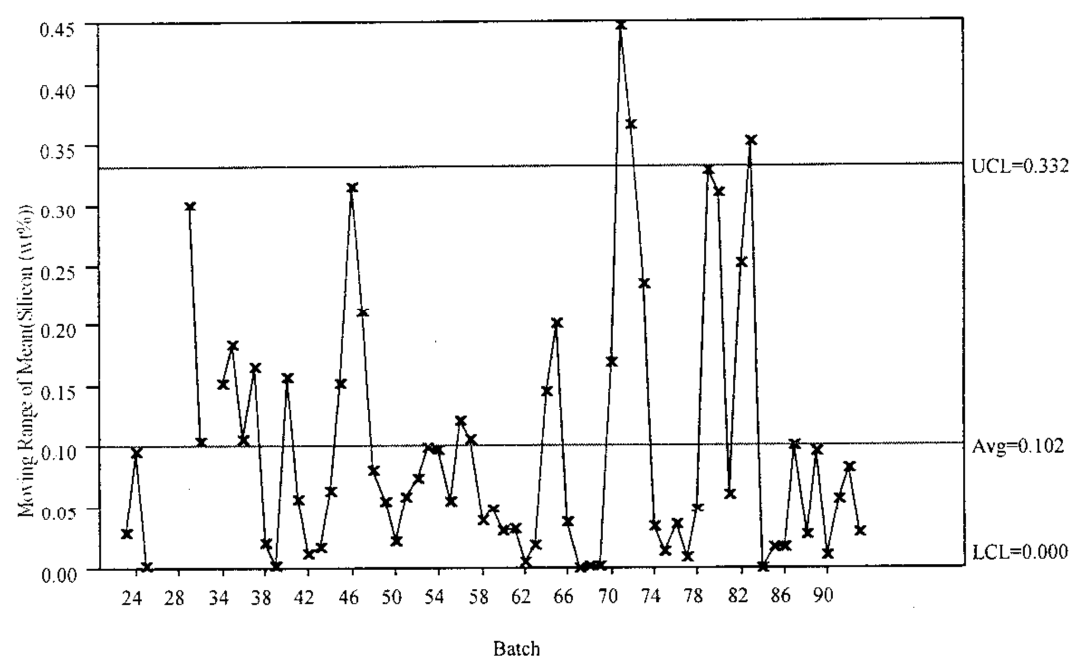


Moving Range of Mean(Nickel (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

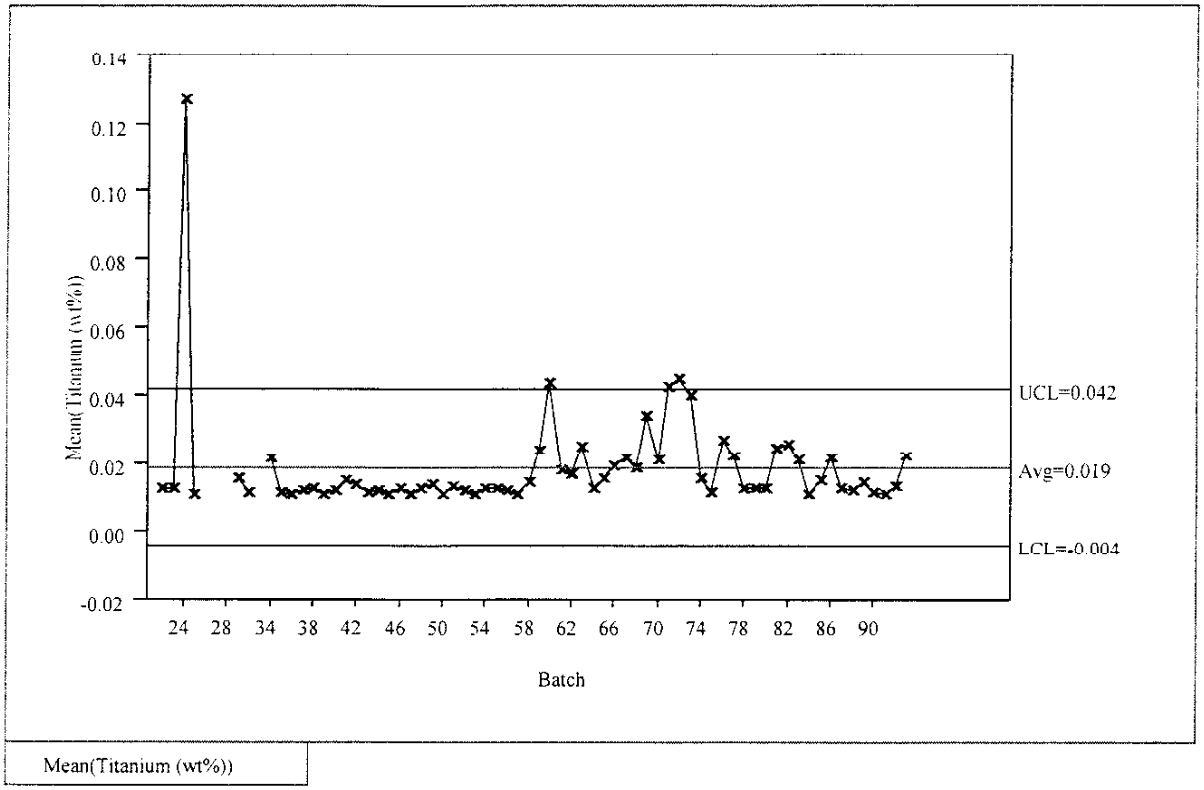


Mean(Silicon (wt%))



Moving Range of Mean(Silicon (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte



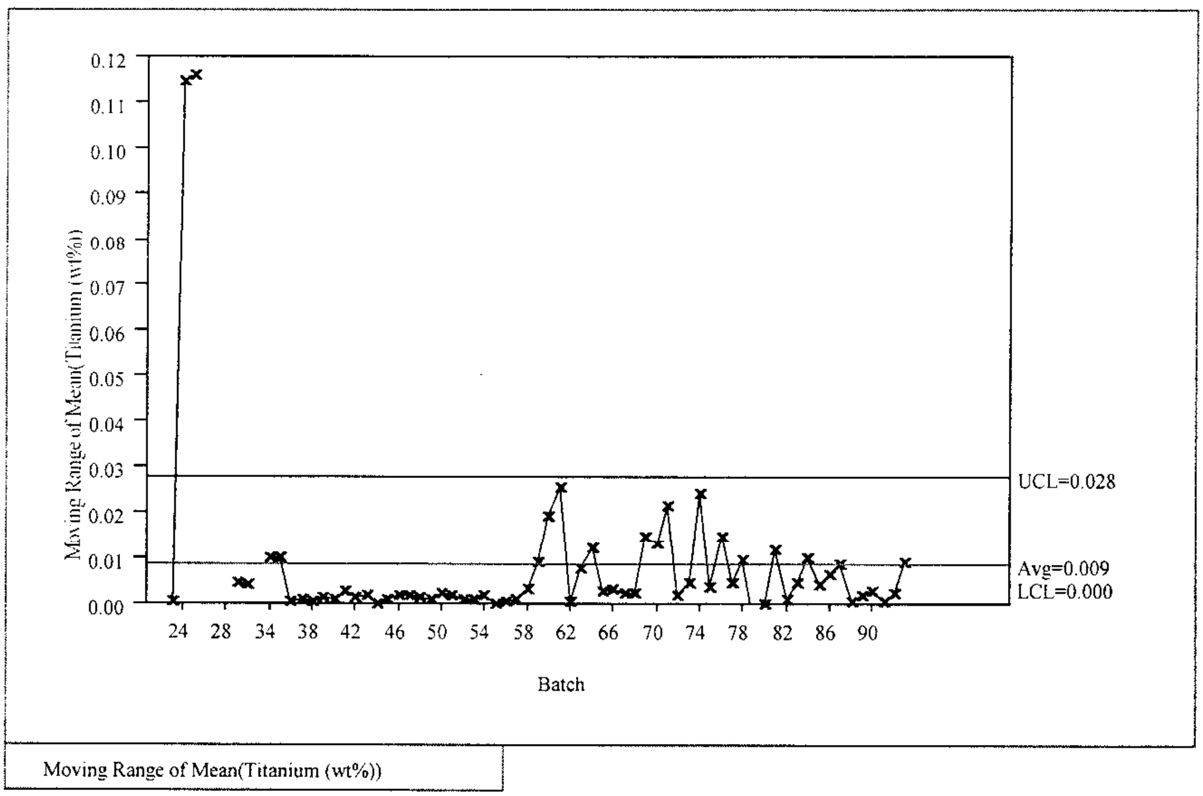
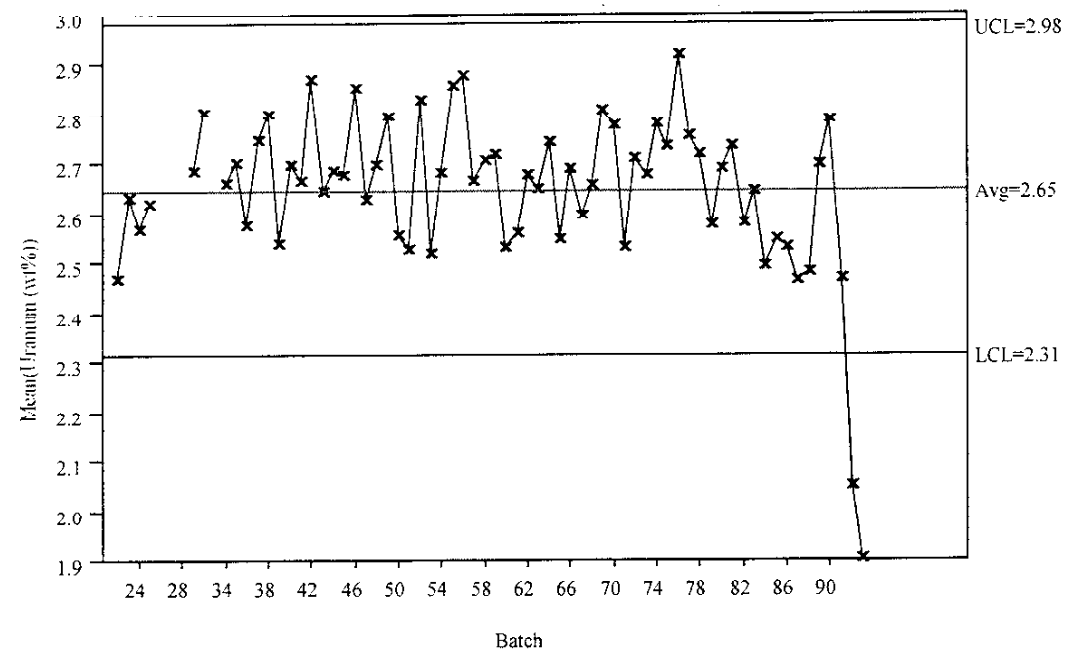
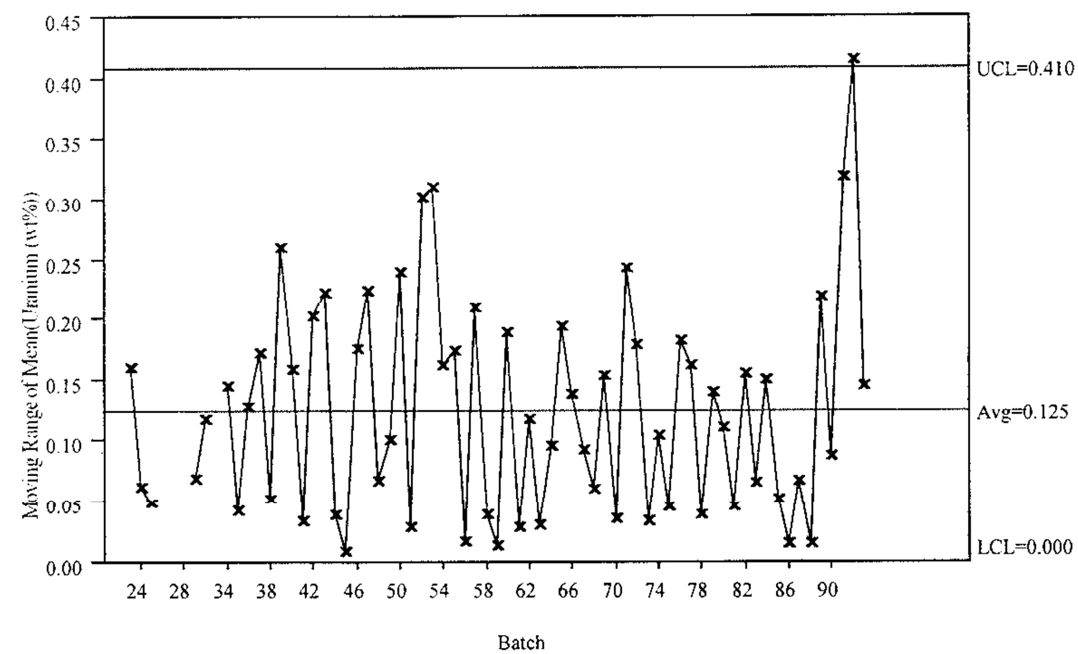


Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

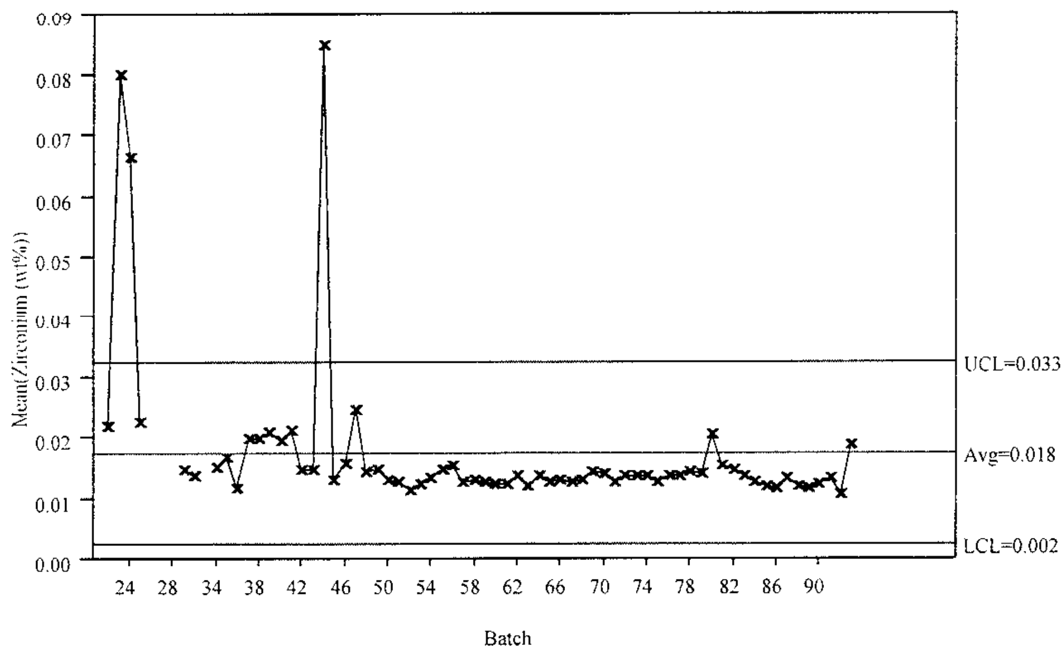


Mean(Uranium (wt%))

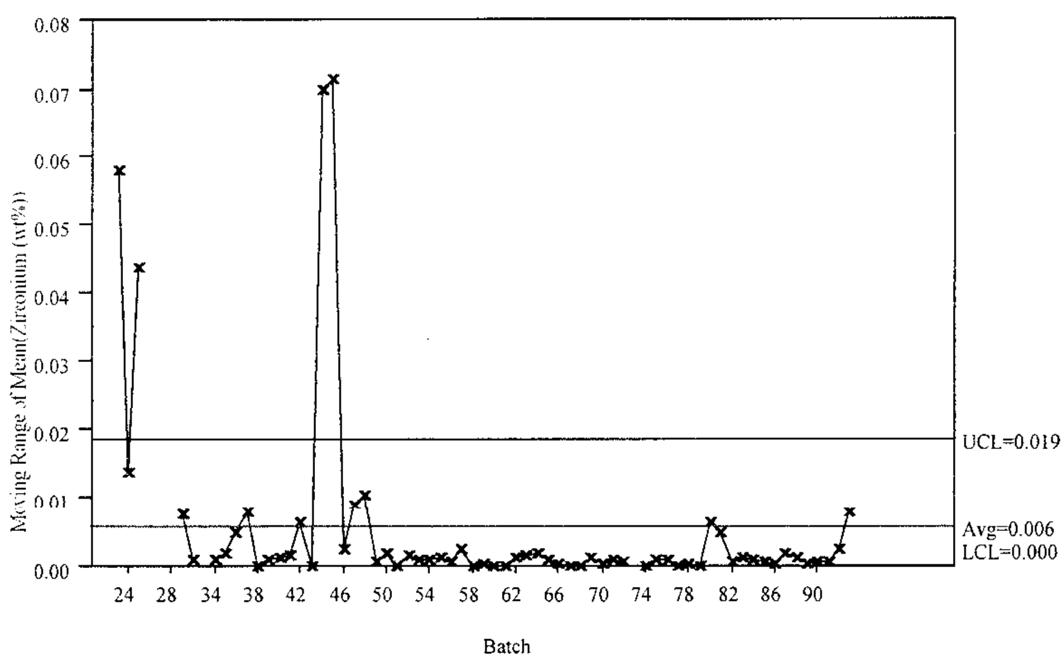


Moving Range of Mean(Uranium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

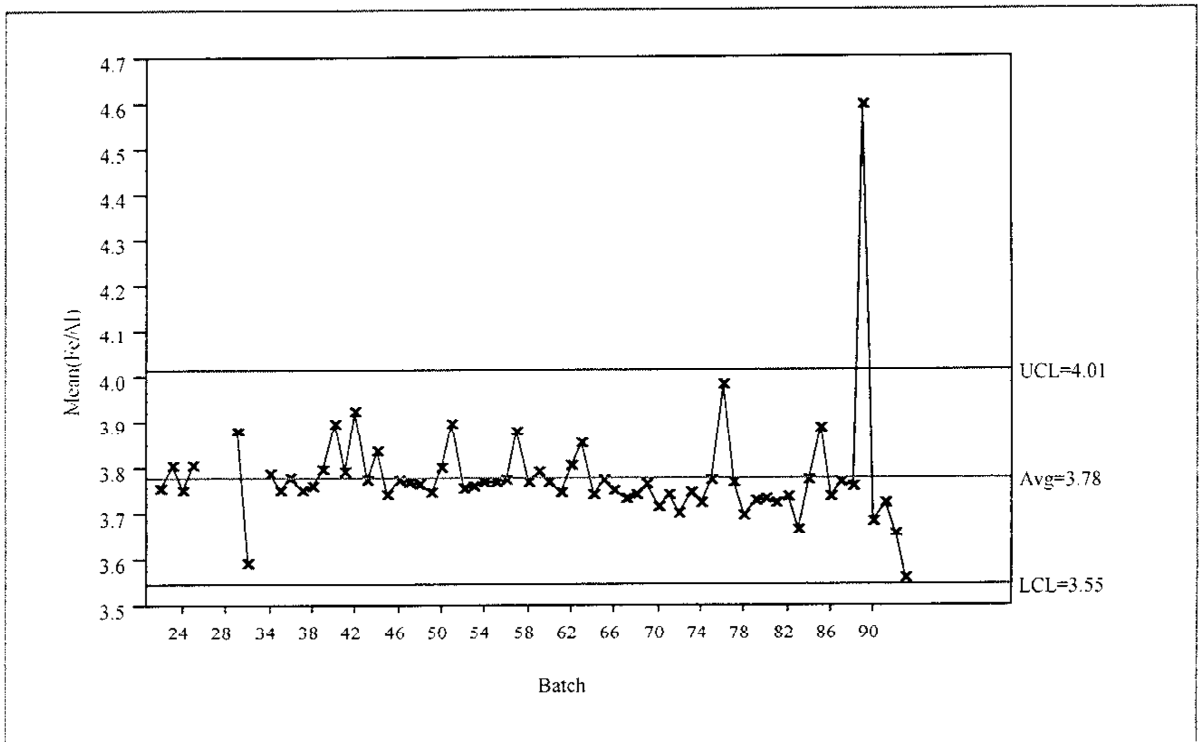


Mean(Zirconium (wt%))

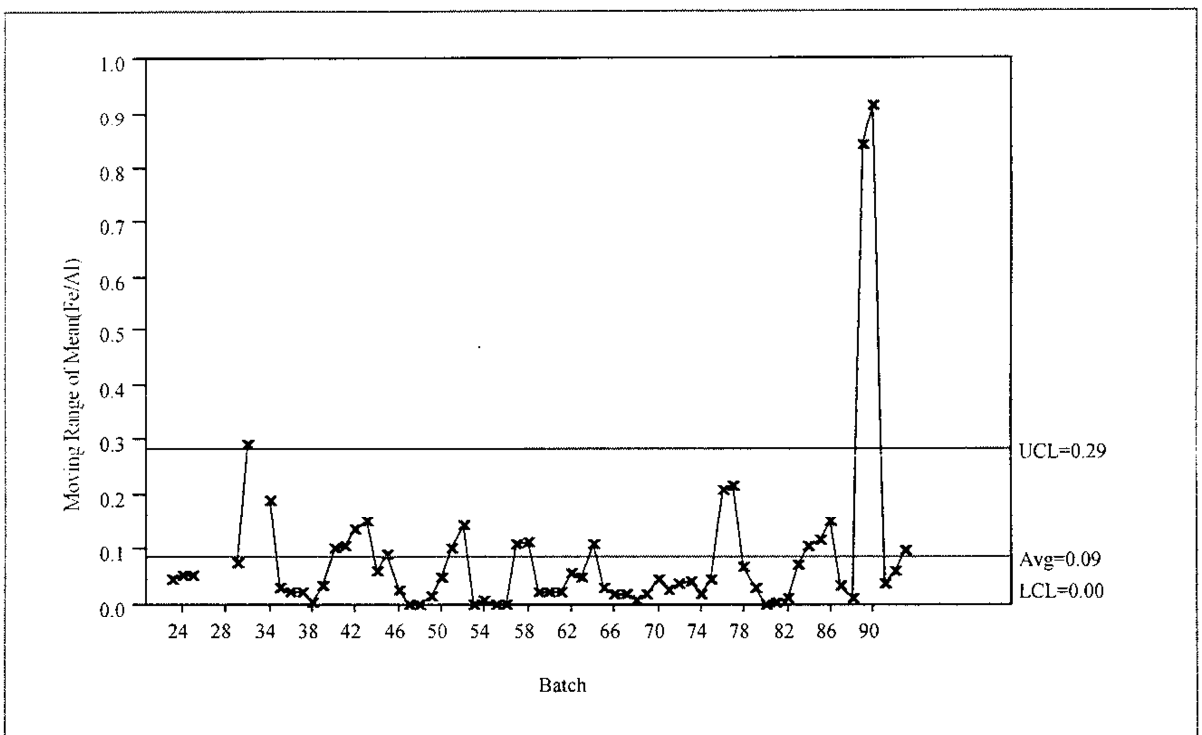


Moving Range of Mean(Zirconium (wt%))

Exhibit 7: SRAT Product Control Charts for Individual Batch Averages by Analyte

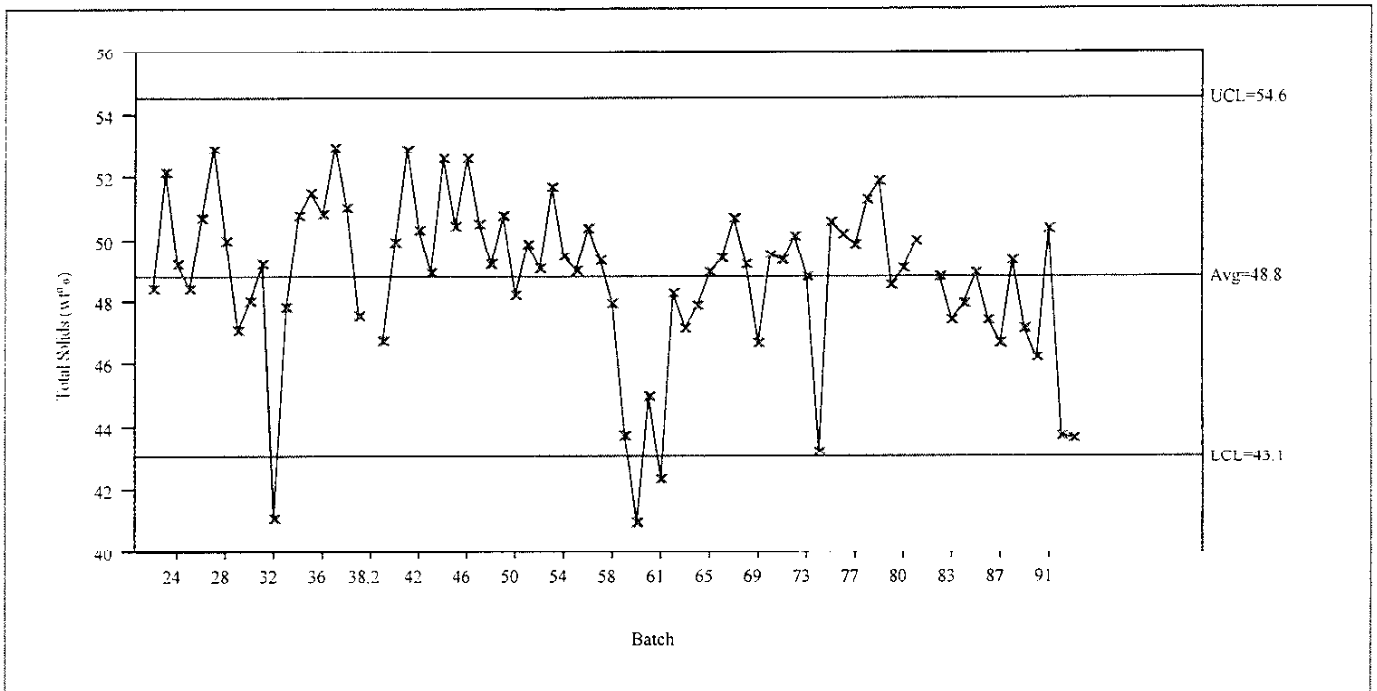


Mean(Fe/Al)

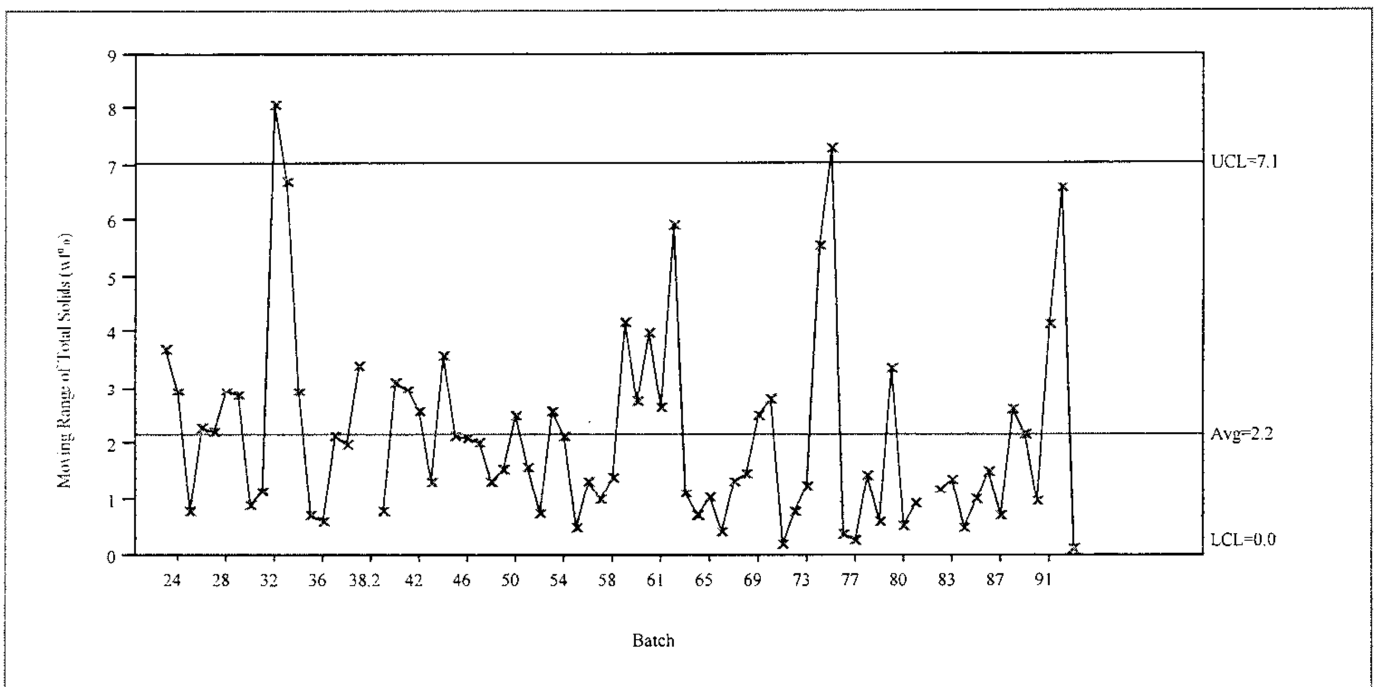


Moving Range of Mean(Fe/Al)

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

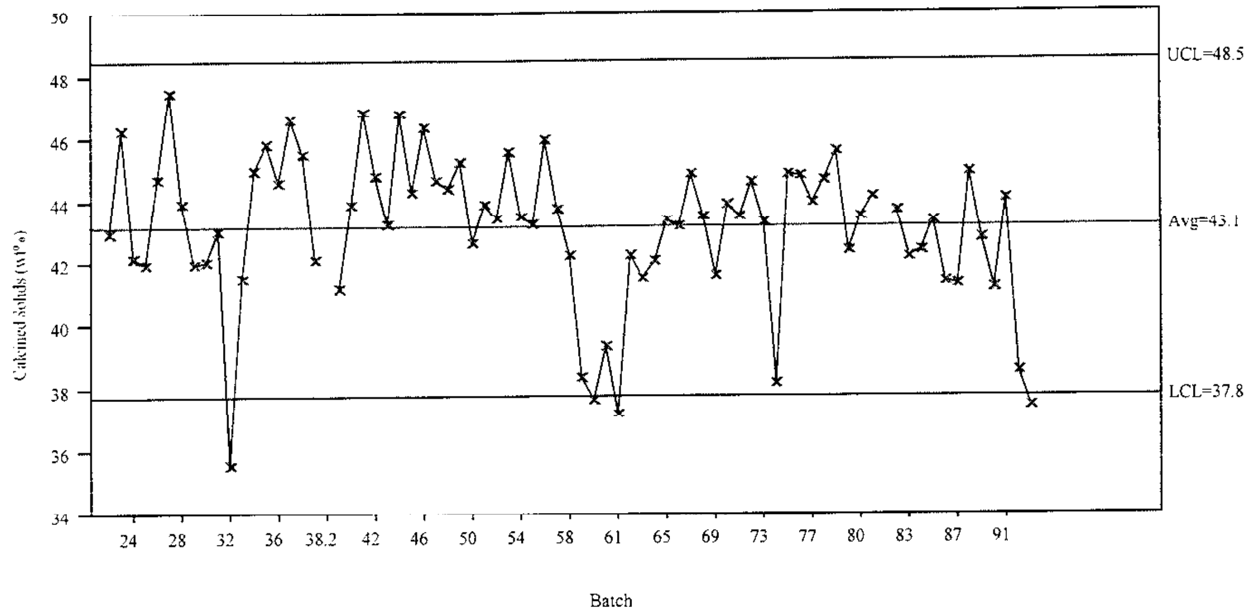


Total Solids (wt%)

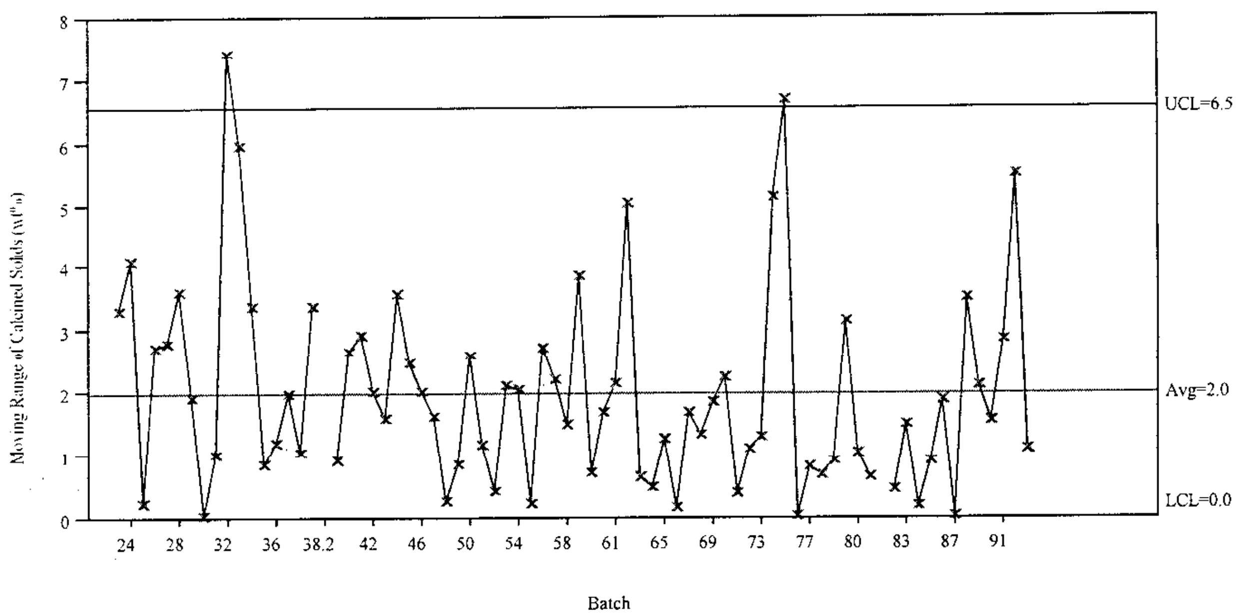


Moving Range of Total Solids (wt%)

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

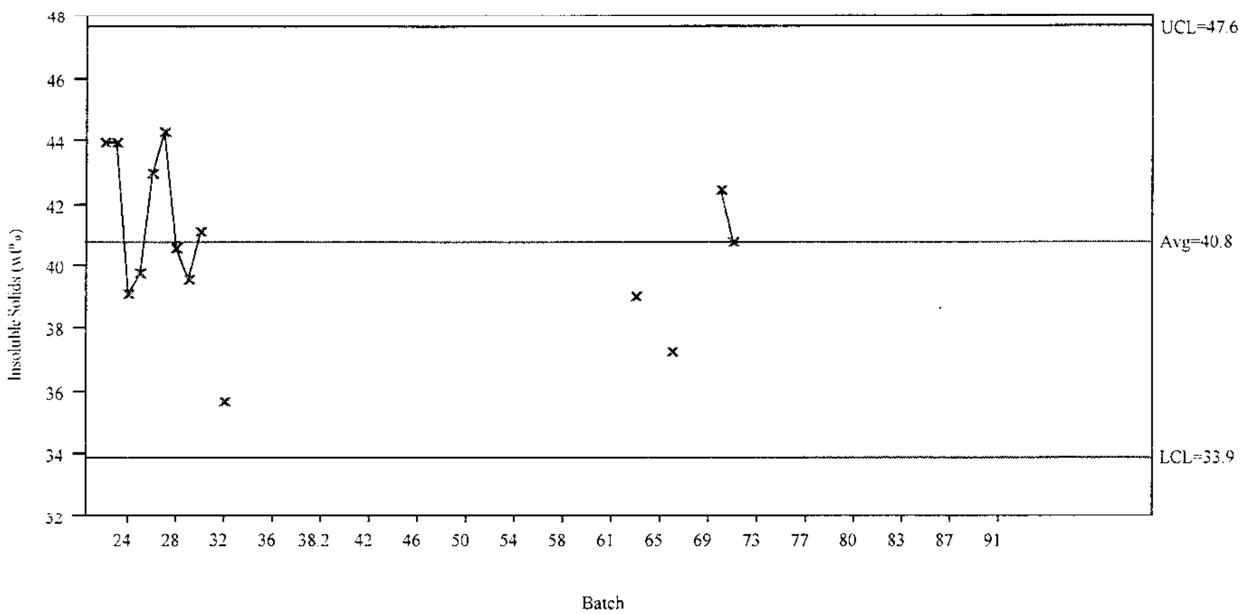


Calcined Solids (wt%)

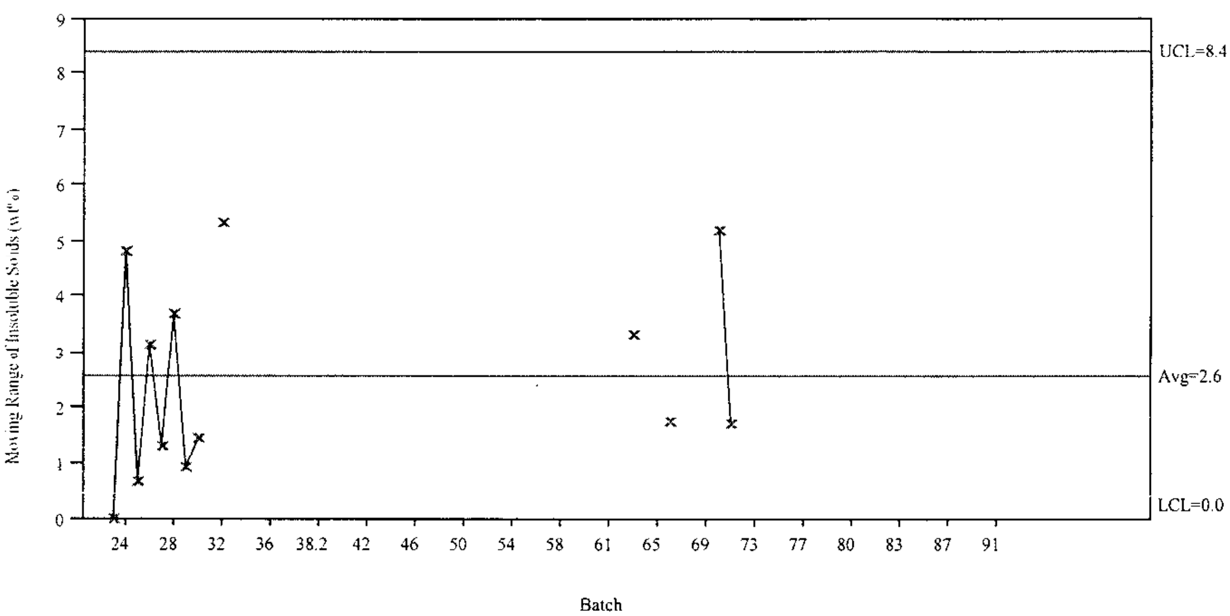


Moving Range of Calcined Solids (wt%)

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

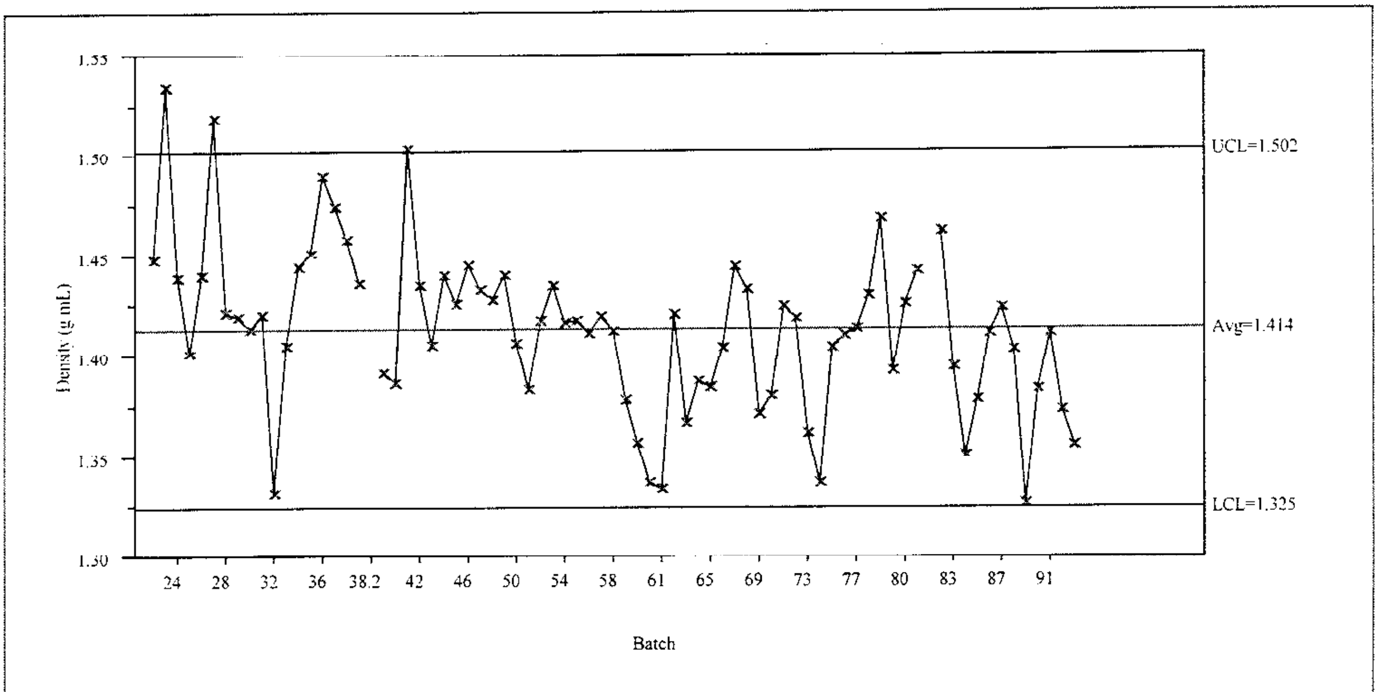


Insoluble Solids (wt%)

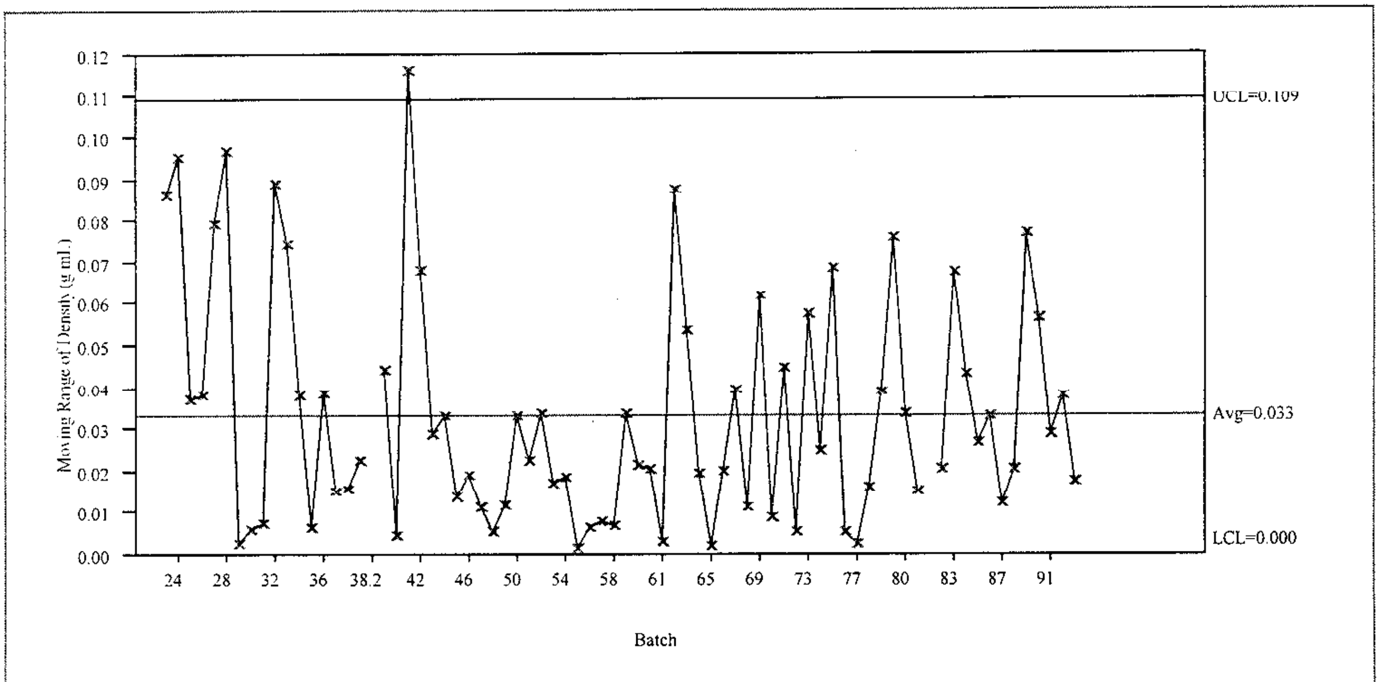


Moving Range of Insoluble Solids (wt%)

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

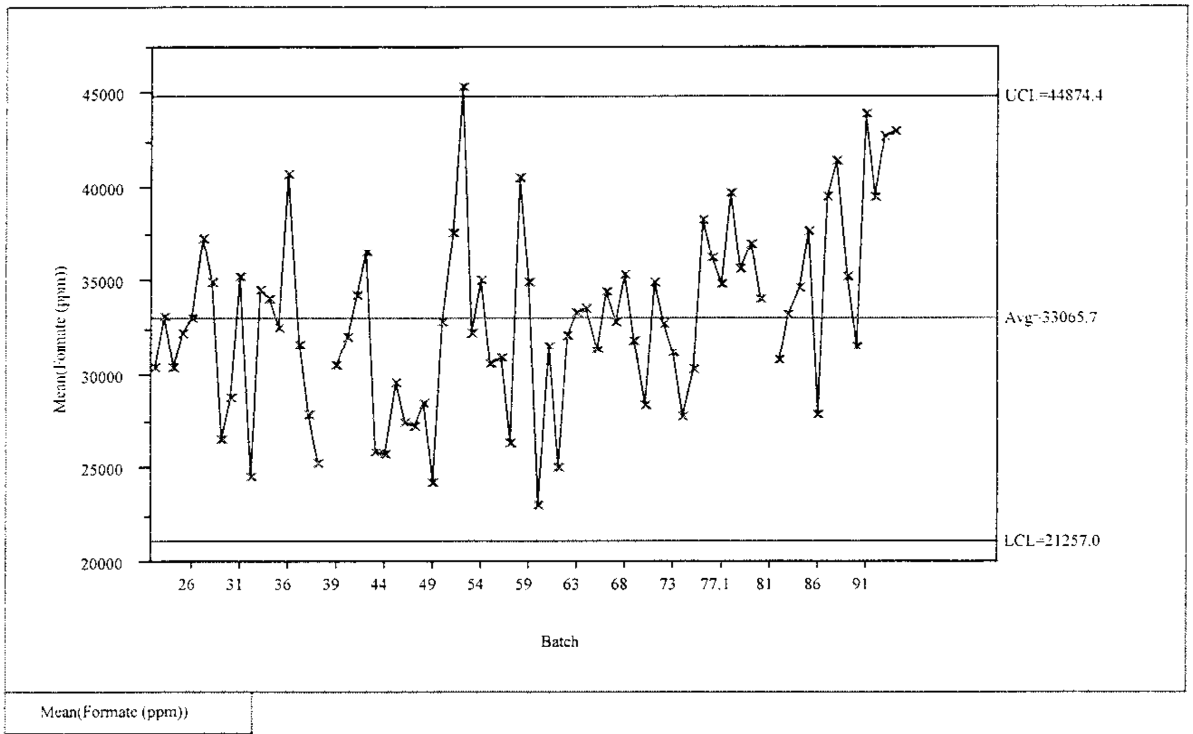


Density (g/mL)



Moving Range of Density (g/mL)

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions



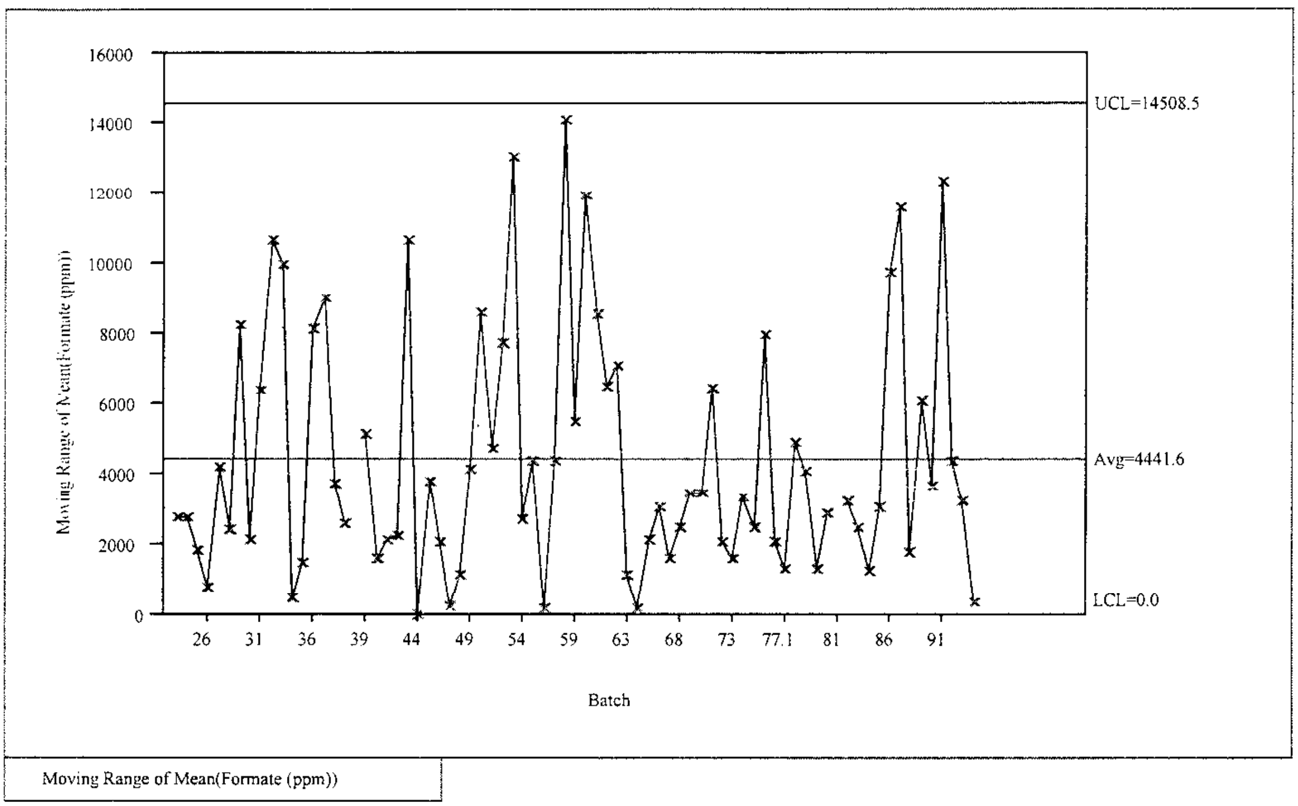
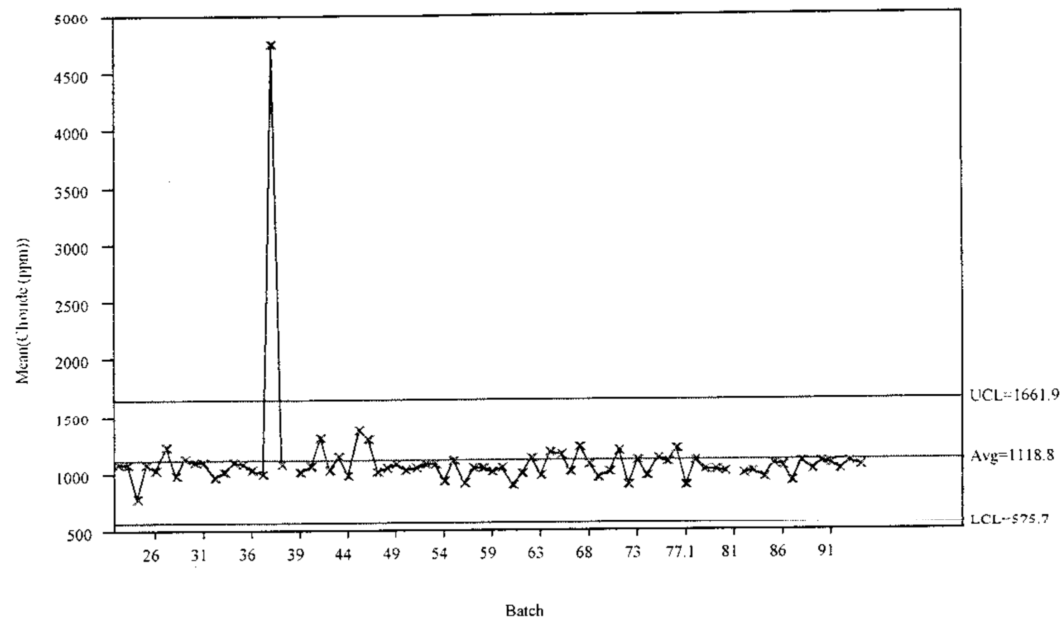
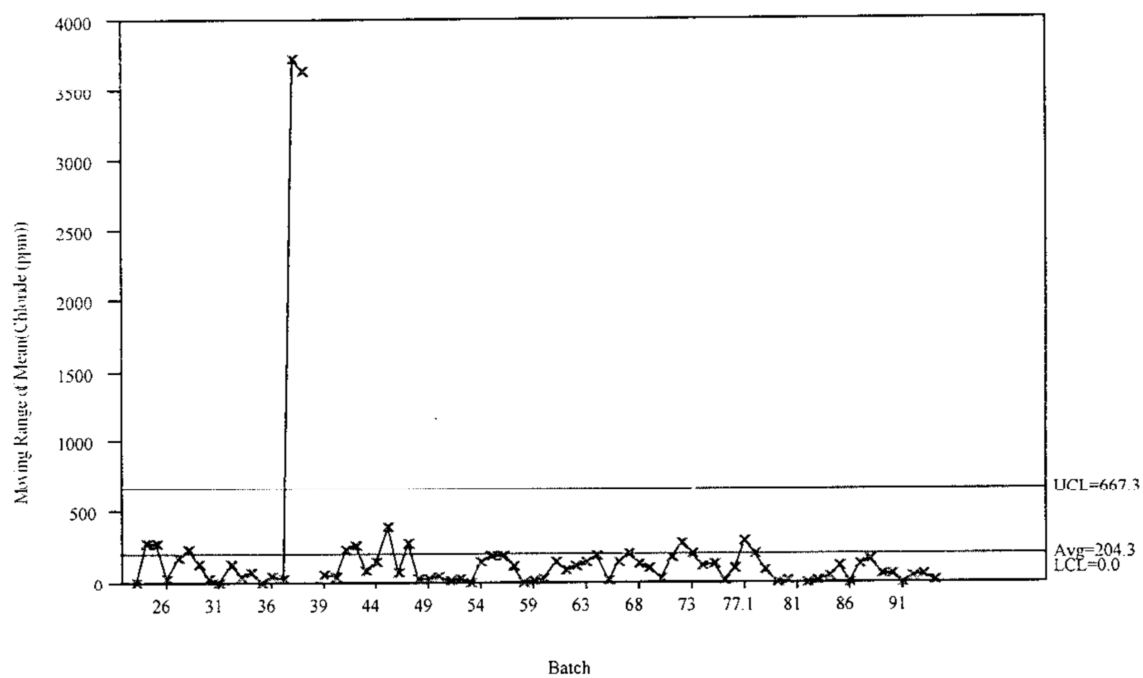


Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

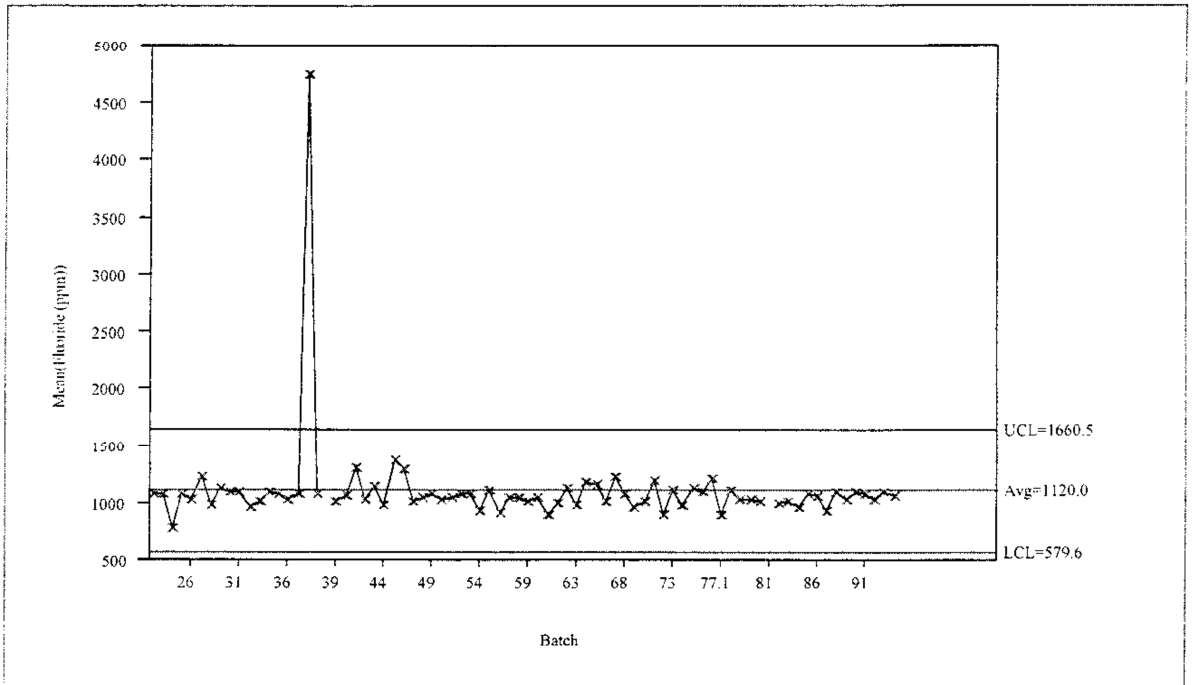


Mean(Chloride (ppm))

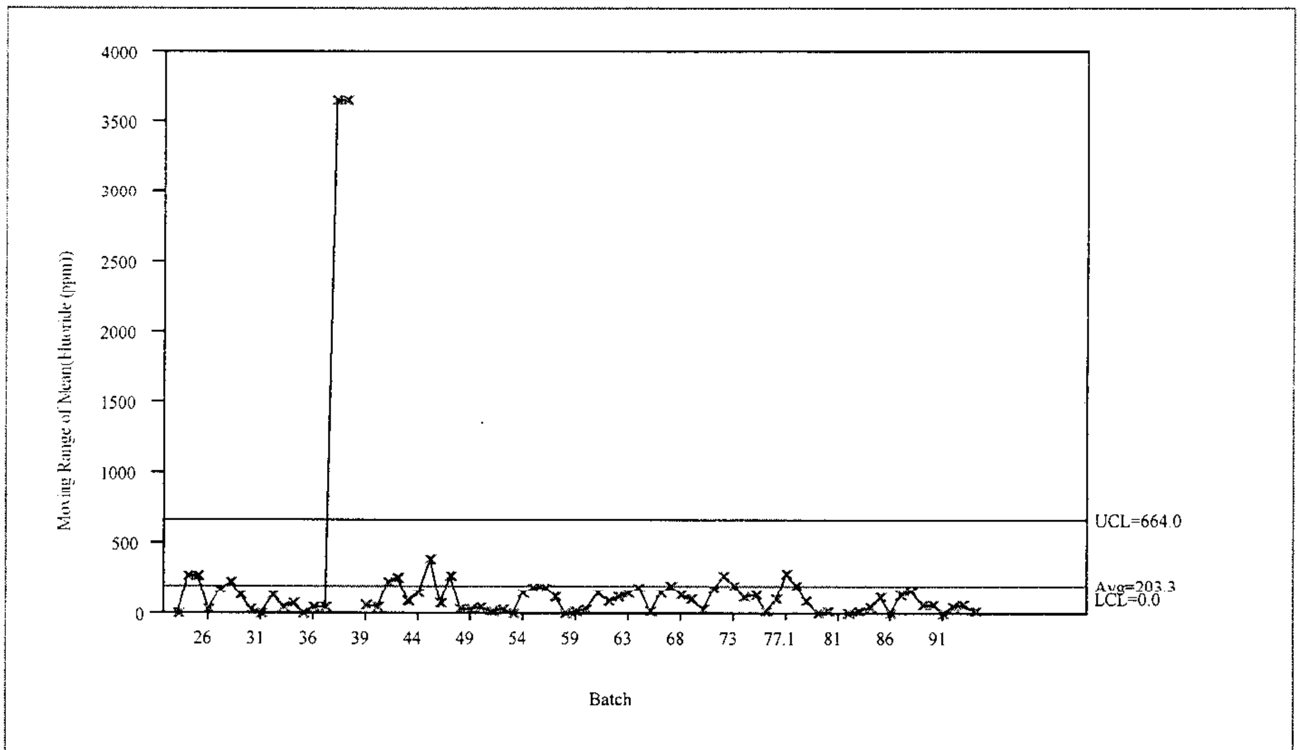


Moving Range of Mean(Chloride (ppm))

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

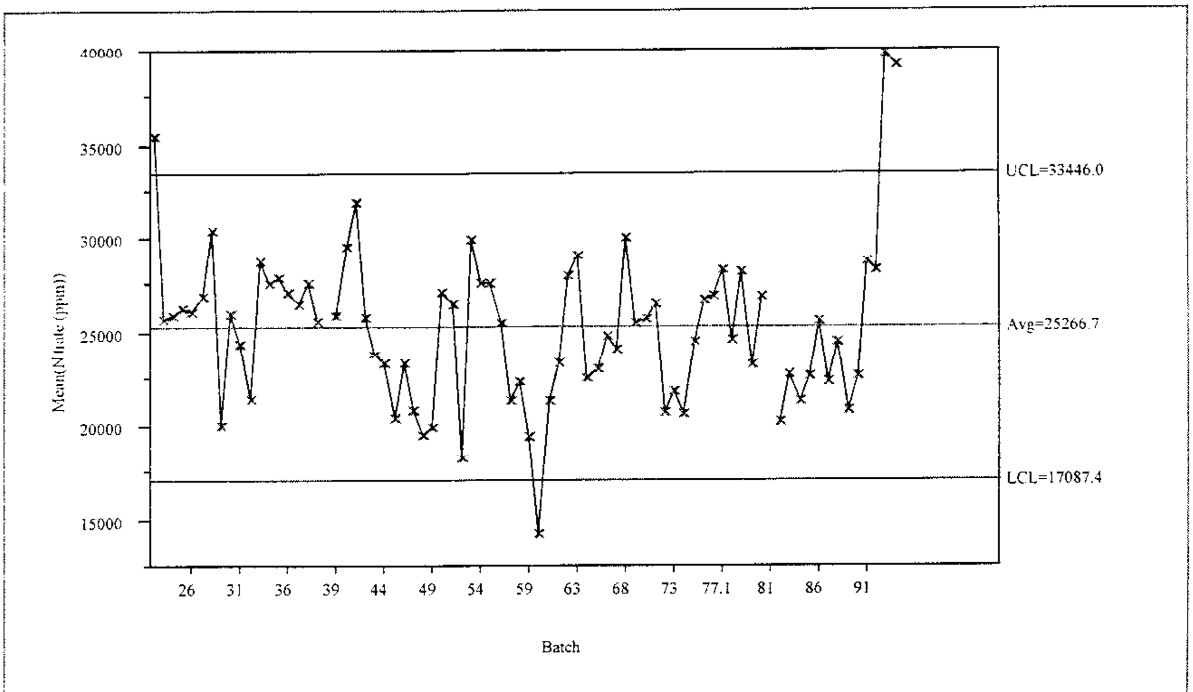


Mean(Fluoride (ppm))

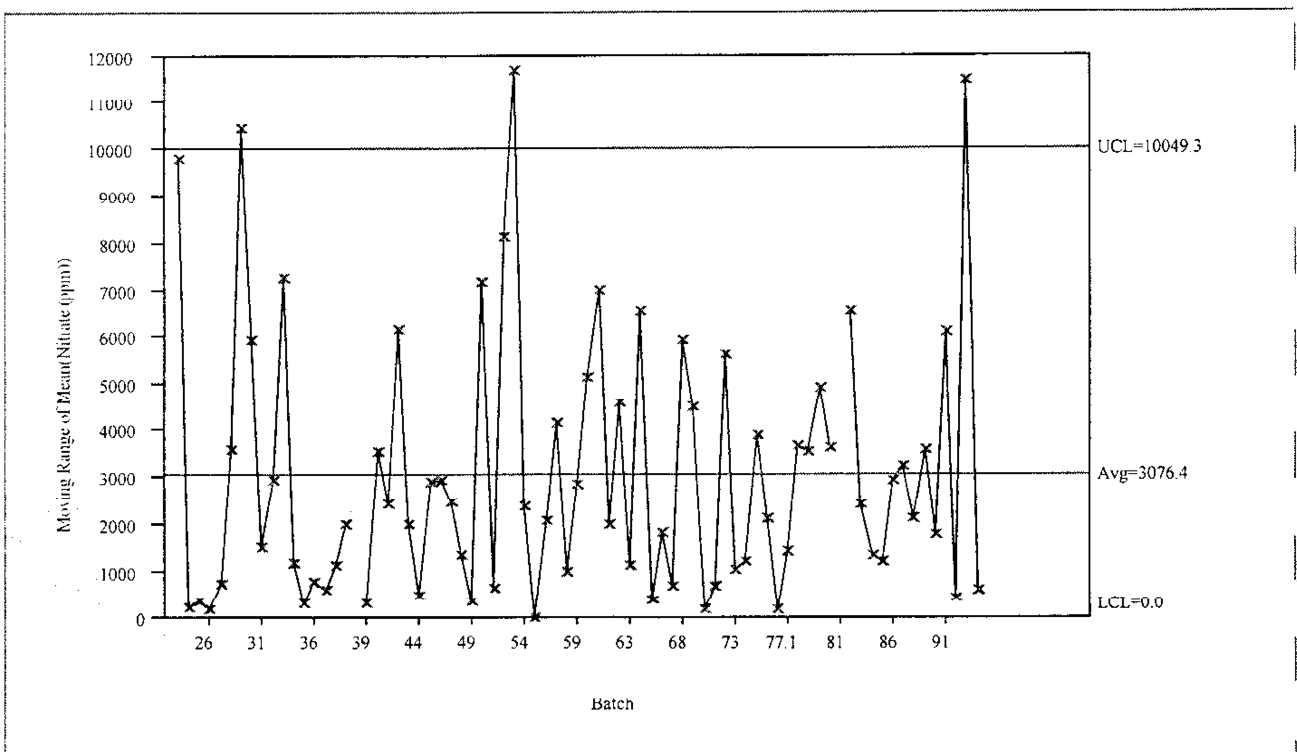


Moving Range of Mean(Fluoride (ppm))

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

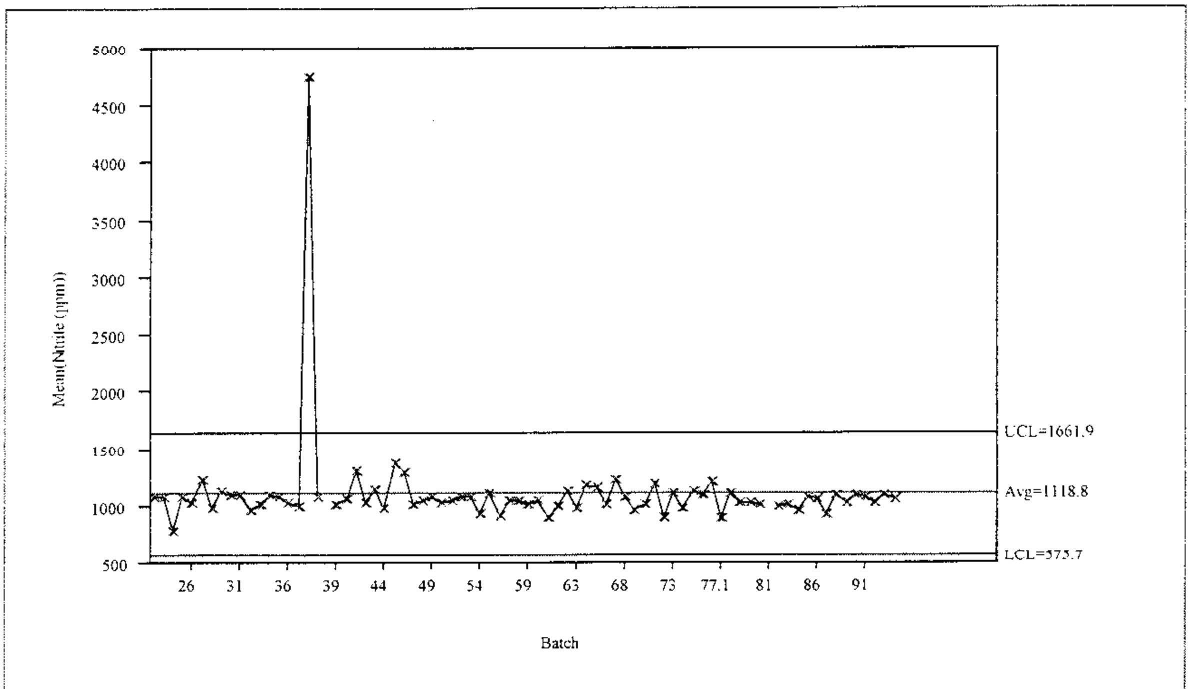


Mean(Nitrate (ppm))

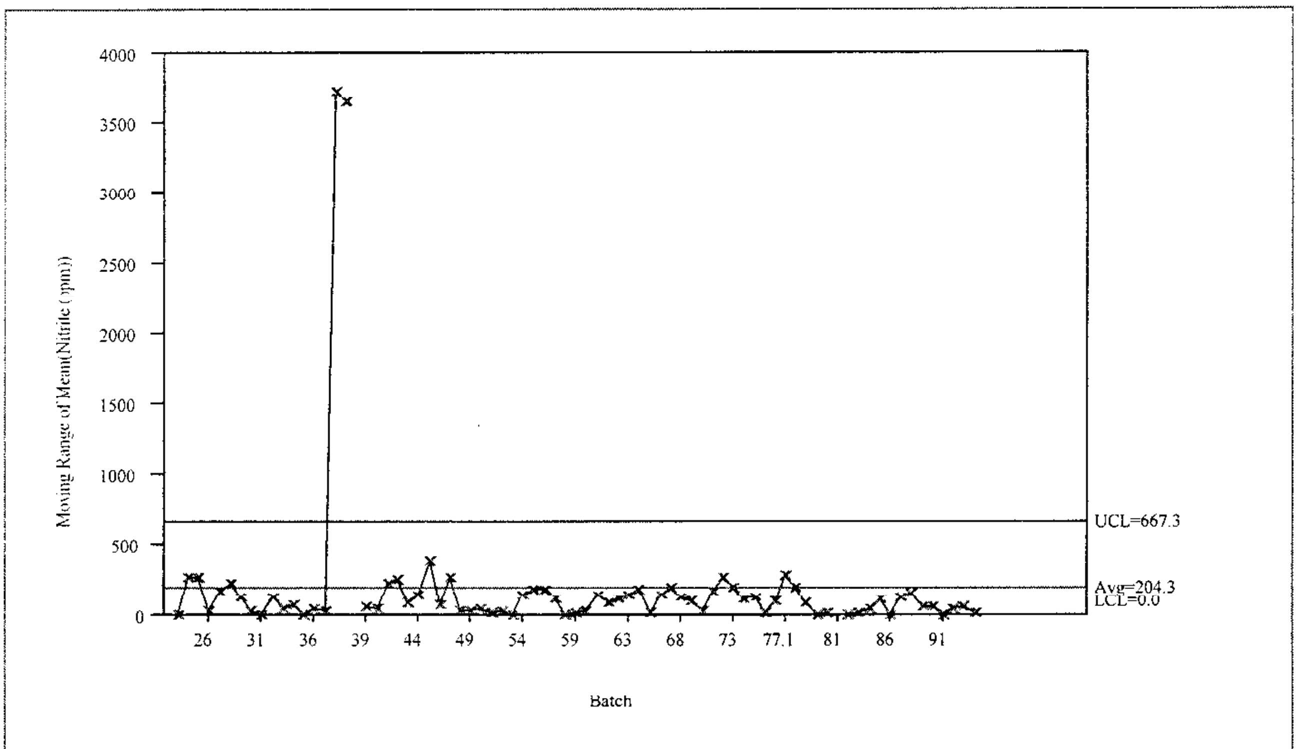


Moving Range of Mean(Nitrate (ppm))

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

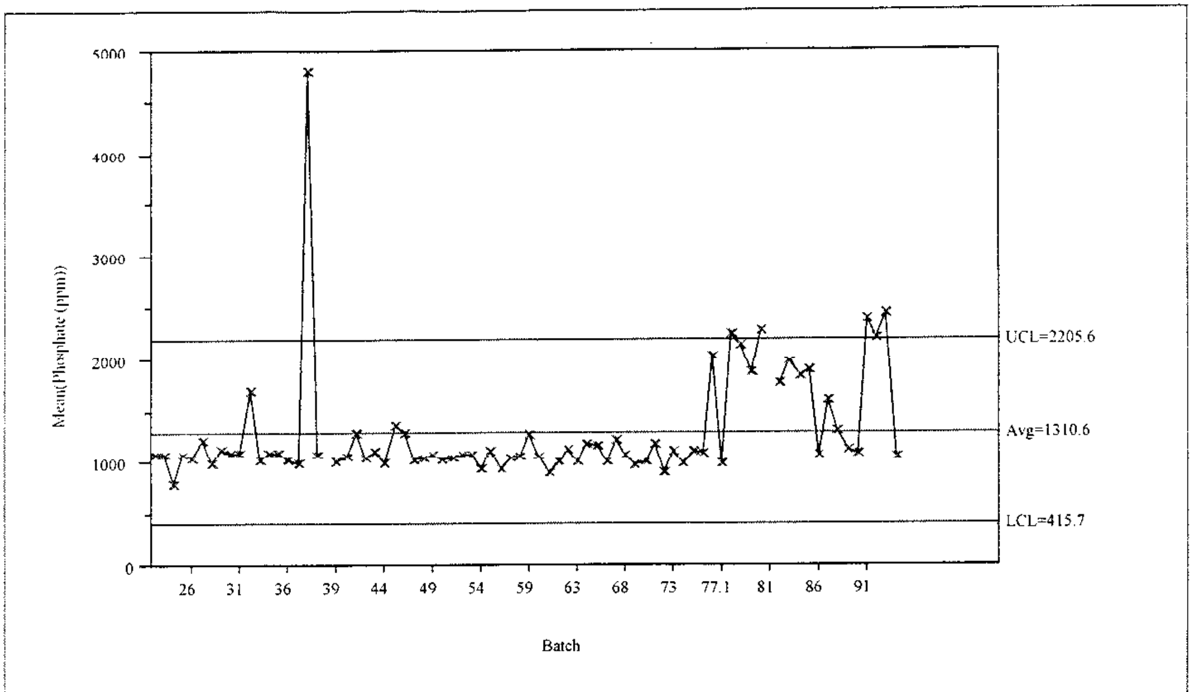


Mean(Nitrite (ppm))

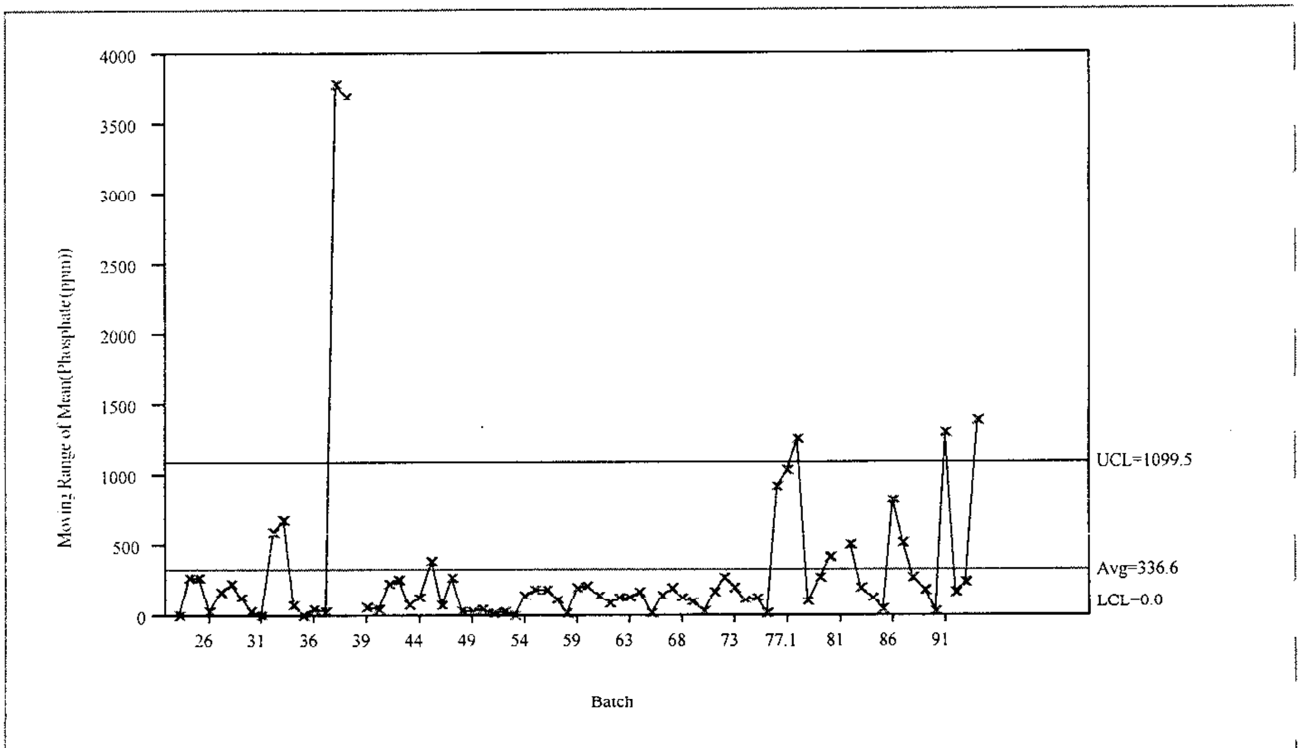


Moving Range of Mean(Nitrite (ppm))

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

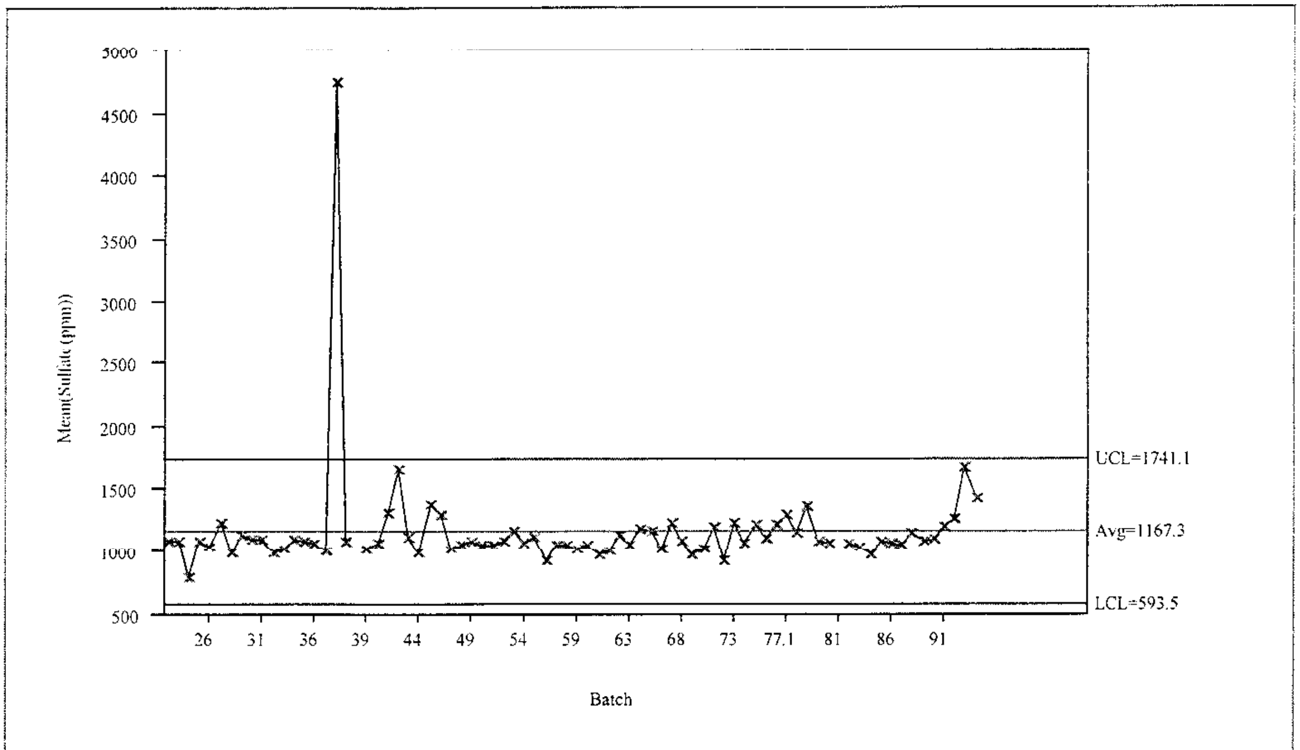


Mean(Phosphate (ppm))

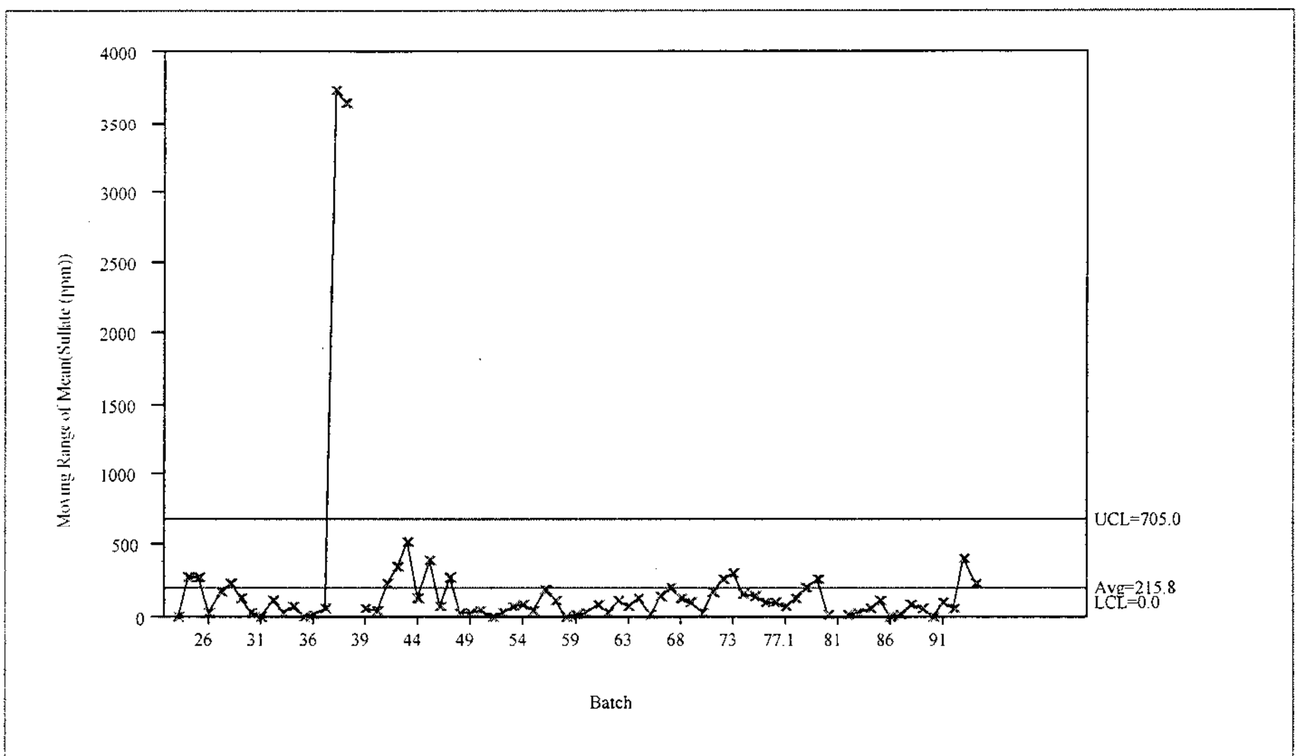


Moving Range of Mean(Phosphate (ppm))

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

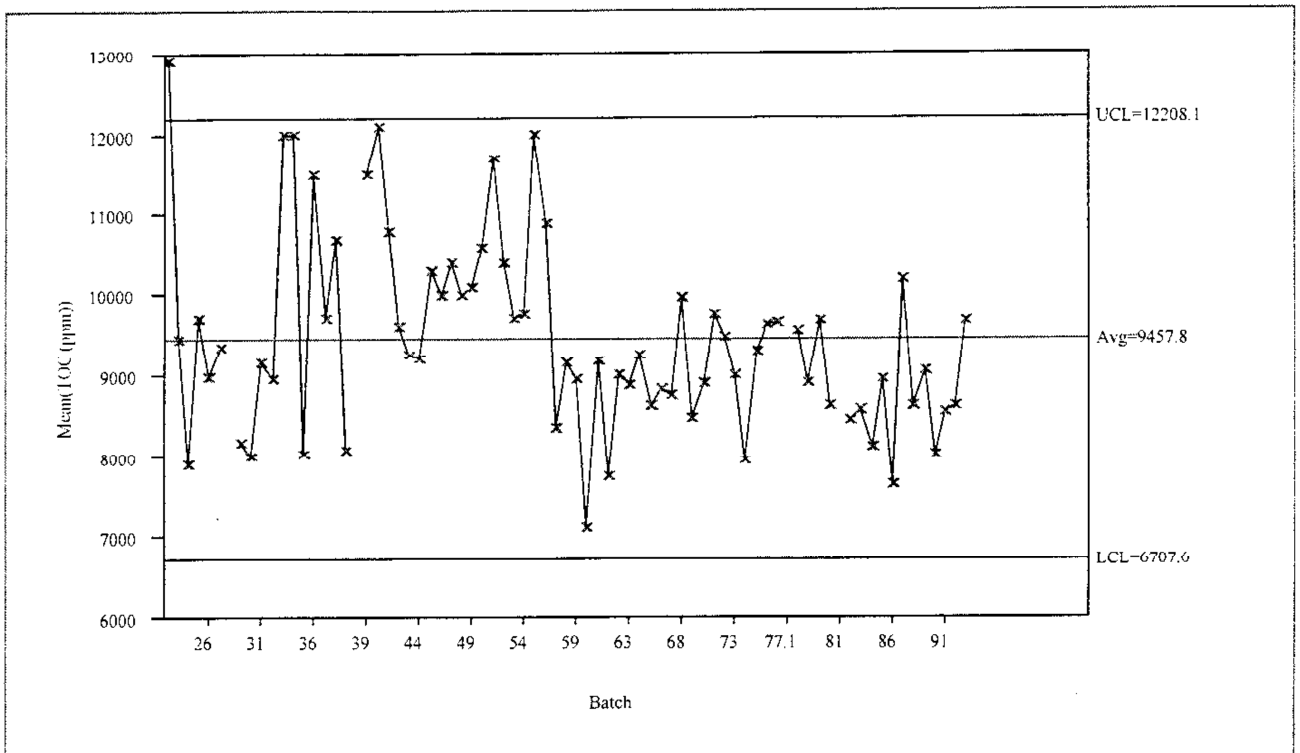


Mean(Sulfate (ppm))

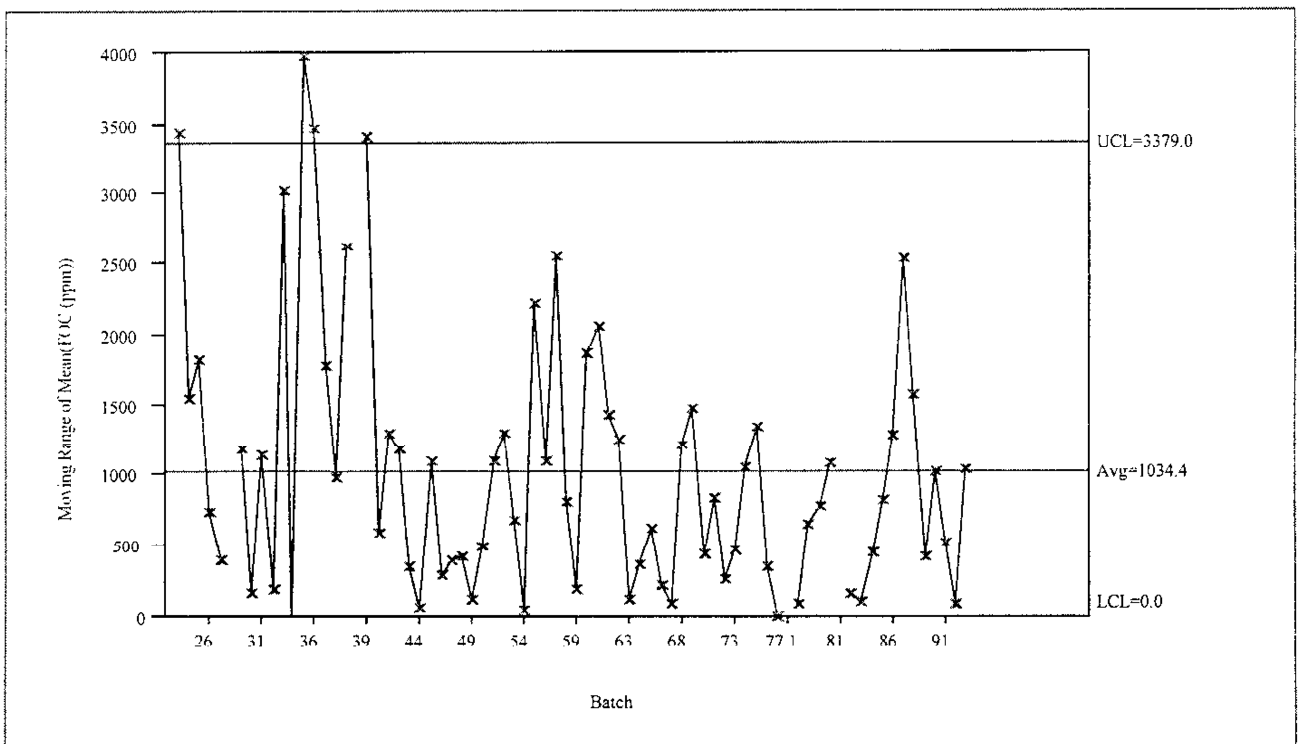


Moving Range of Mean(Sulfate (ppm))

Exhibit 8a: SME Control Charts for Individual Batch Averages for Anions

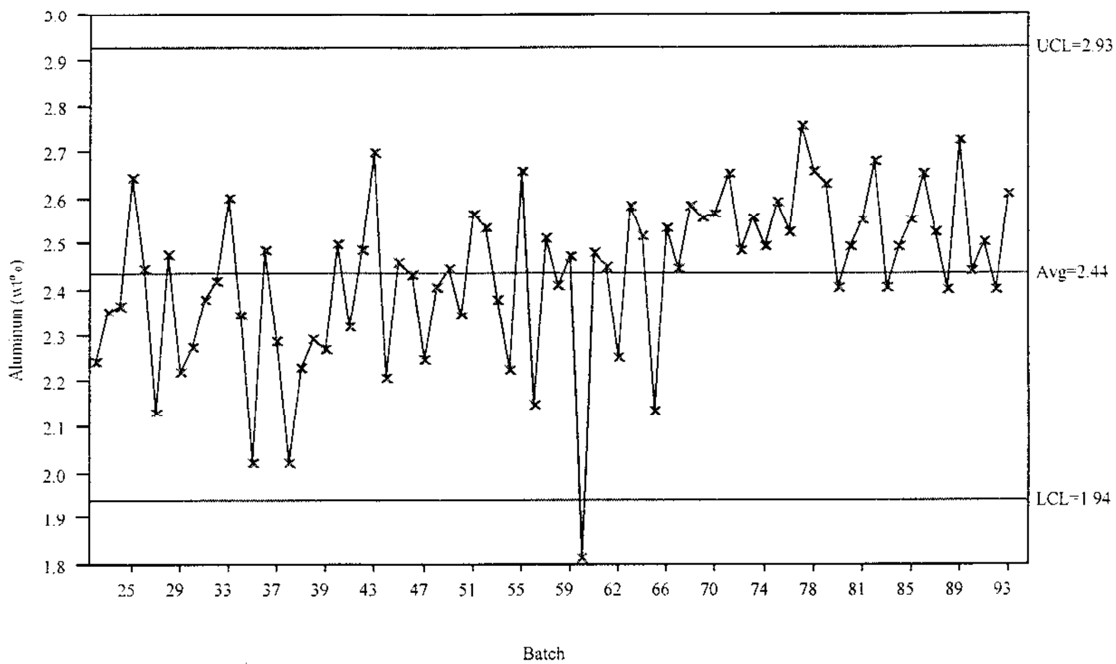


Mean(TOC (ppm))

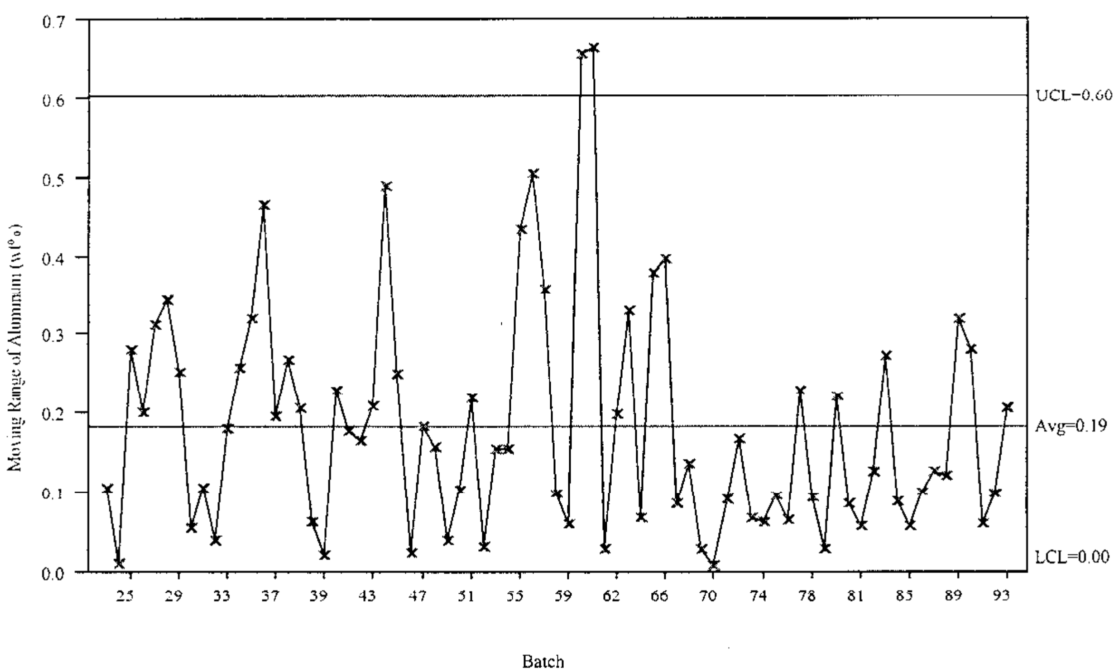


Moving Range of Mean(TOC (ppm))

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

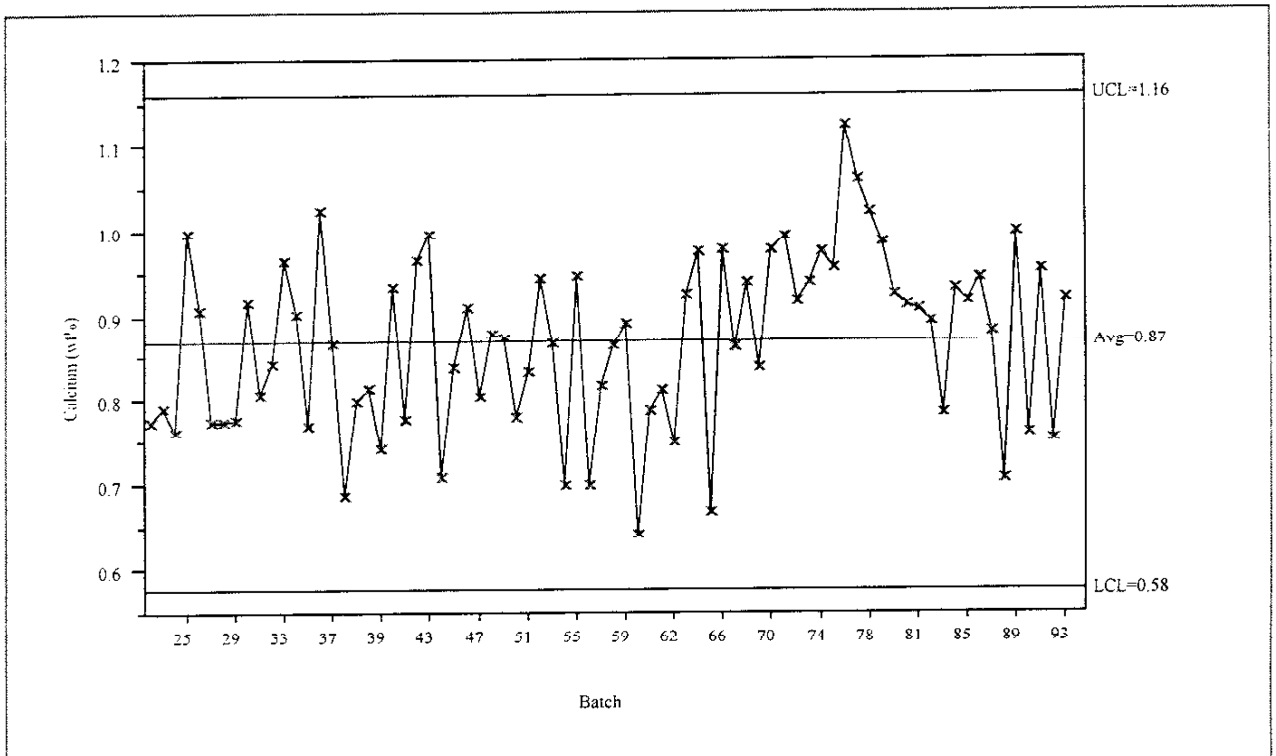


Aluminum (wt%)

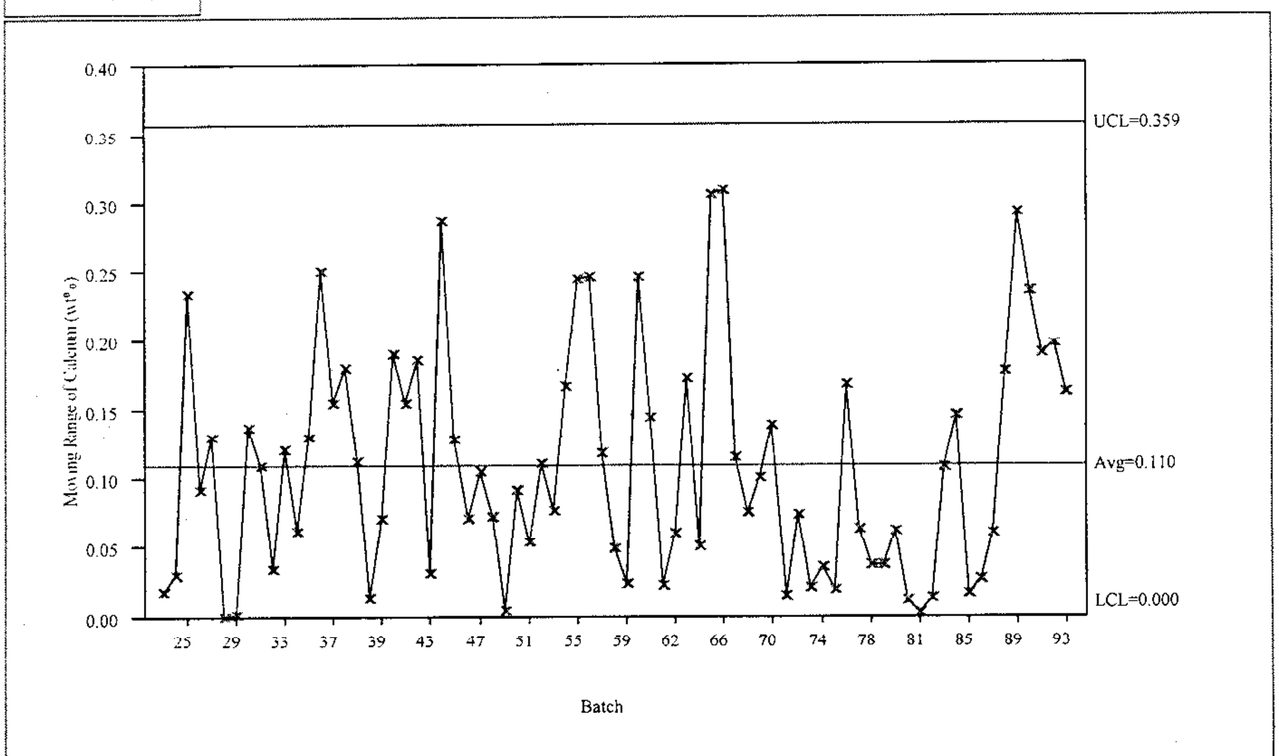


Moving Range of Aluminum (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

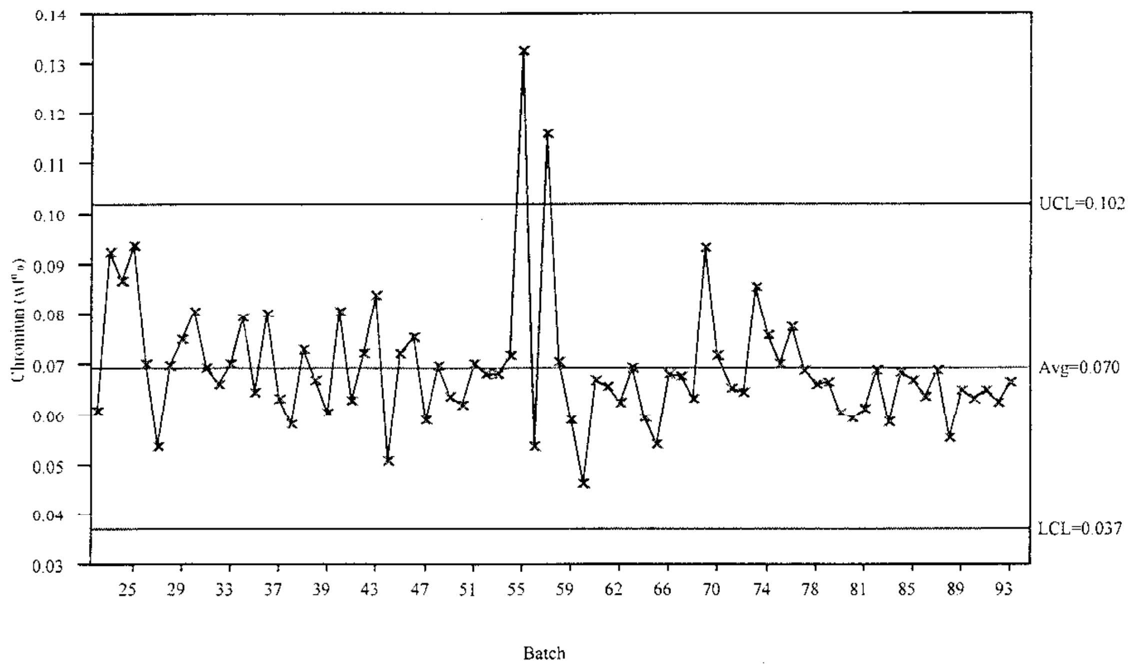


Calcium (wt%)

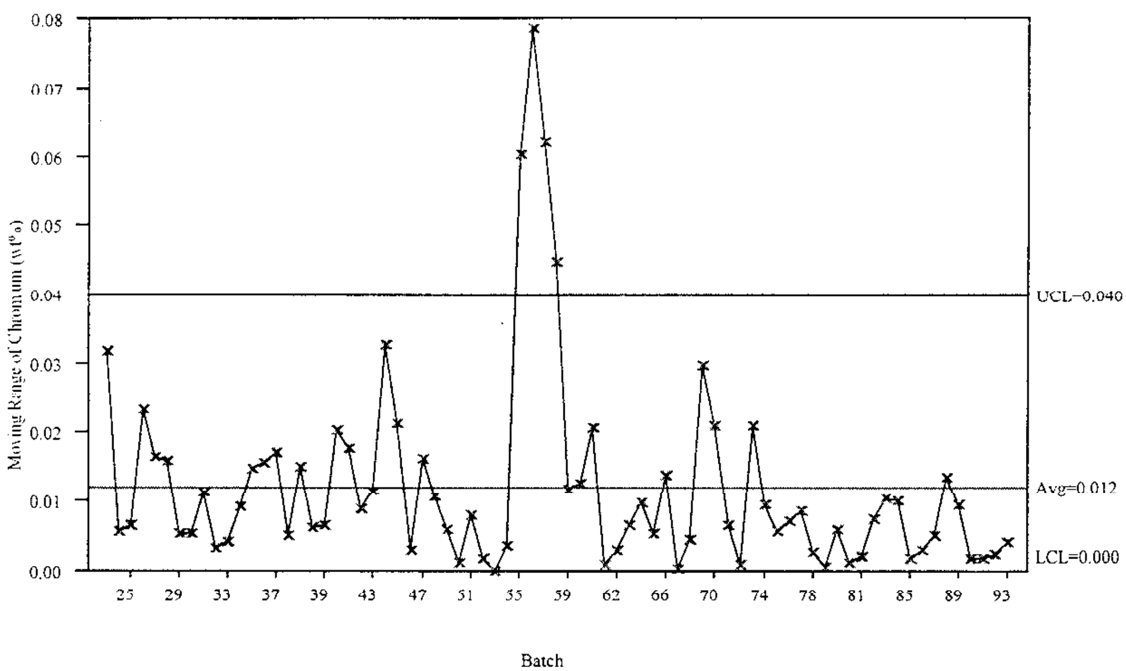


Moving Range of Calcium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

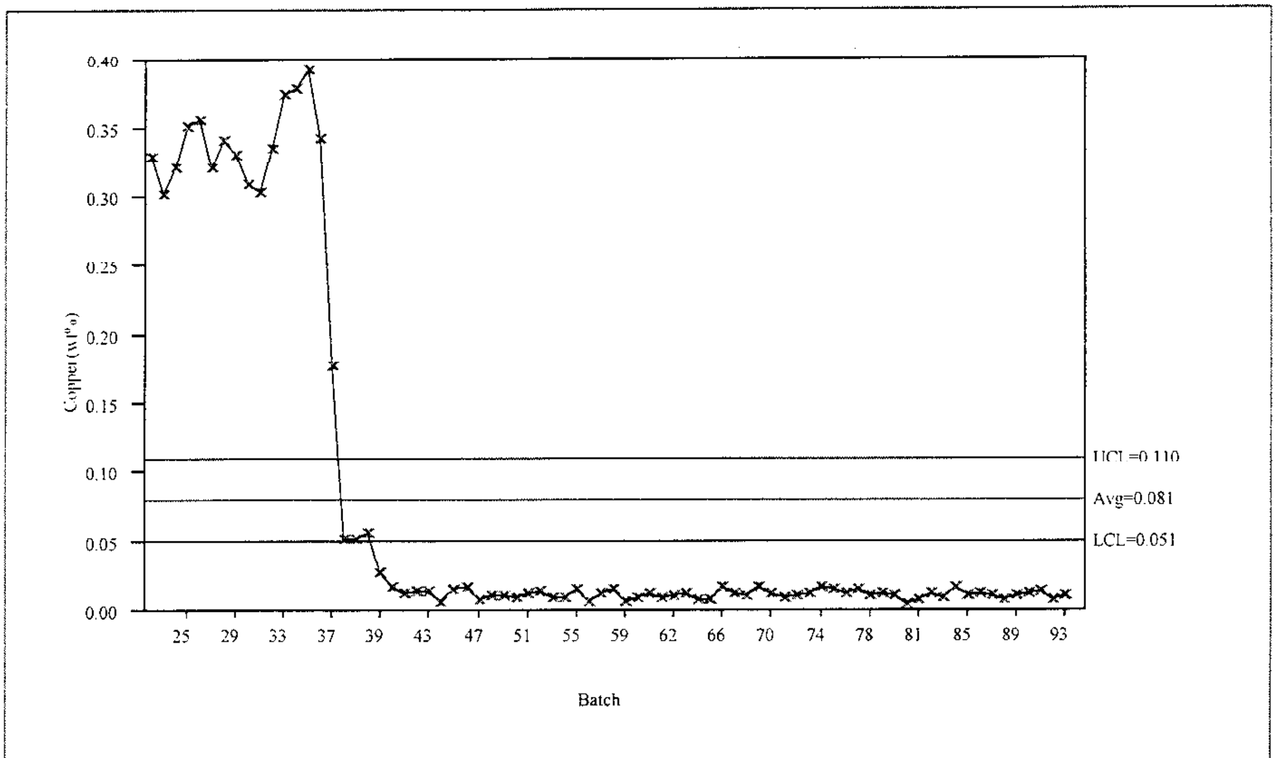


Chromium (wt%)

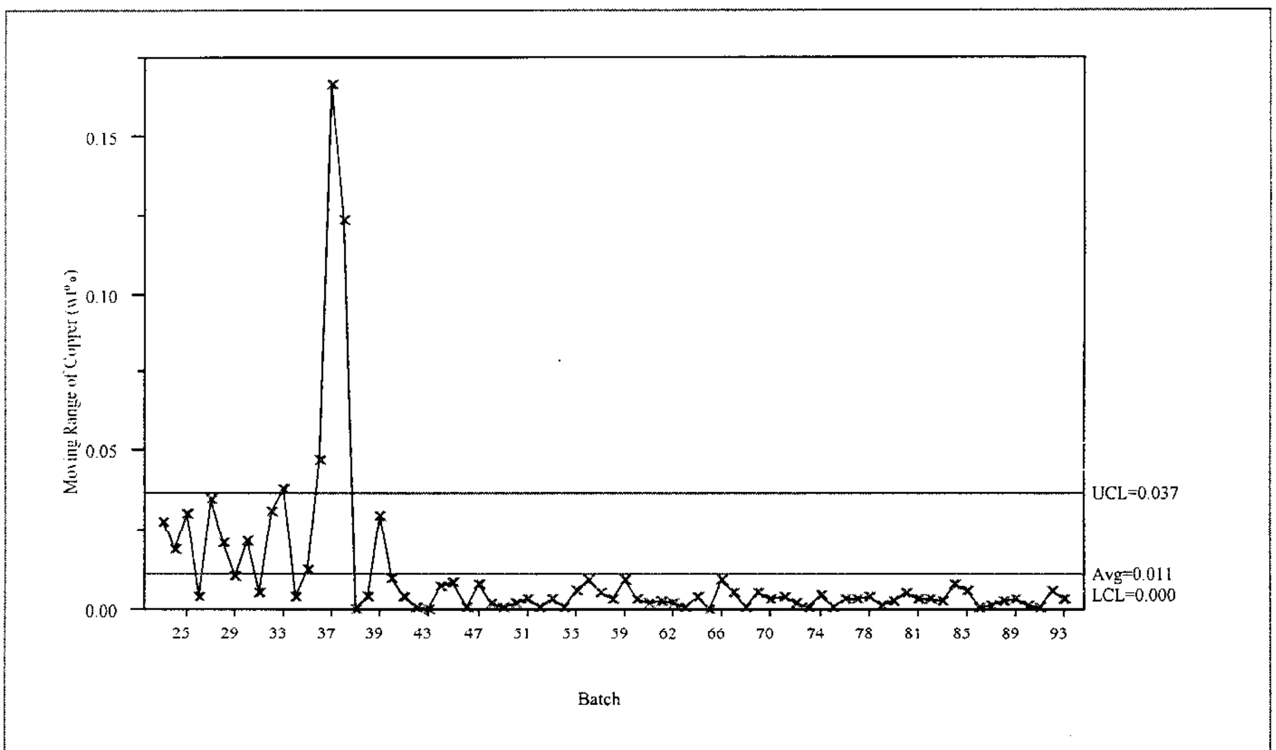


Moving Range of Chromium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

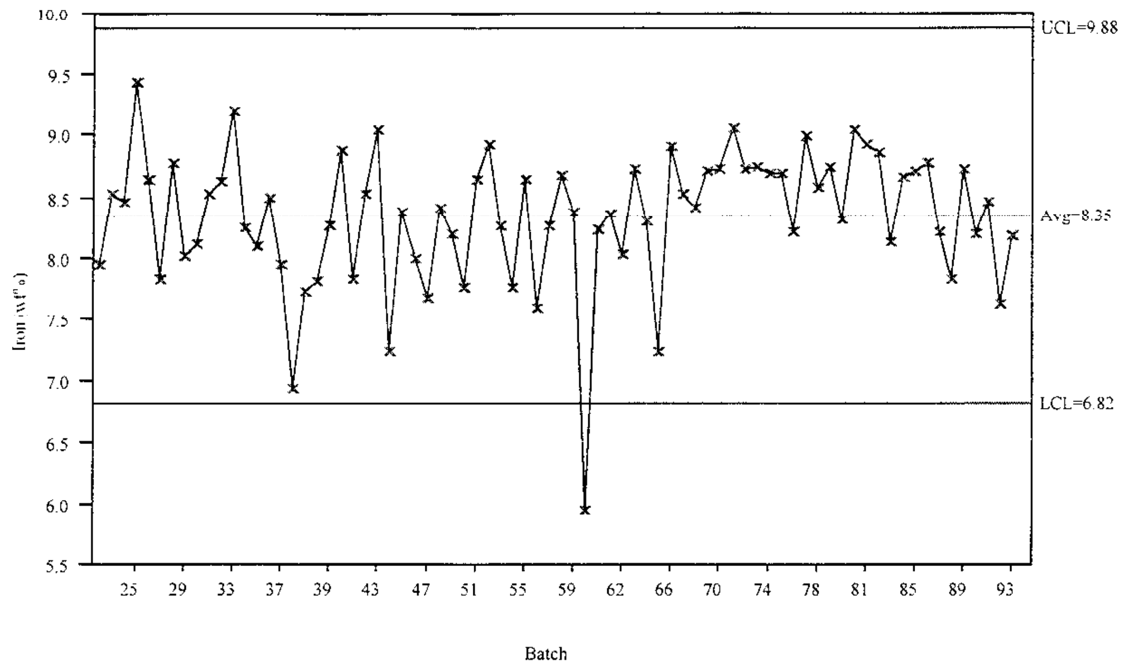


Copper (wt%)

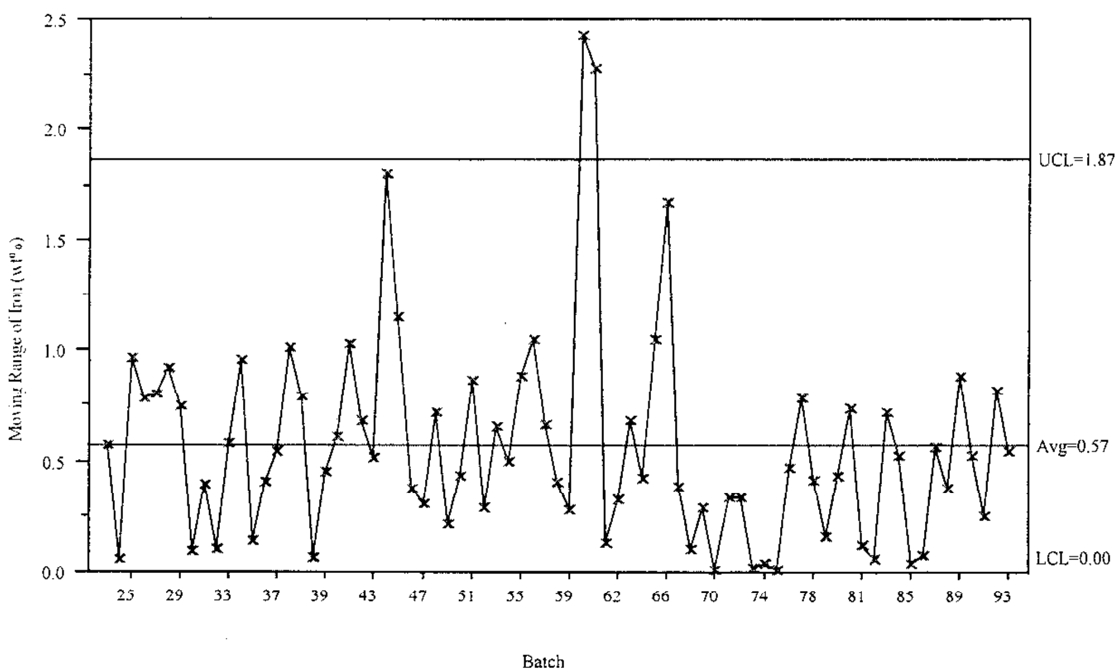


Moving Range of Copper (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

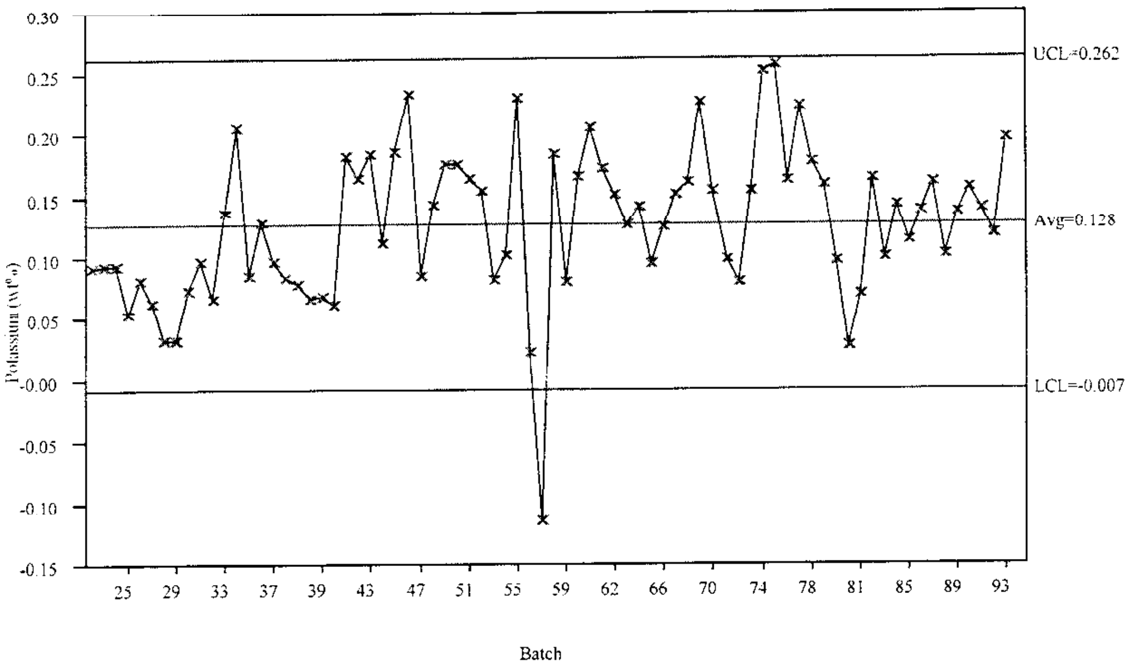


Iron (wt%)

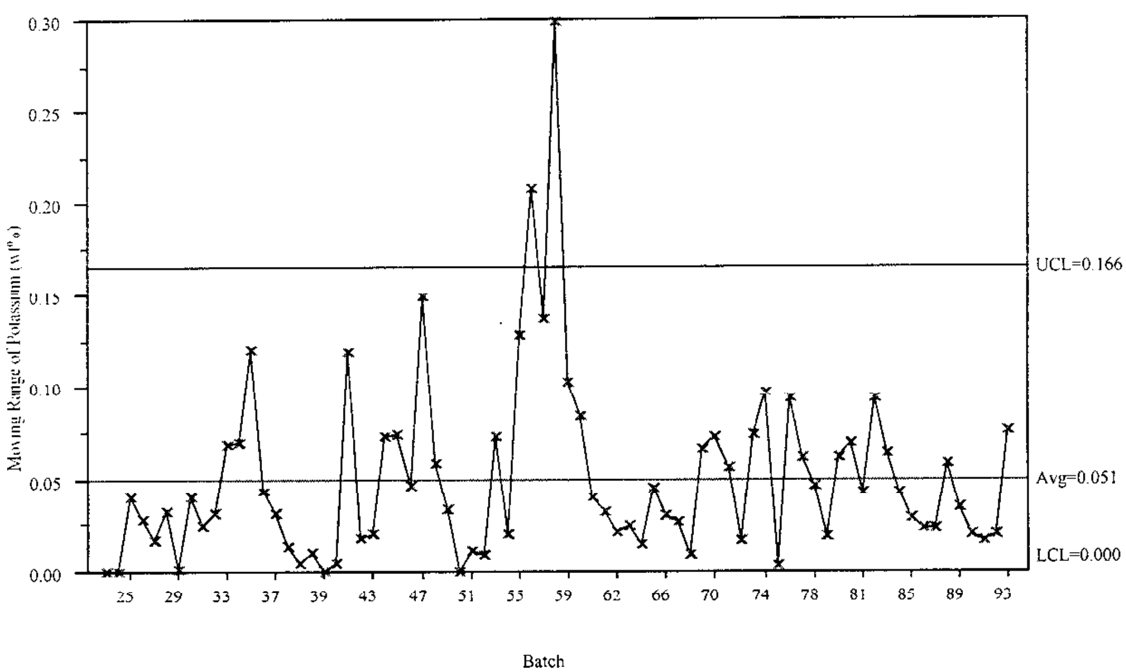


Moving Range of Iron (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

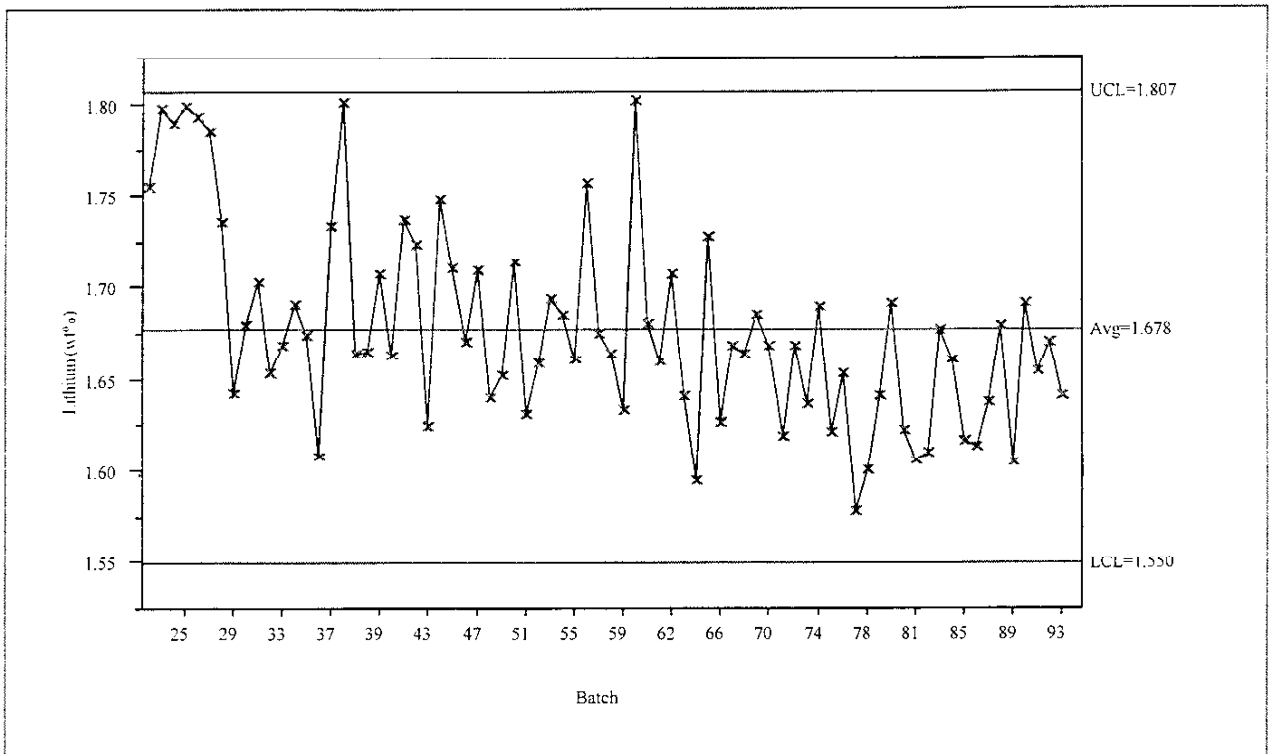


Potassium (wt%)

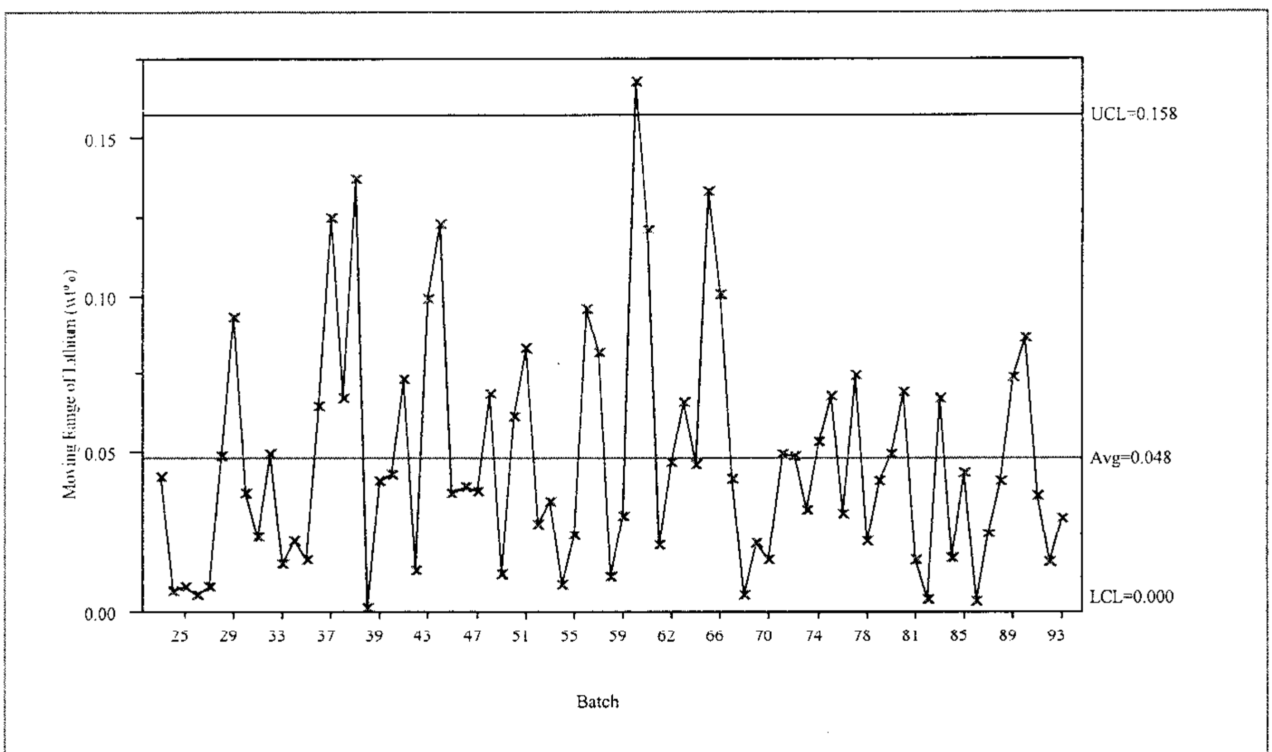


Moving Range of Potassium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

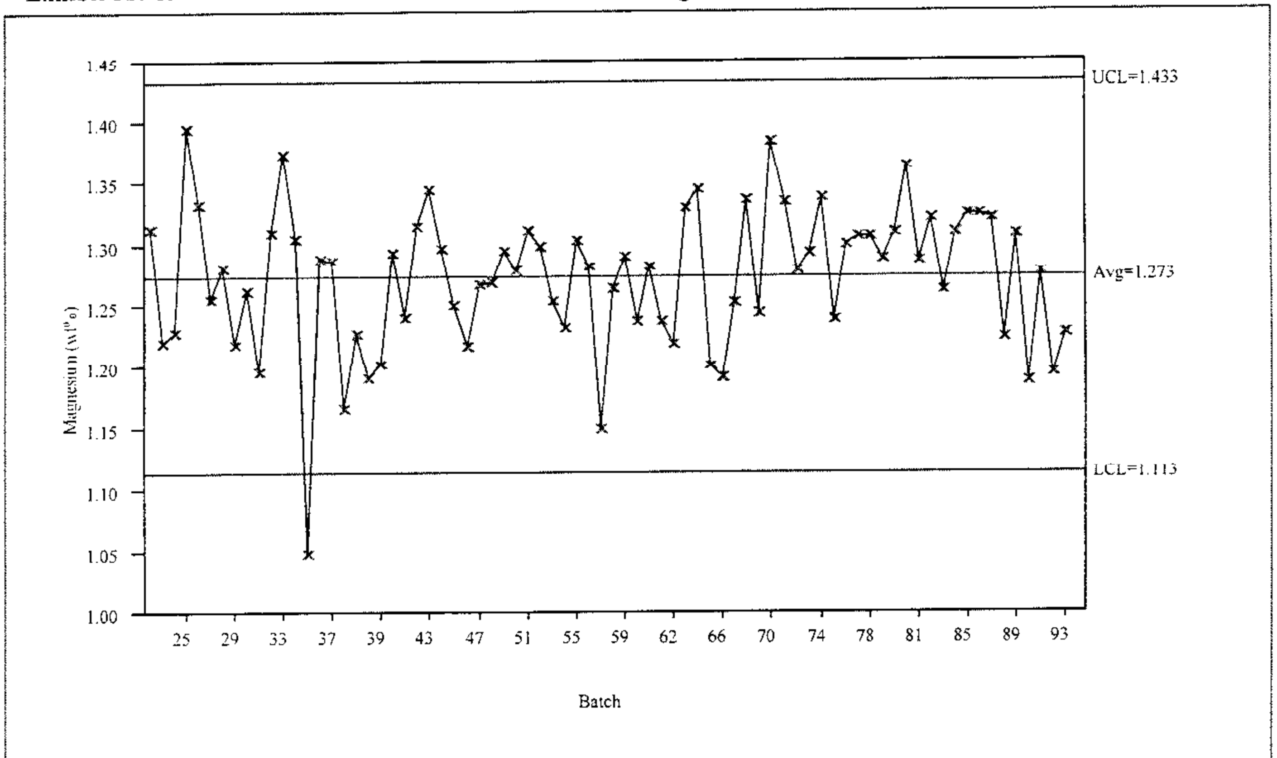


Lithium (wt%)

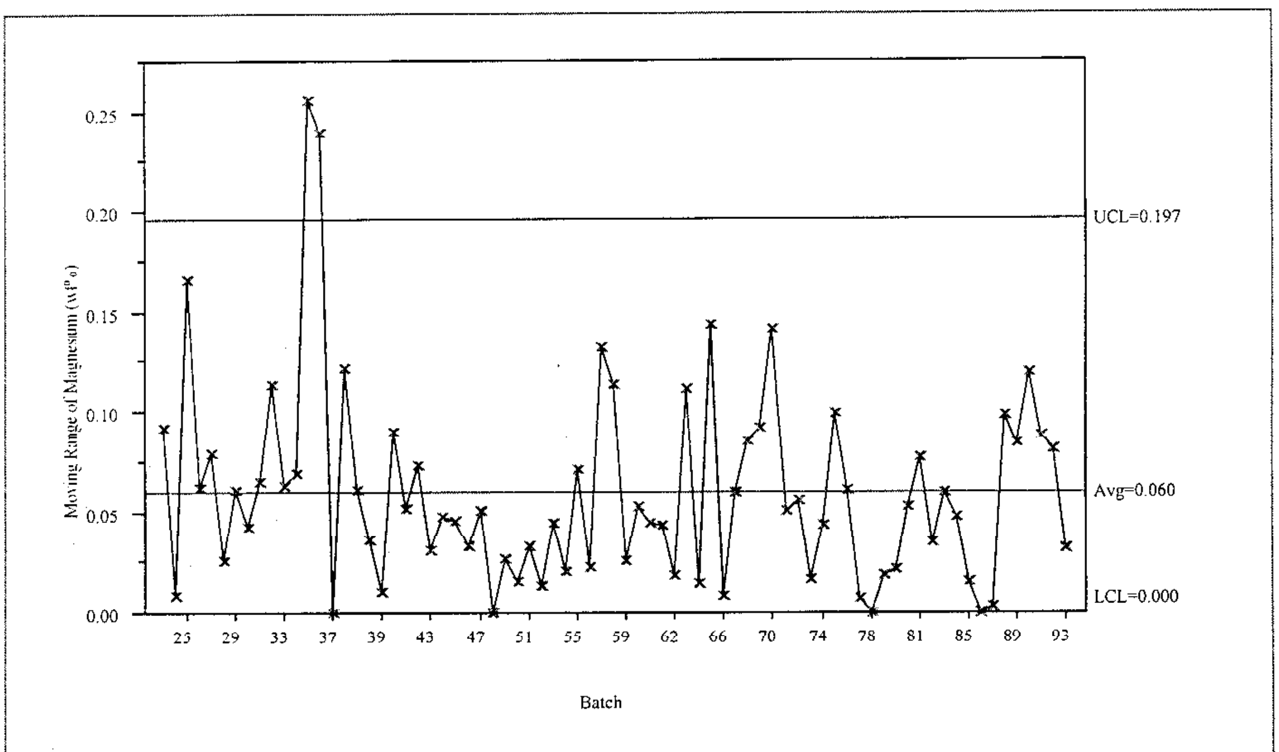


Moving Range of Lithium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

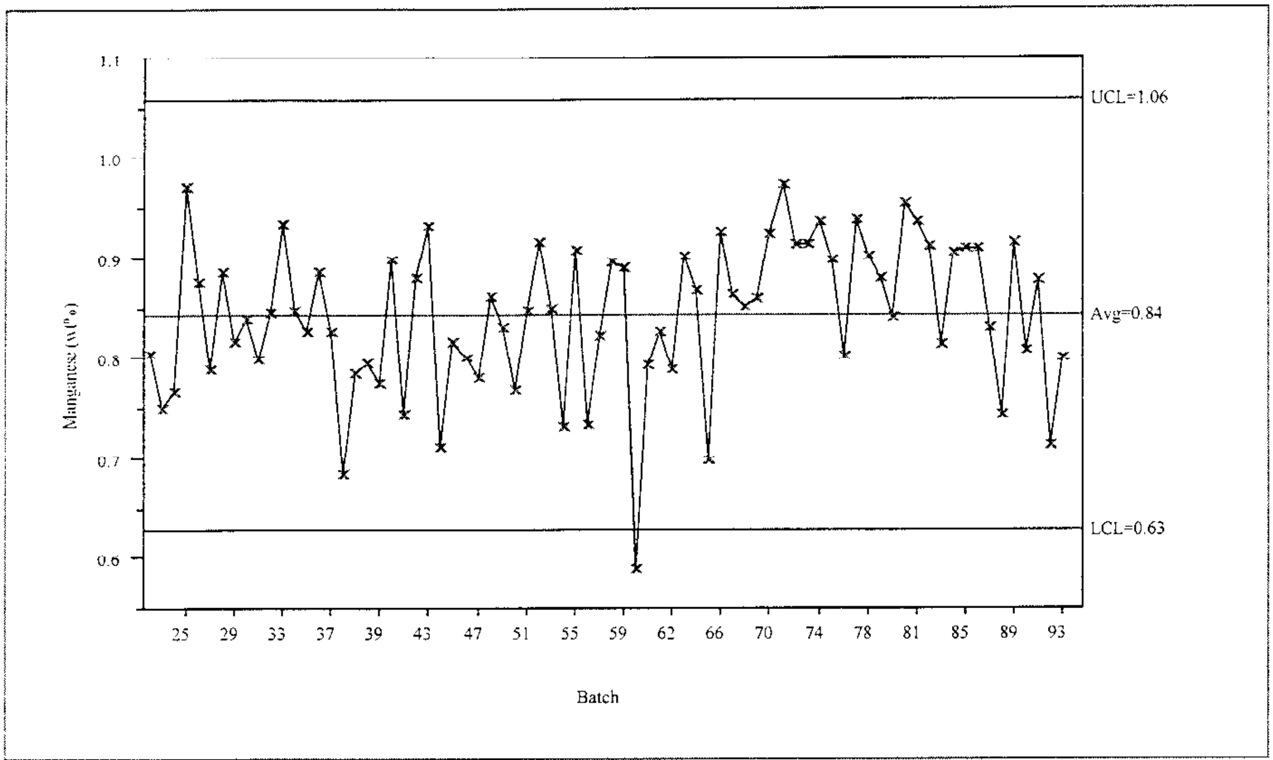


Magnesium (wt%)

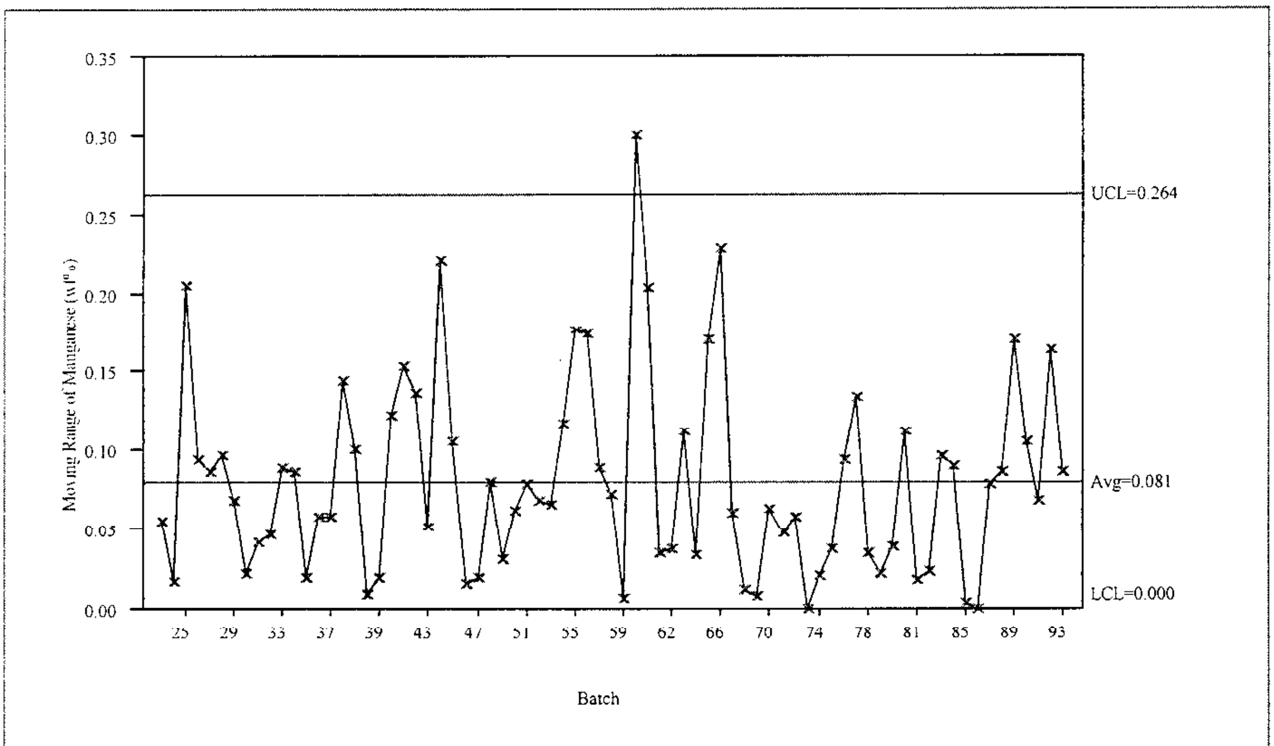


Moving Range of Magnesium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

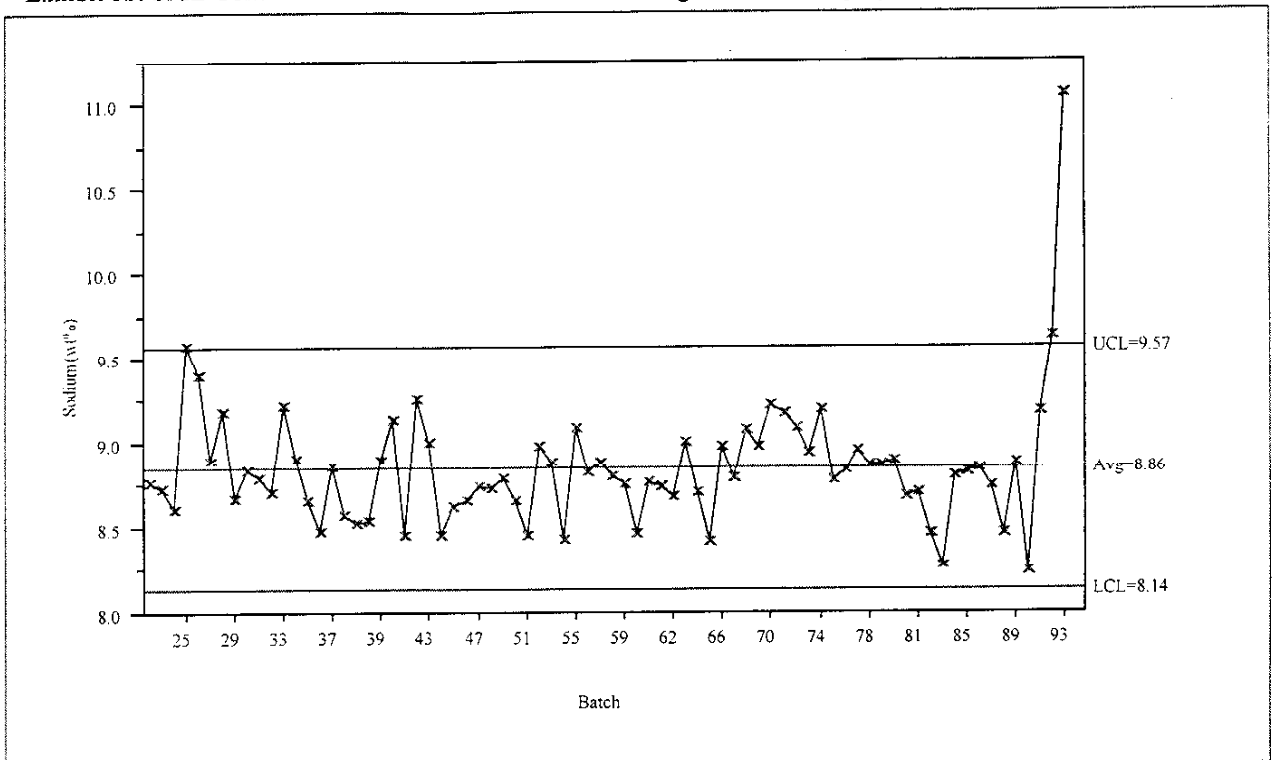


Manganese (wt%)

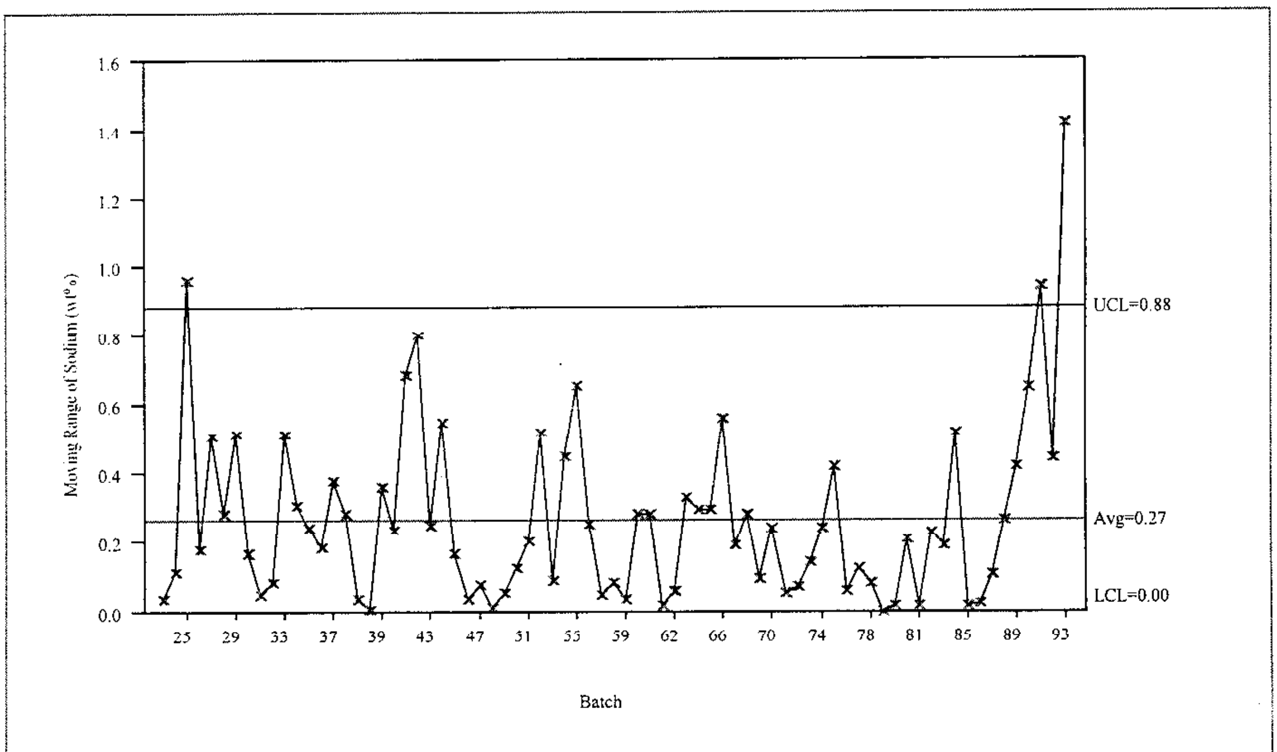


Moving Range of Manganese (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

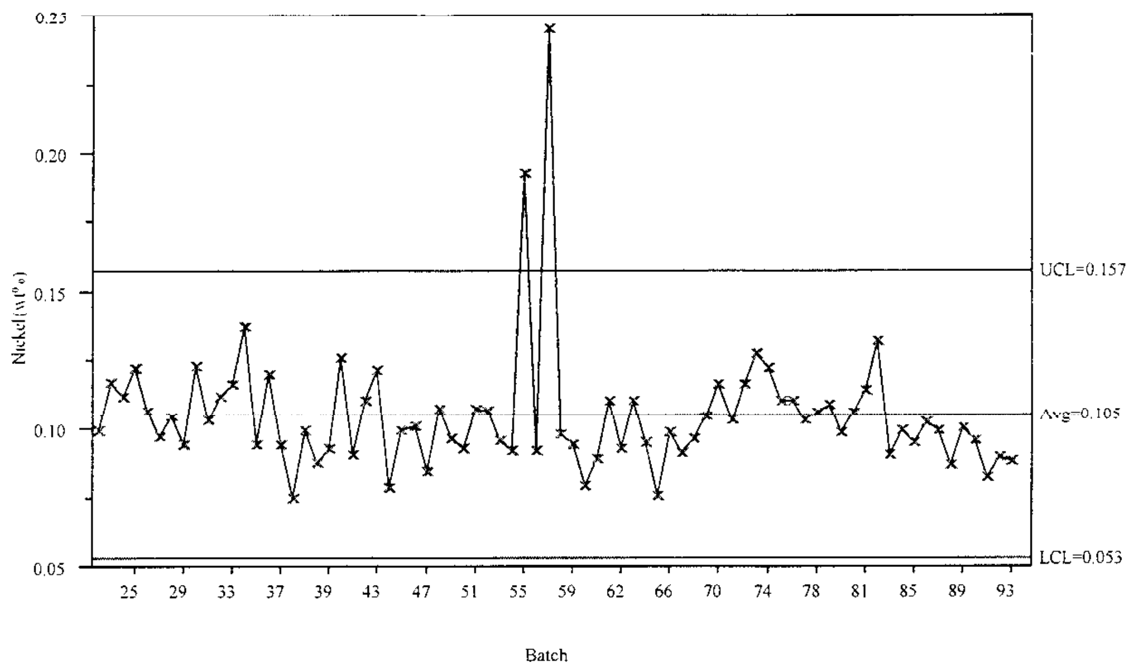


Sodium (wt%)

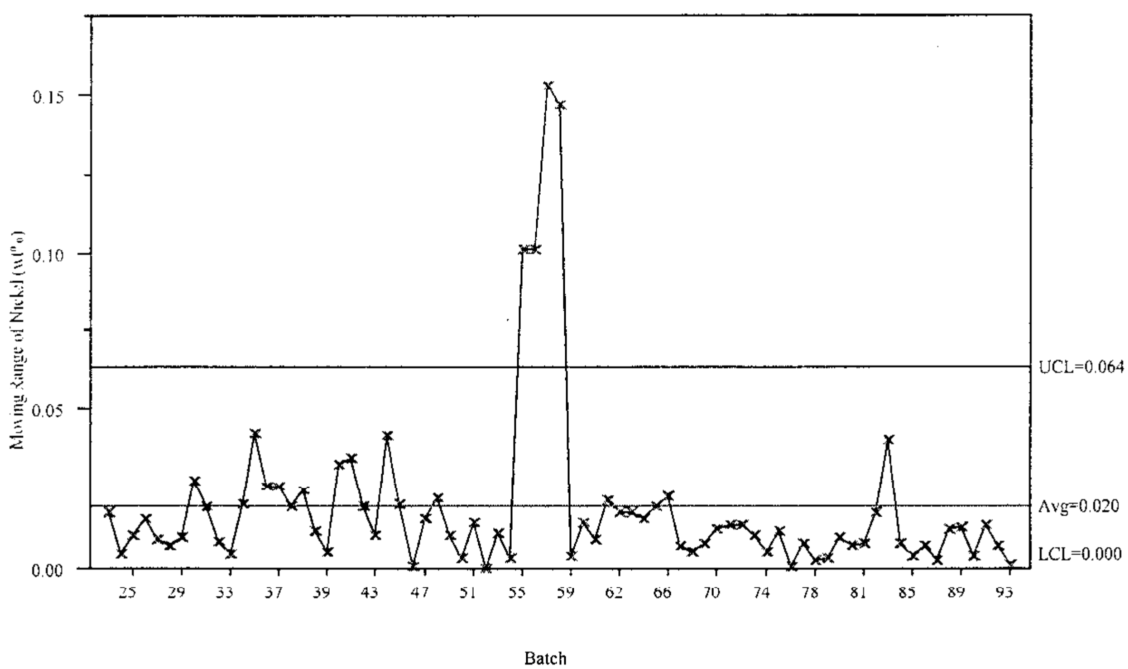


Moving Range of Sodium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

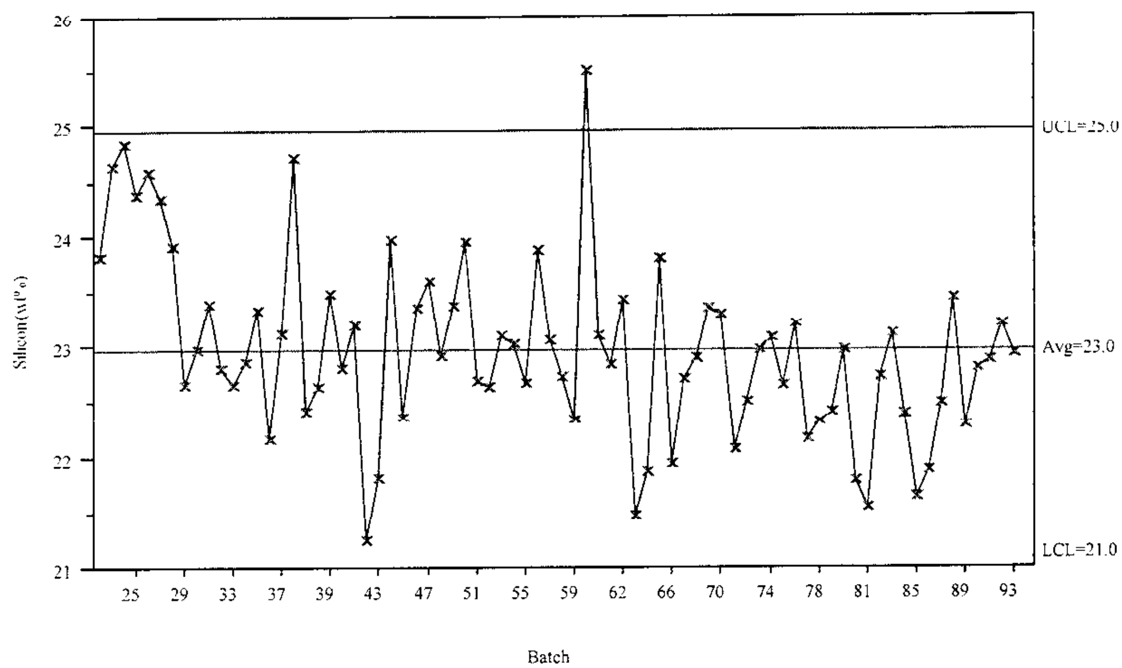


Nickel (wt%)

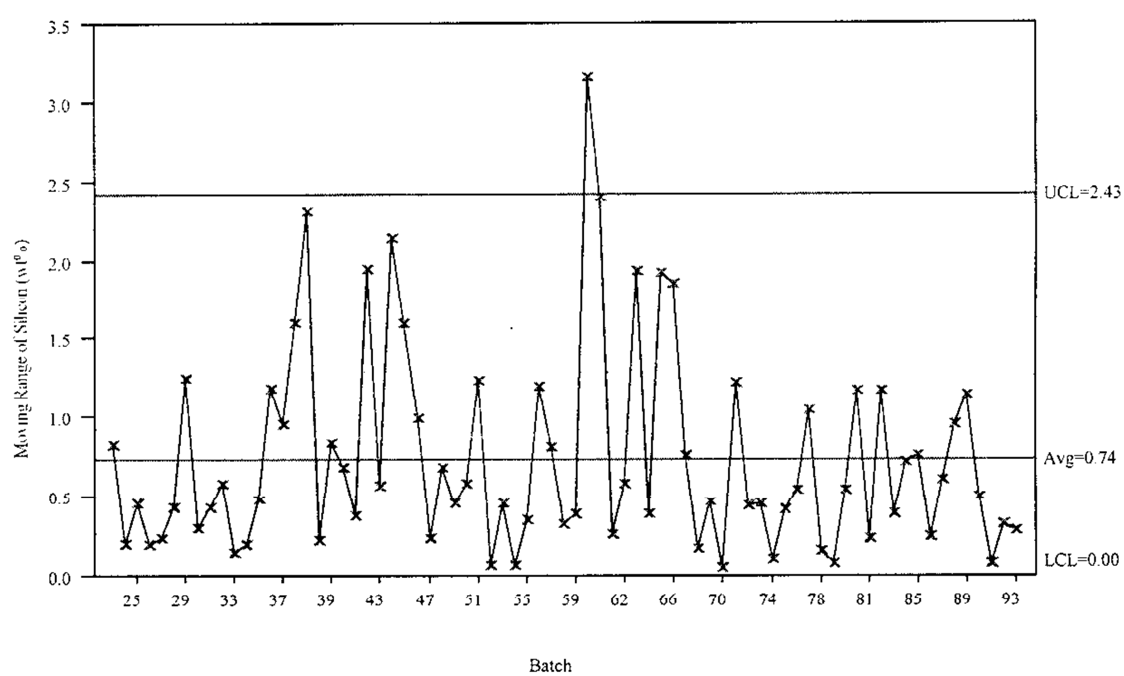


Moving Range of Nickel (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

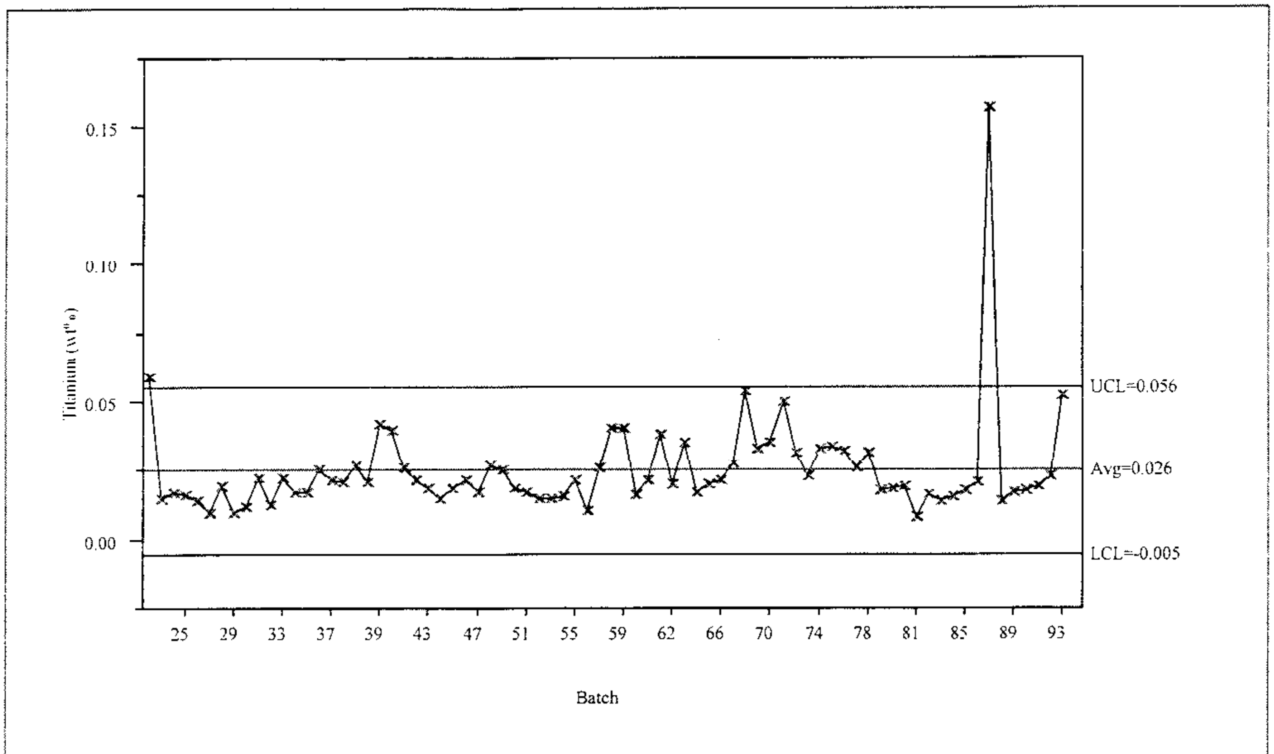


Silicon (wt%)

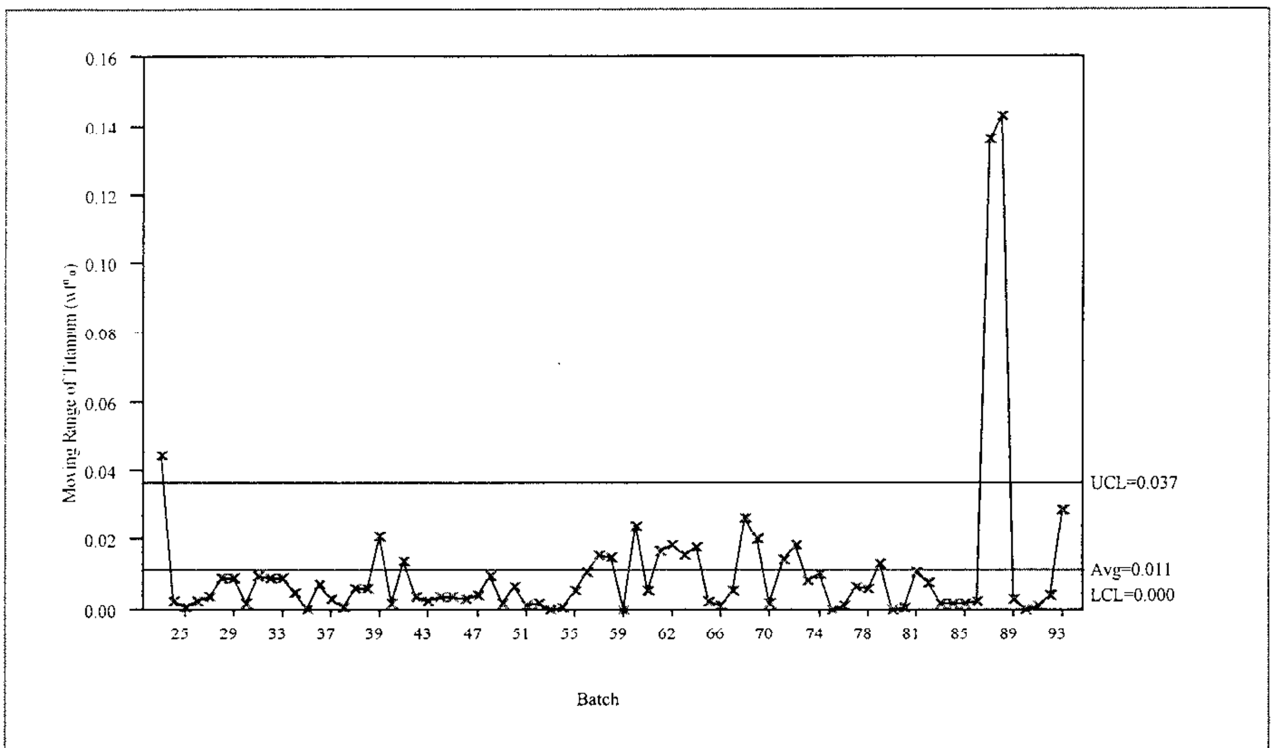


Moving Range of Silicon (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

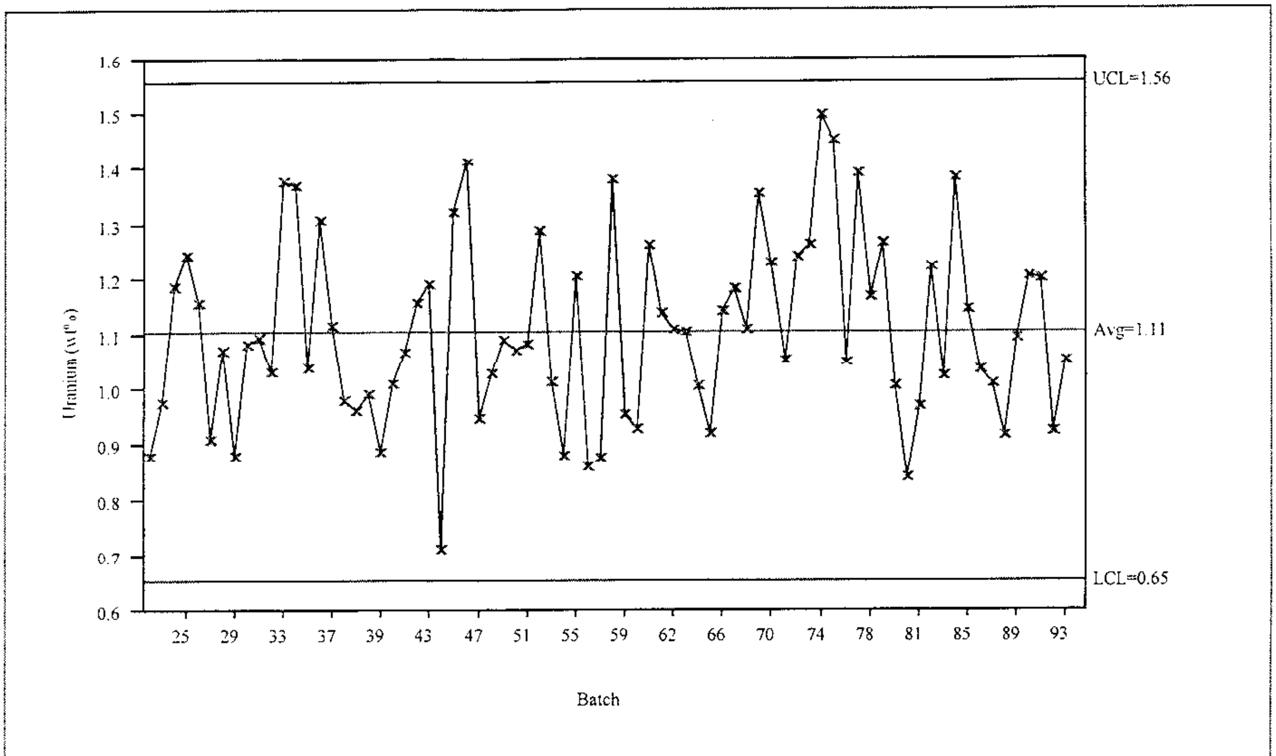


Titanium (wt%)

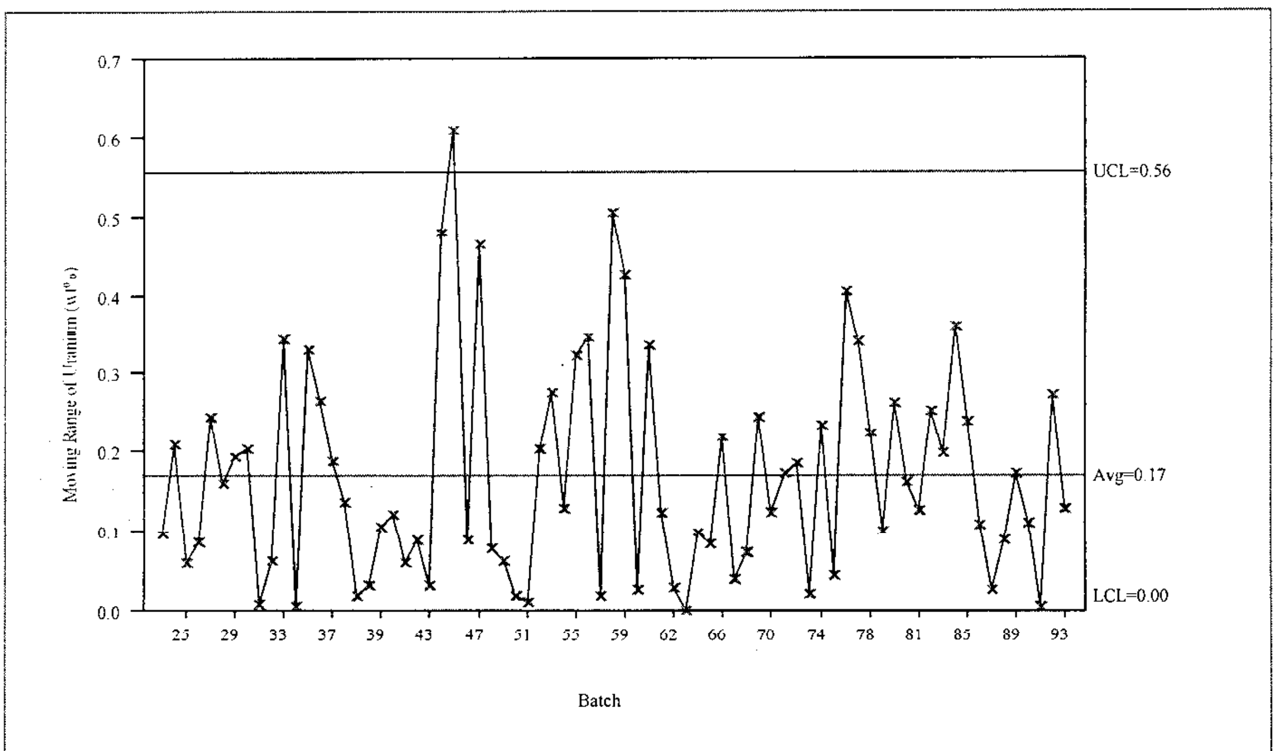


Moving Range of Titanium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

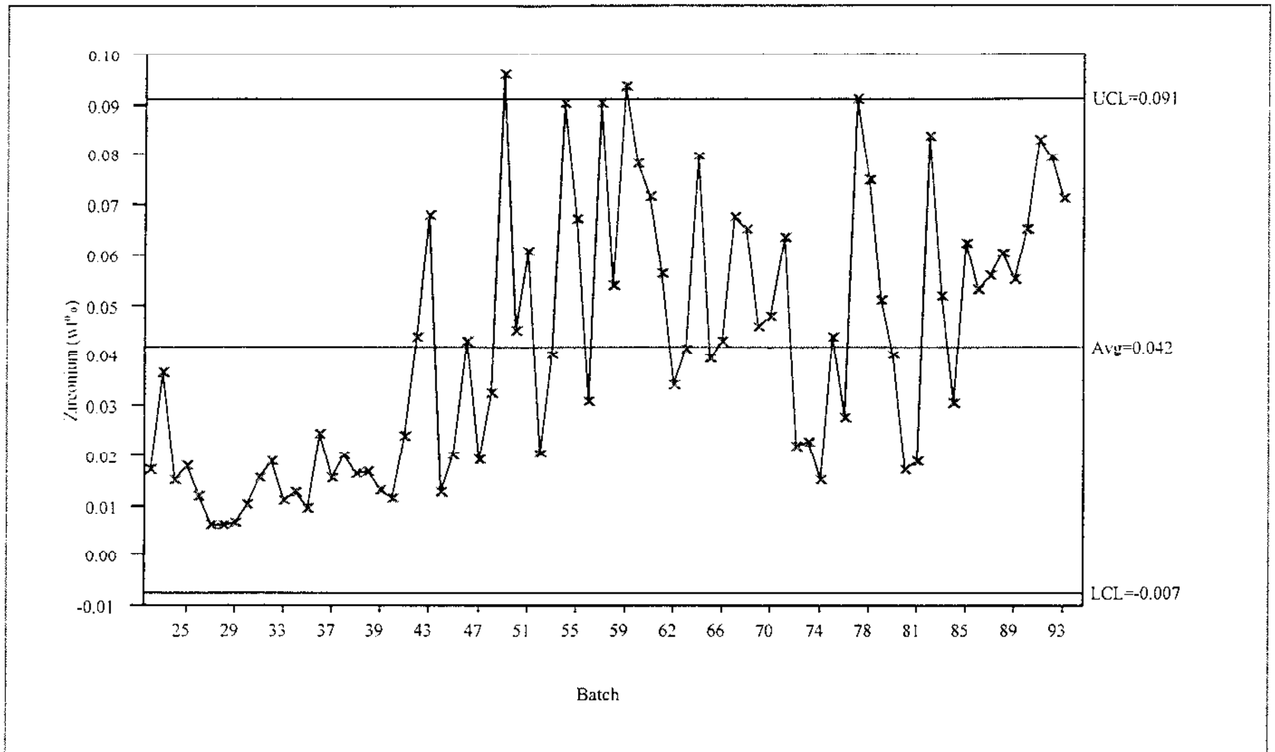


Uranium (wt%)

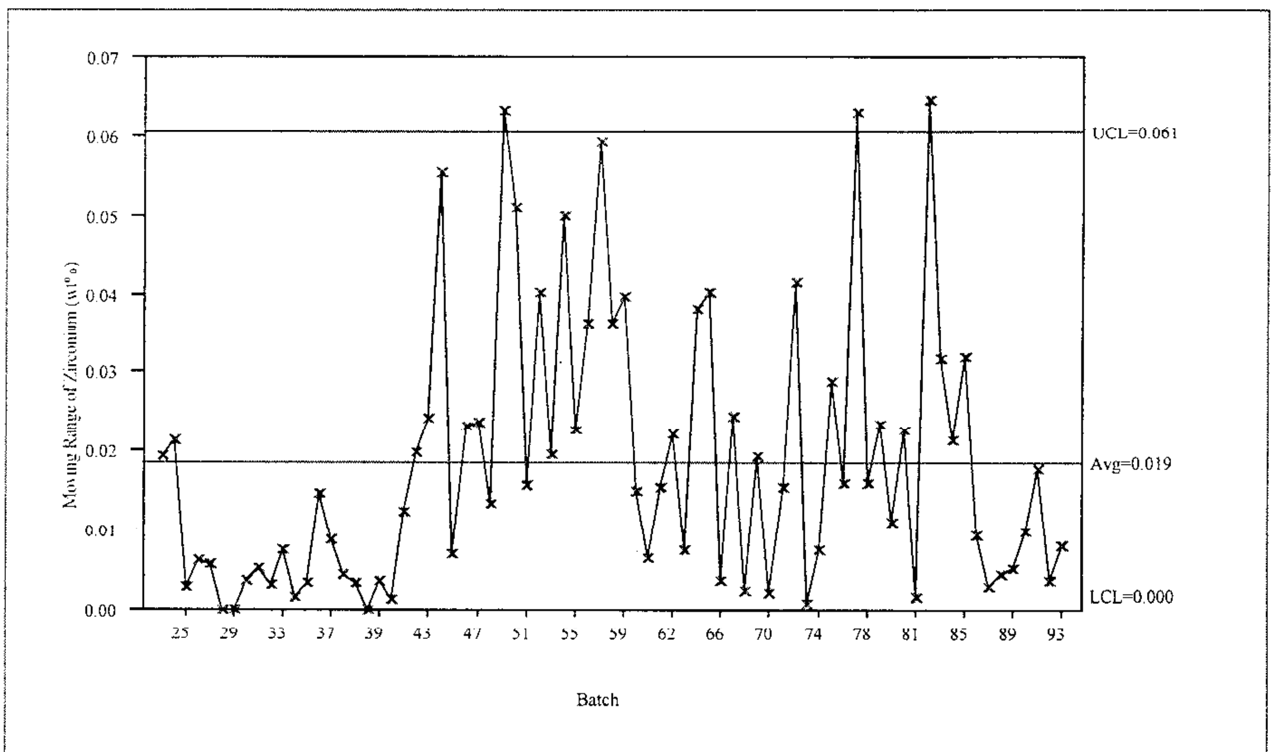


Moving Range of Uranium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

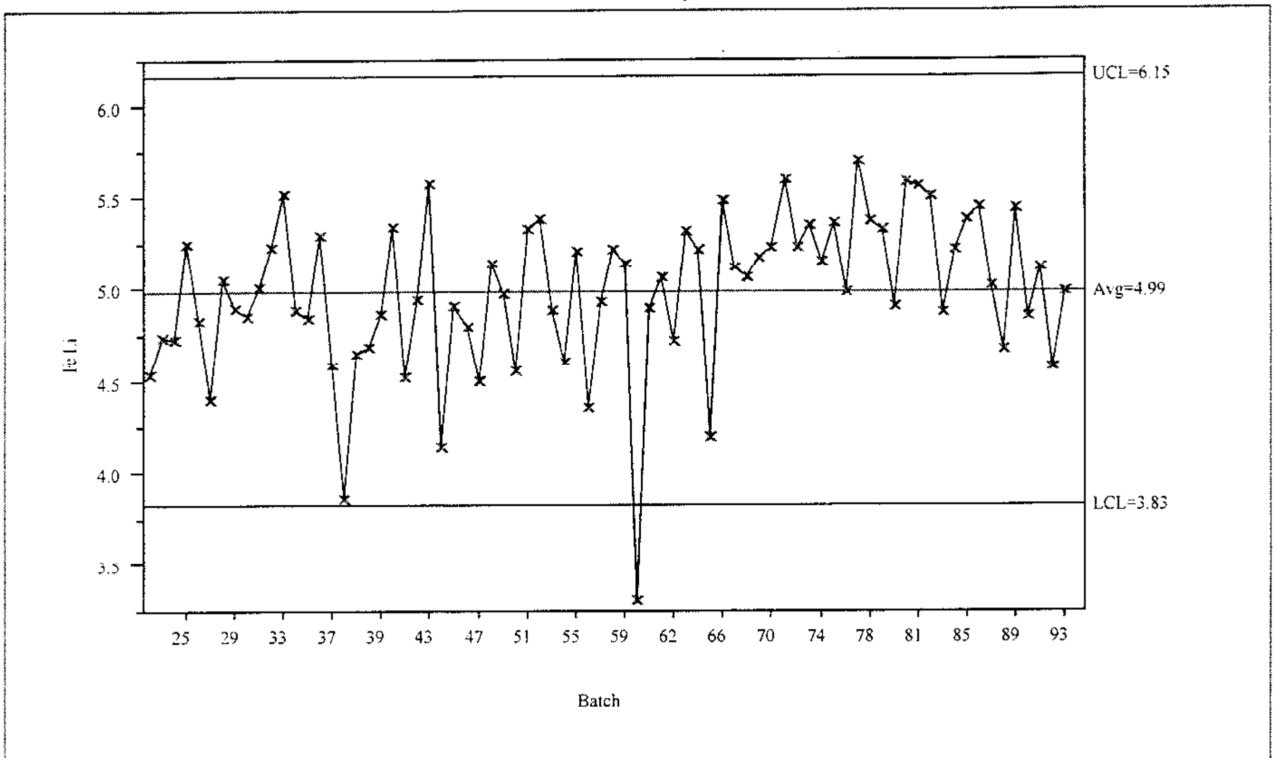


Zirconium (wt%)

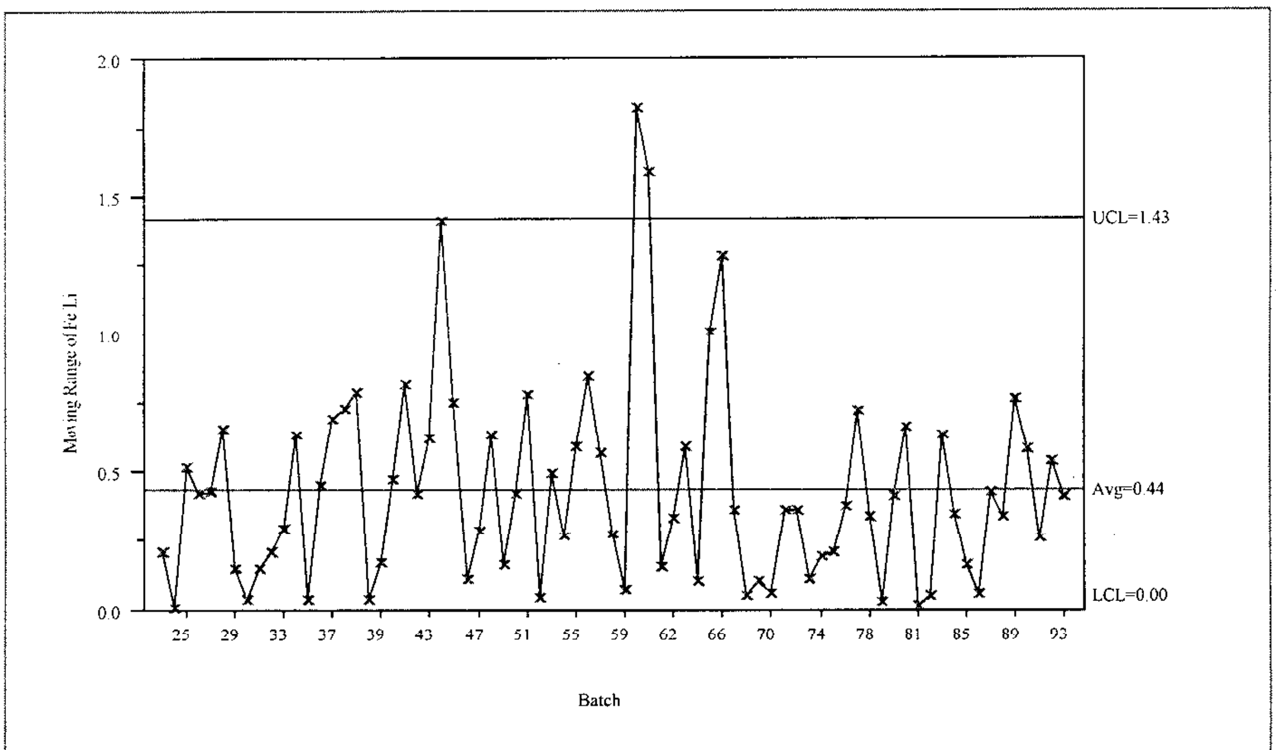


Moving Range of Zirconium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

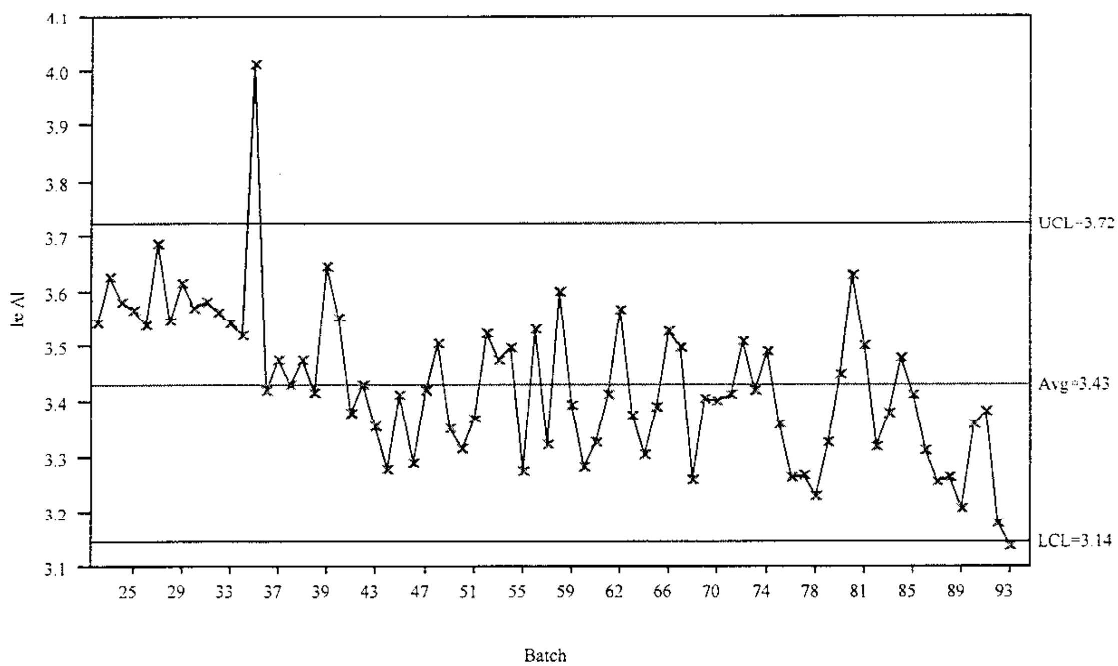


Fe/Li

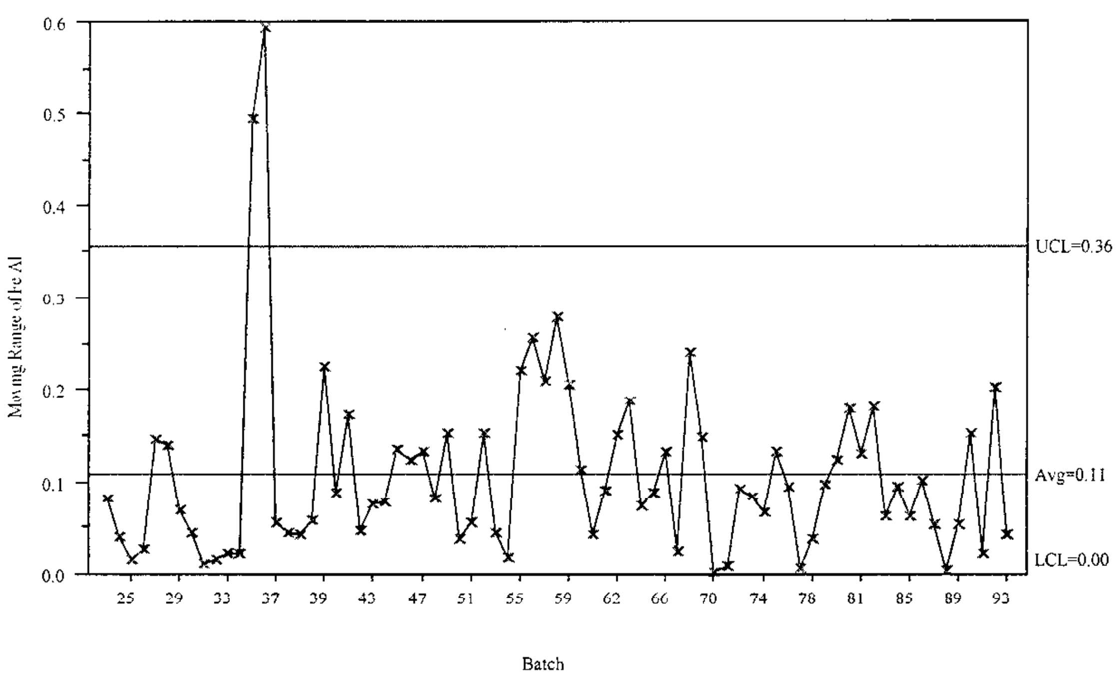


Moving Range of Fe/Li

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

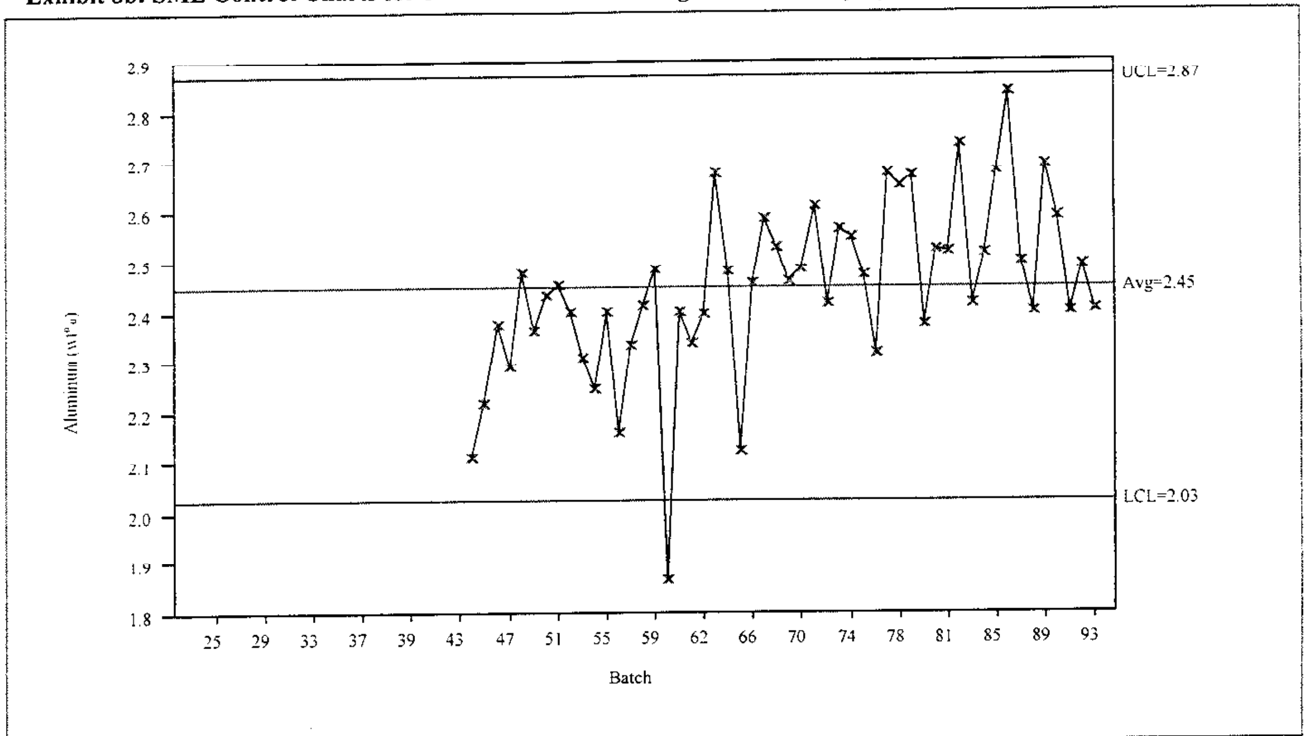


Fe/Al

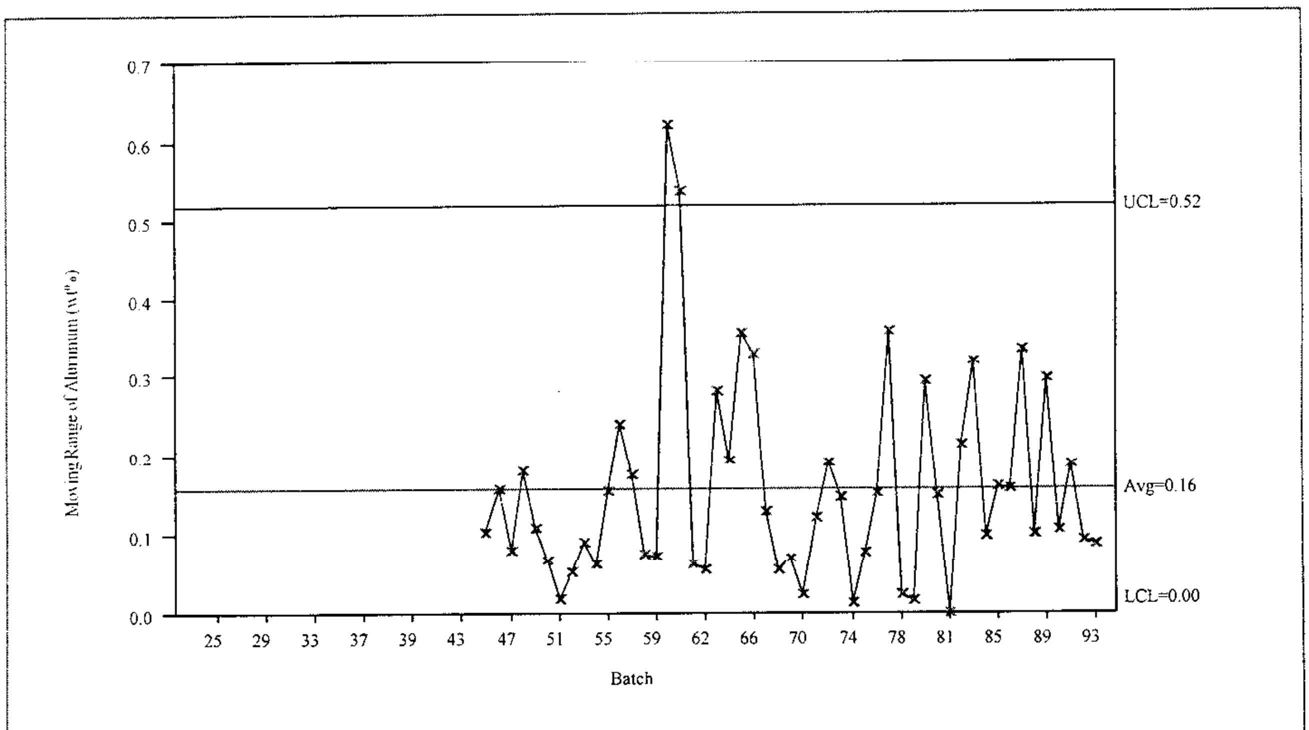


Moving Range of Fe/Al

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

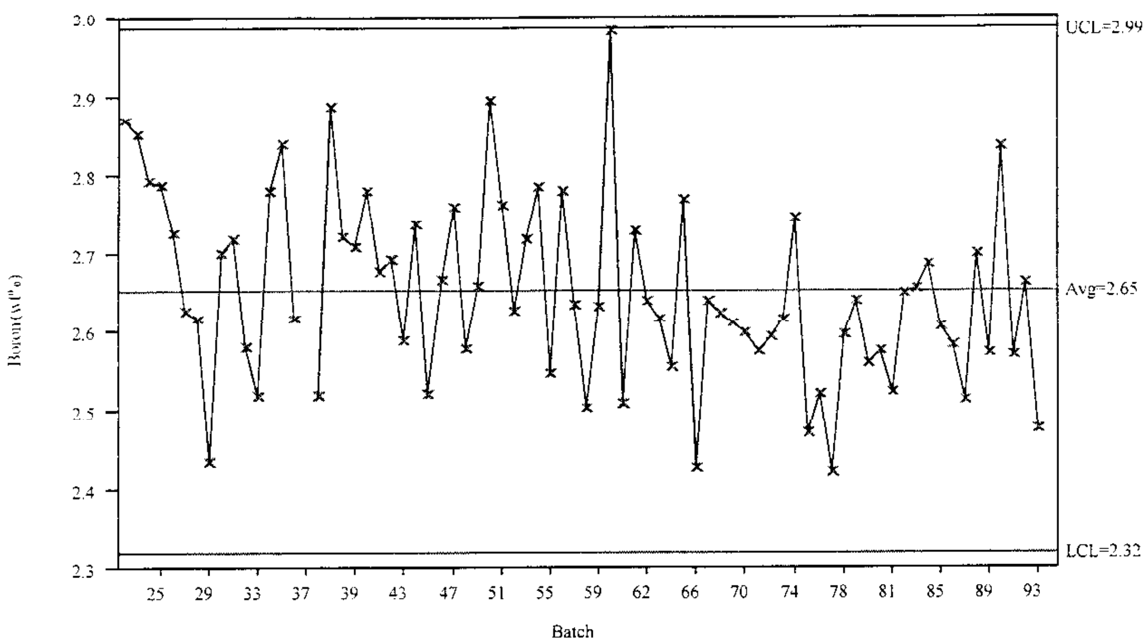


Aluminum (wt%)

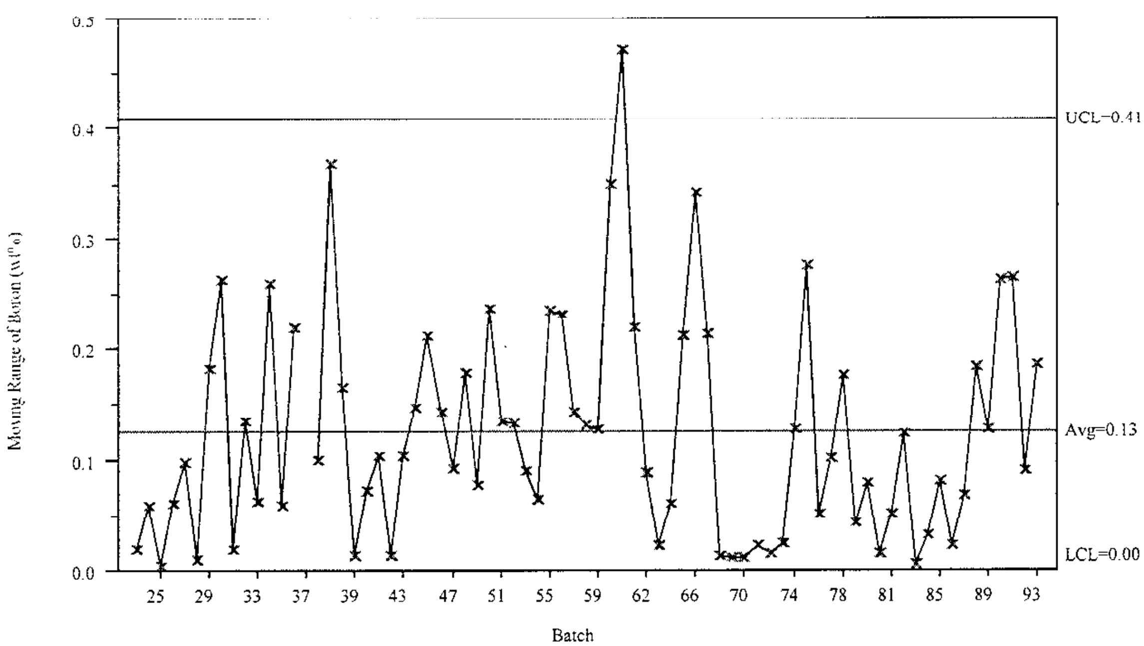


Moving Range of Aluminum (wt%)

Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte

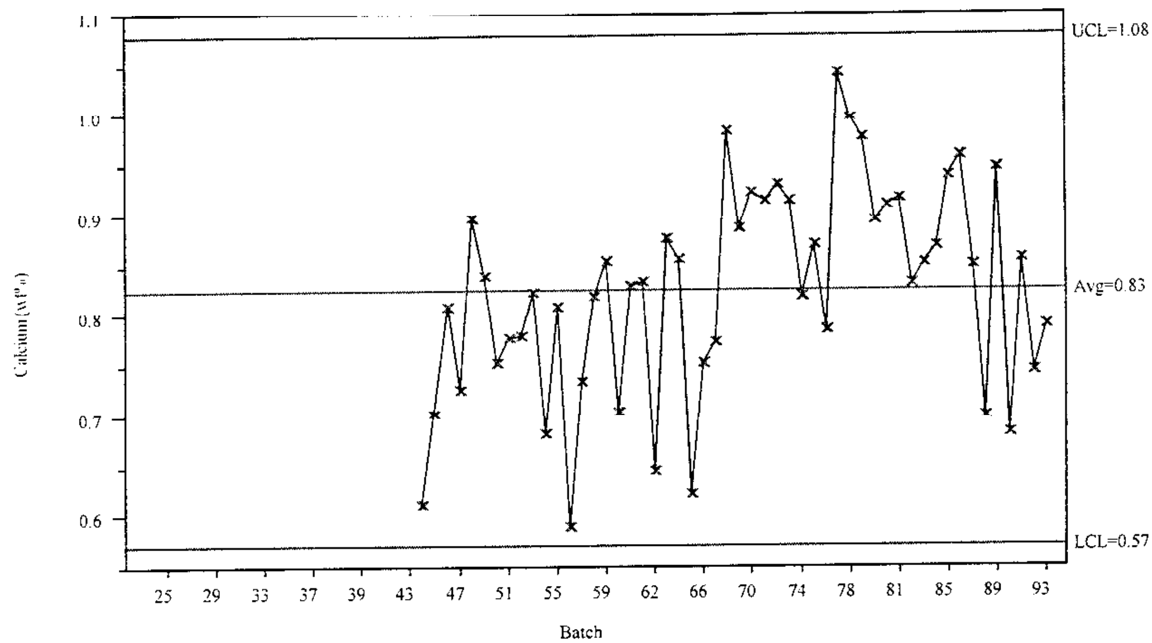


Boron (wt%)

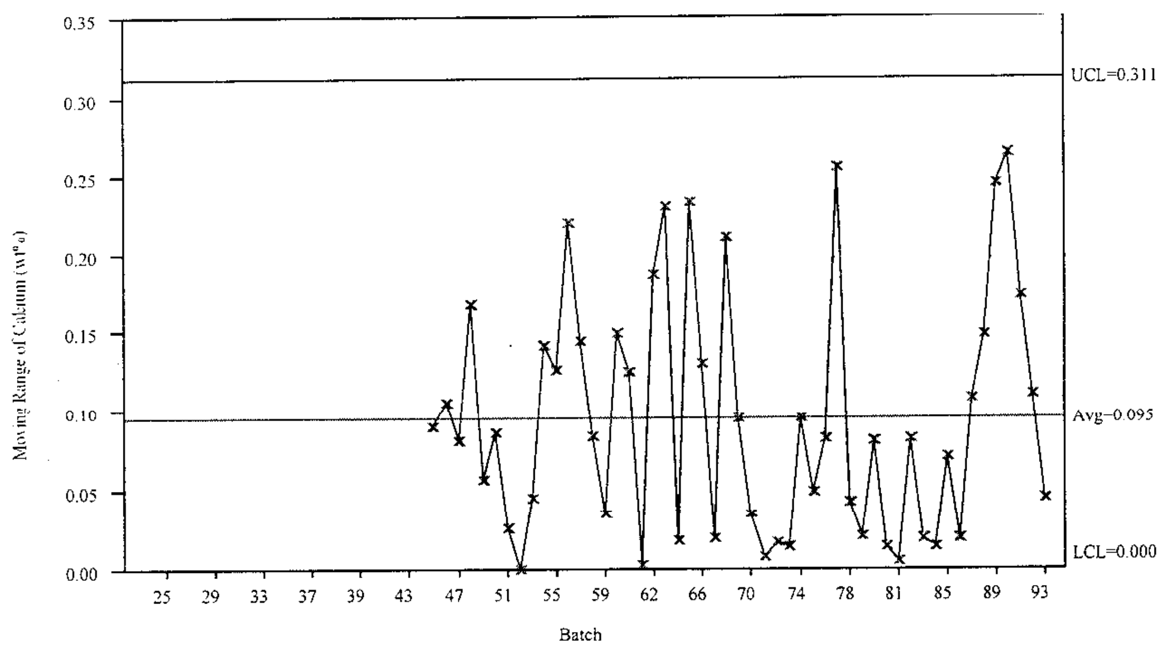


Moving Range of Boron (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

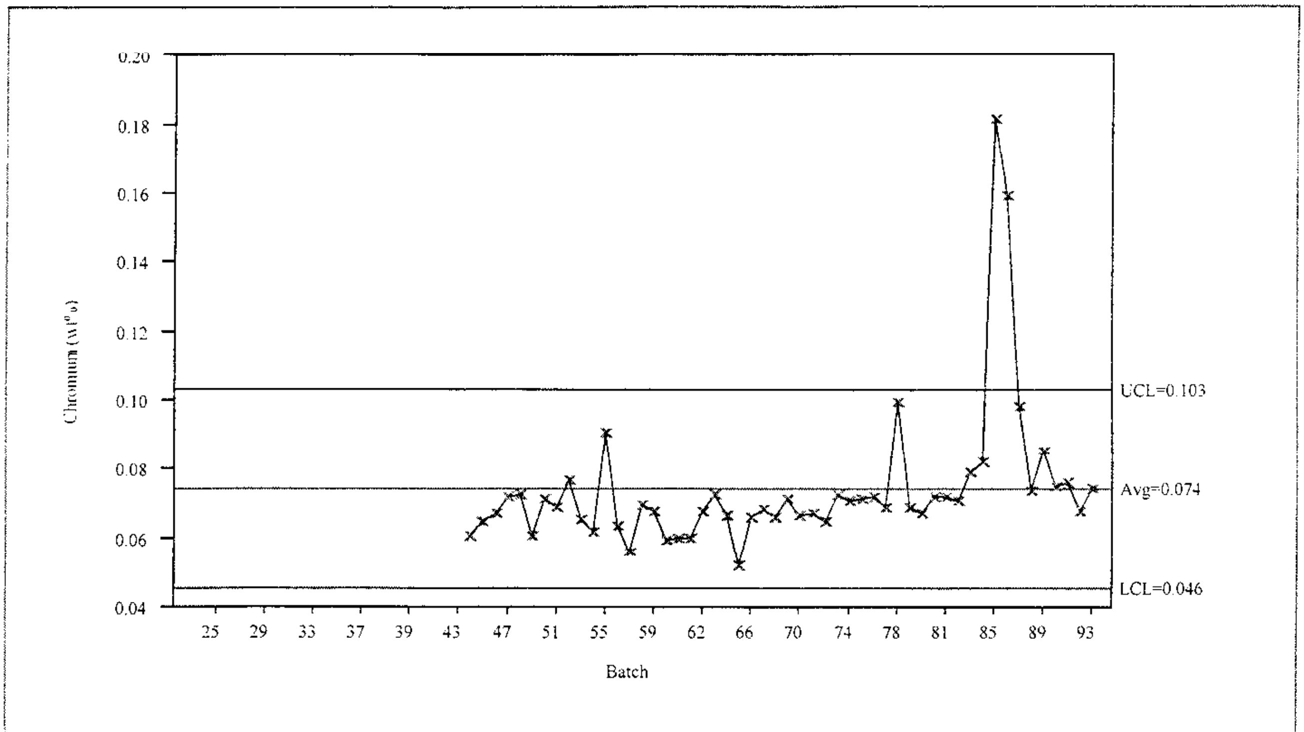


Calcium (wt%)

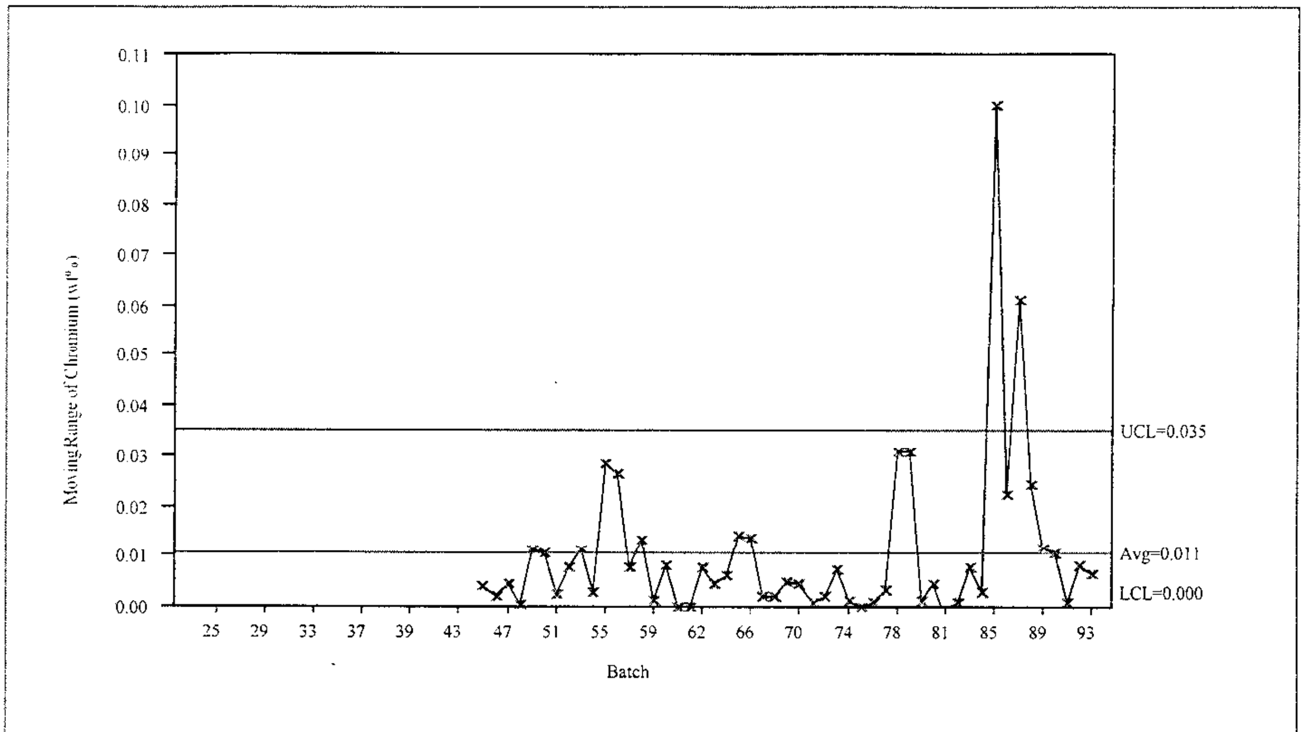


Moving Range of Calcium (wt%)

Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte

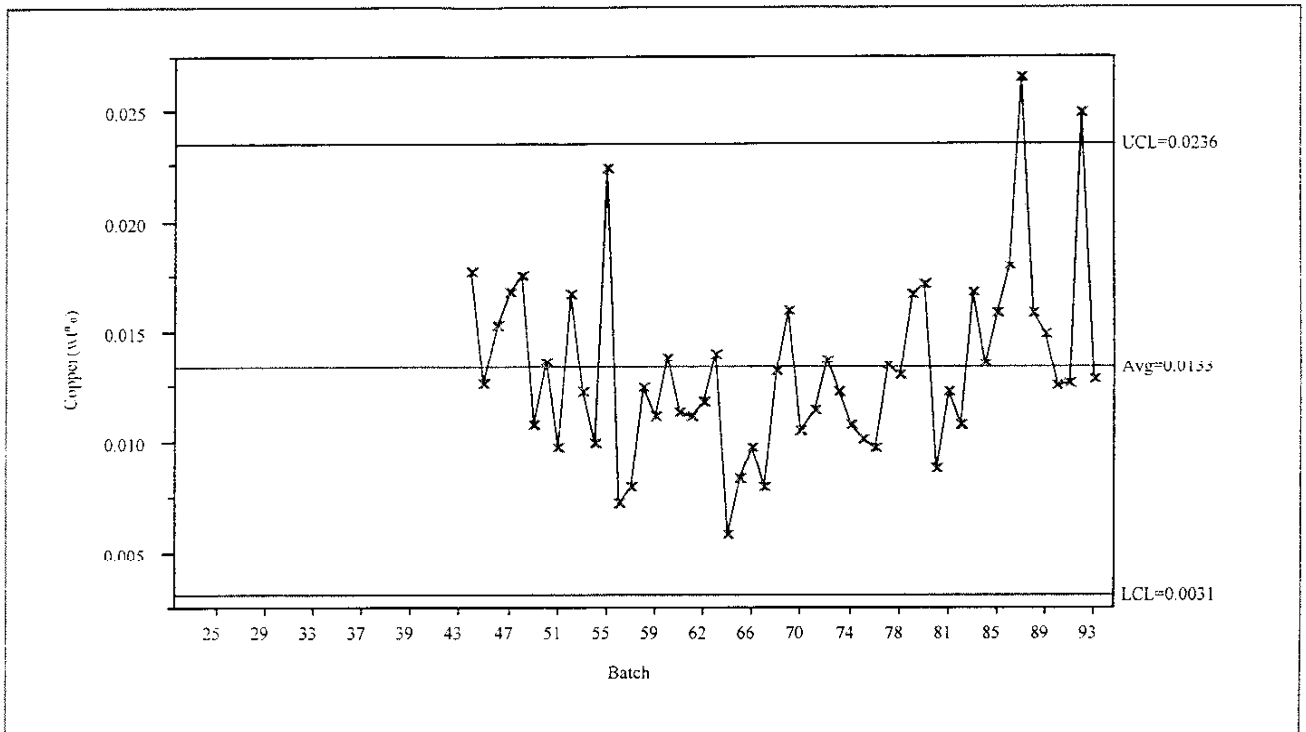


Chromium (wt%)

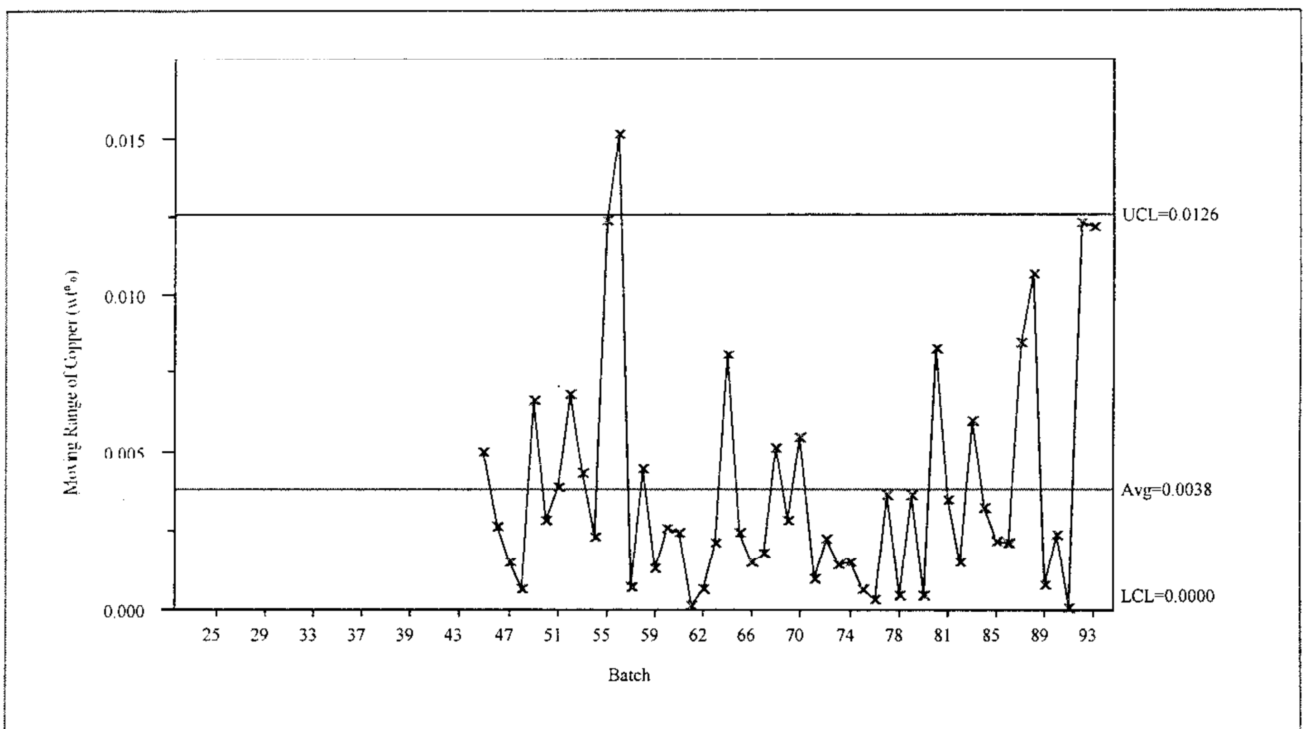


Moving Range of Chromium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

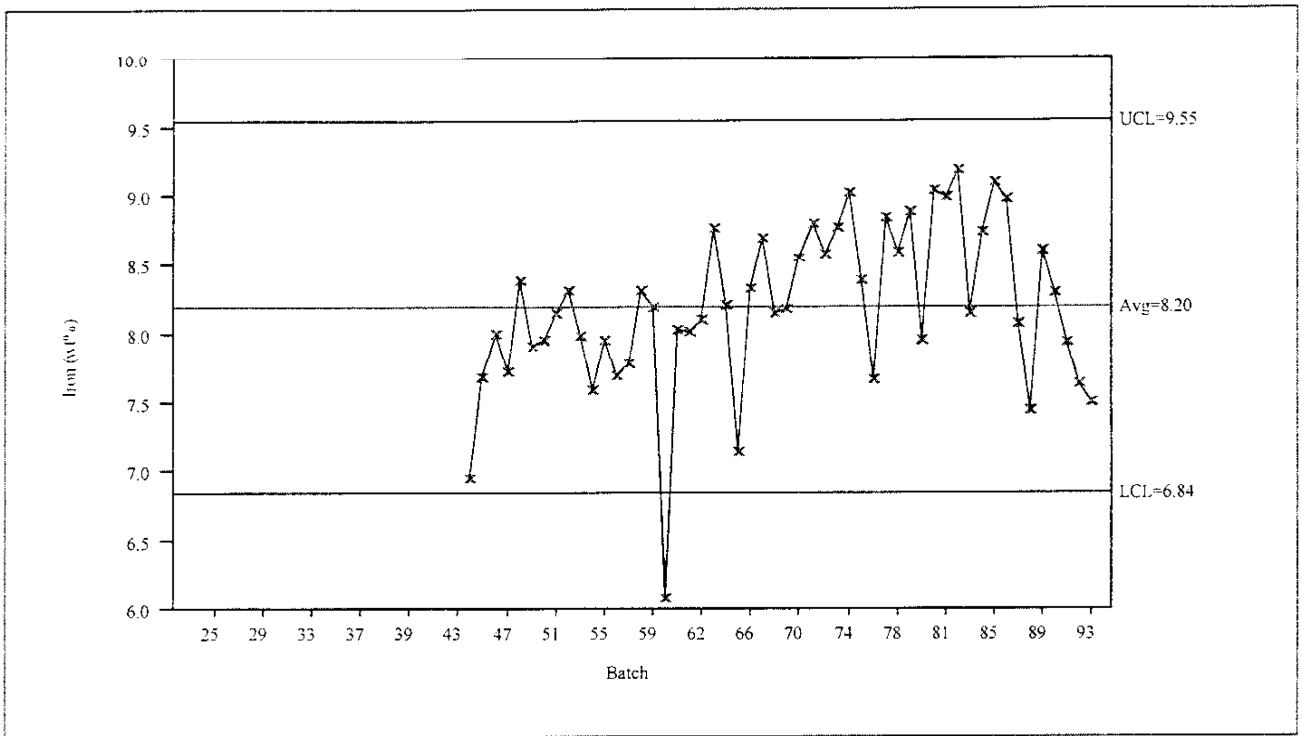


Copper (wt%)

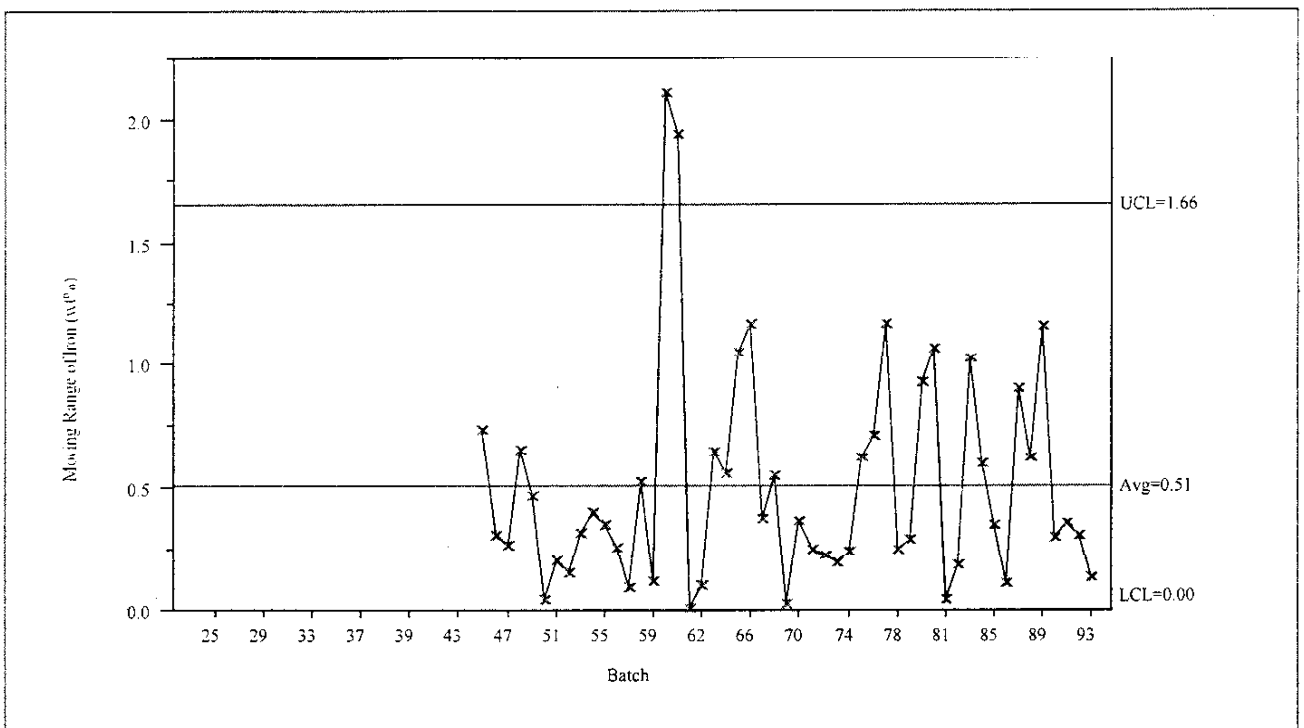


Moving Range of Copper (wt%)

Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte

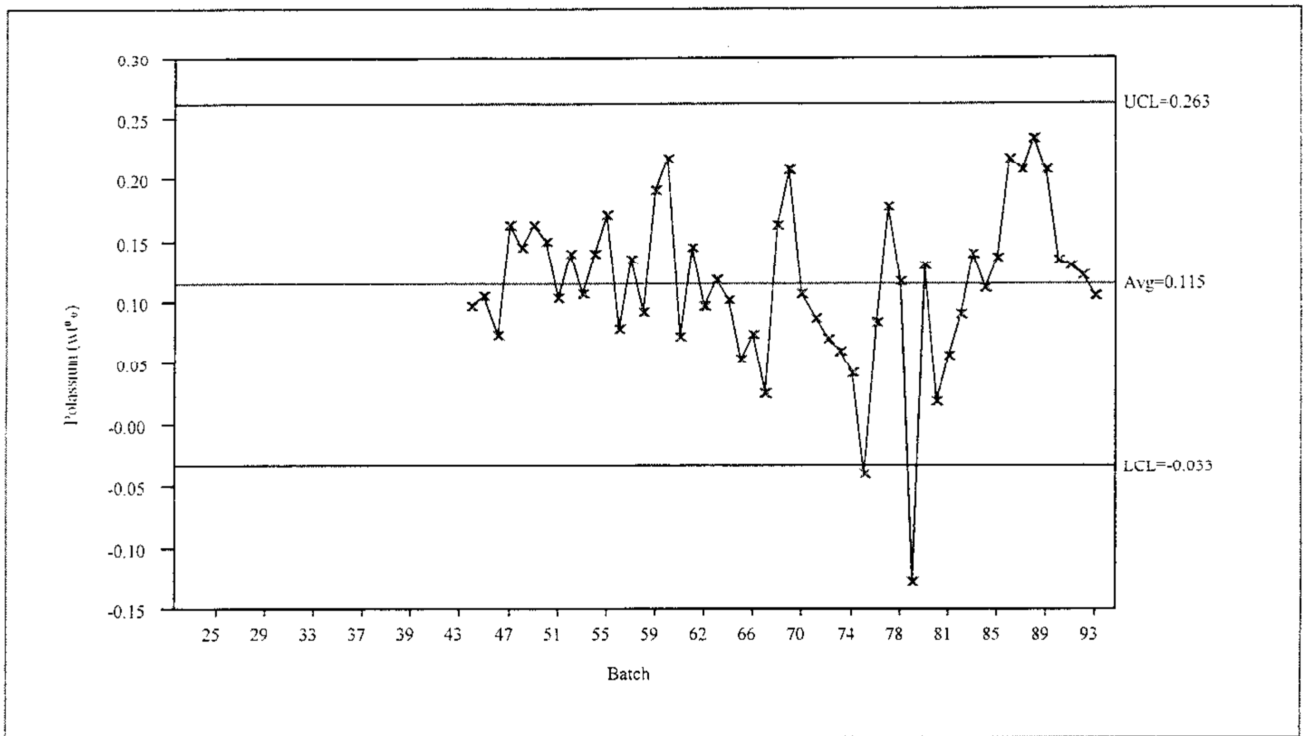


Iron (wt%)

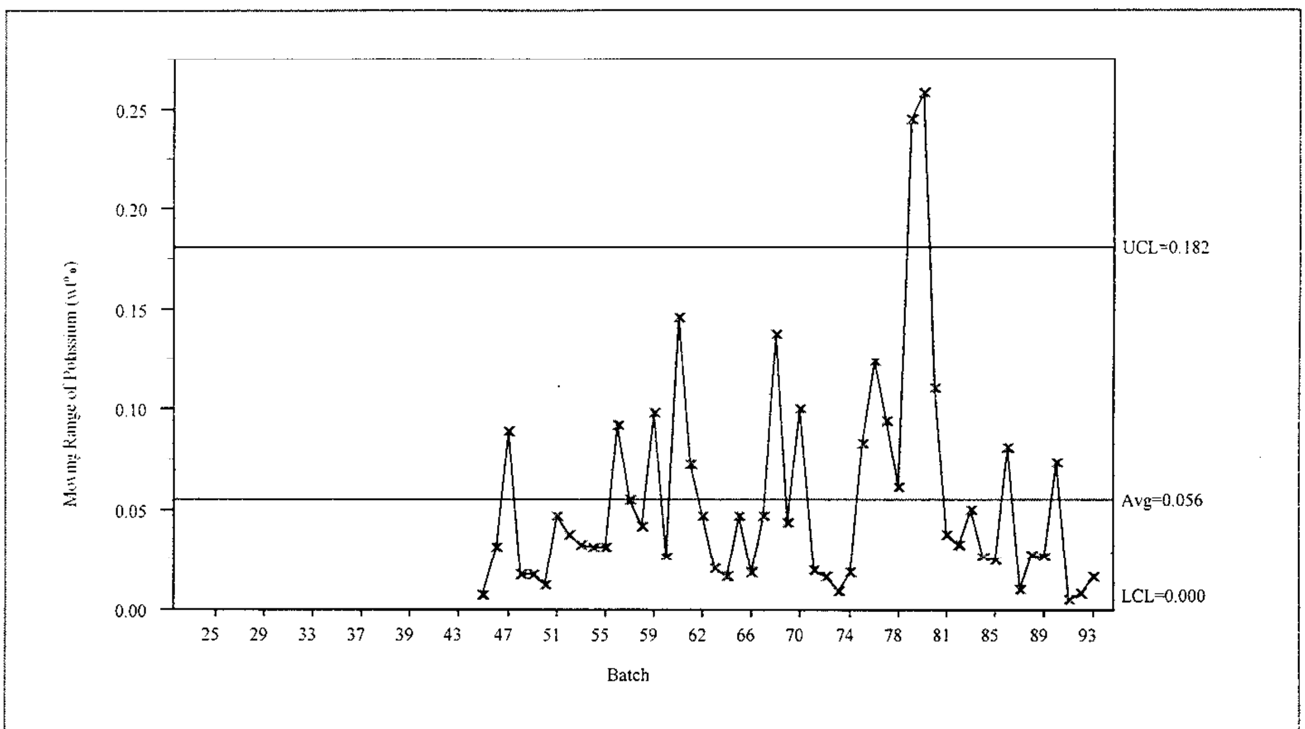


Moving Range of Iron (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

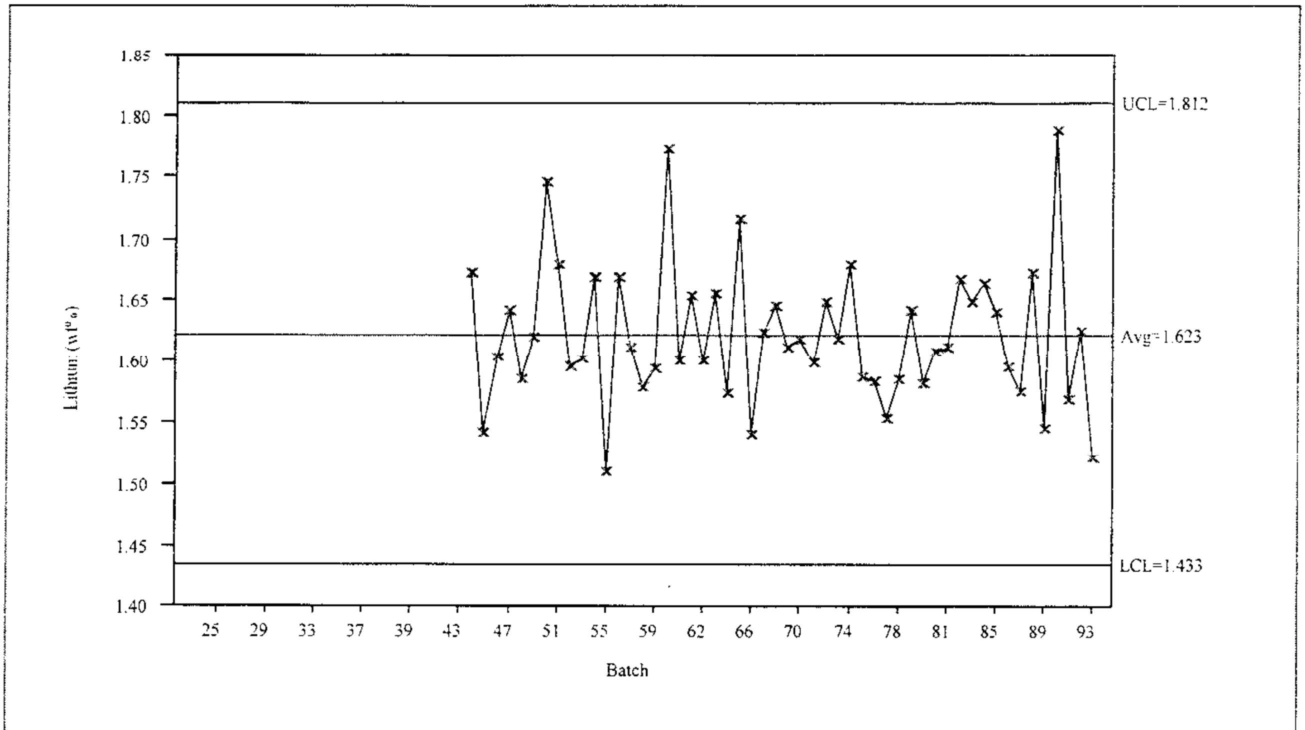


Potassium (wt%)

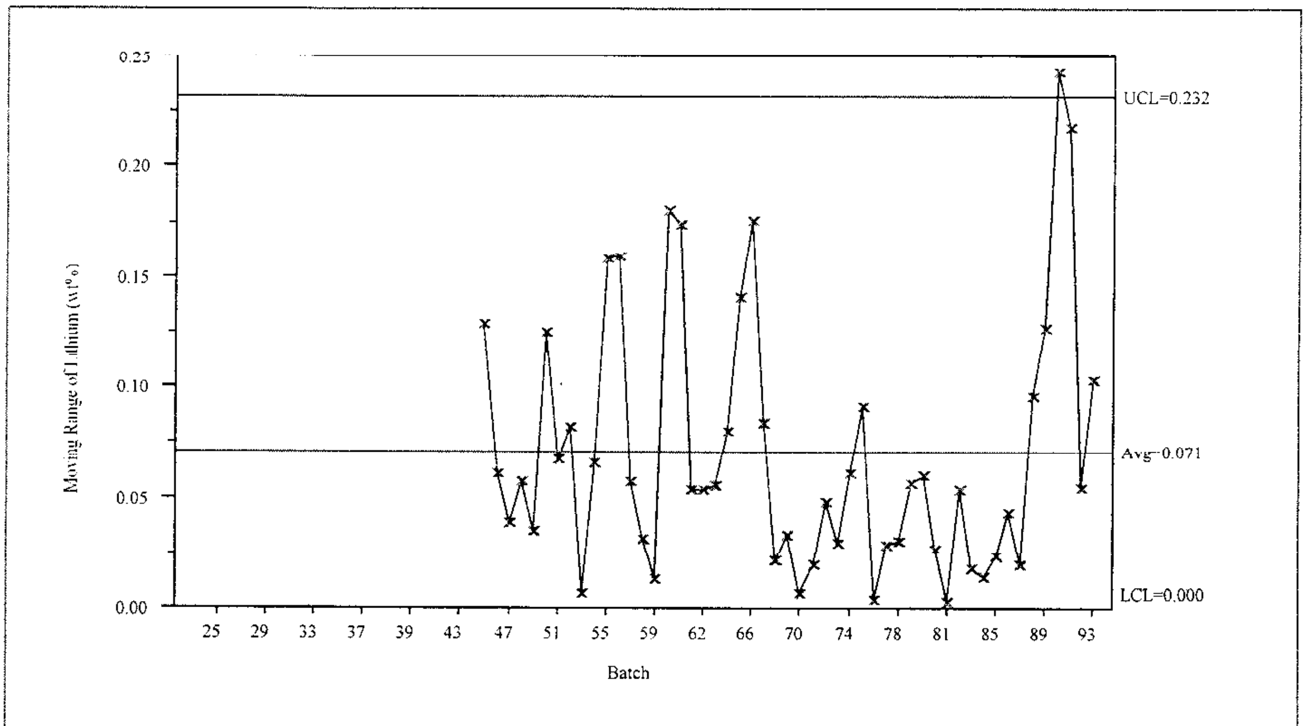


Moving Range of Potassium (wt%)

Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte

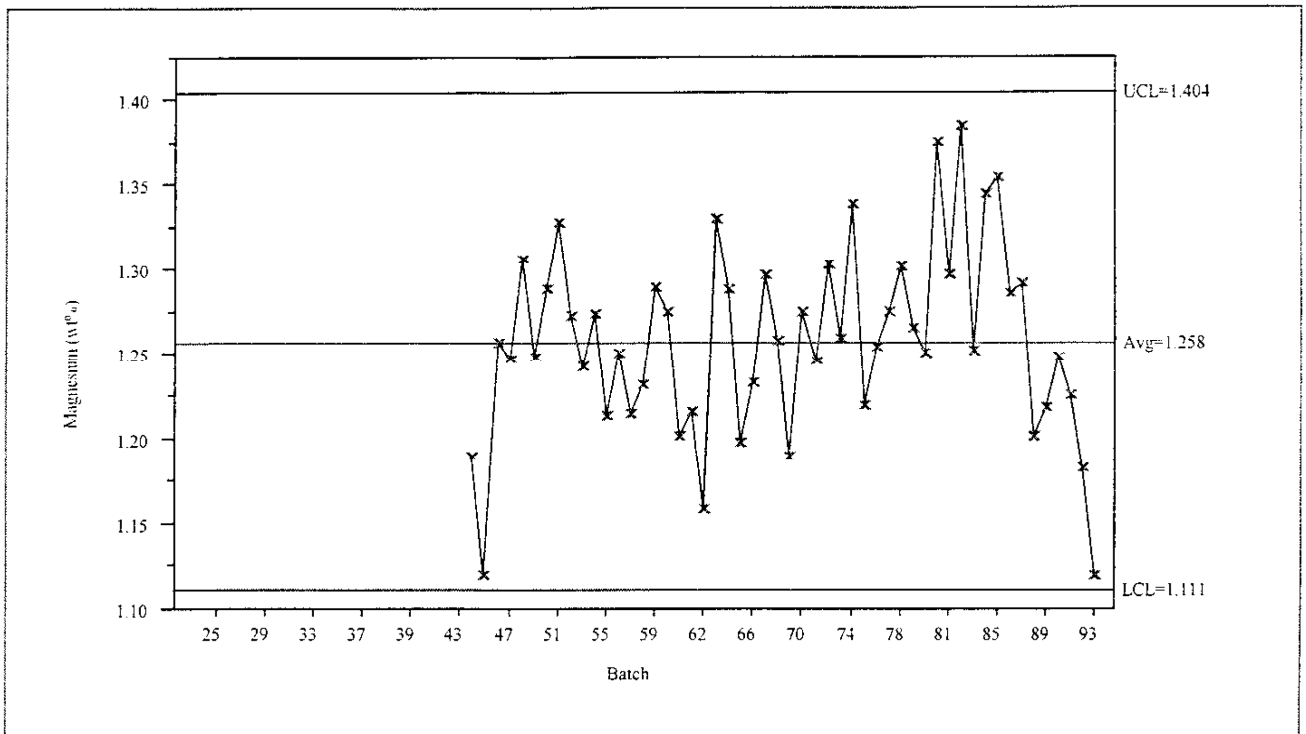


Lithium (wt%)

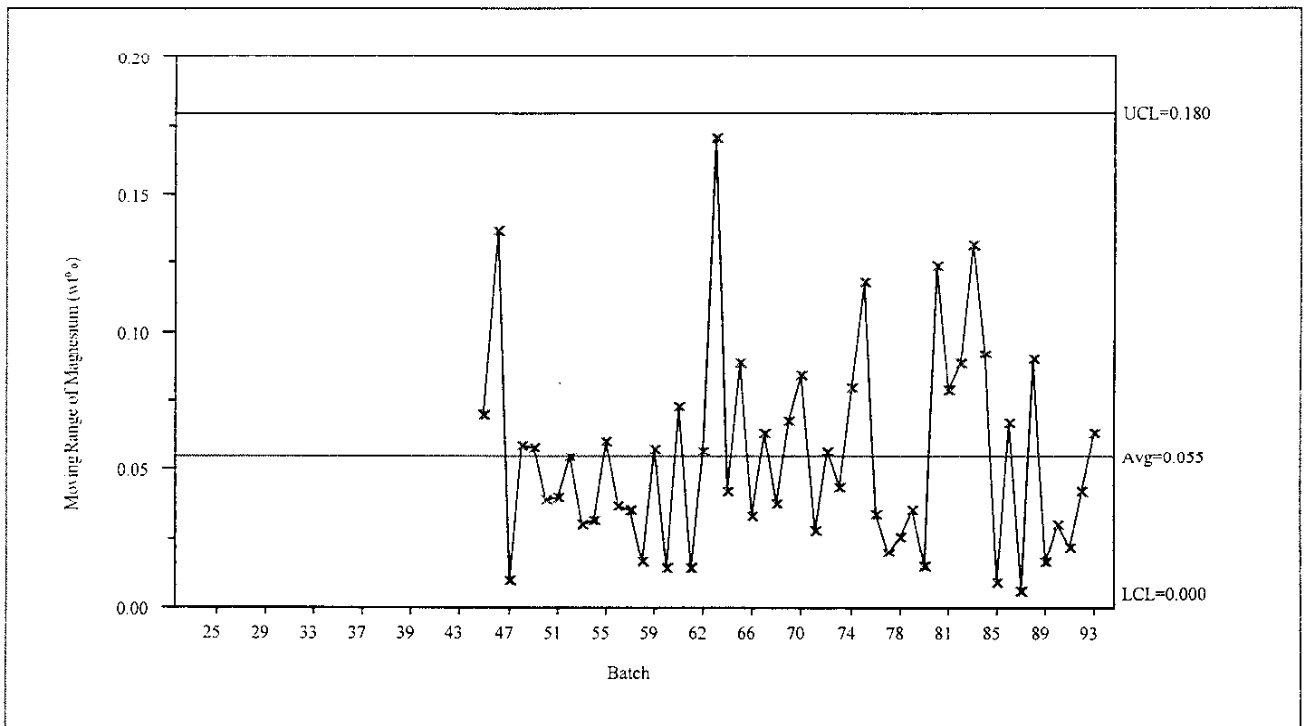


Moving Range of Lithium (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

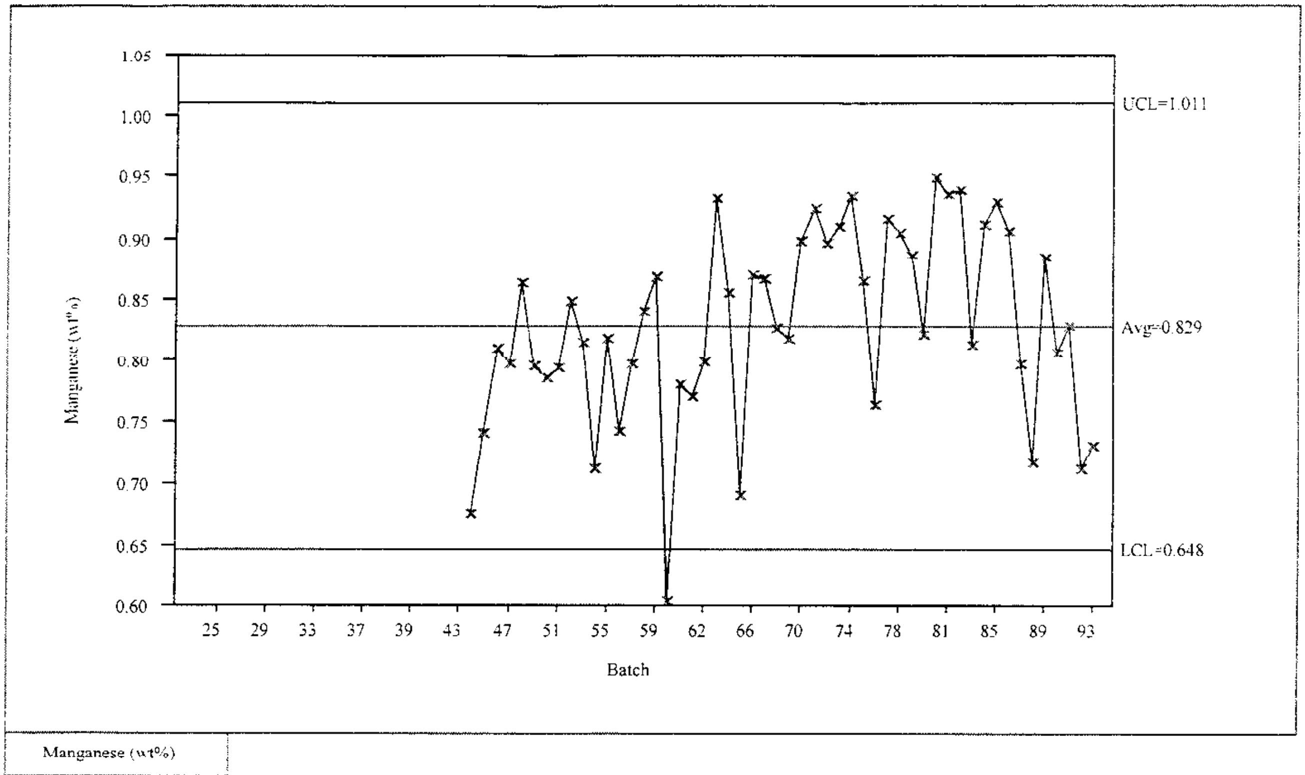


Magnesium (wt%)



Moving Range of Magnesium (wt%)

Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte



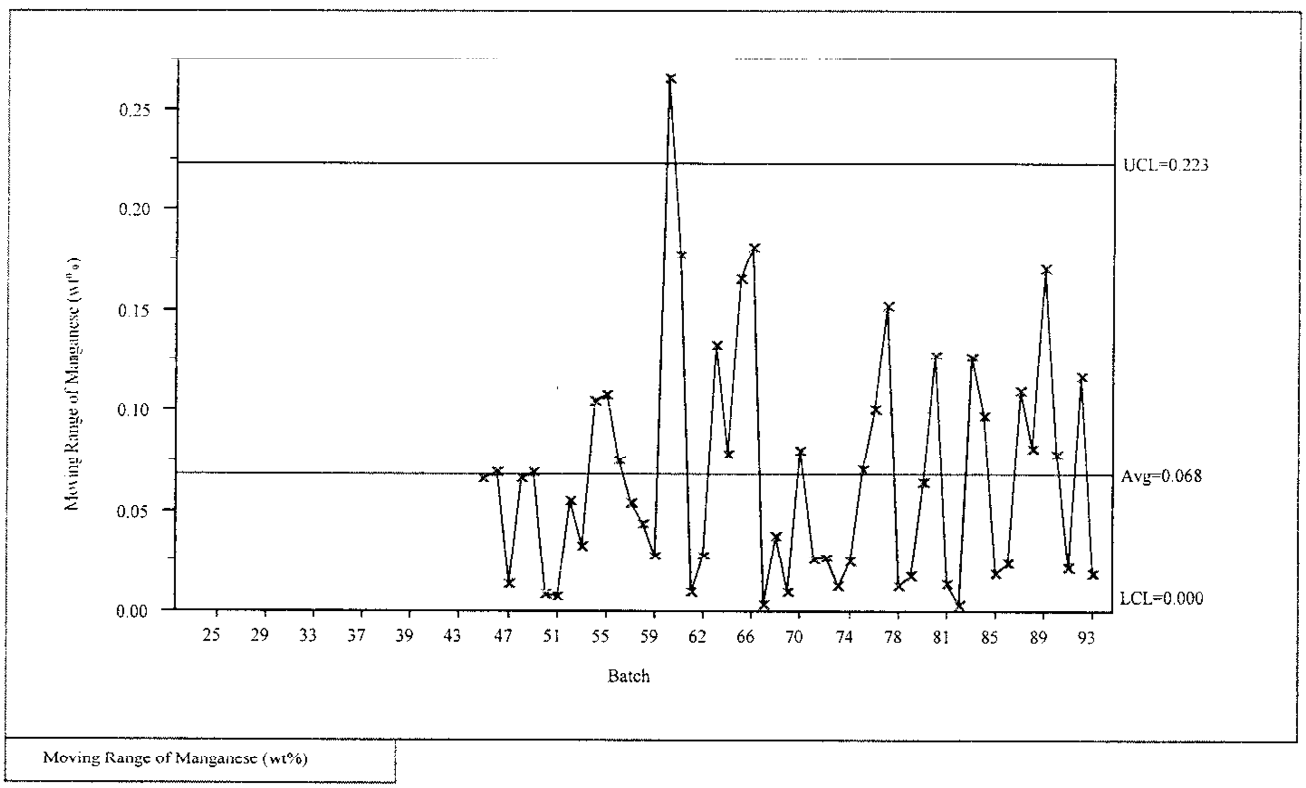
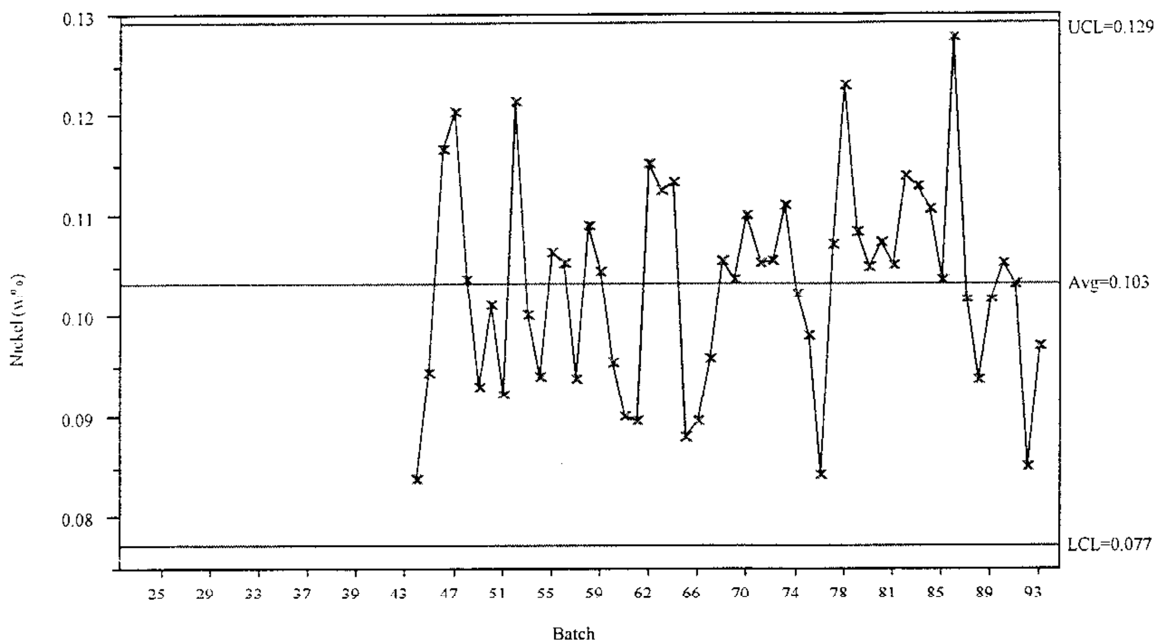
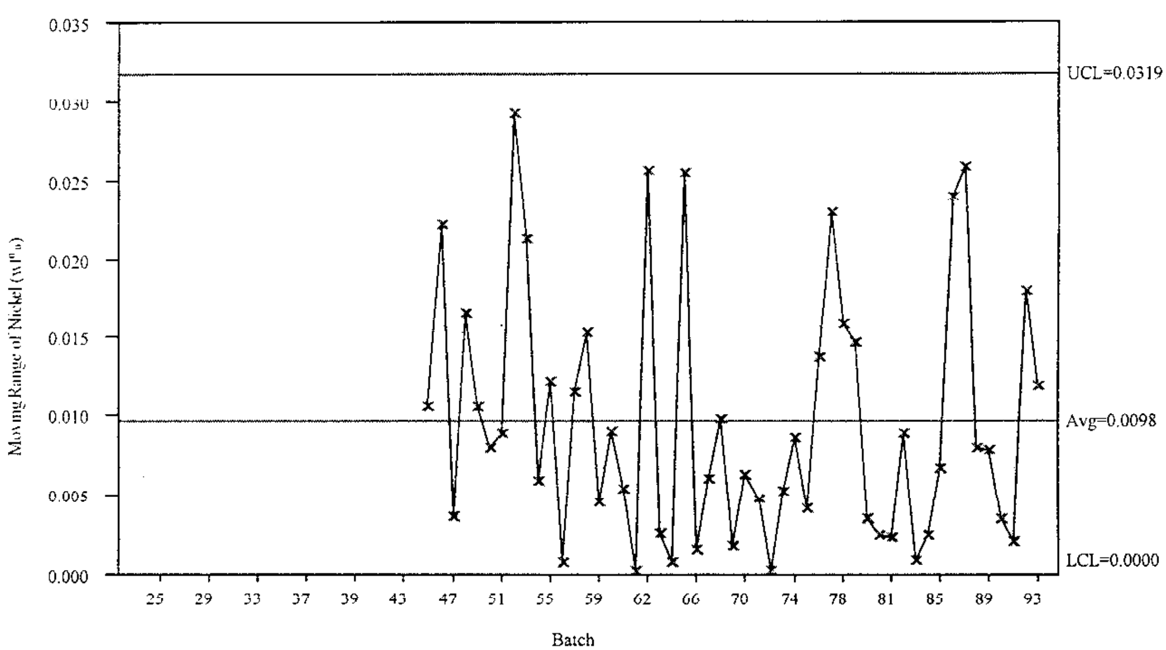


Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

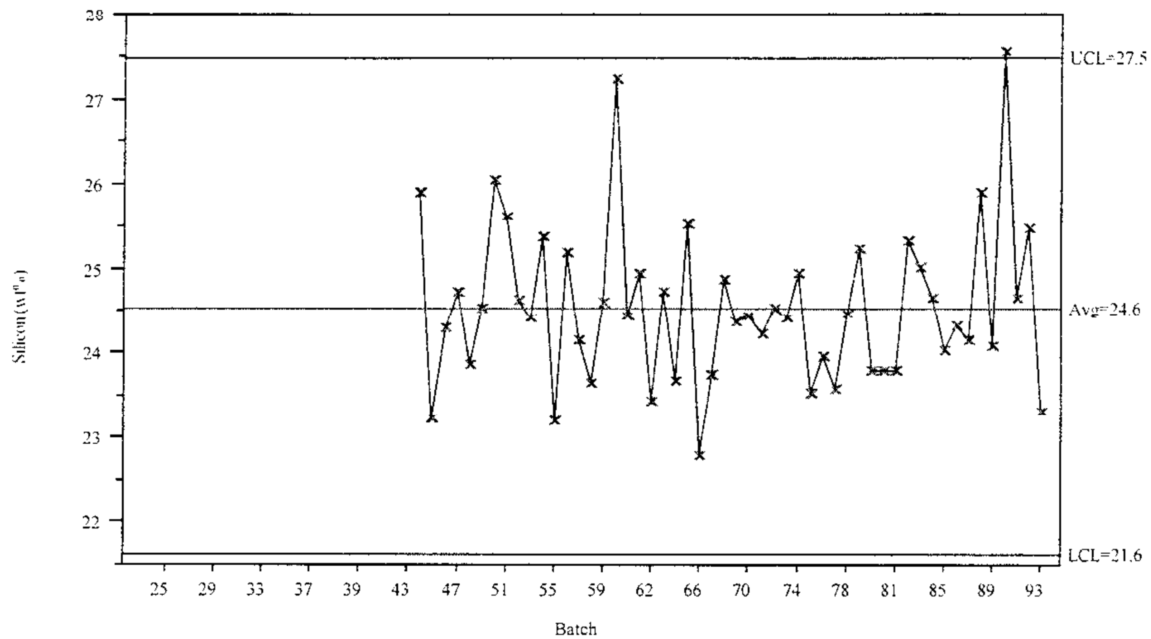


Nickel (wt%)

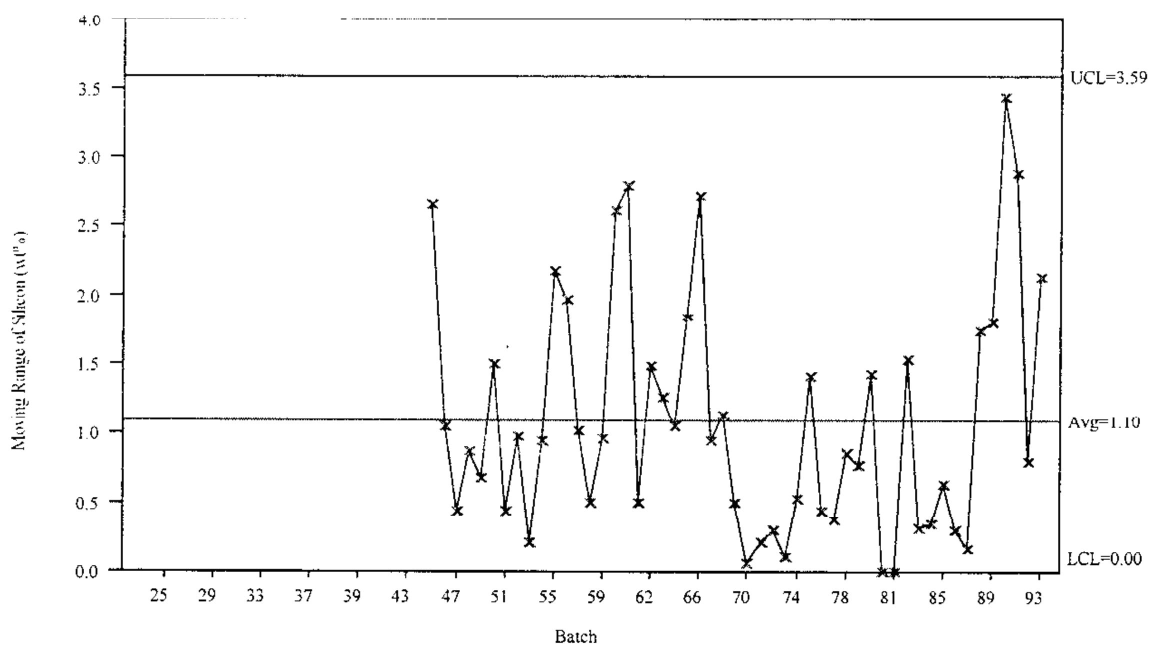


Moving Range of Nickel (wt%)

Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte

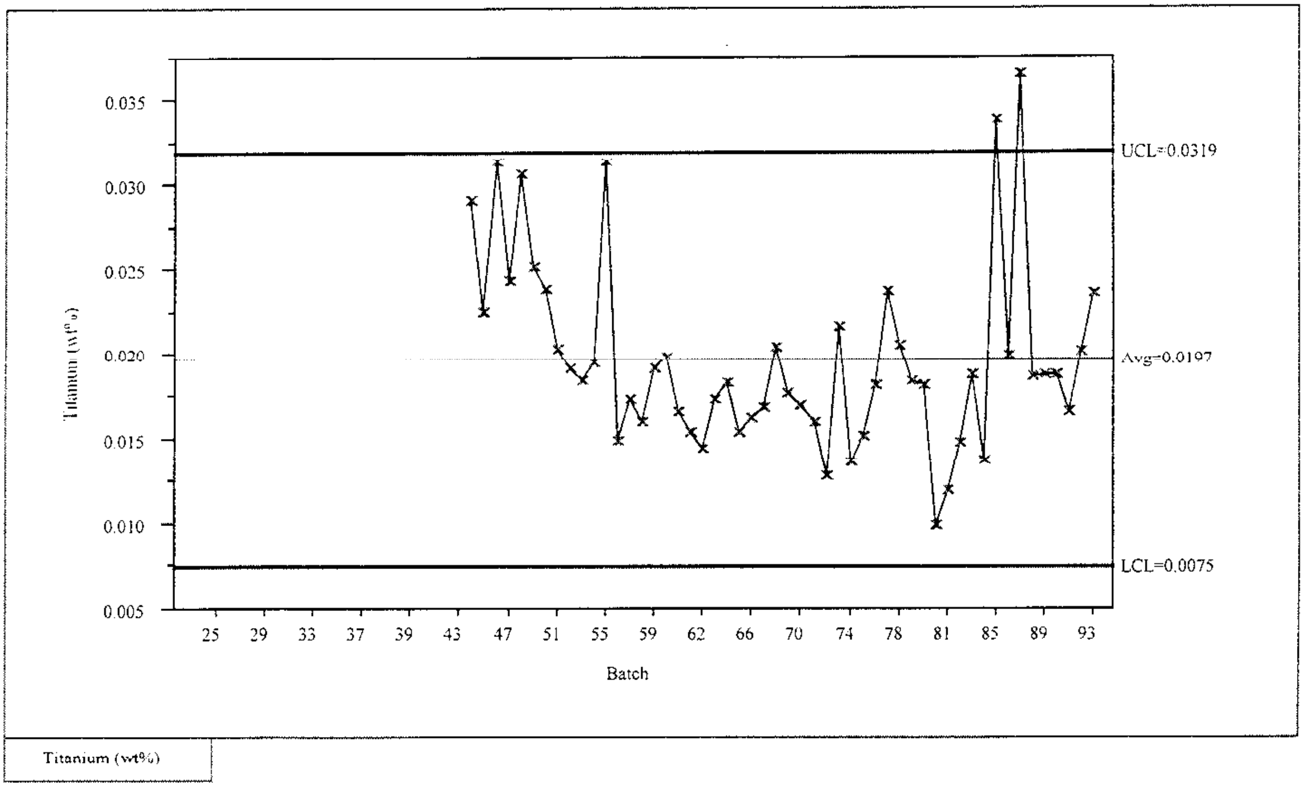


Silicon (wt%)



Moving Range of Silicon (wt%)

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte



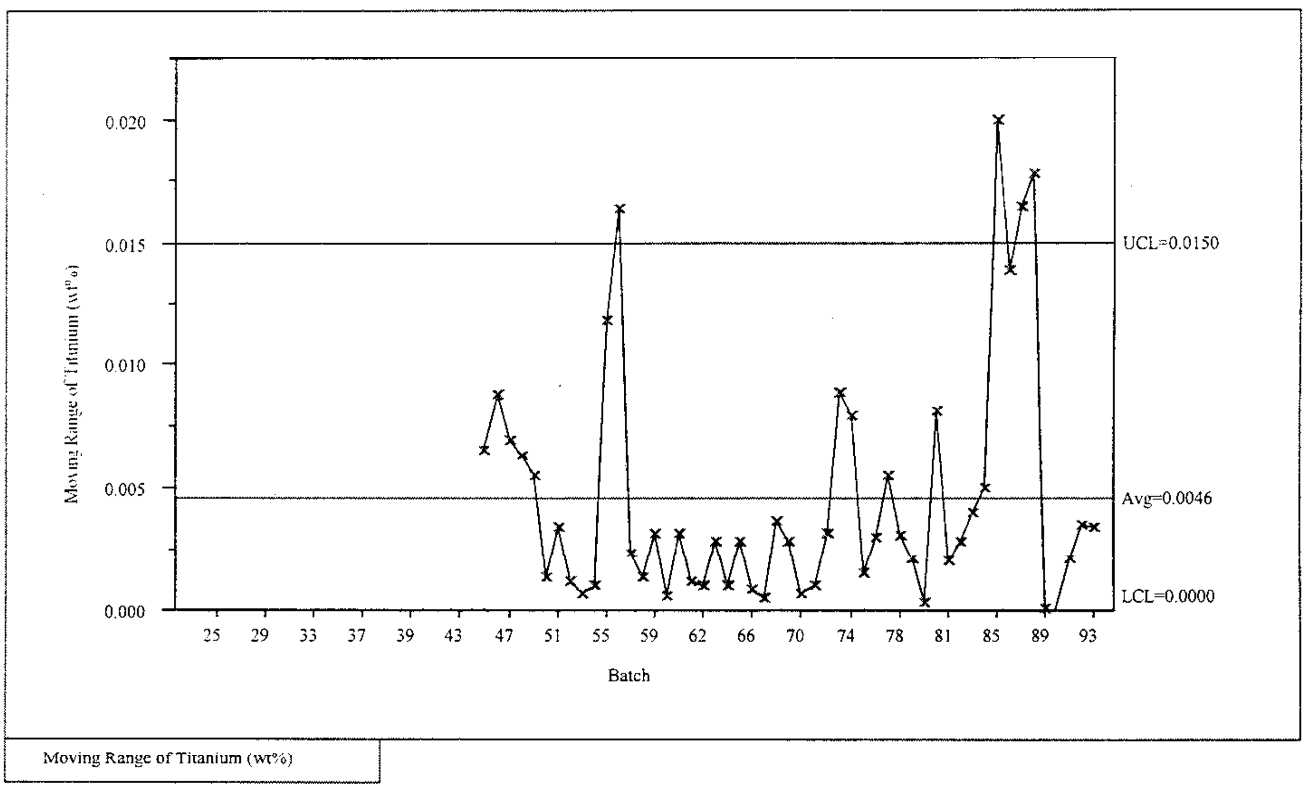
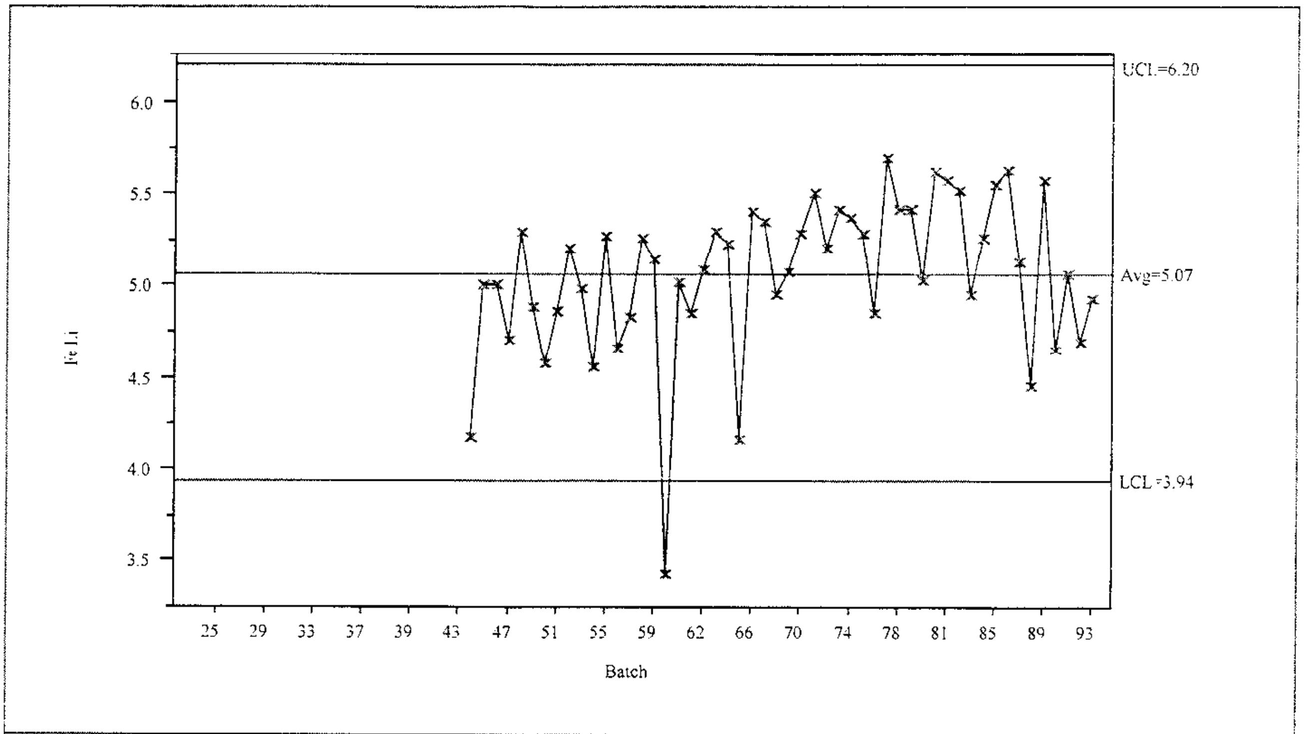
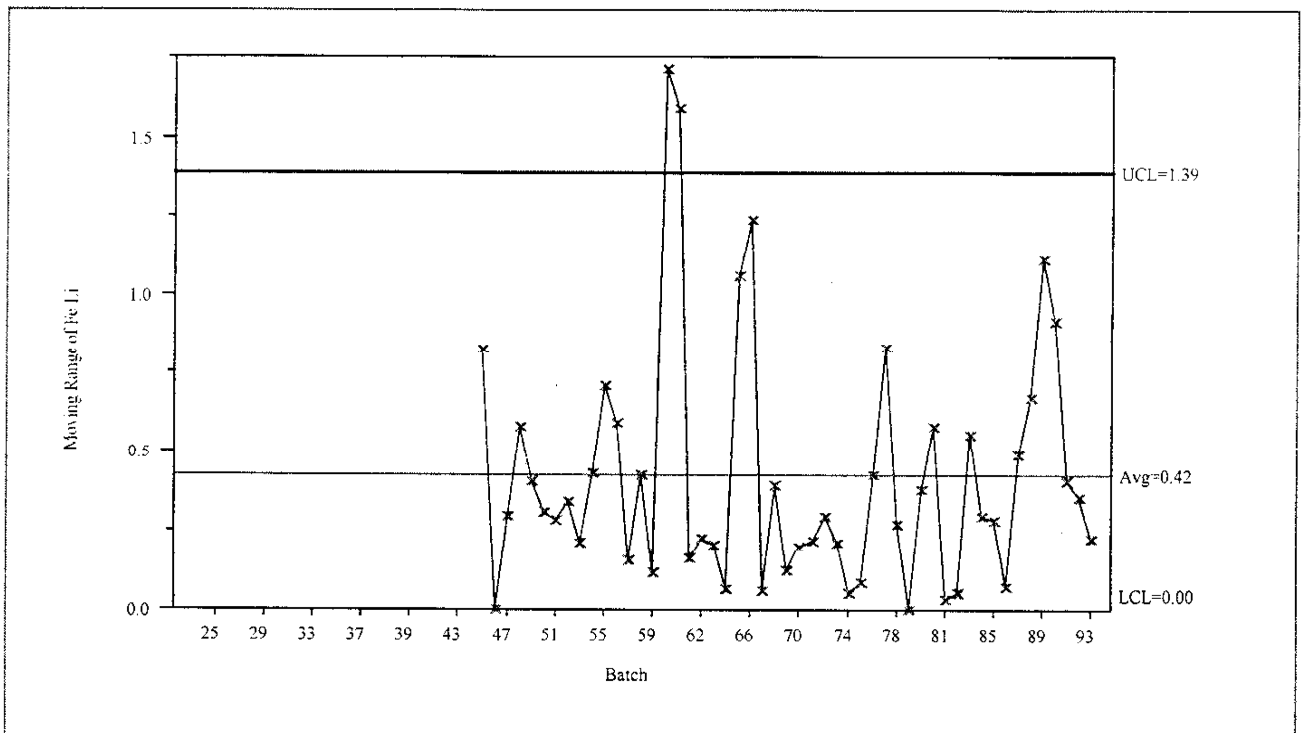


Exhibit 8c: SME Control Charts for Individual Batch Averages for PF Prep by Analyte

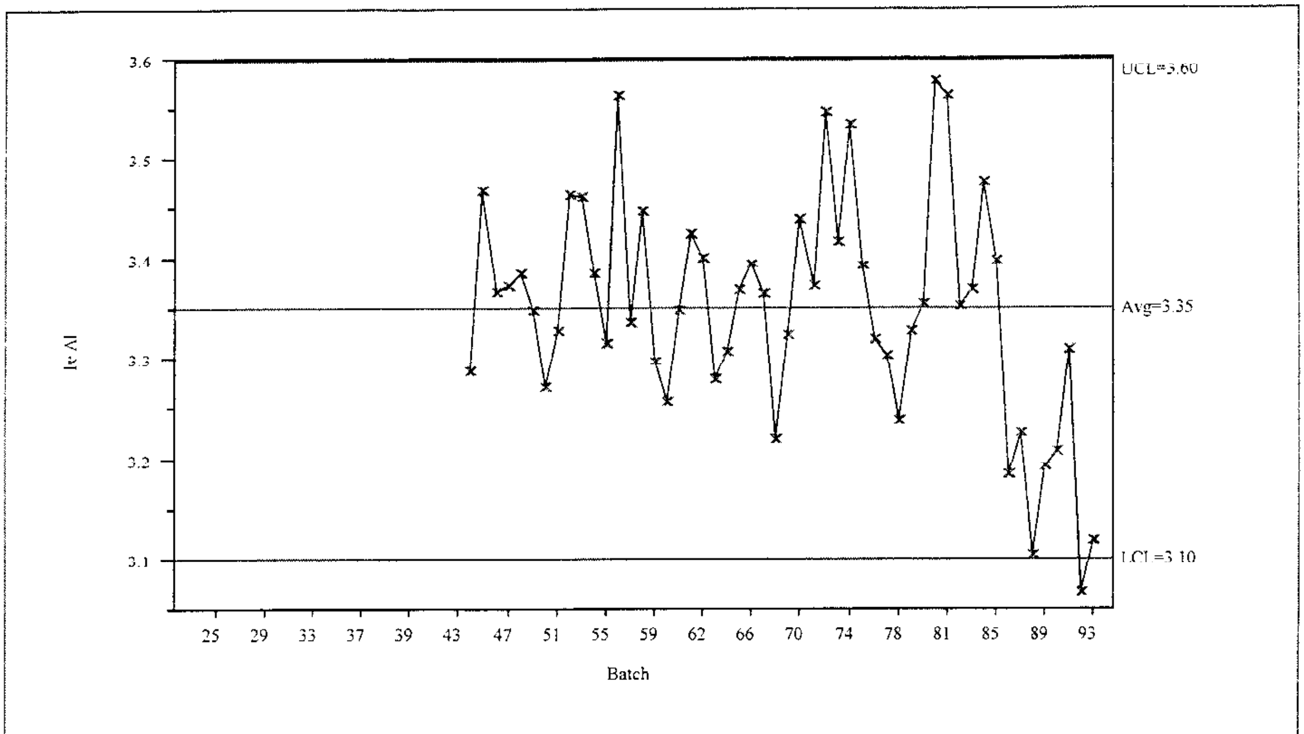


Fe/Li

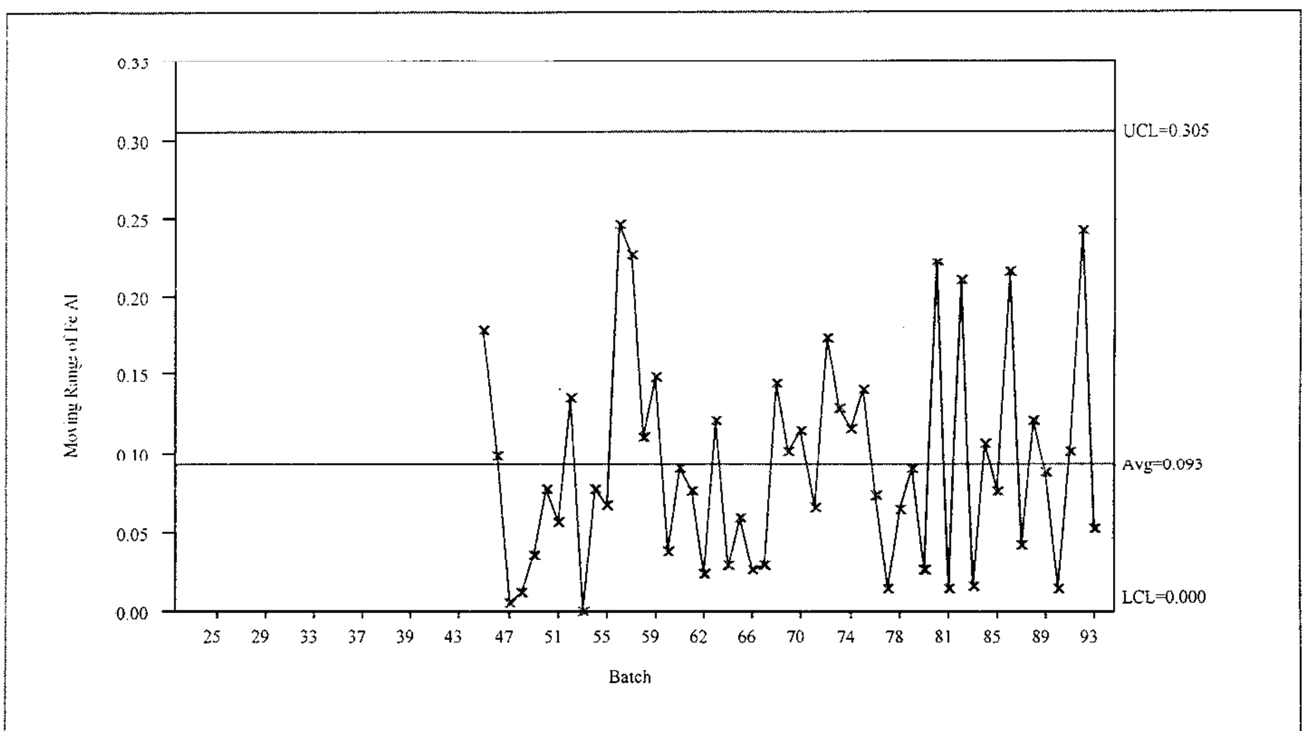


Moving Range of Fe/Li

Exhibit 8b: SME Control Charts for Individual Batch Averages for MA Prep by Analyte

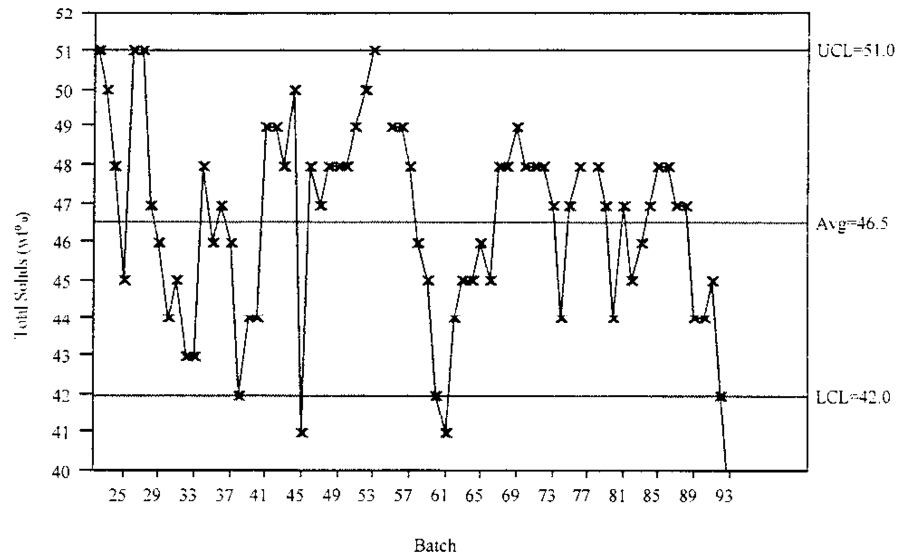


Fe/Al

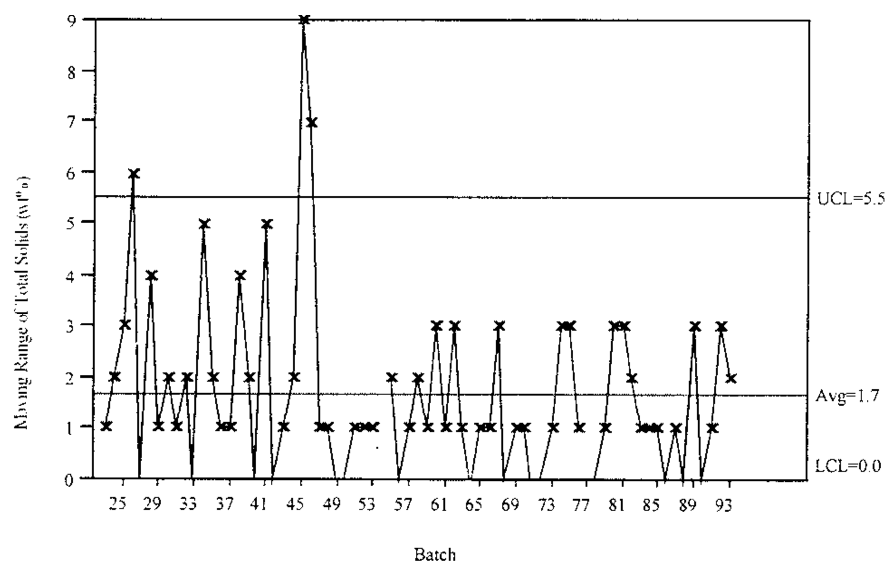


Moving Range of Fe/Al

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

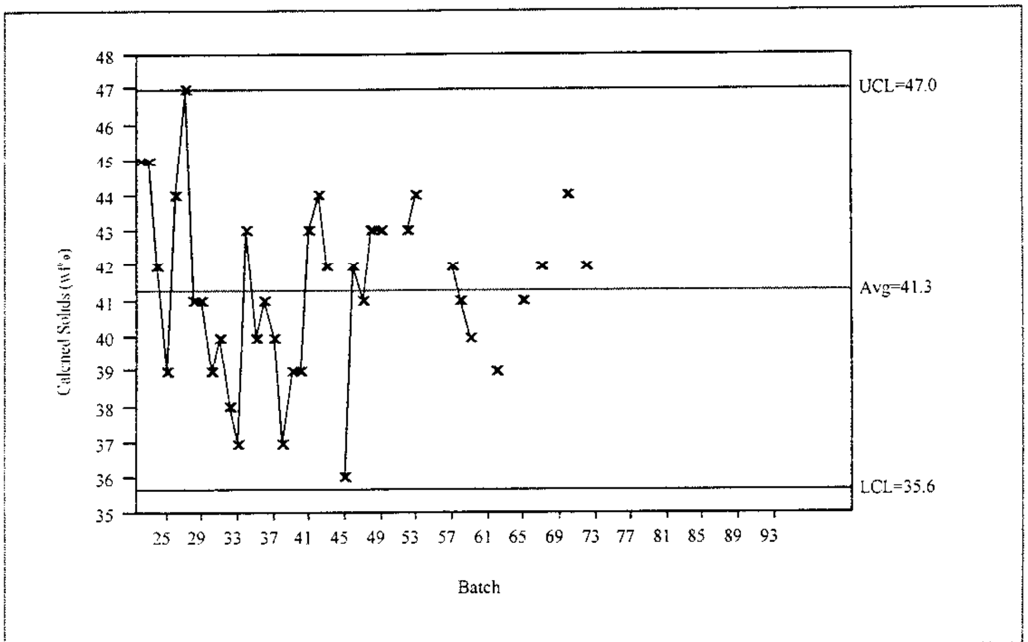


Total Solids (wt%)

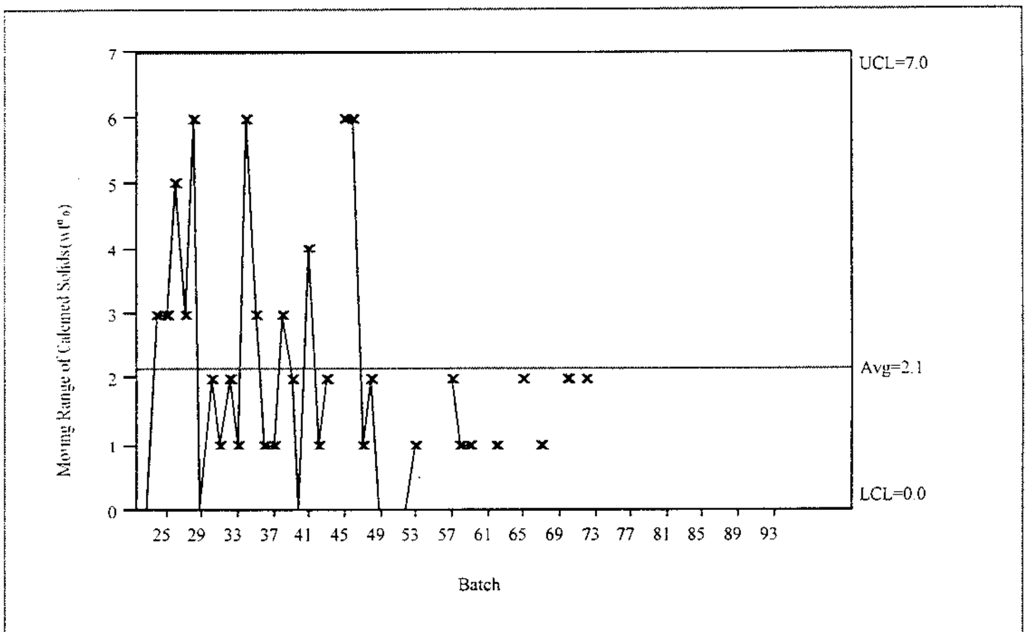


Moving Range of Total Solids (wt%)

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

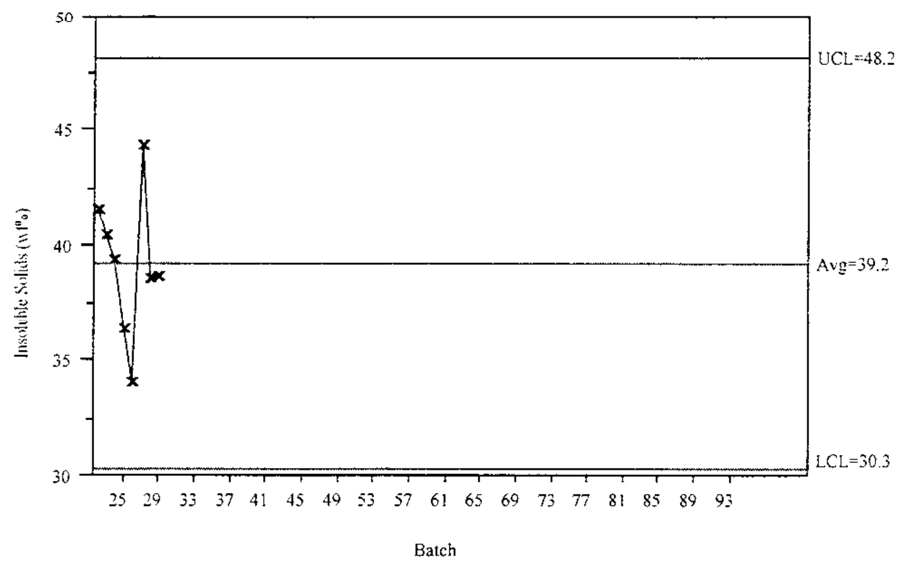


Calcined Solids (wt%)

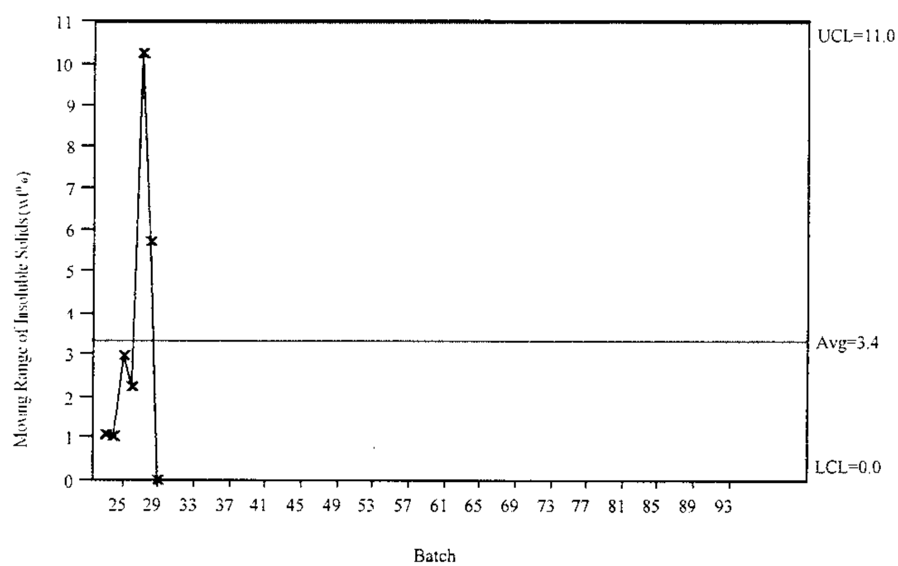


Moving Range of Calcined Solids (wt%)

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

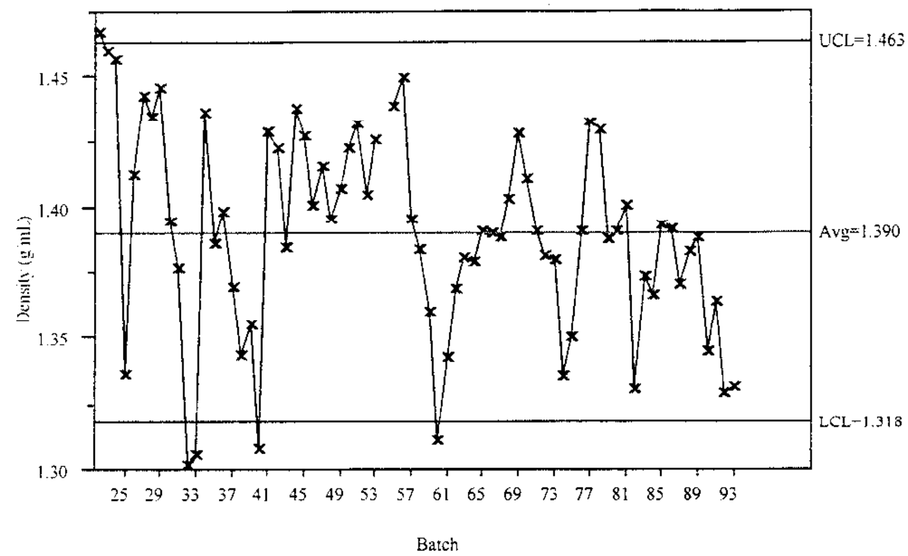


Insoluble Solids (wt%)

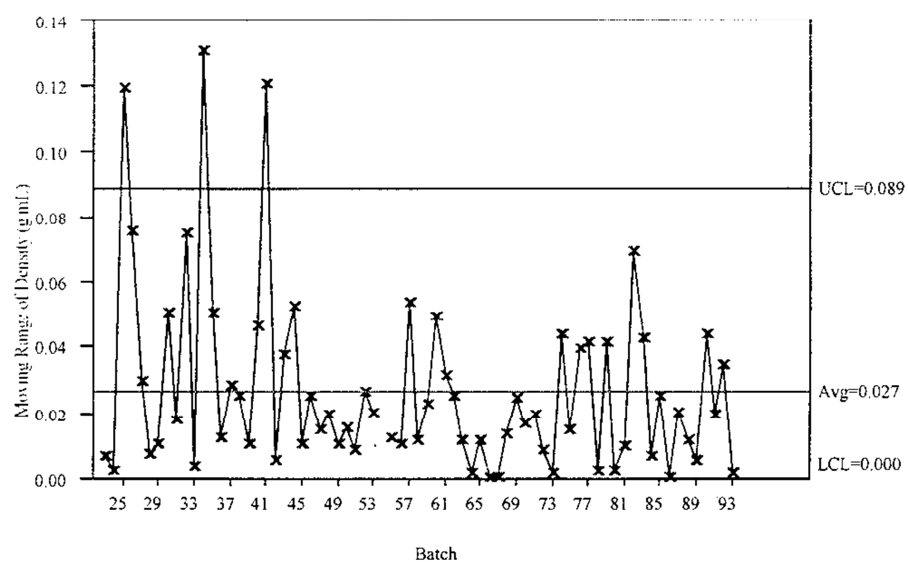


Moving Range of Insoluble Solids (wt%)

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

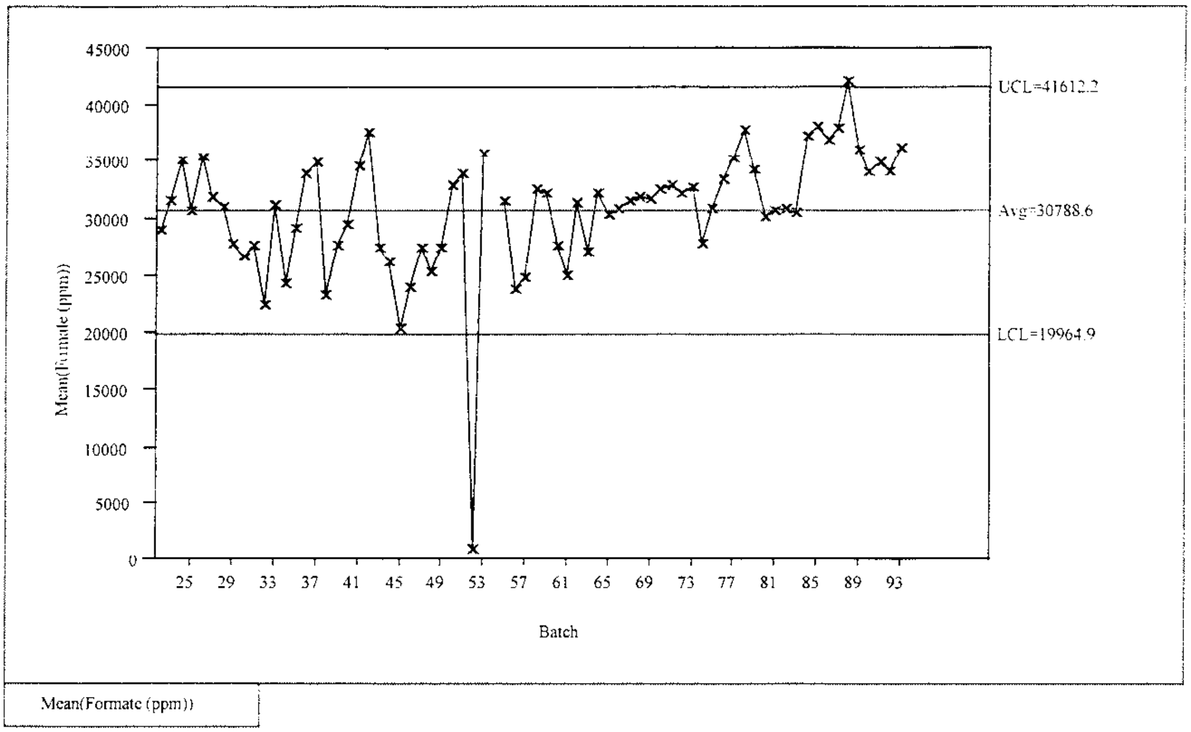


Density (g/mL)



Moving Range of Density (g/mL)

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions



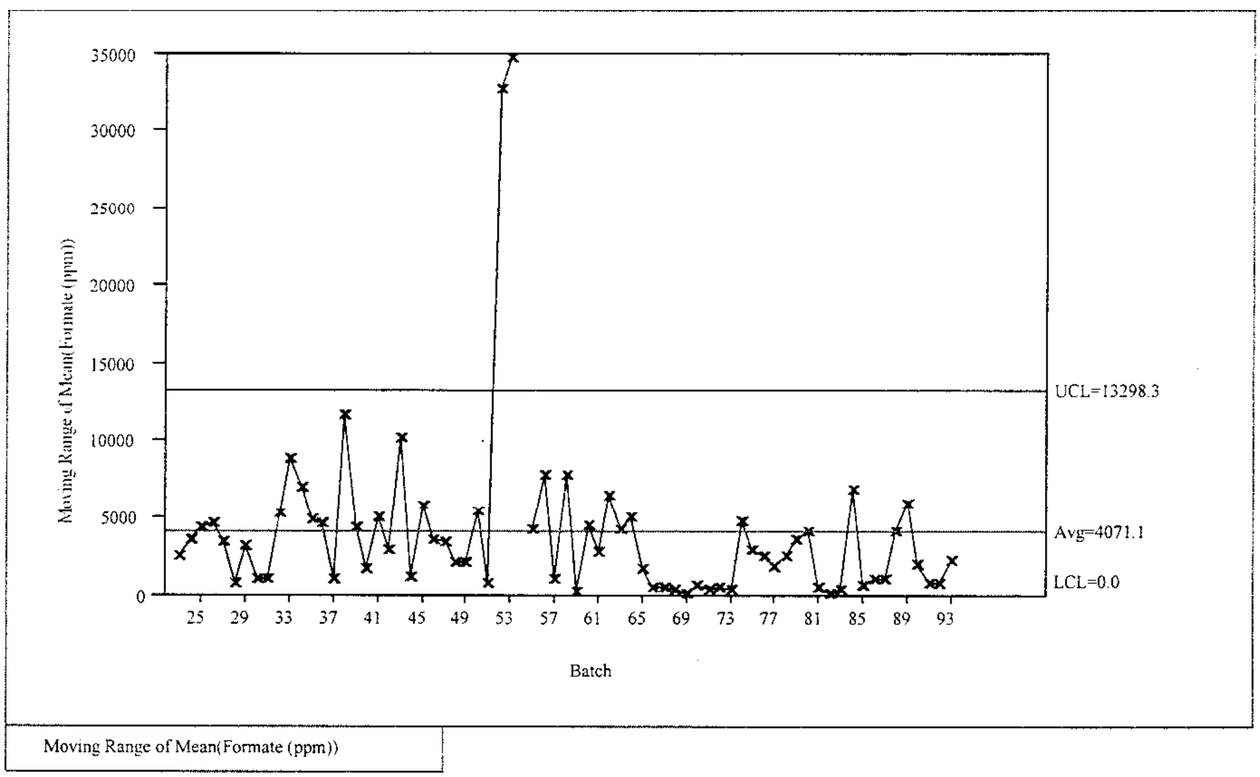
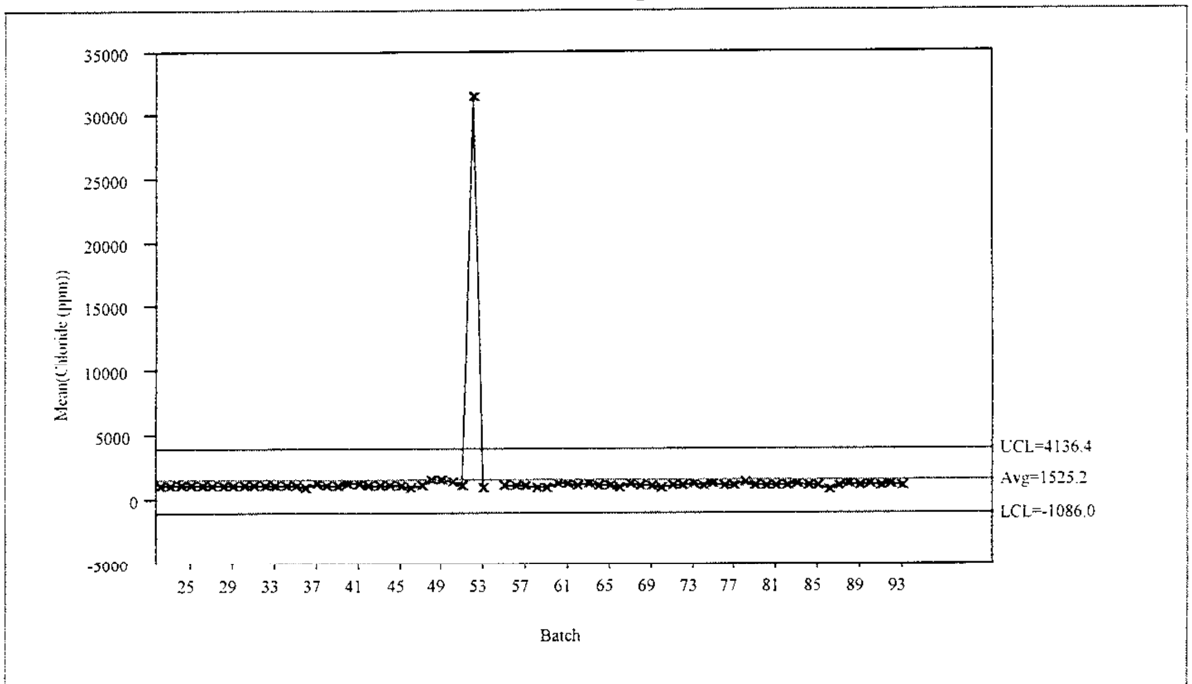
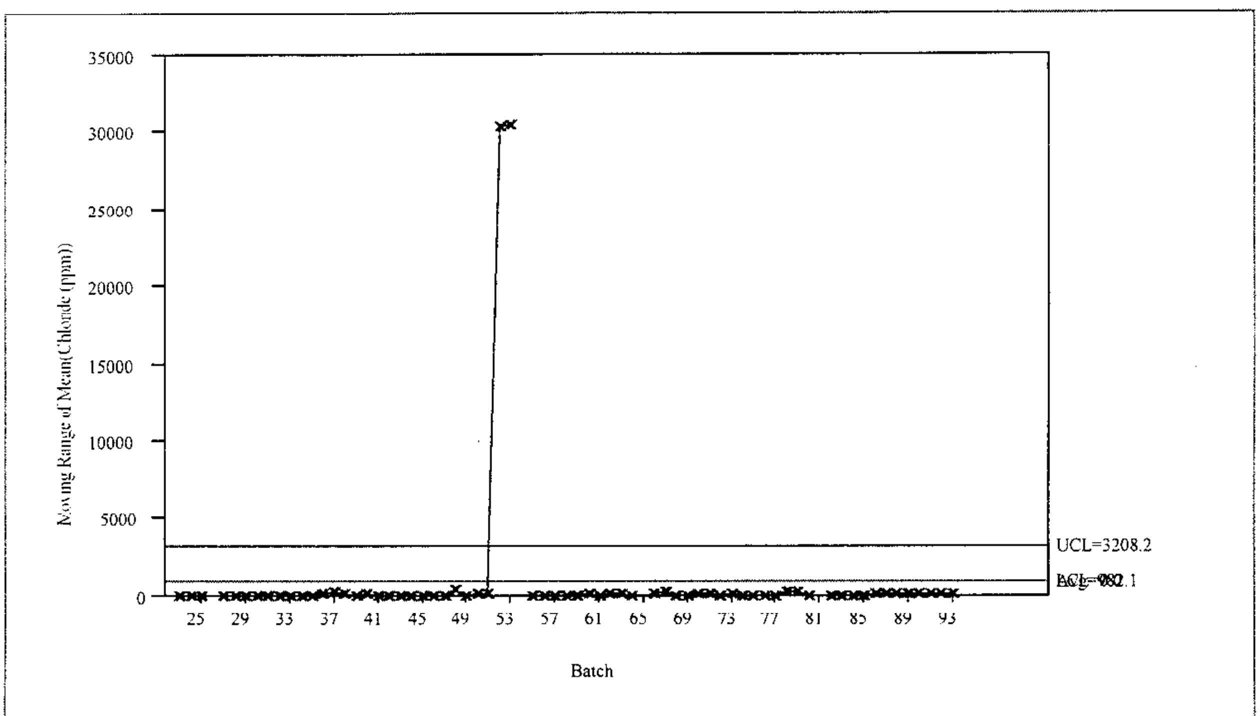


Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

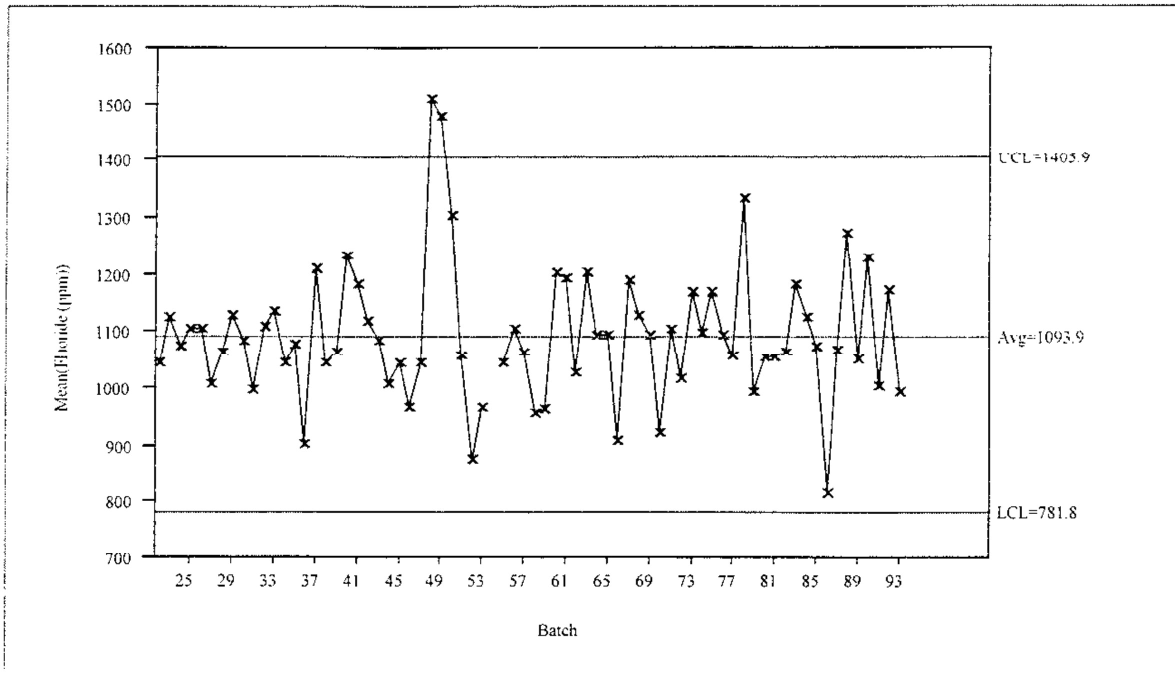


Mean(Chloride (ppm))

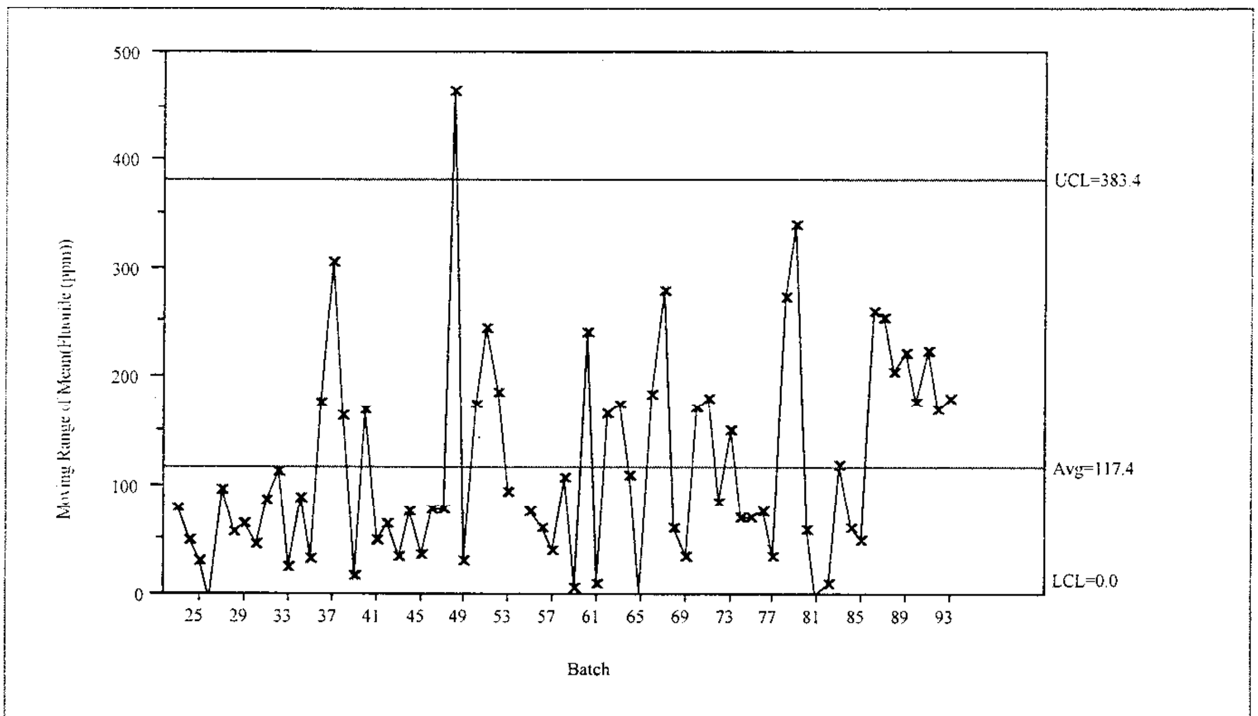


Moving Range of Mean(Chloride (ppm))

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

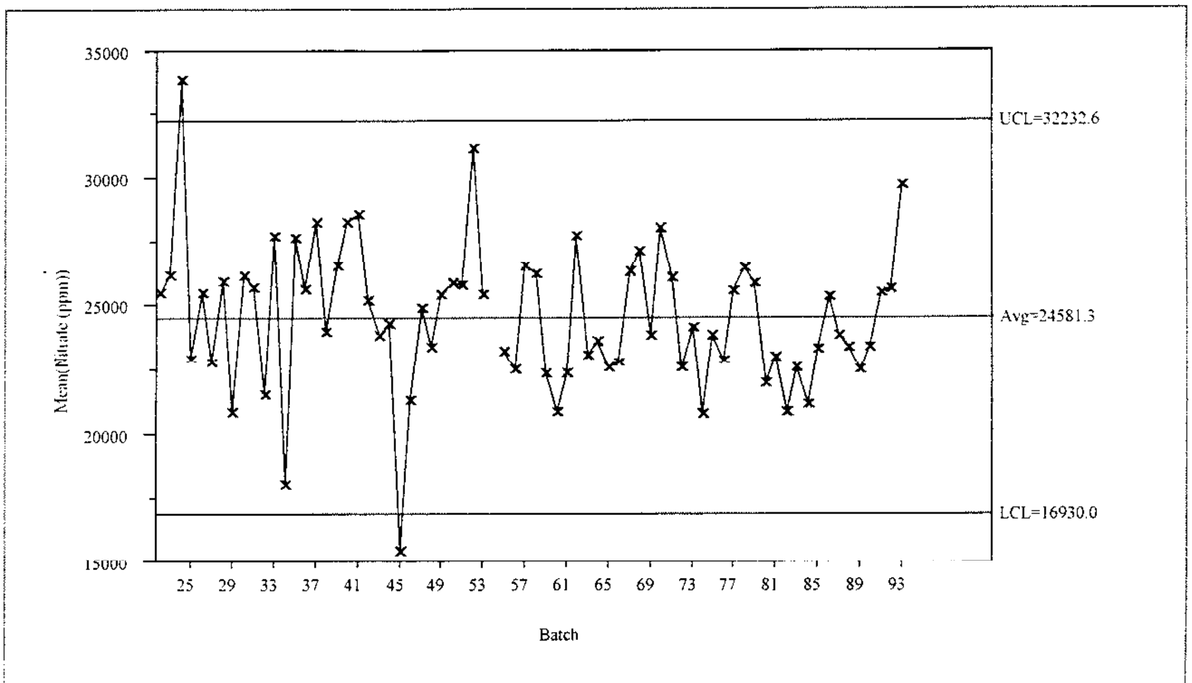


Mean(Fluoride (ppm))

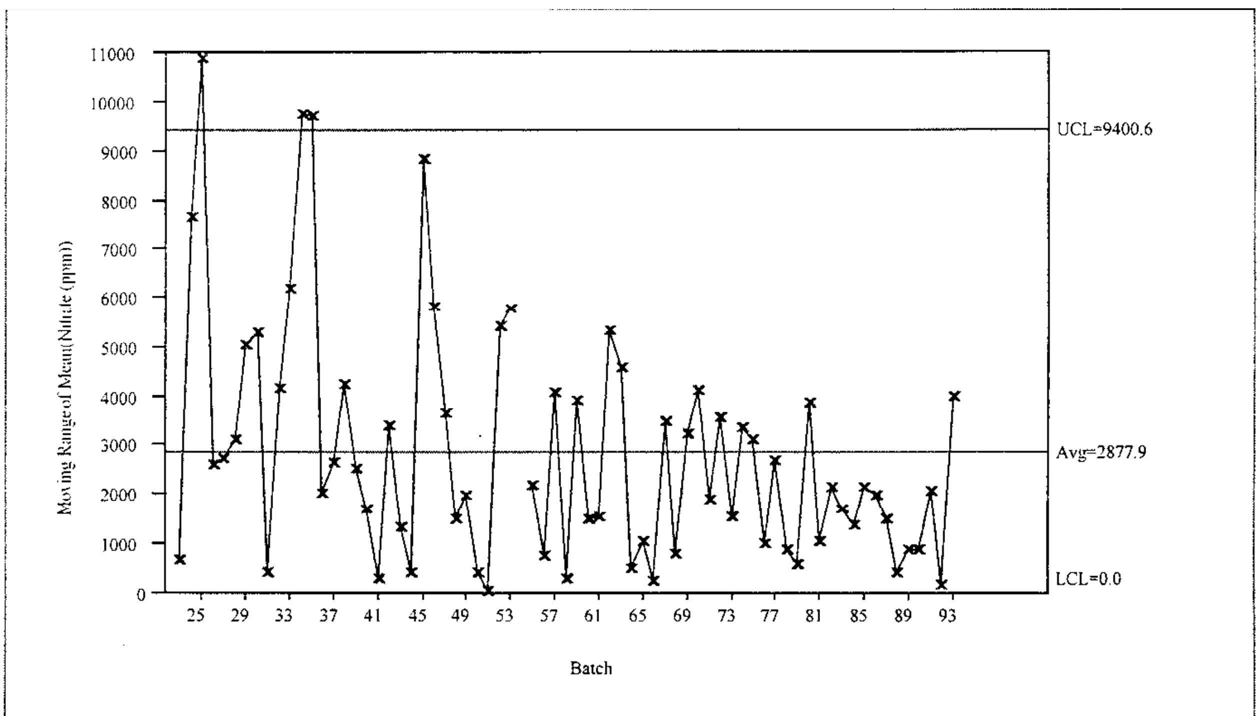


Moving Range of Mean(Fluoride (ppm))

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

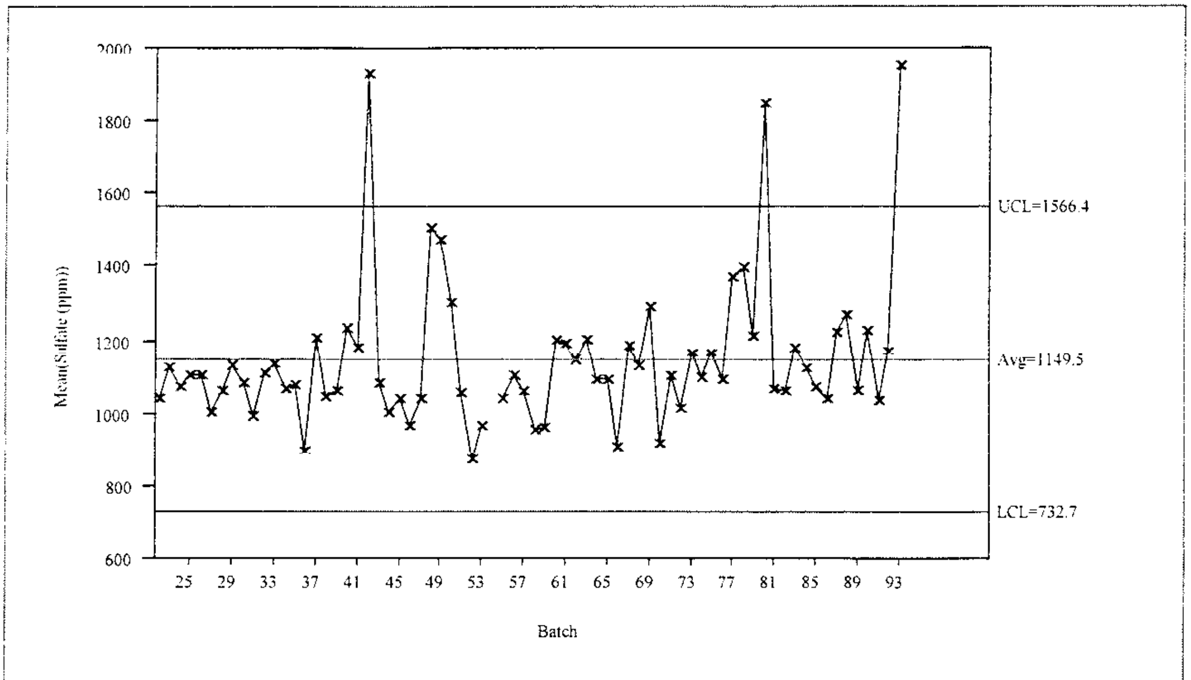


Mean(Nitrate (ppm))

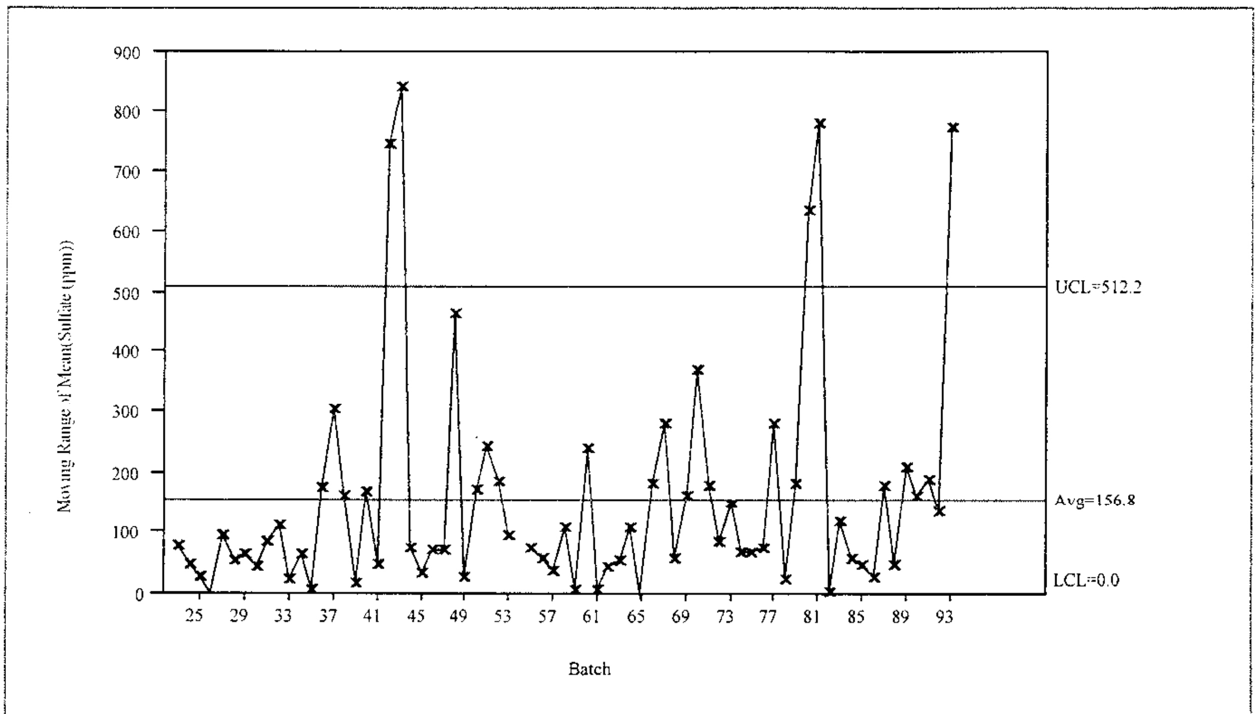


Moving Range of Mean(Nitrate (ppm))

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions



Mean(Sulfate (ppm))



Moving Range of Mean(Sulfate (ppm))

Exhibit 9a: MFT Control Charts for Individual Batch Averages for Anions

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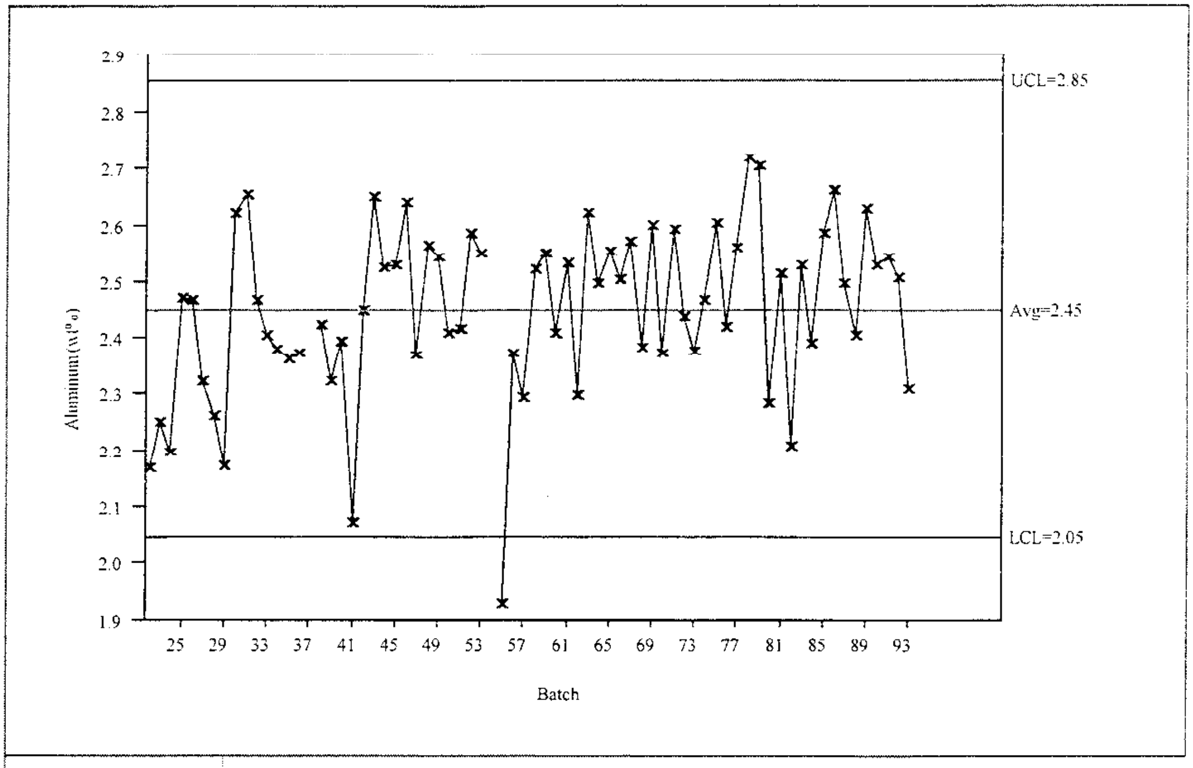
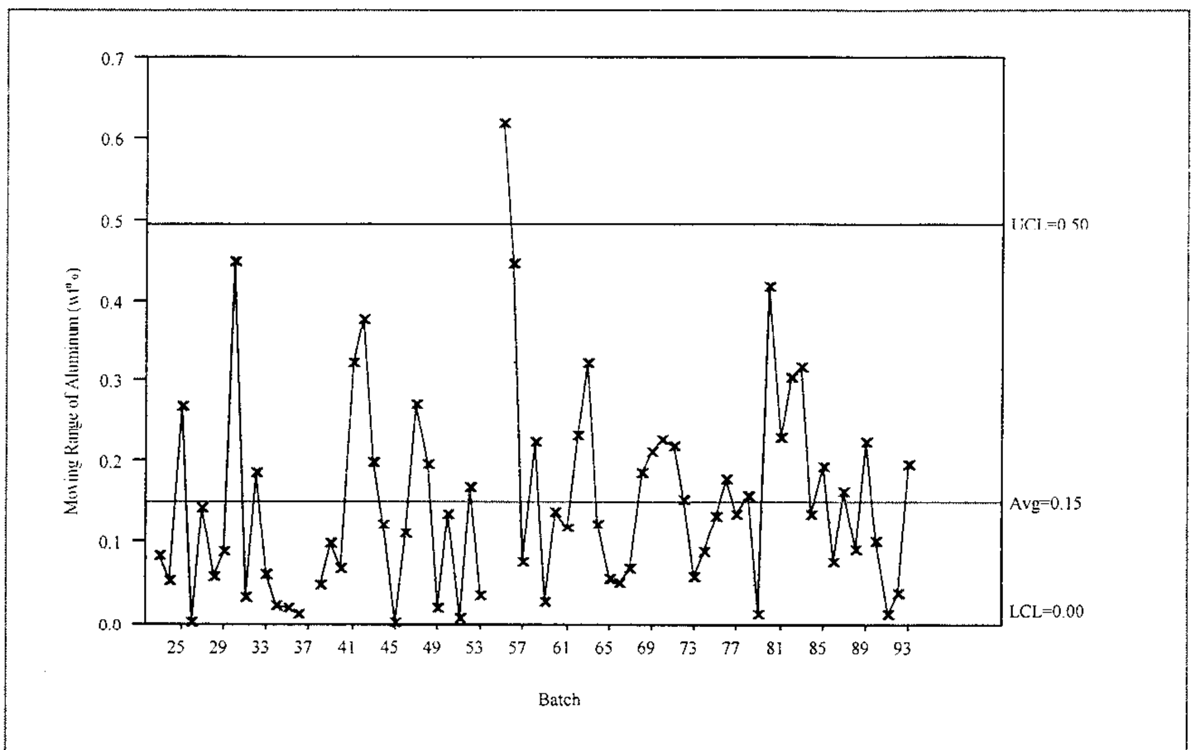
Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

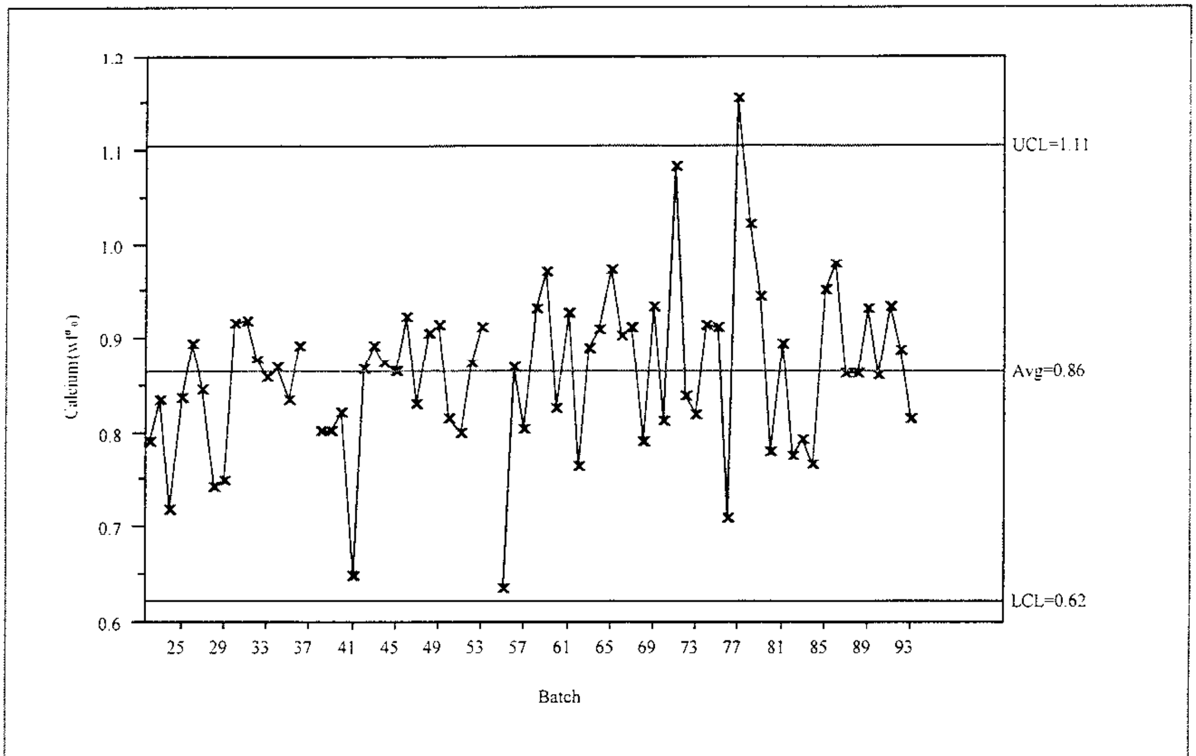


Aluminum (wt%)

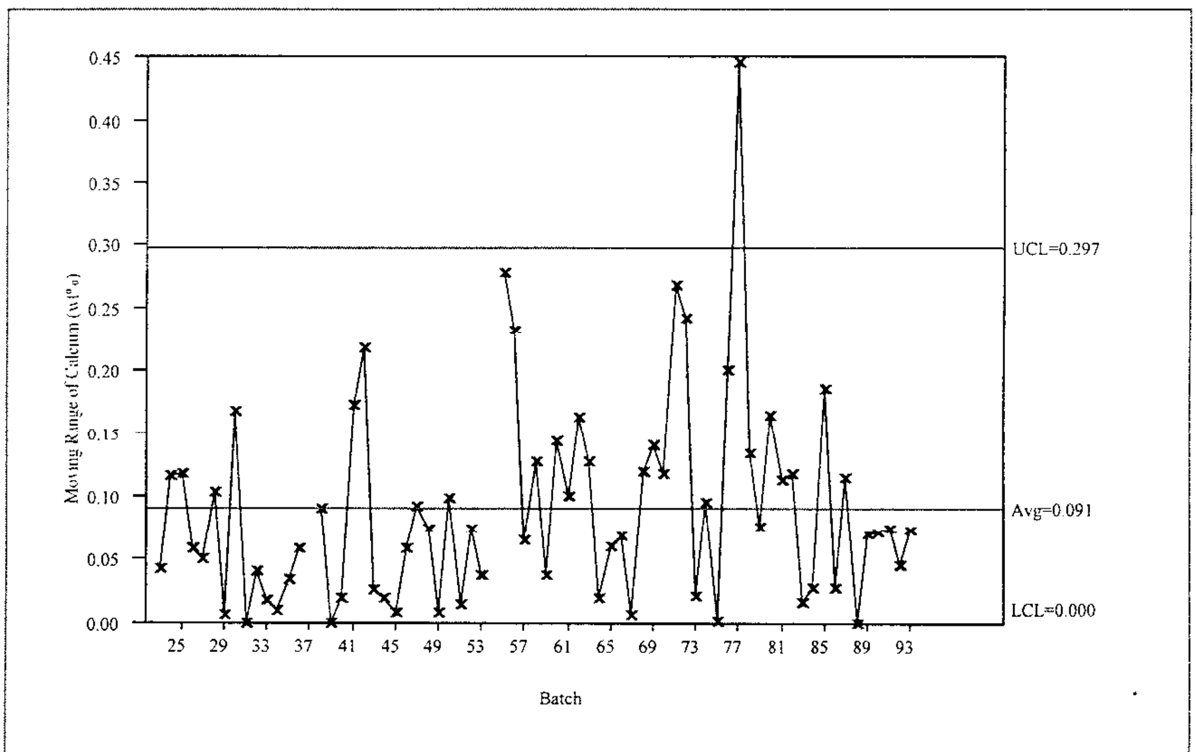


Moving Range of Aluminum (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

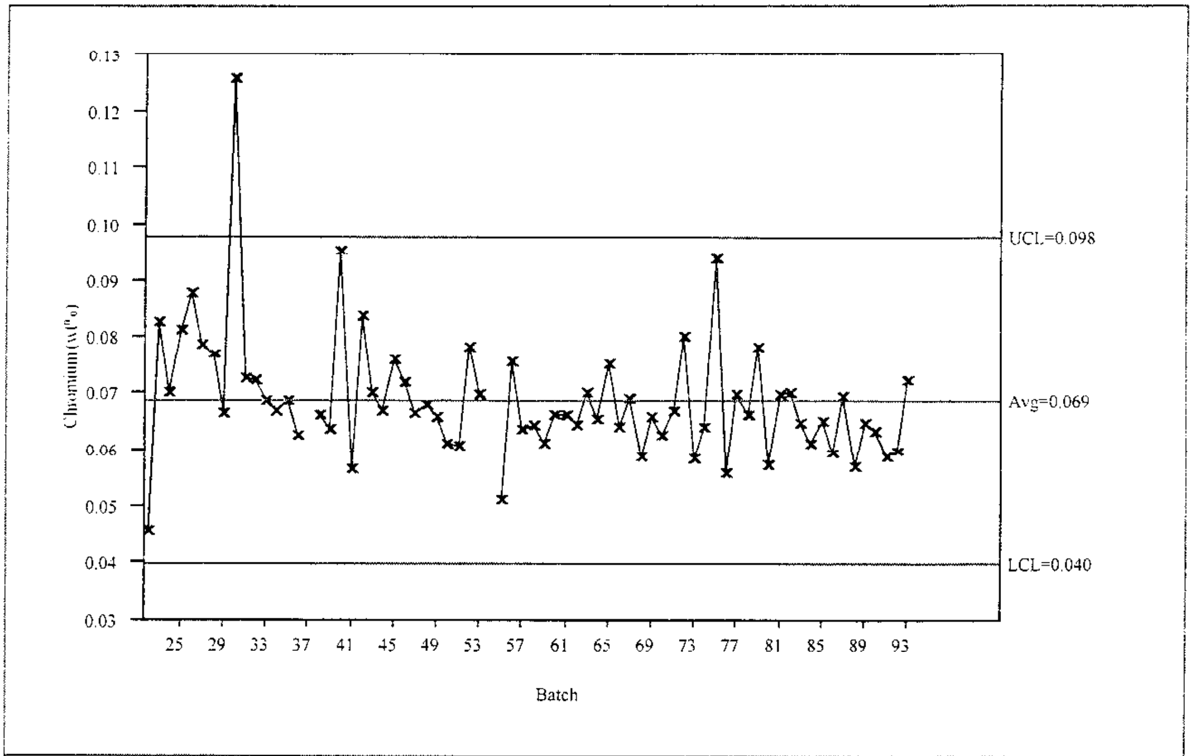


Calcium (wt%)

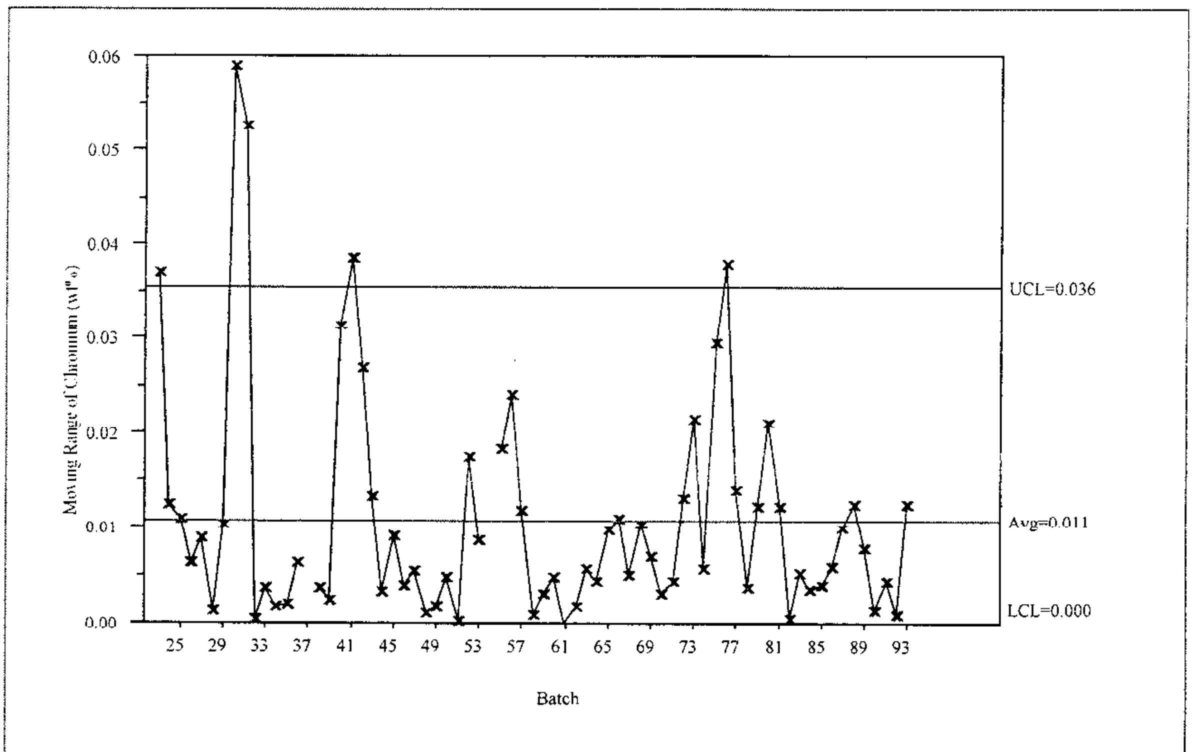


Moving Range of Calcium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

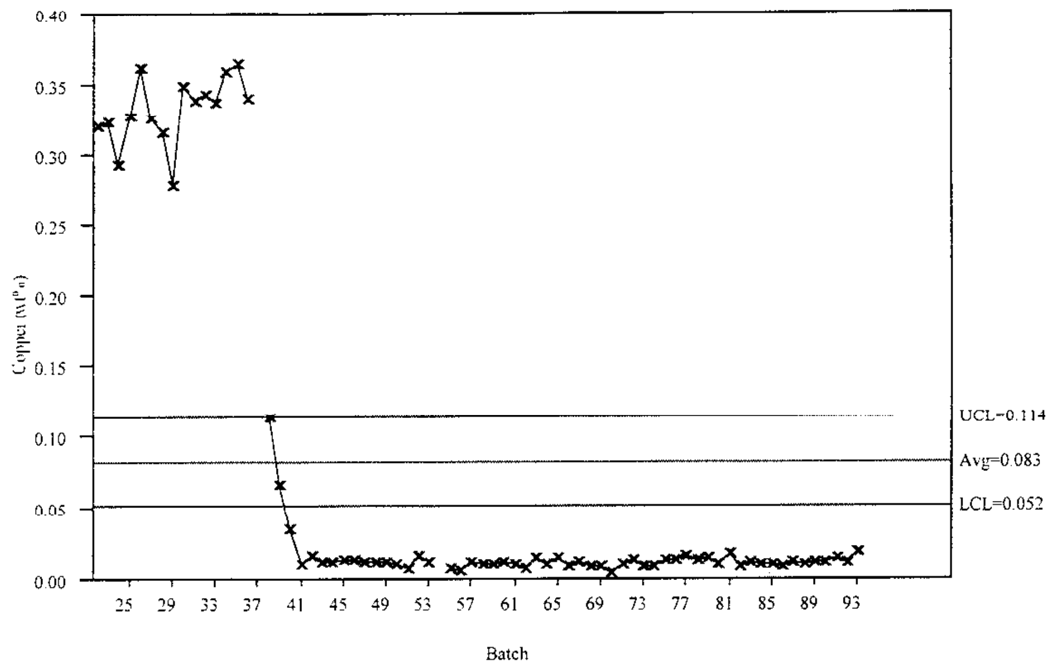


Chromium (wt%)

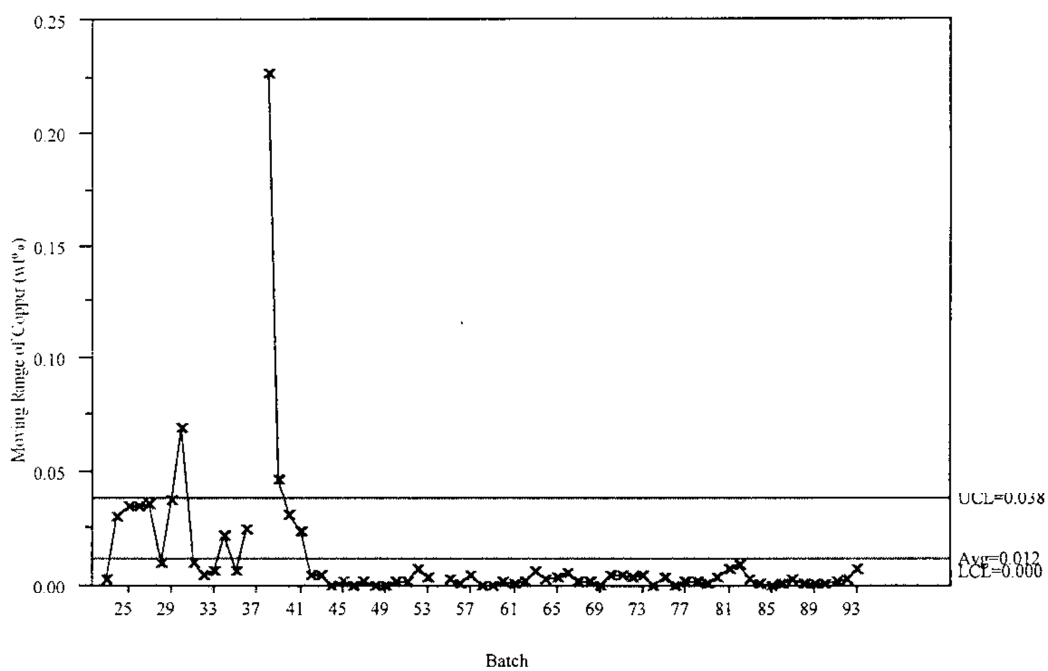


Moving Range of Chromium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

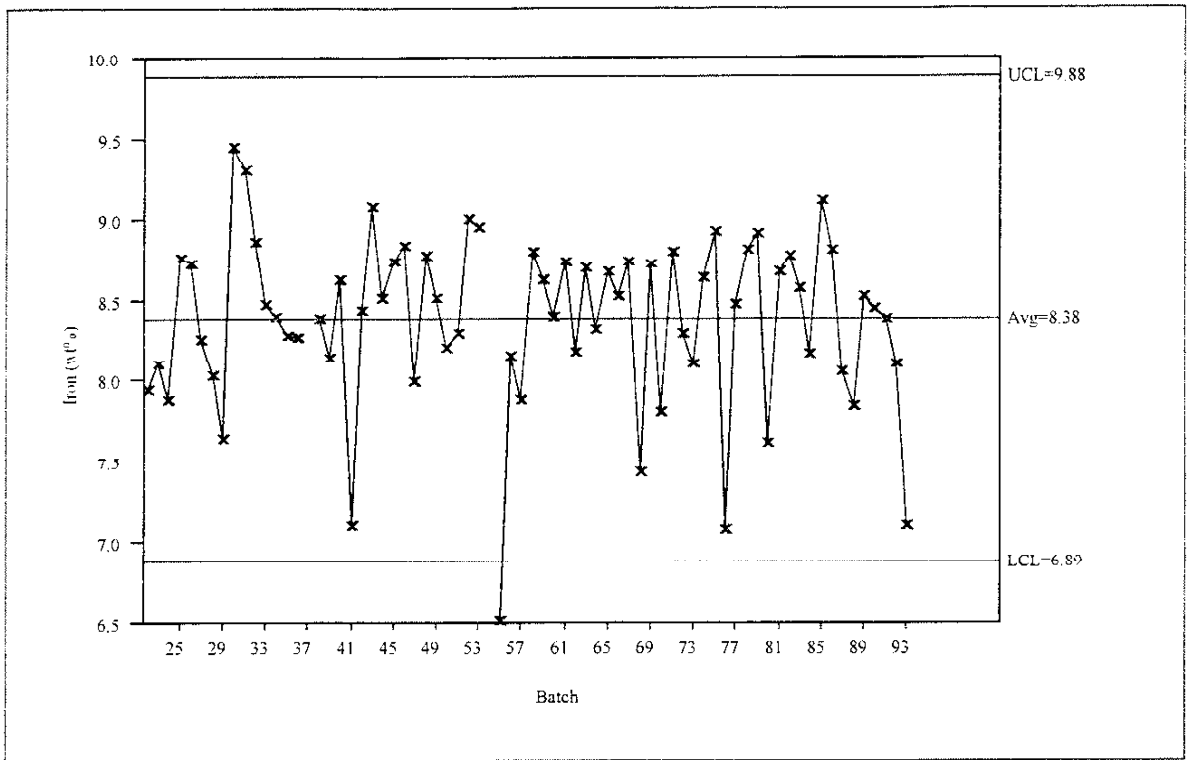


Copper (wt%)

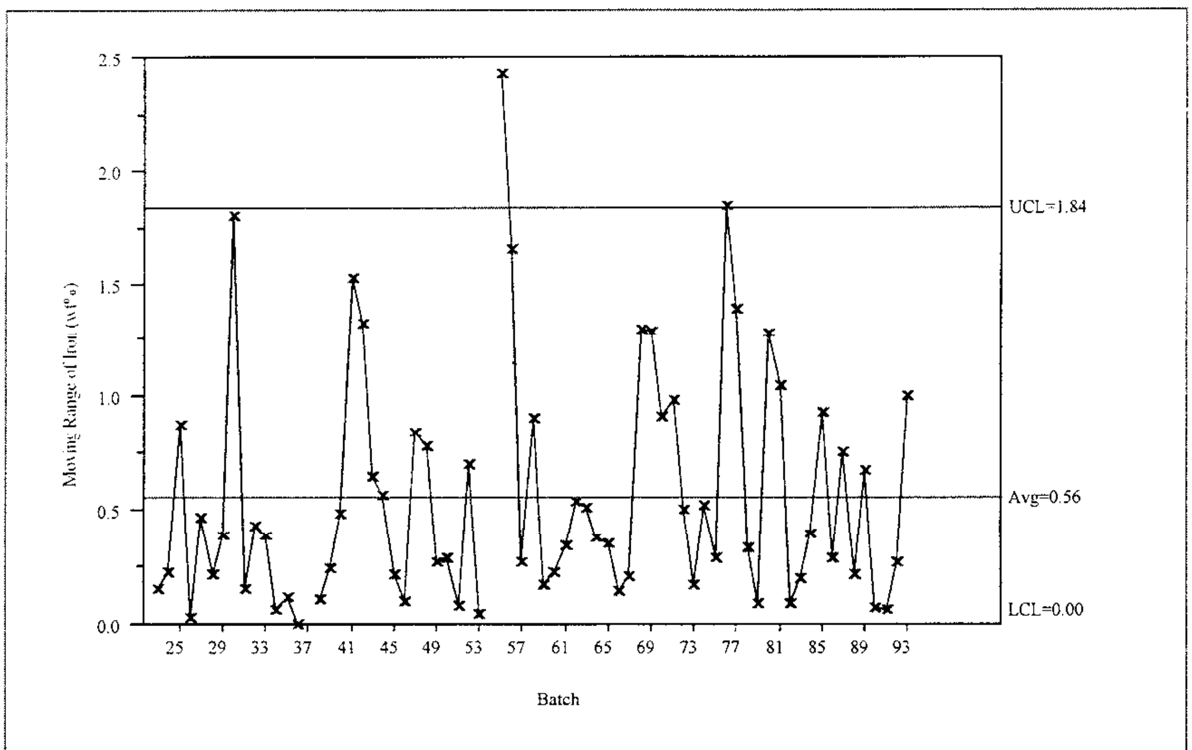


Moving Range of Copper (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

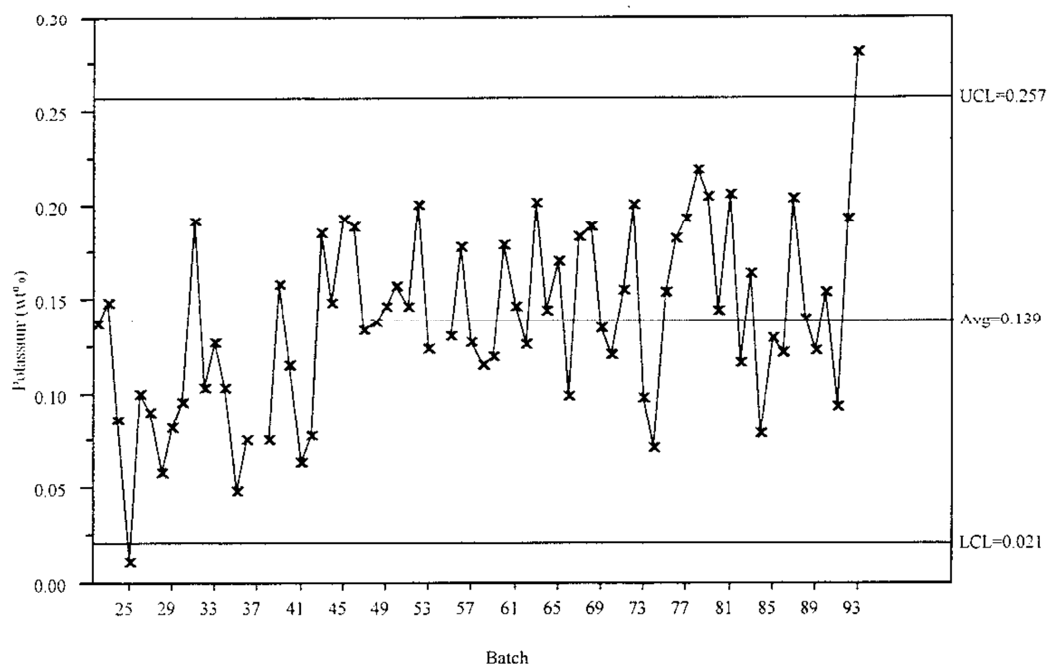


Iron (wt%)

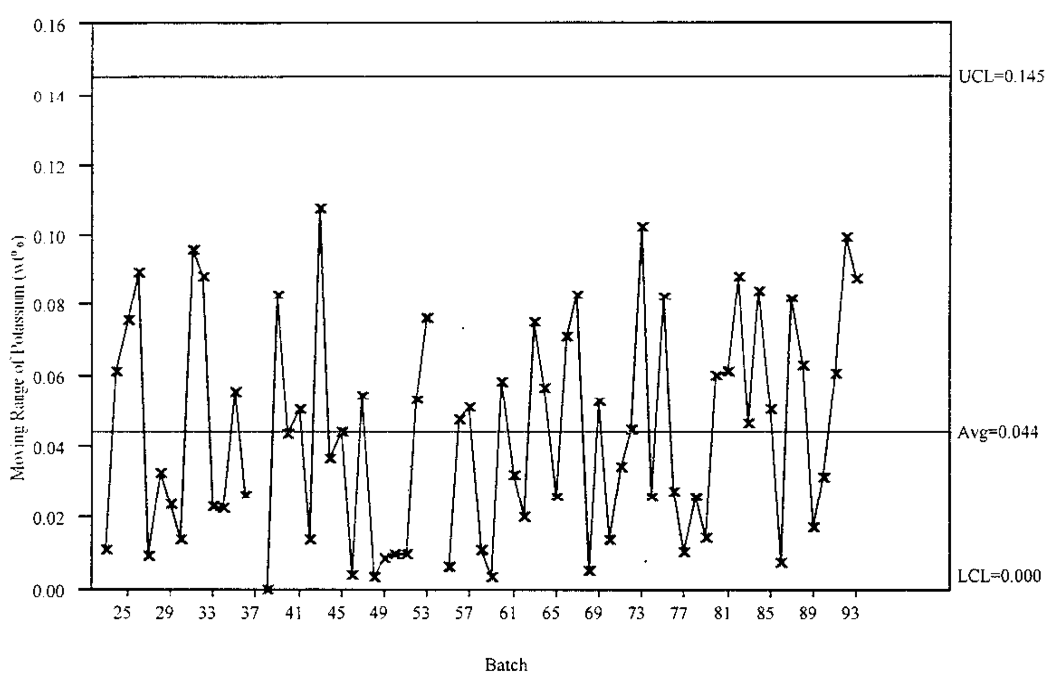


Moving Range of Iron (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

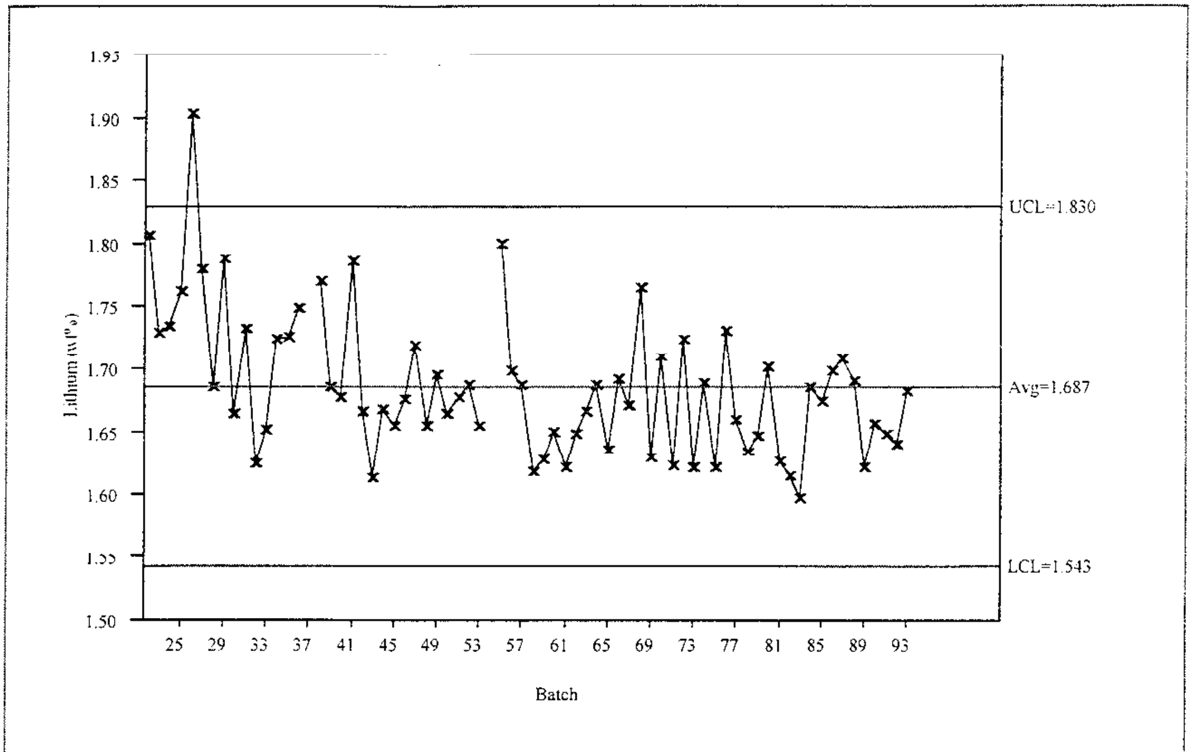


Potassium (wt%)

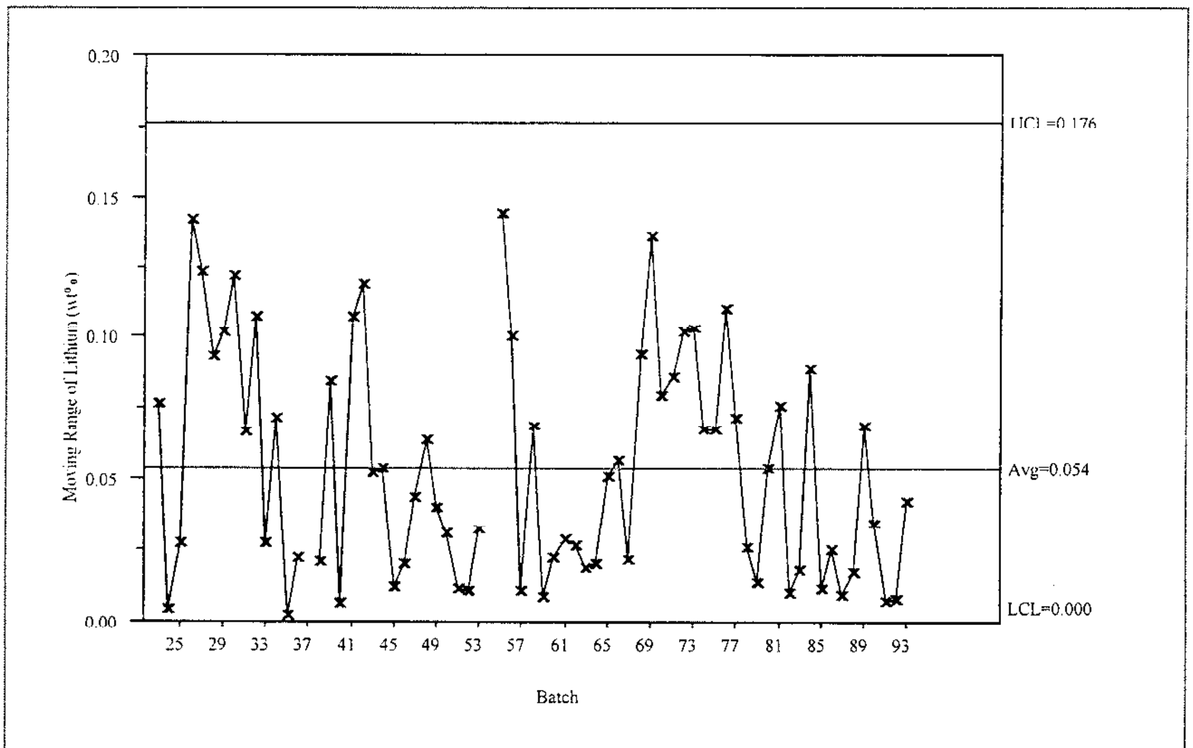


Moving Range of Potassium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

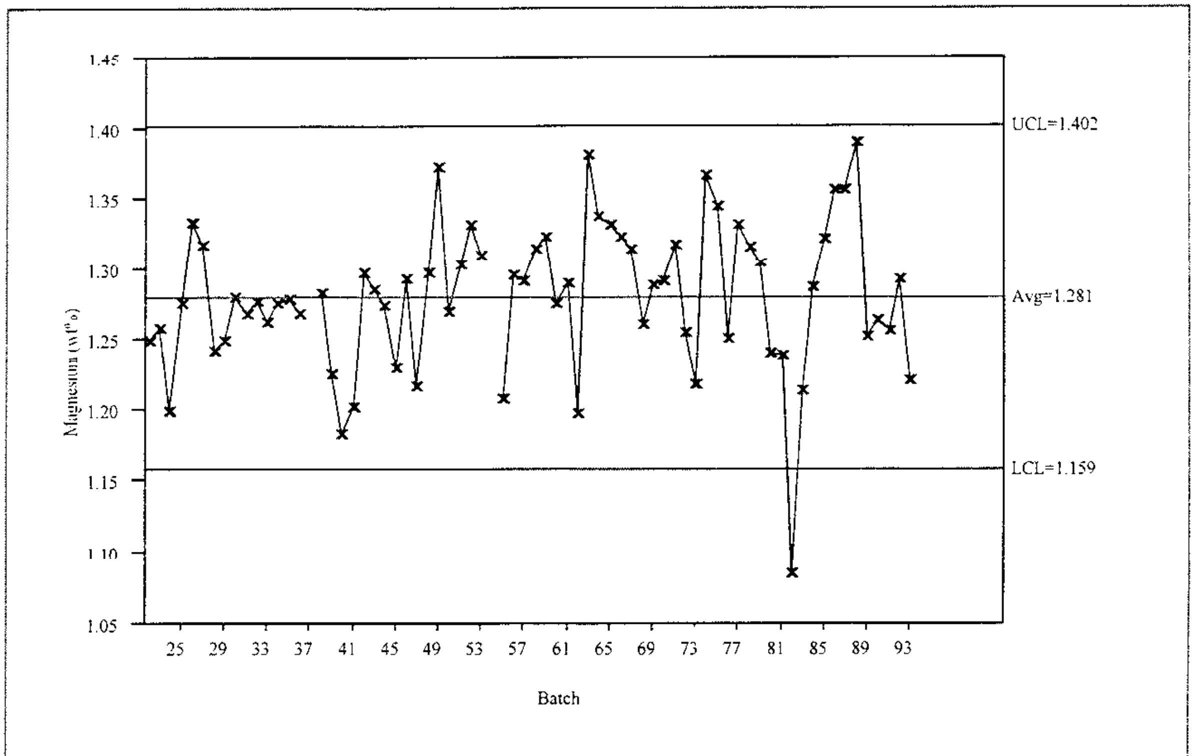


Lithium (wt%)

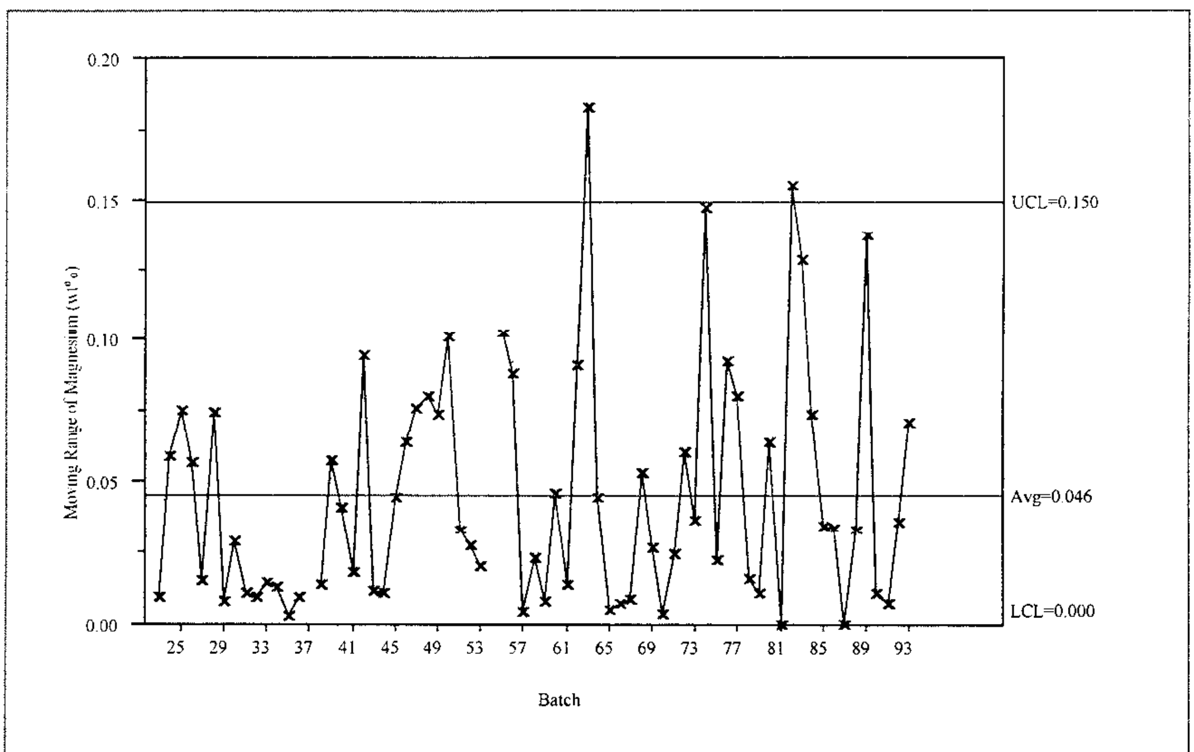


Moving Range of Lithium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

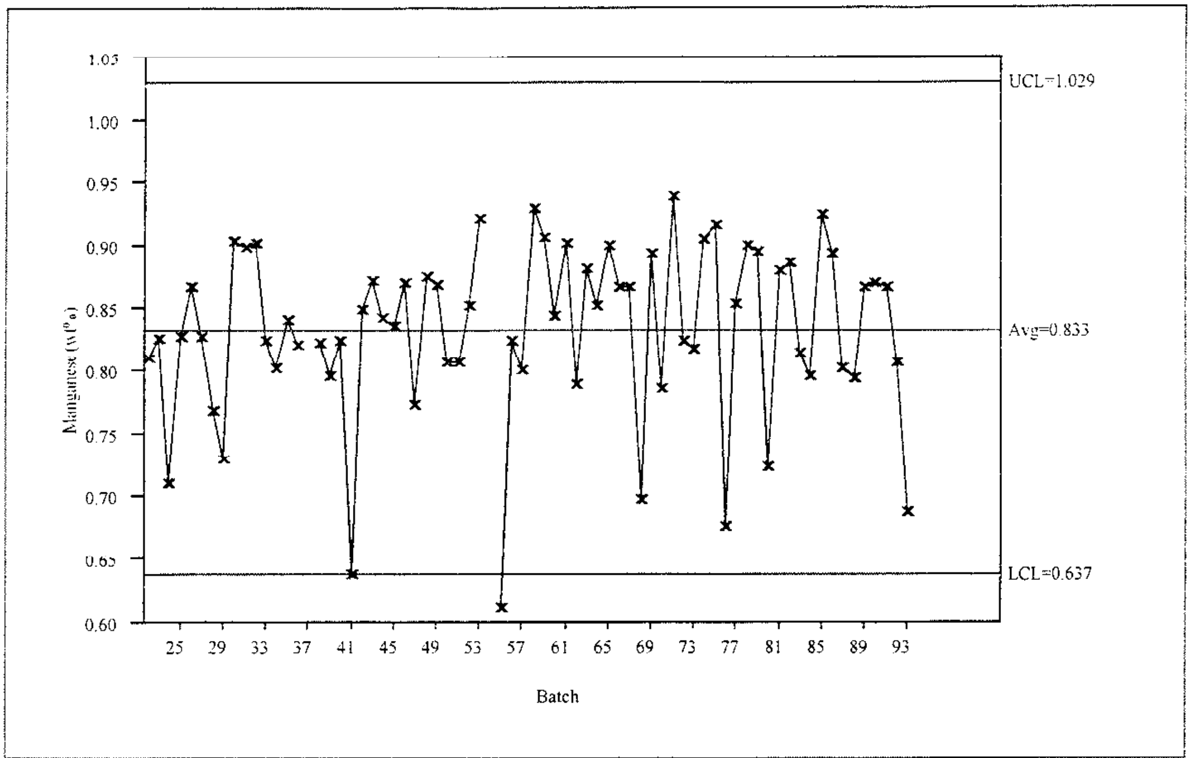


Magnesium (wt%)

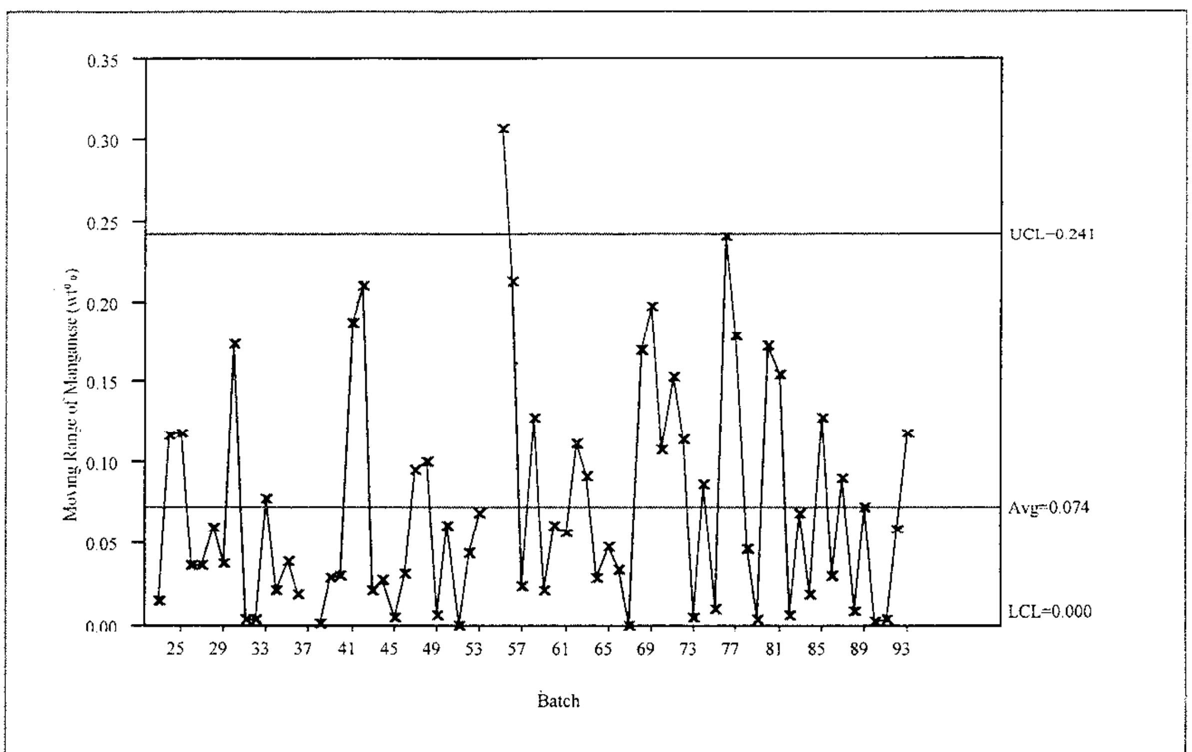


Moving Range of Magnesium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

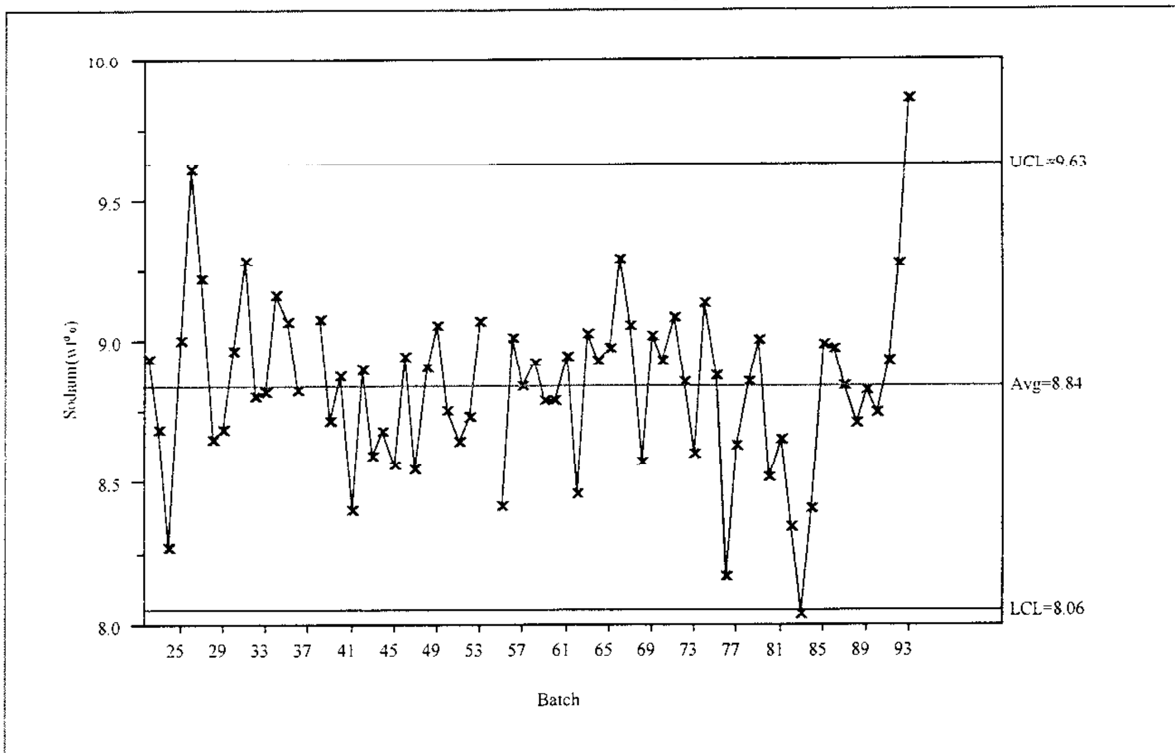


Manganese (wt%)

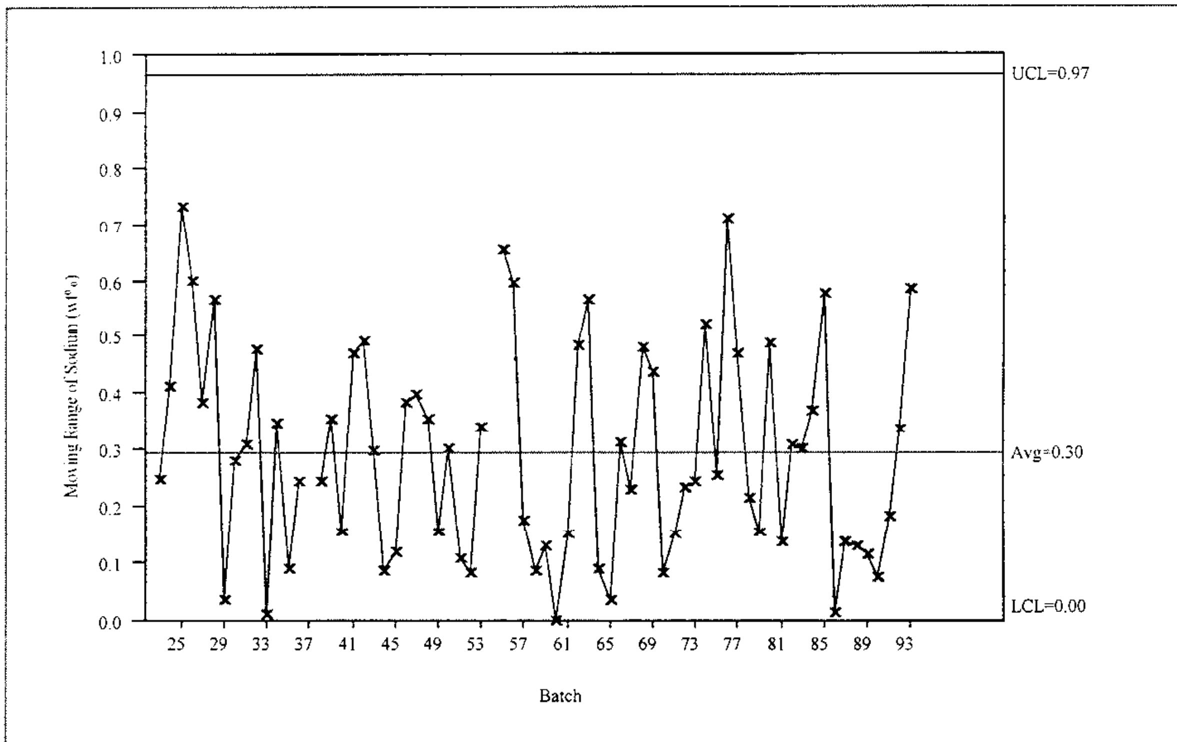


Moving Range of Manganese (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

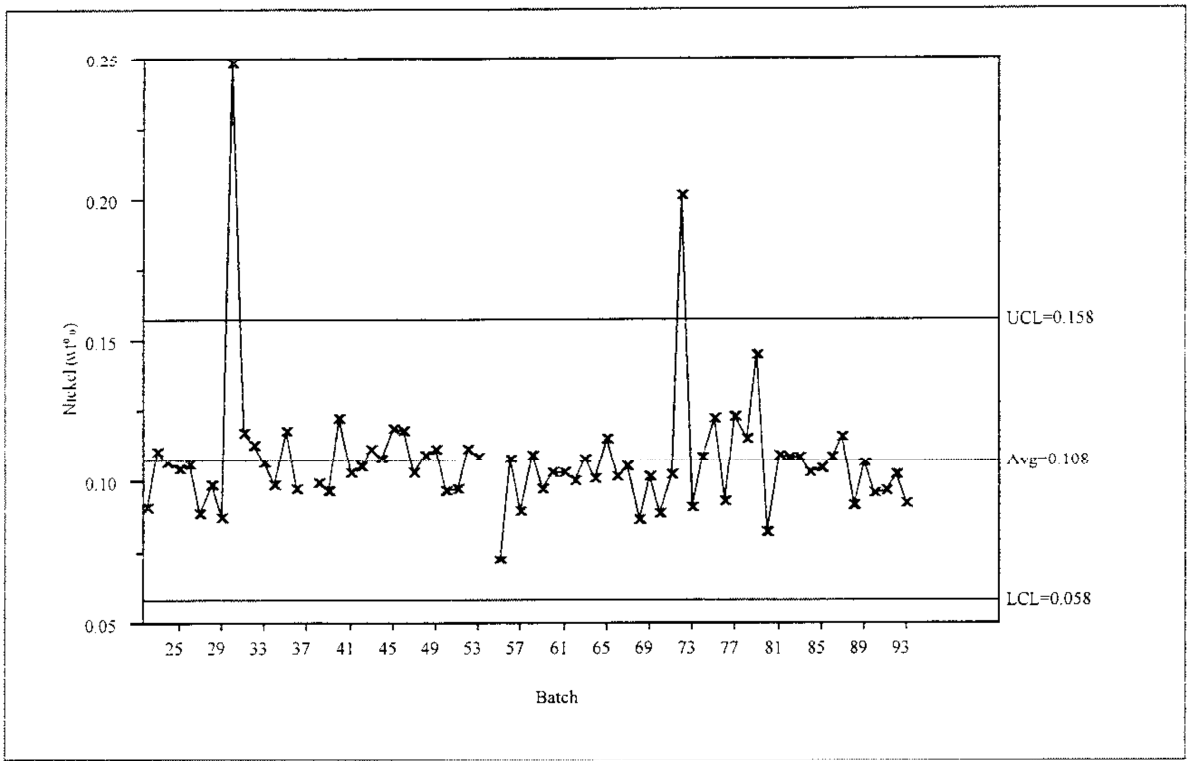


Sodium (wt%)

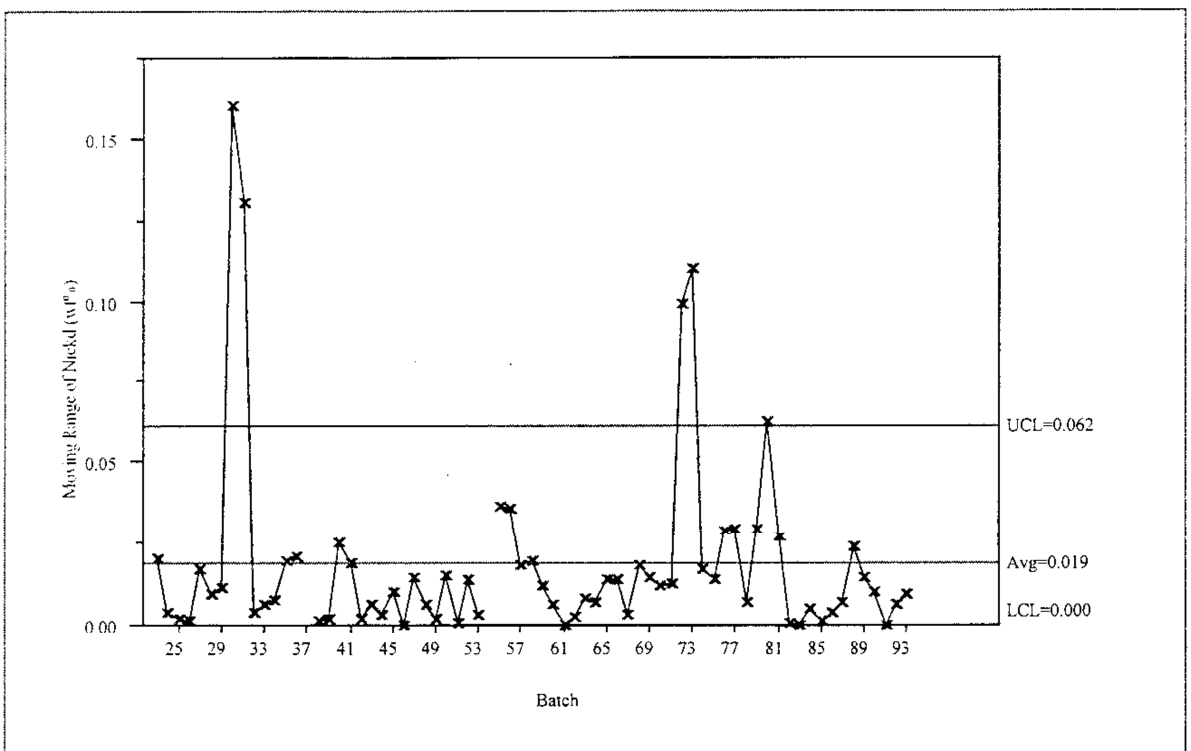


Moving Range of Sodium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

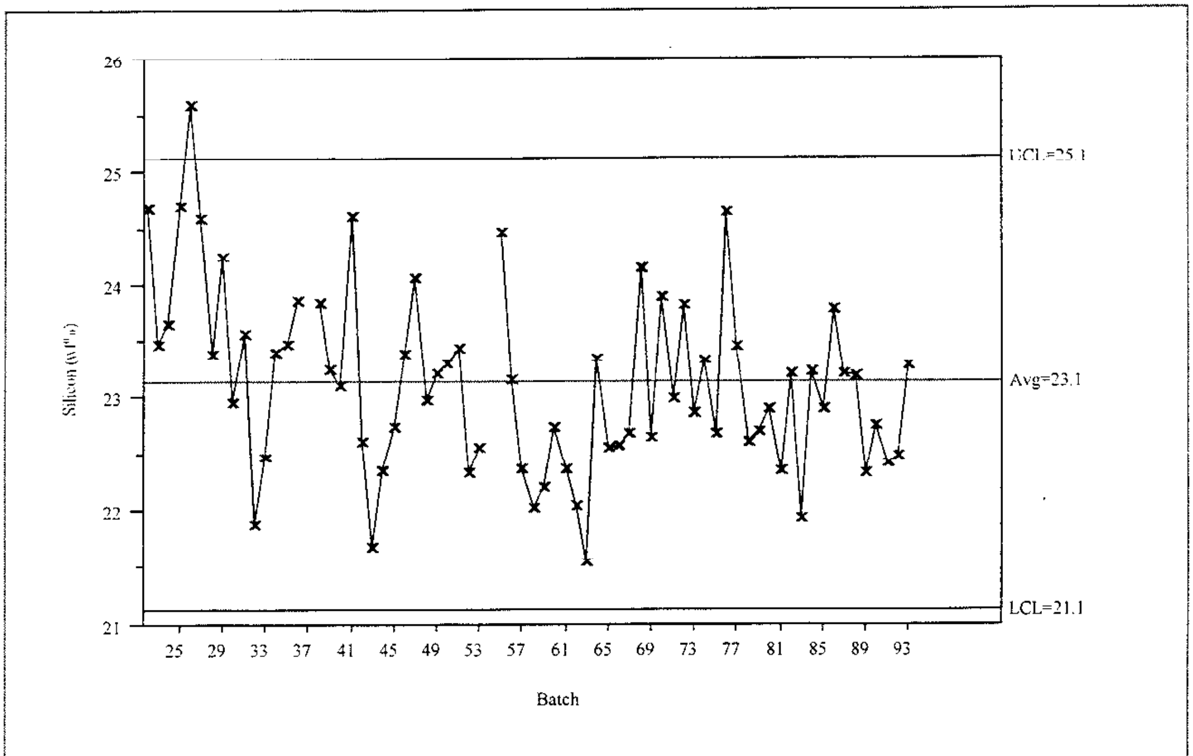


Nickel (wt%)

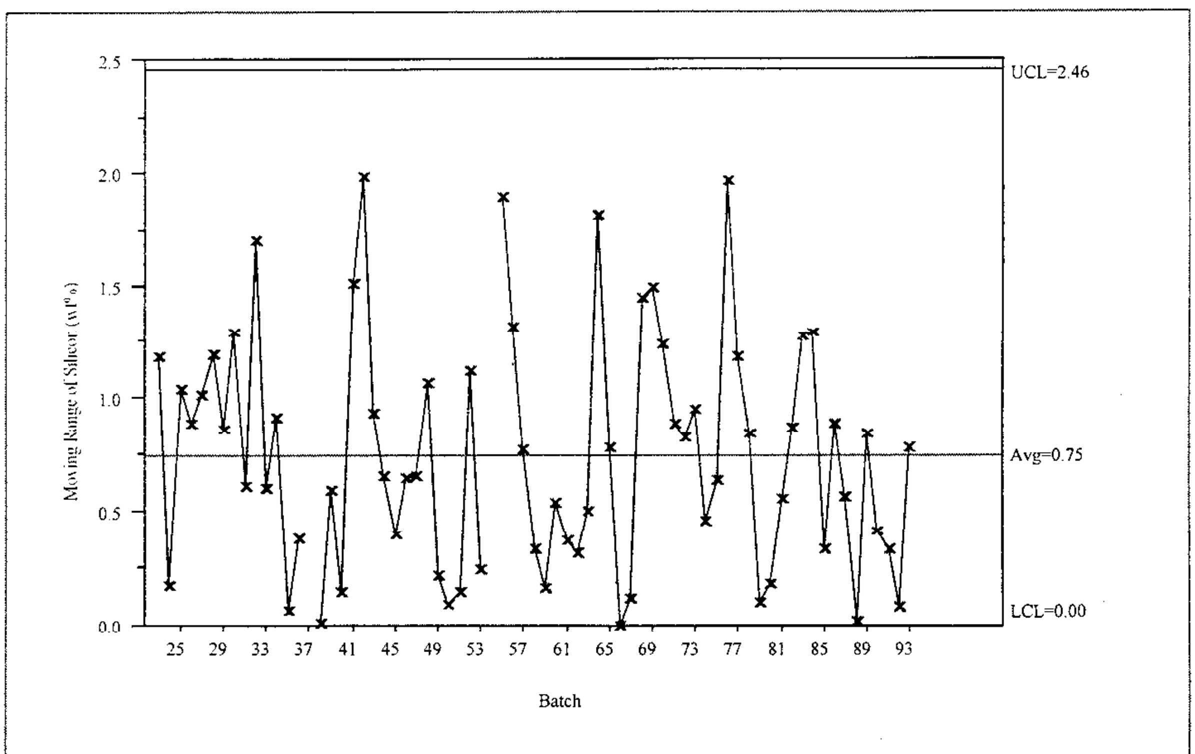


Moving Range of Nickel (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

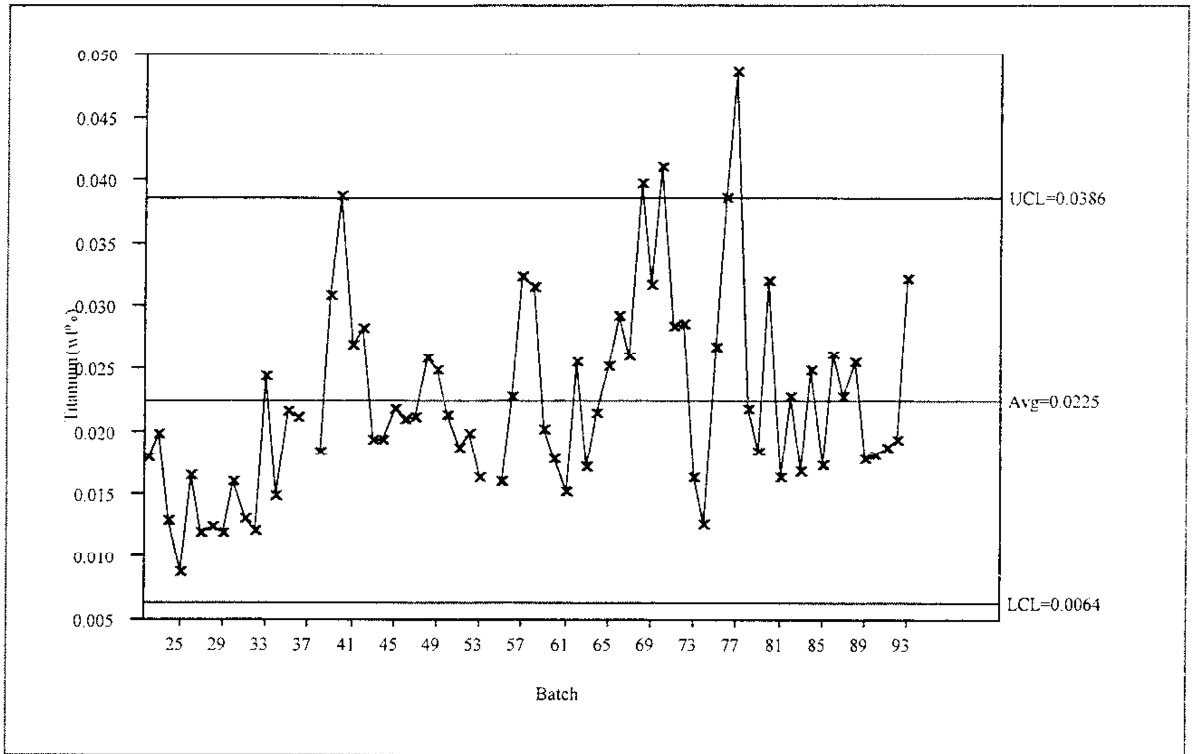


Silicon (wt%)

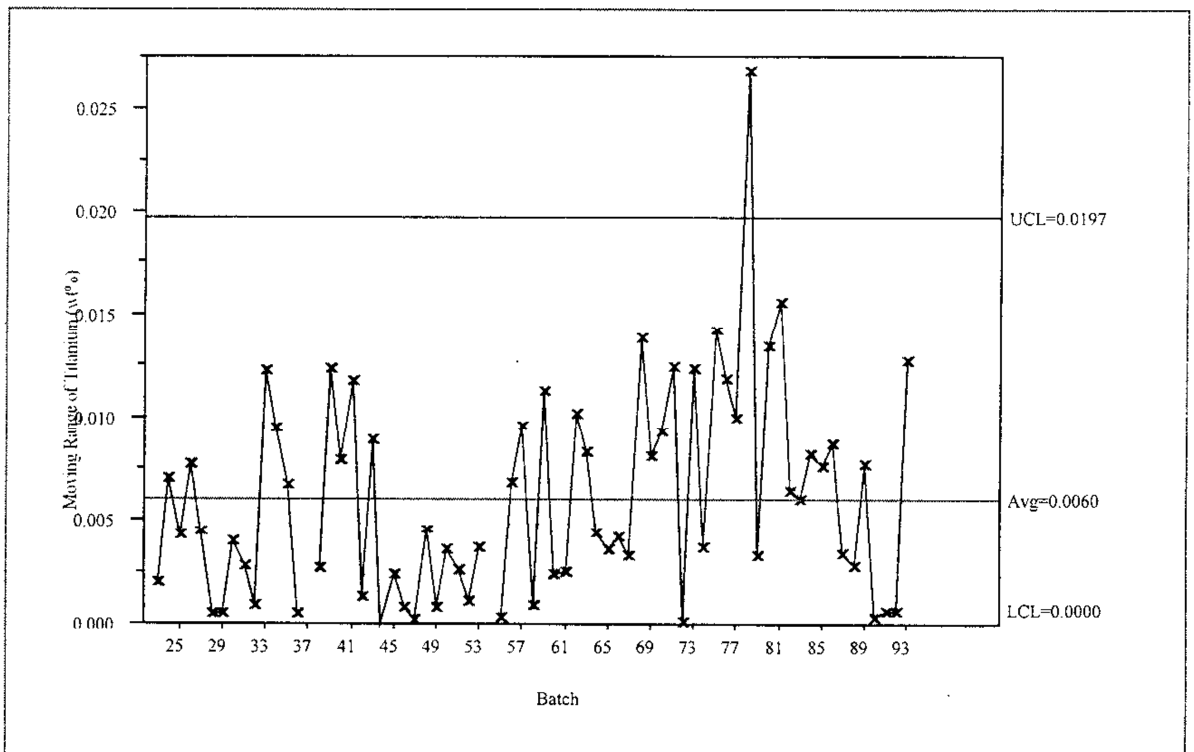


Moving Range of Silicon (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

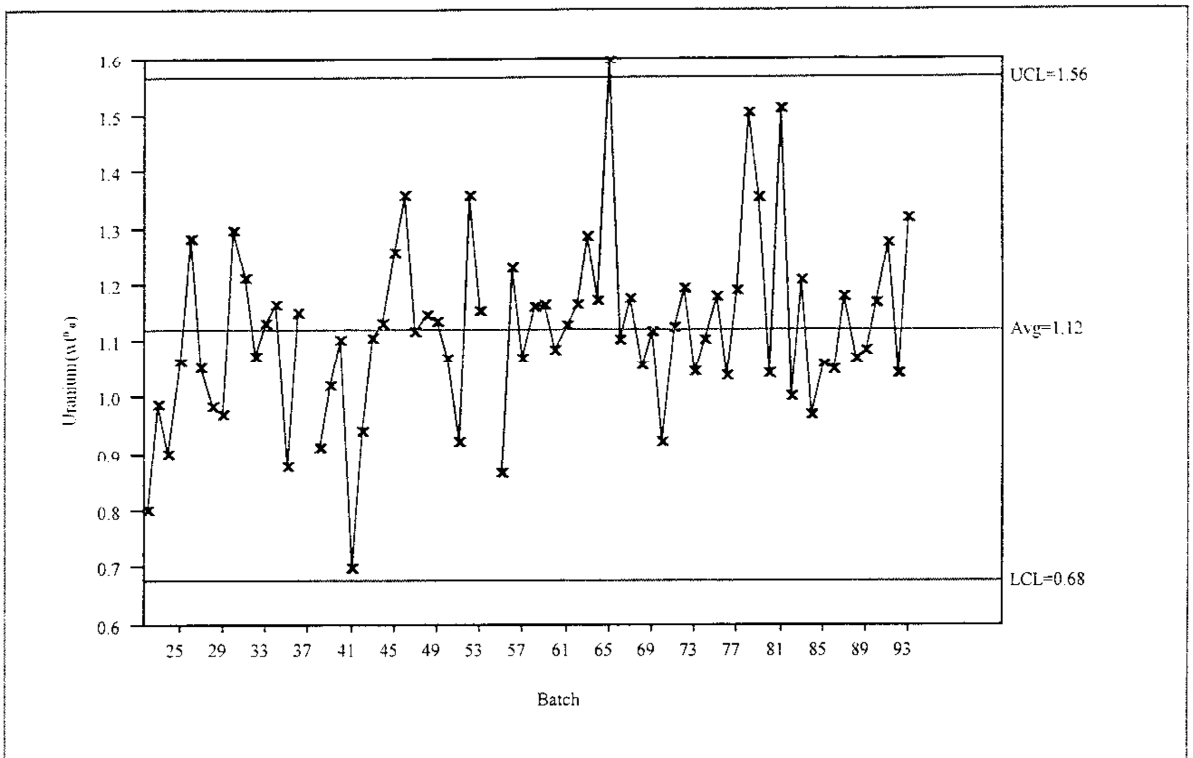


Titanium (wt%)

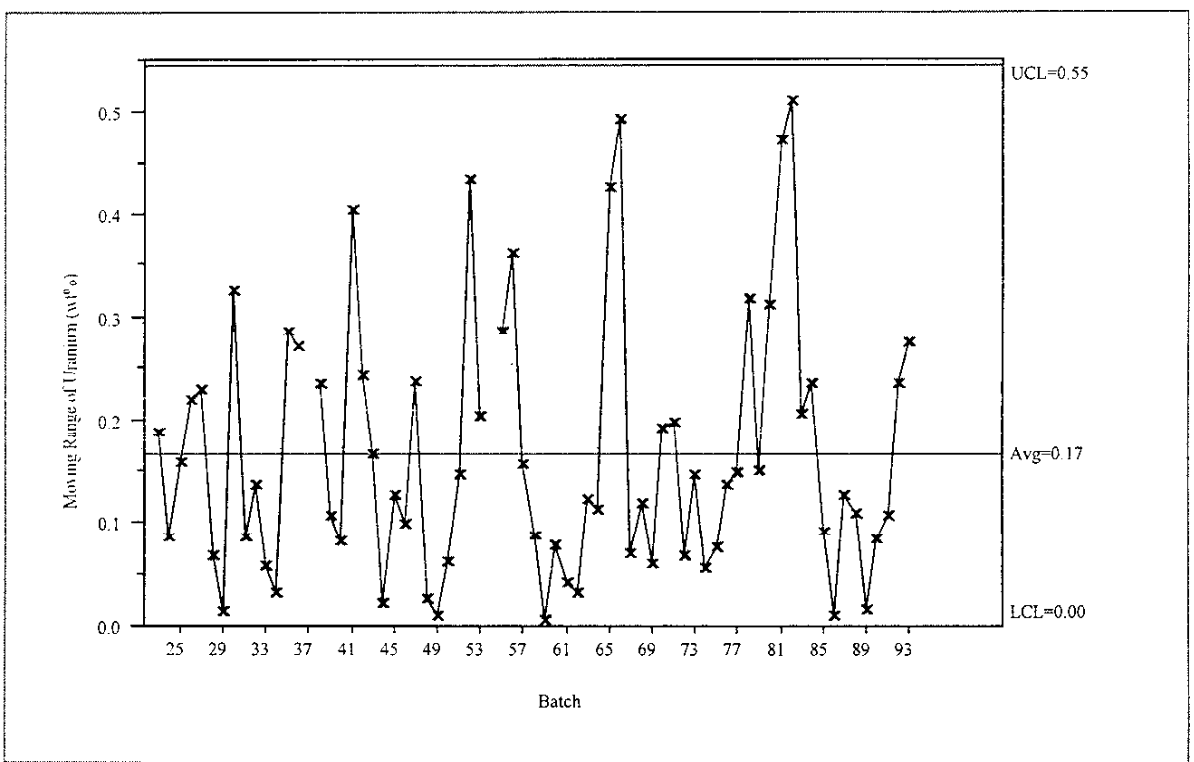


Moving Range of Titanium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

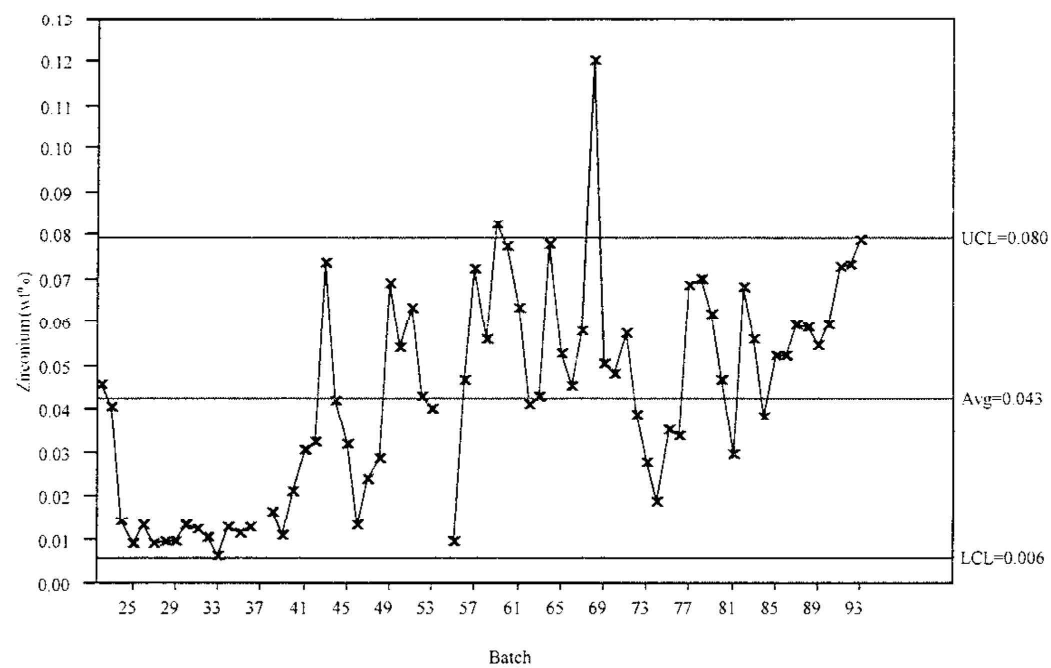


Uranium (wt%)

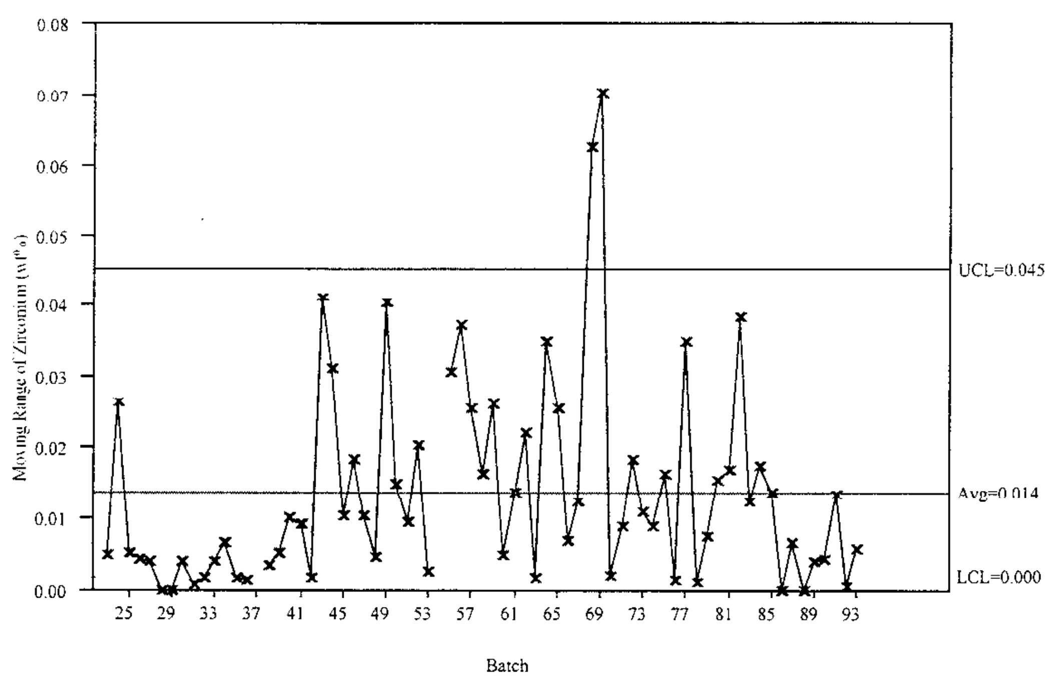


Moving Range of Uranium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

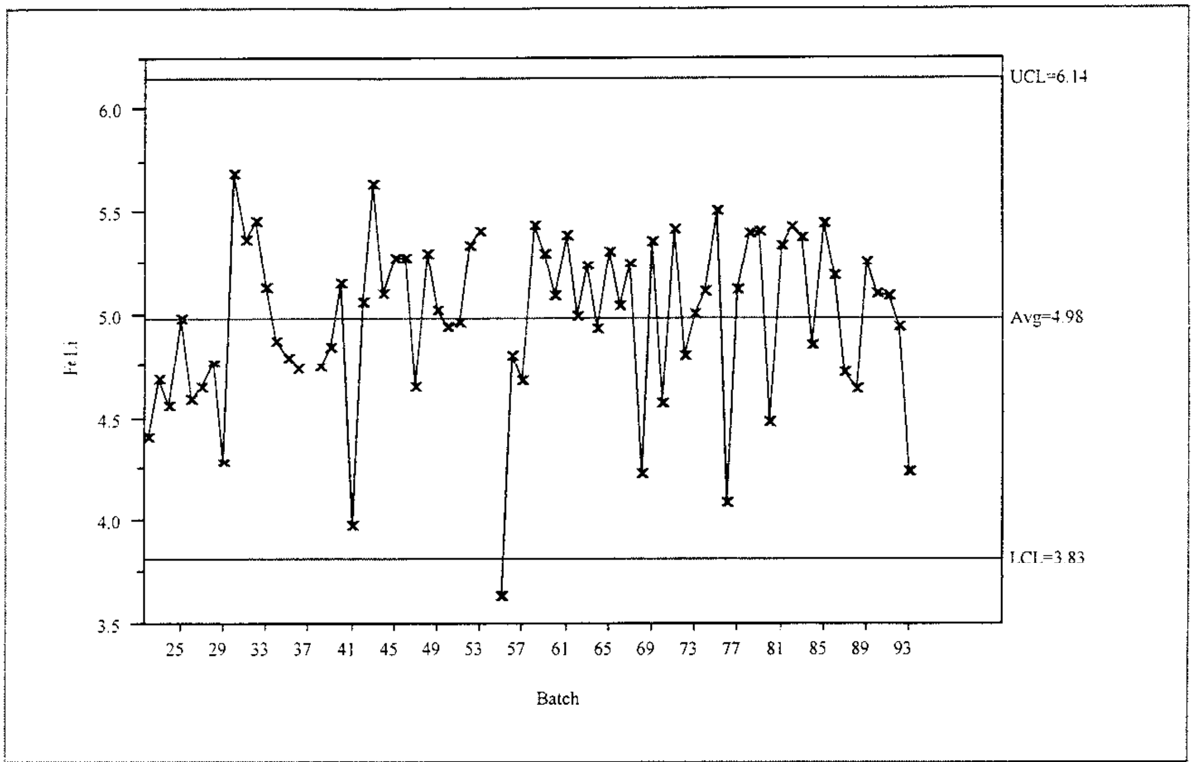


Zirconium (wt%)

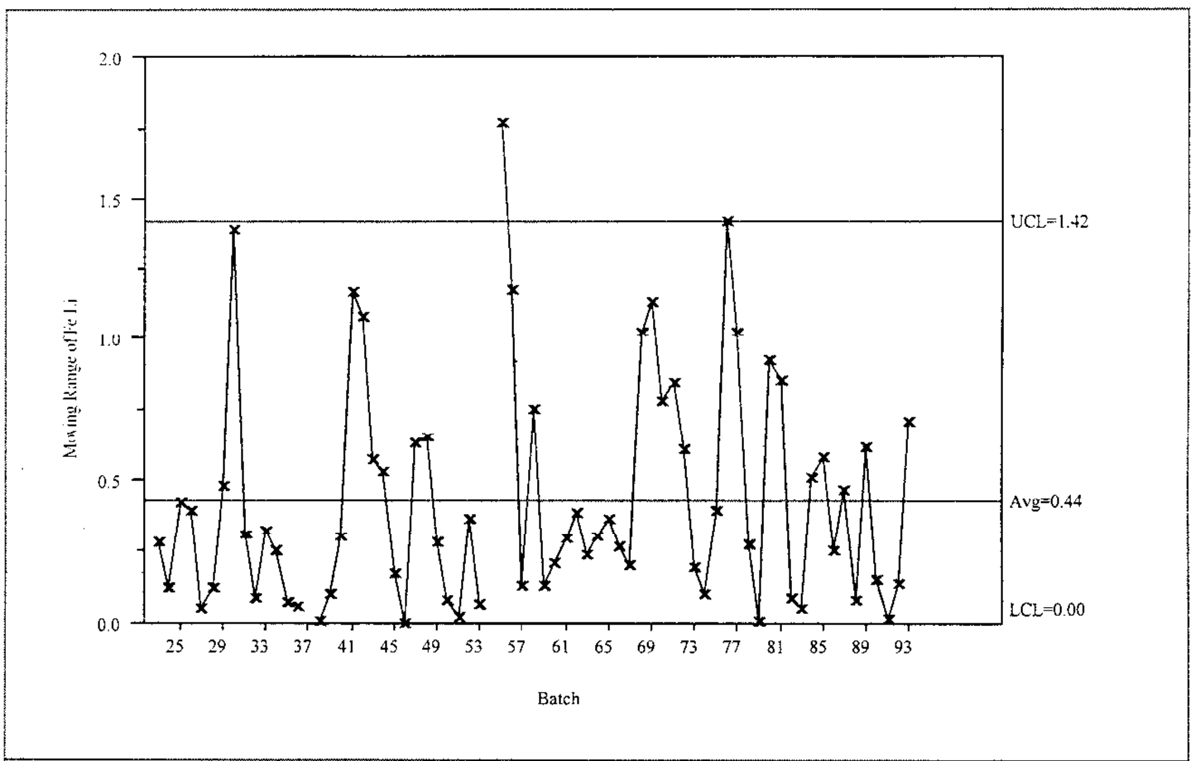


Moving Range of Zirconium (wt%)

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte

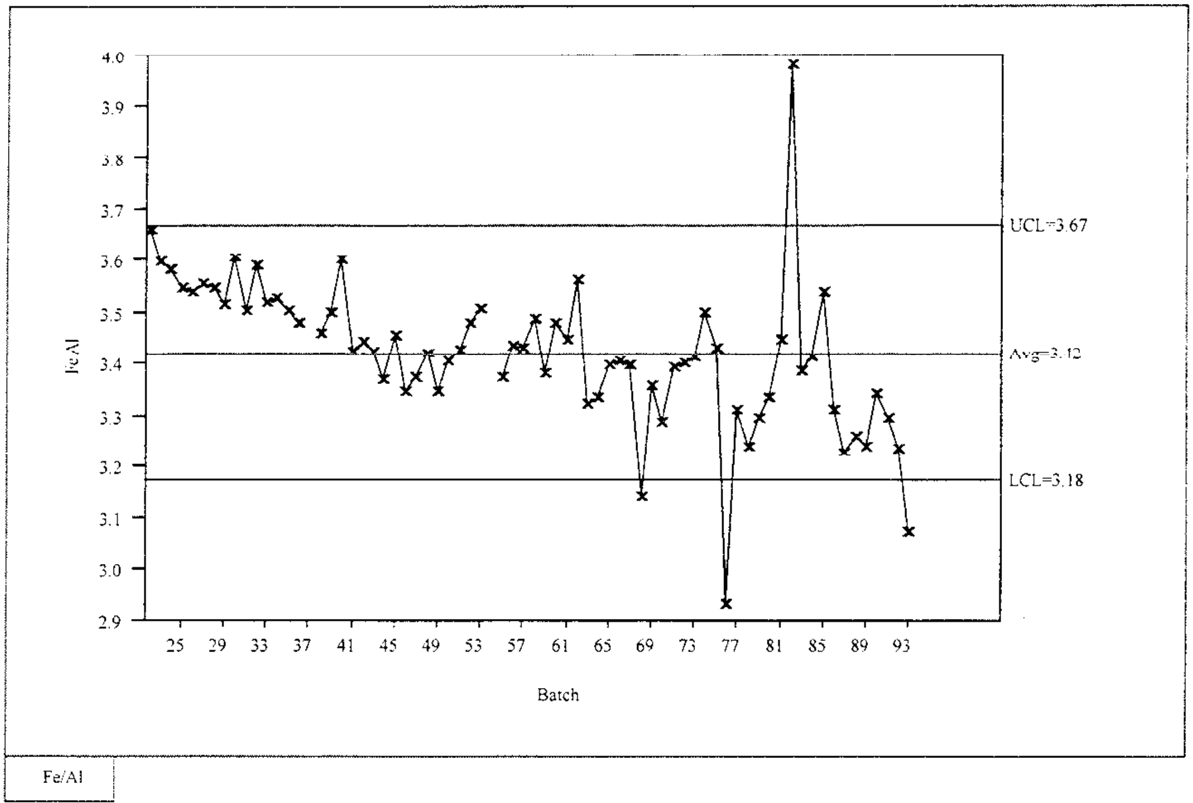


Fe/Li



Moving Range of Fe/Li

Exhibit 9b: MFT Control Charts for Individual Batch Averages for MA Prep by Analyte



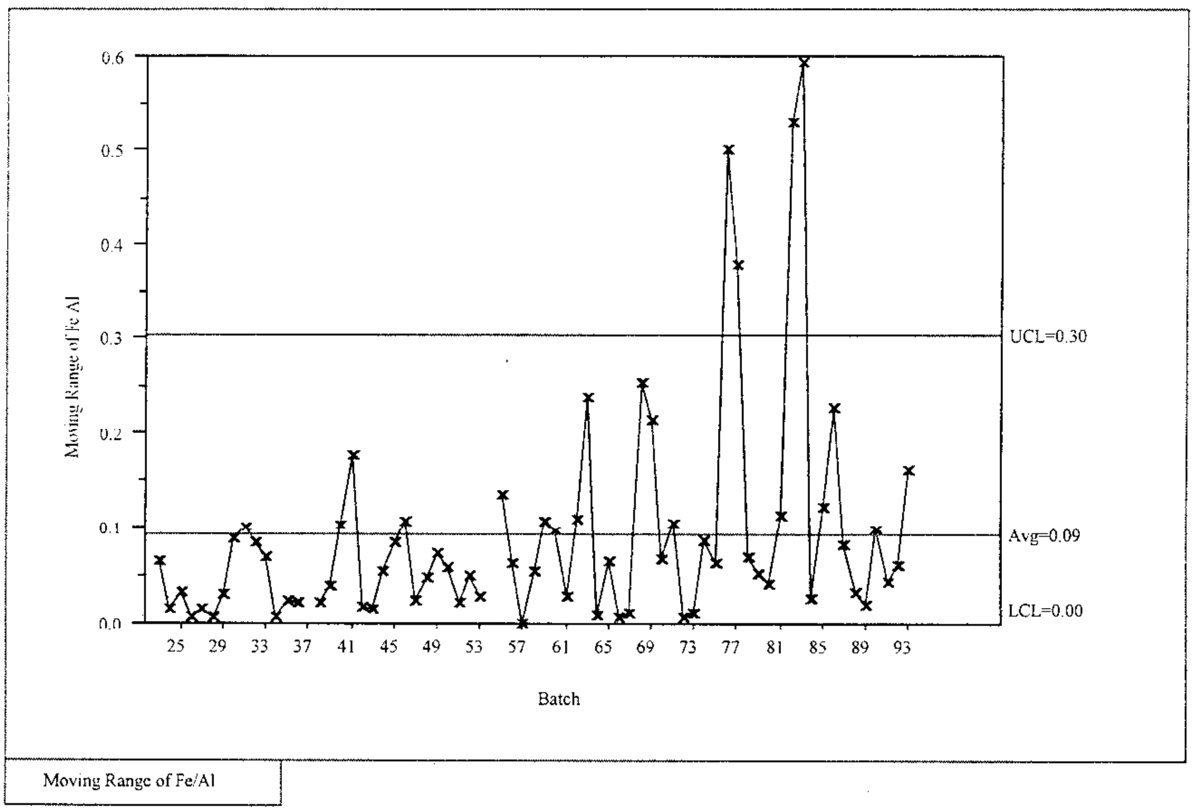
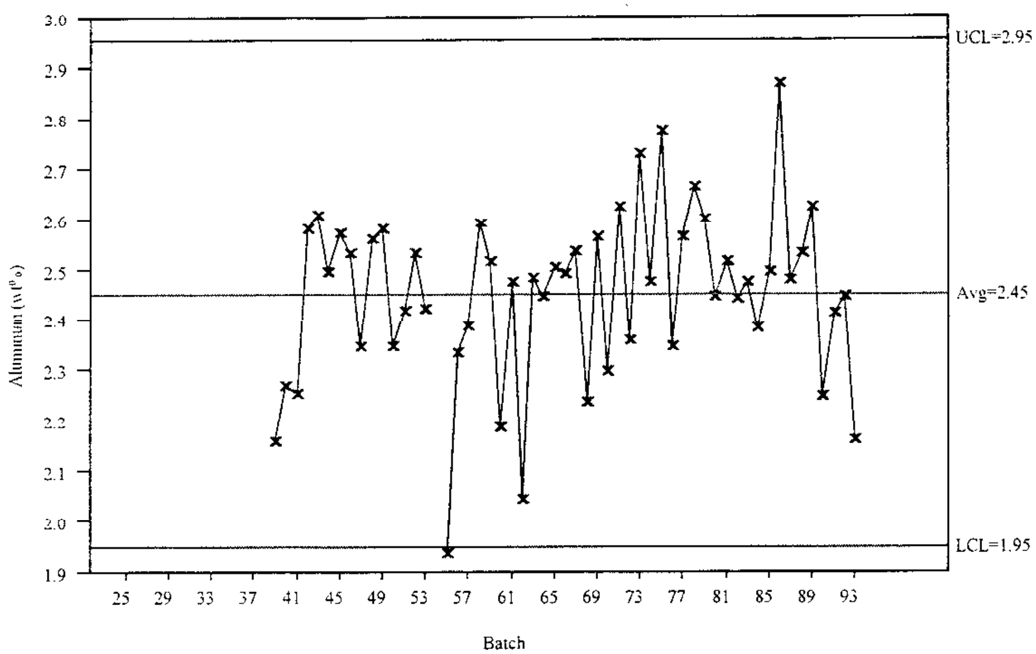
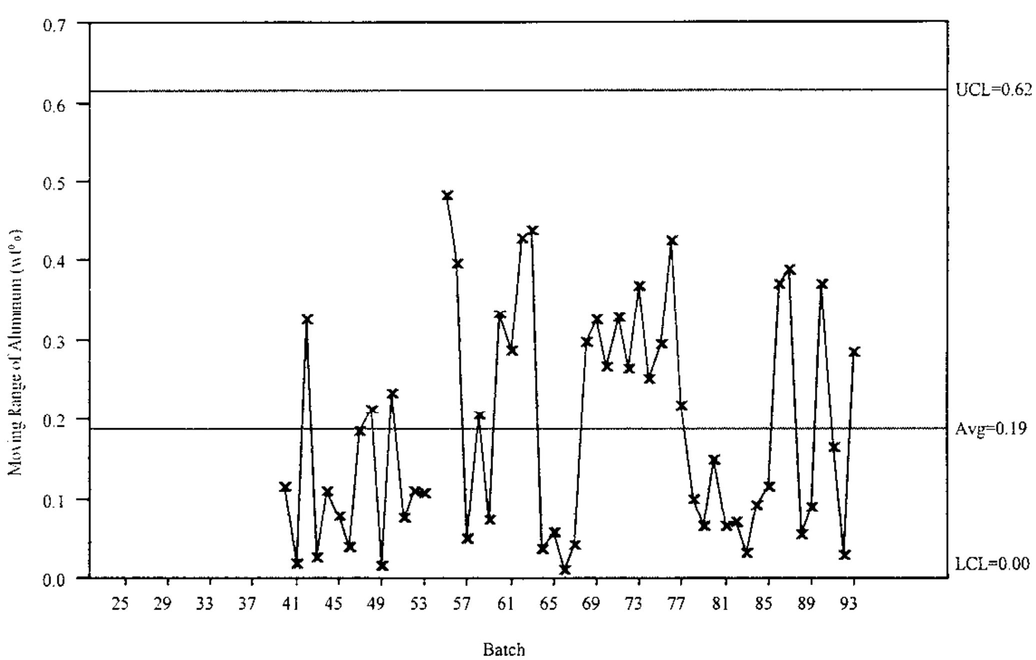


Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

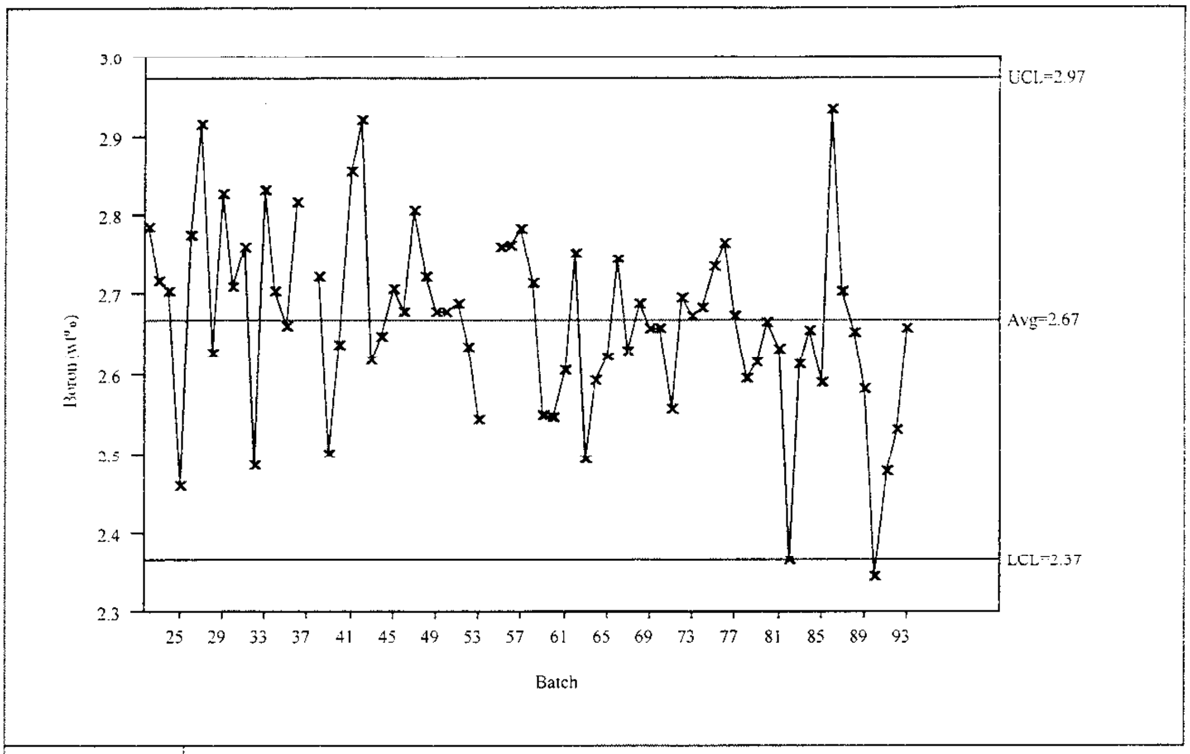


Aluminum (wt%)

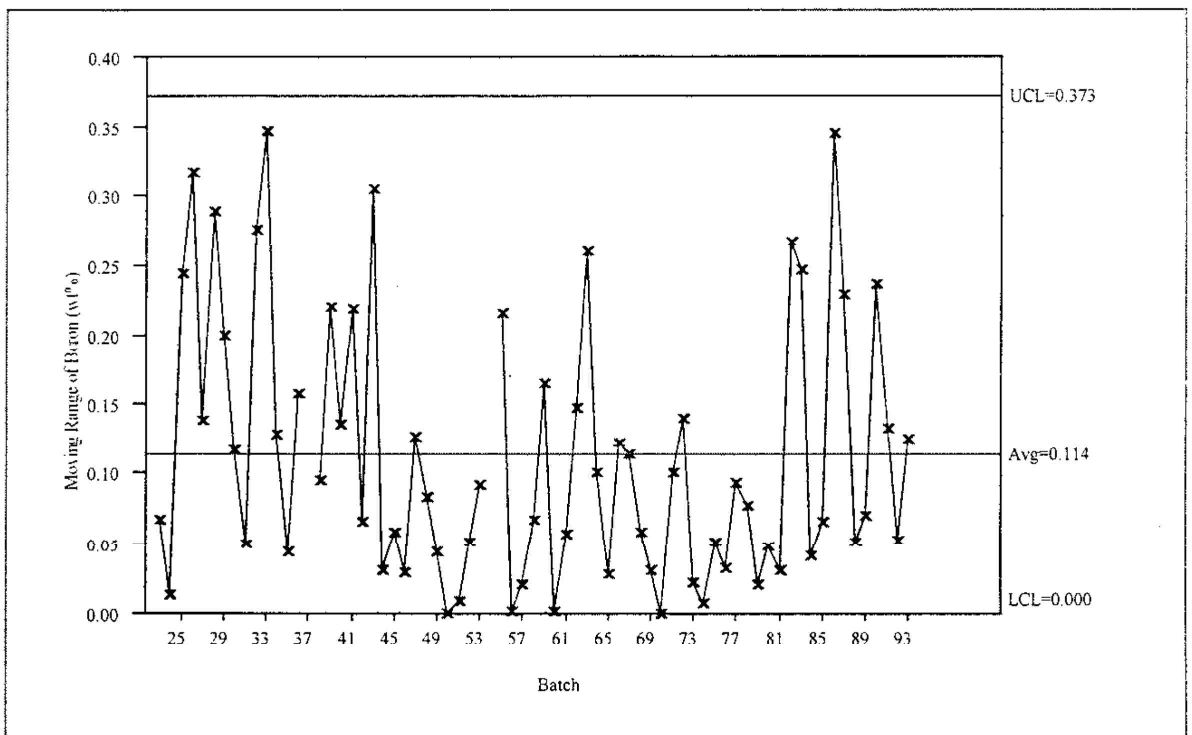


Moving Range of Aluminum (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

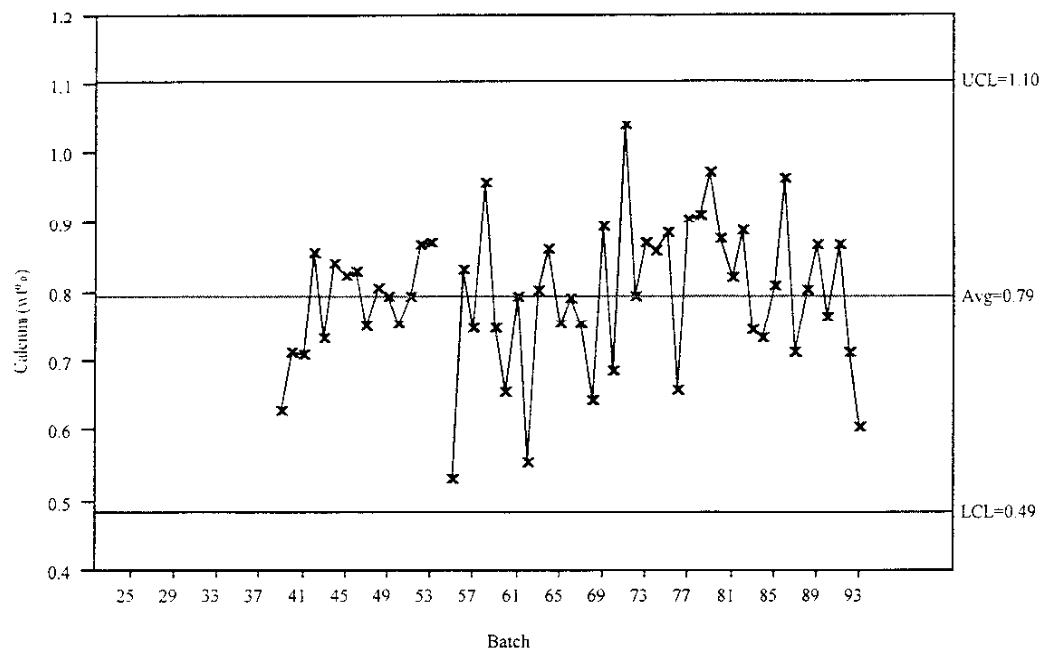


Boron (wt%)

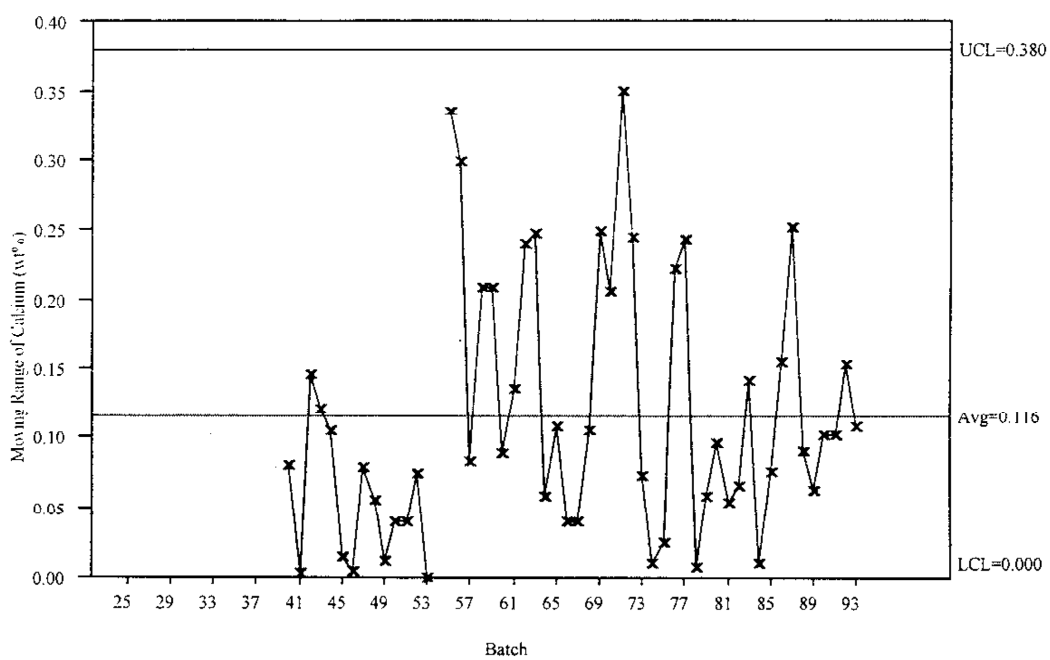


Moving Range of Boron (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

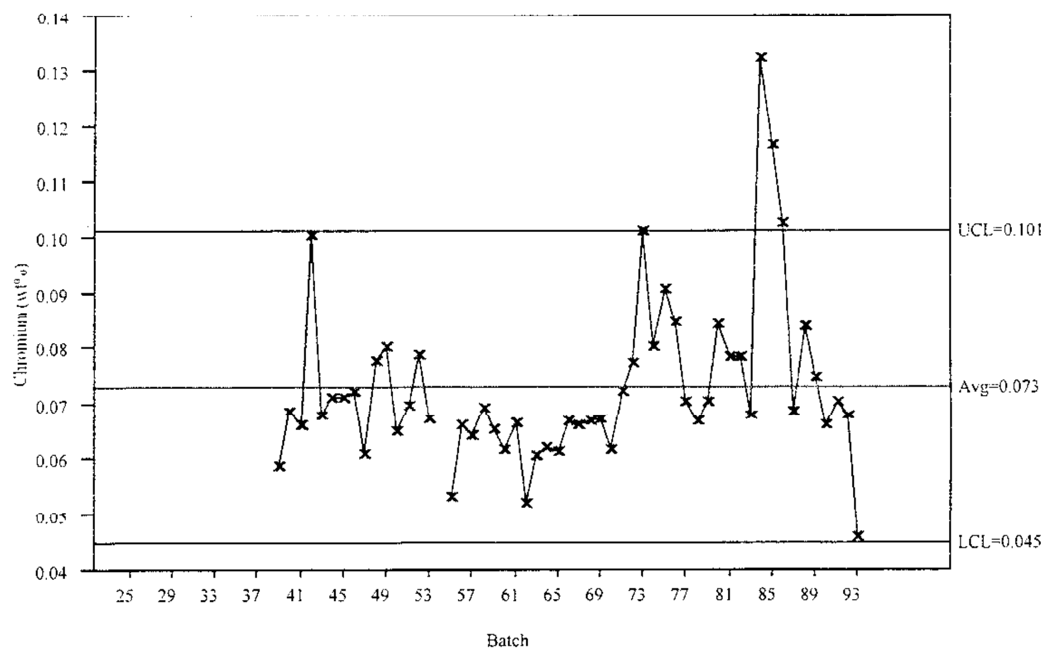


Calcium (wt%)

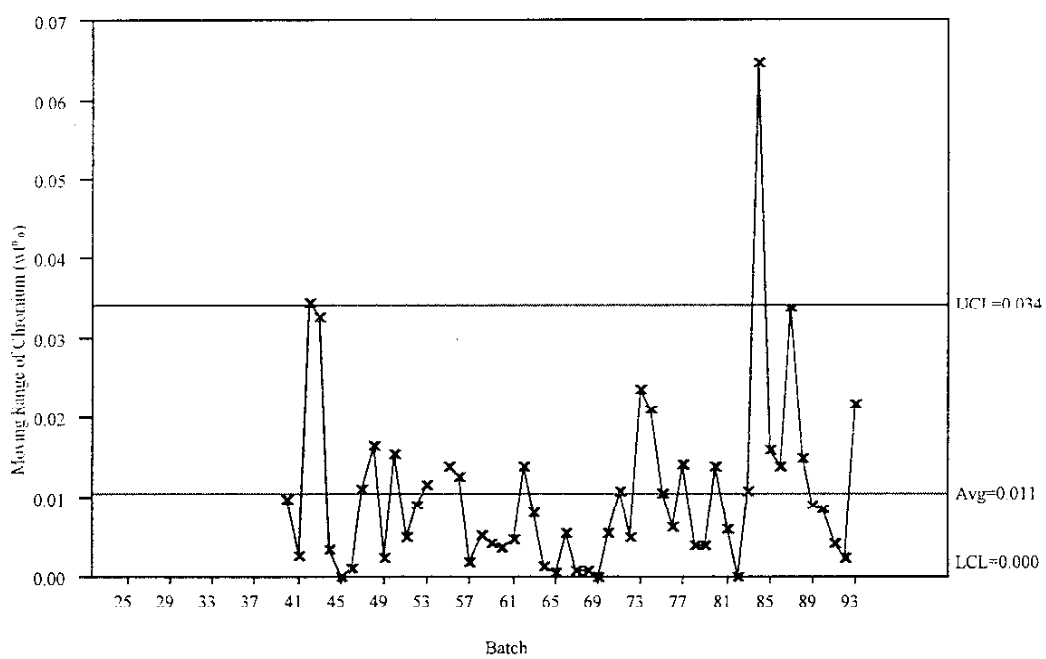


Moving Range of Calcium (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

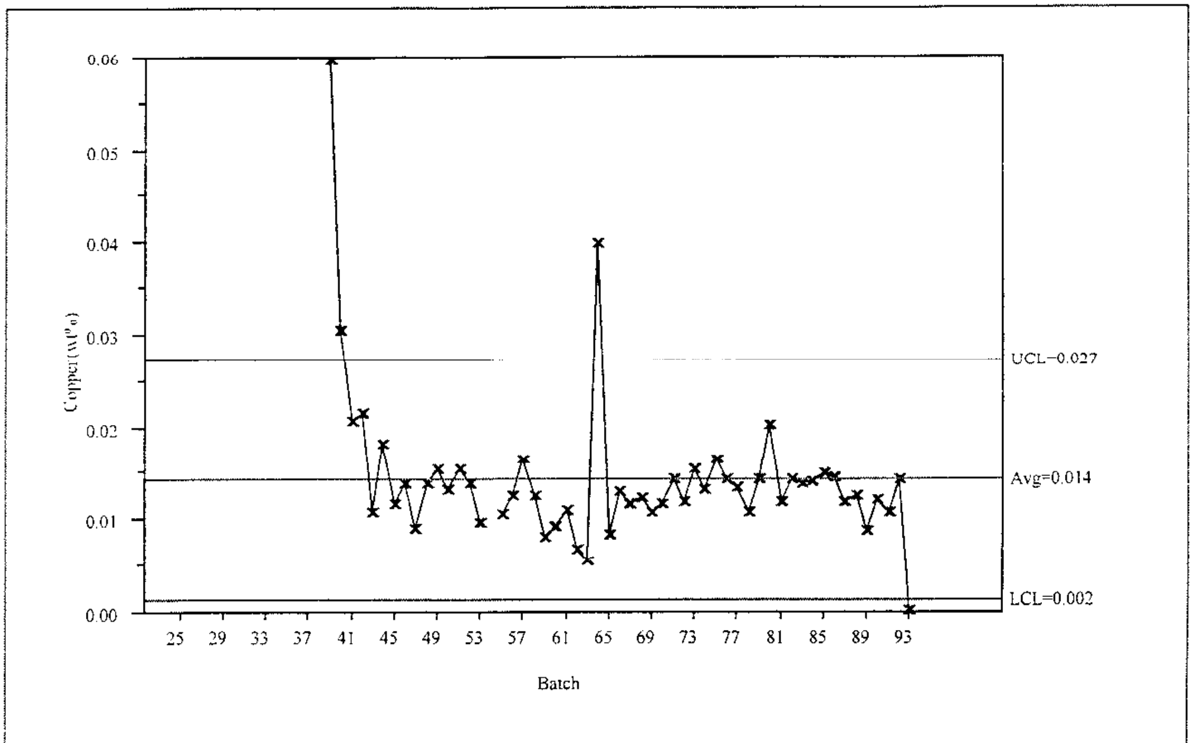


Chromium (wt%)

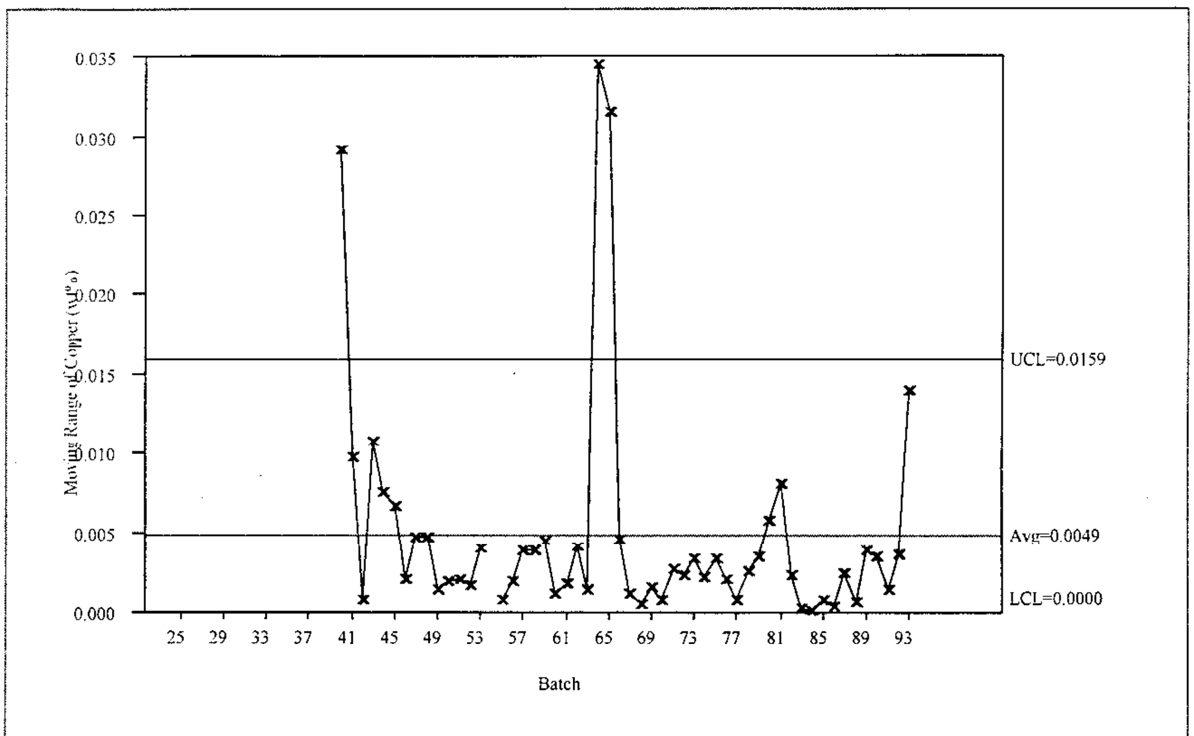


Moving Range of Chromium (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

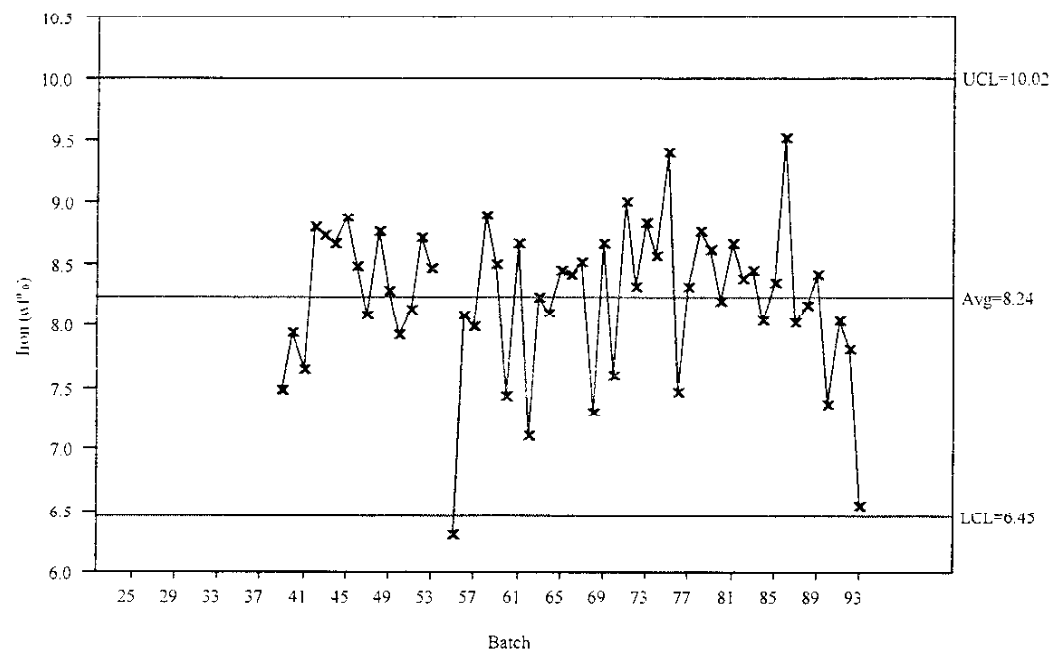


Copper (wt%)

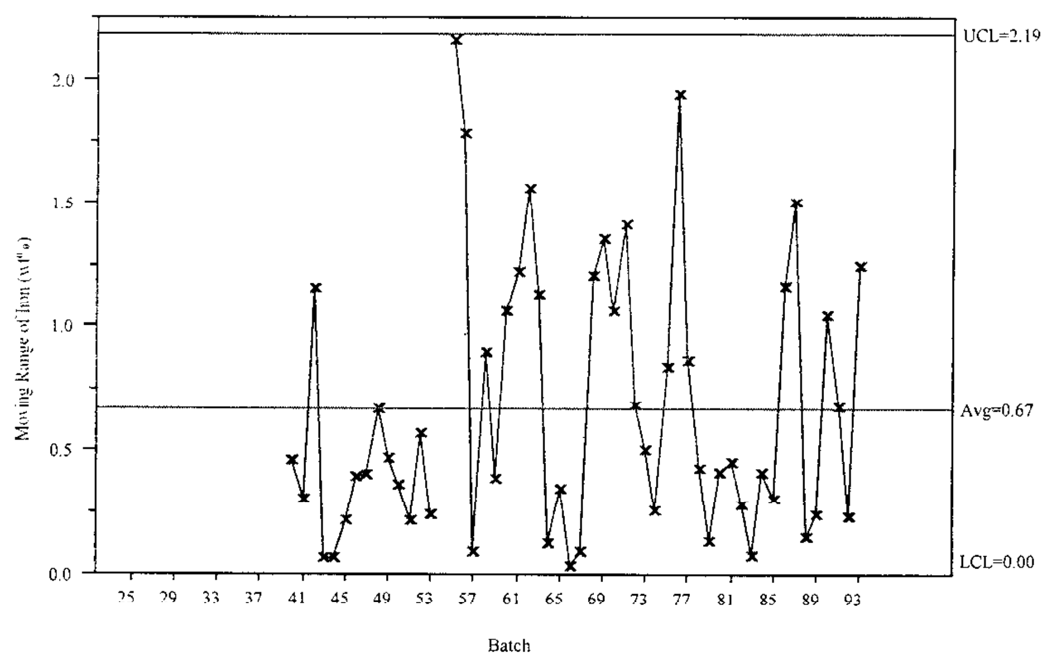


Moving Range of Copper (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

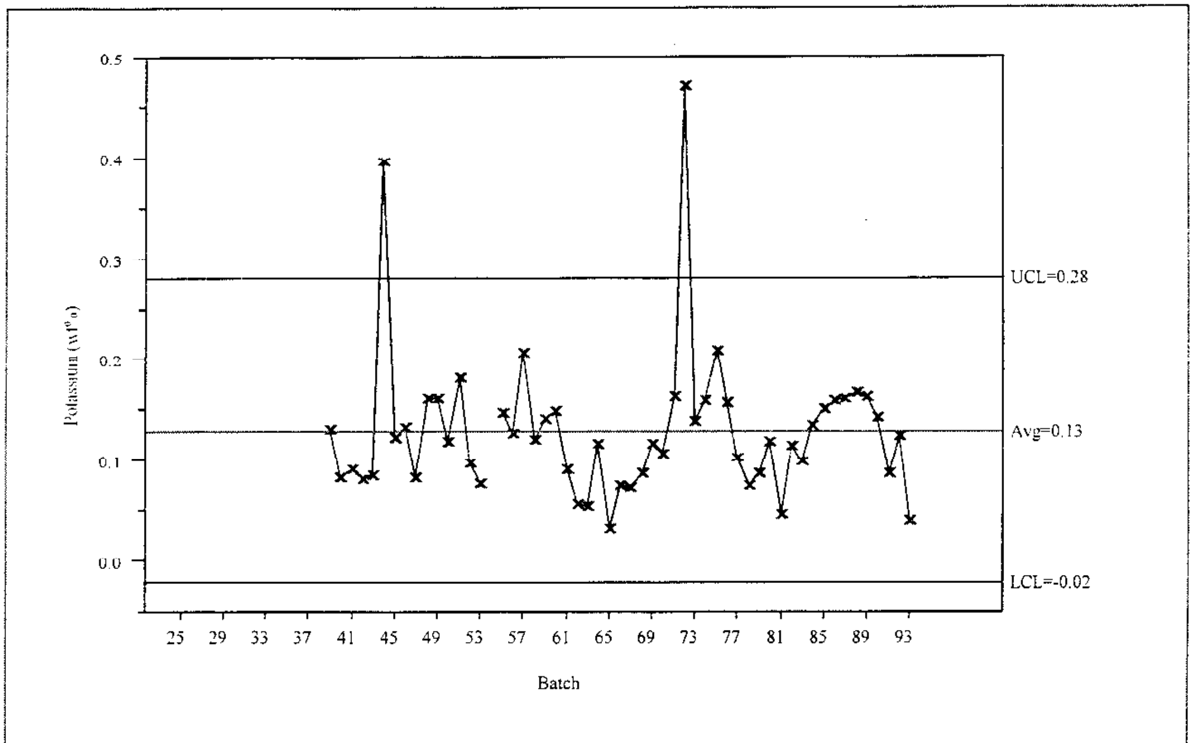


Iron (wt%)

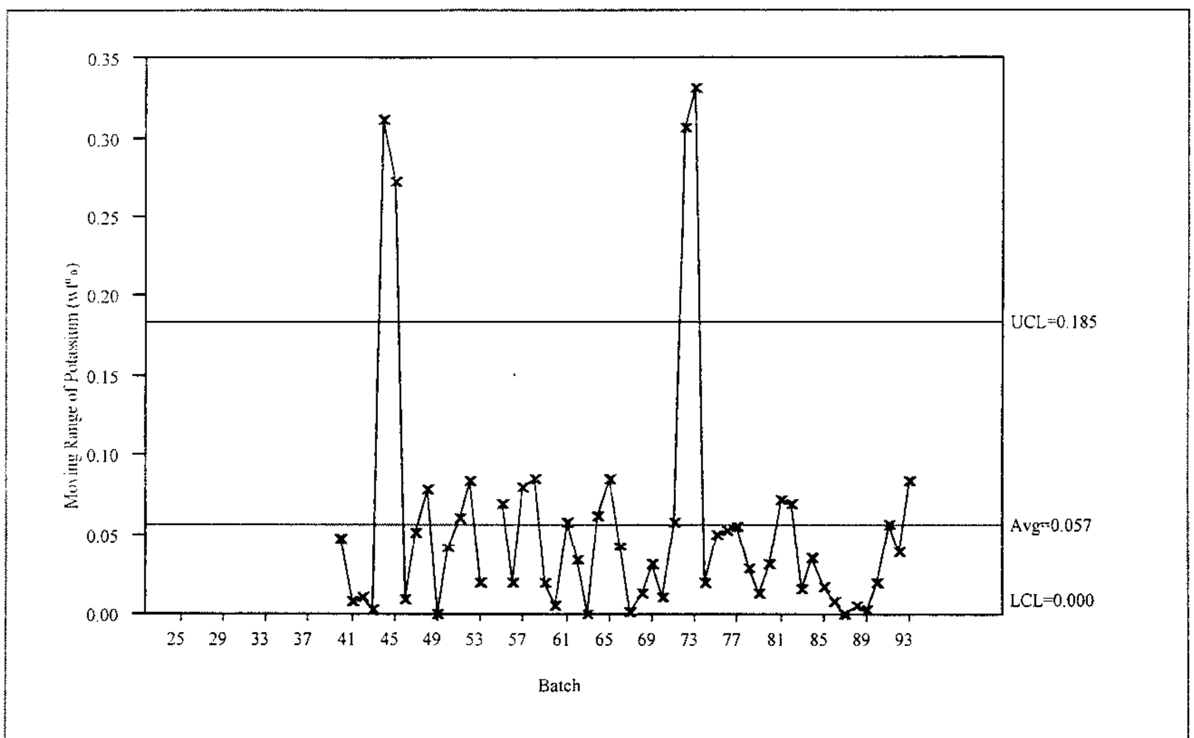


Moving Range of Iron (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

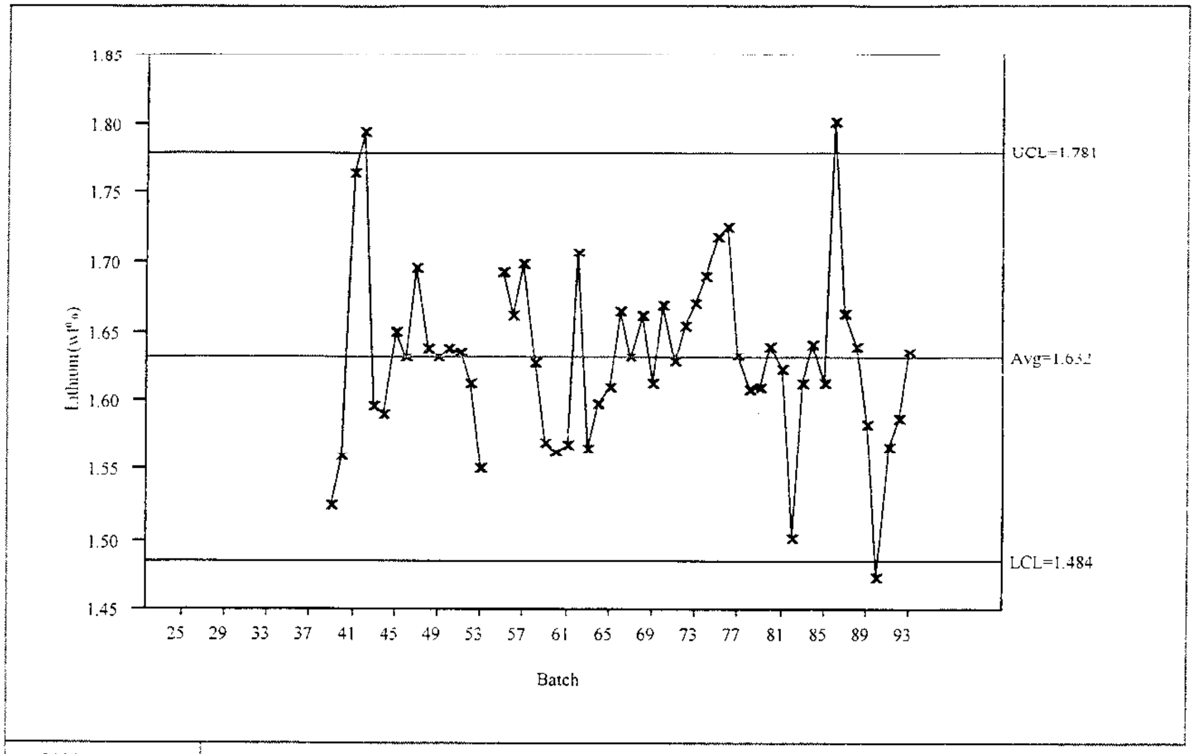


Potassium (wt%)

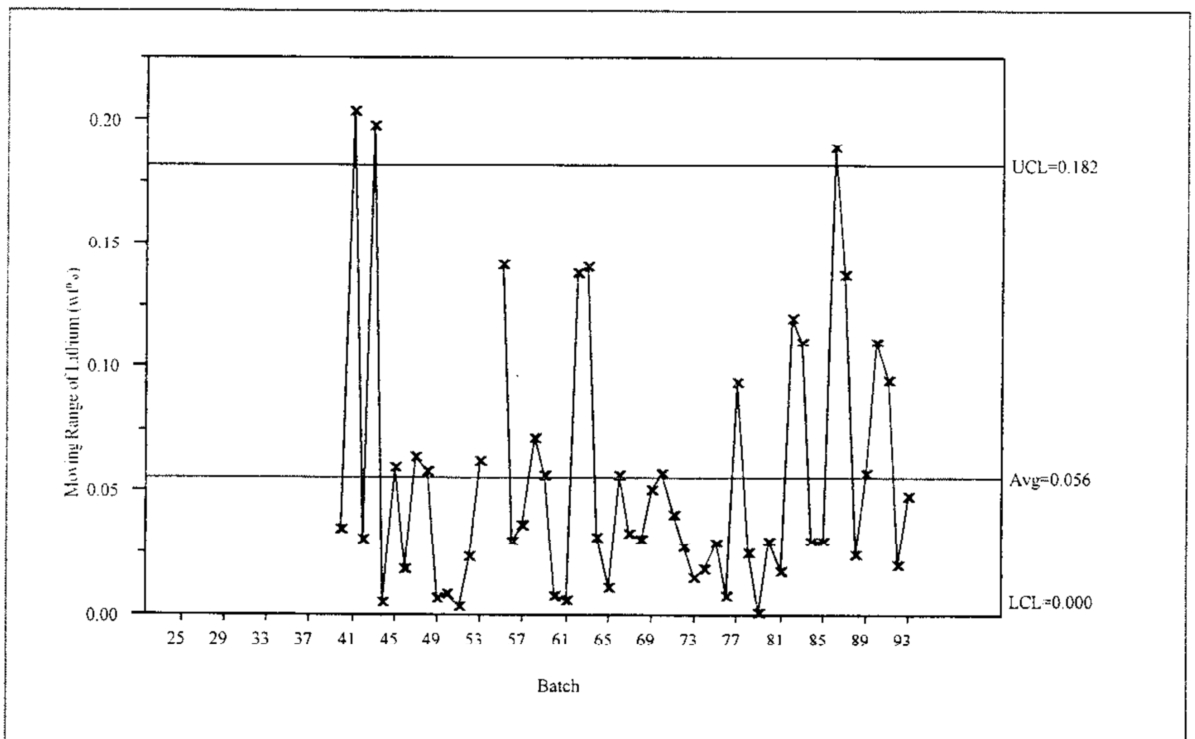


Moving Range of Potassium (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

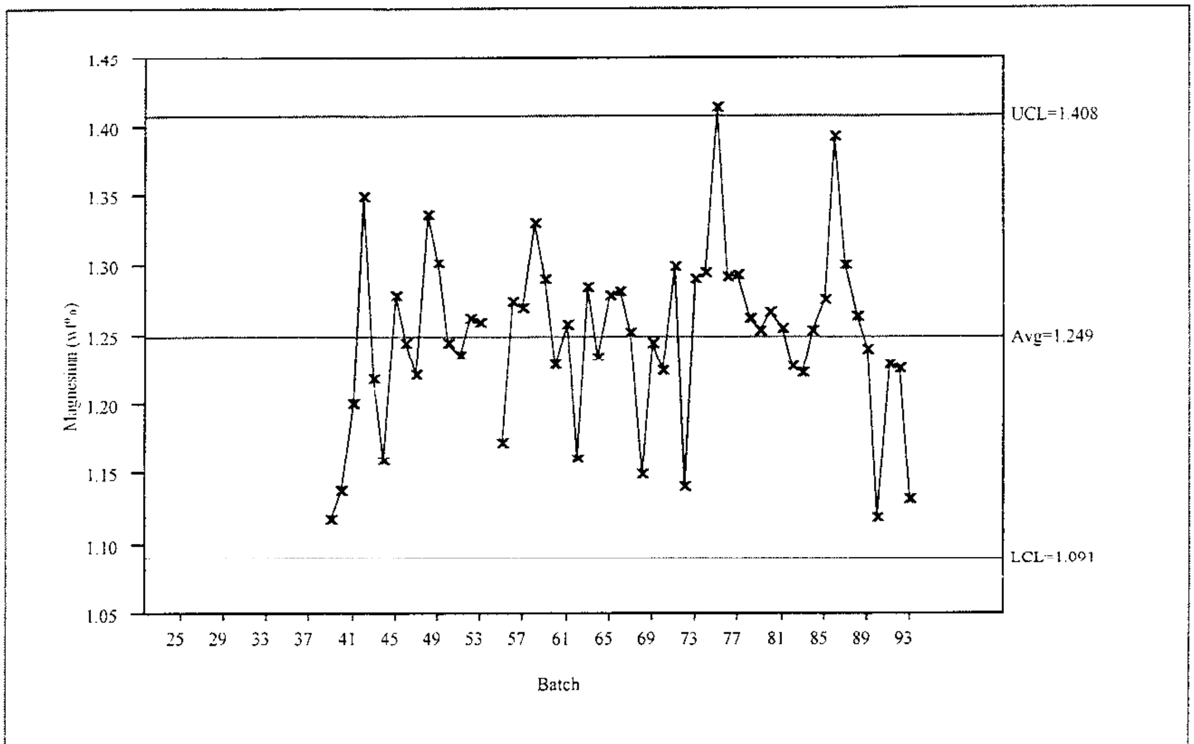


Lithium (wt%)

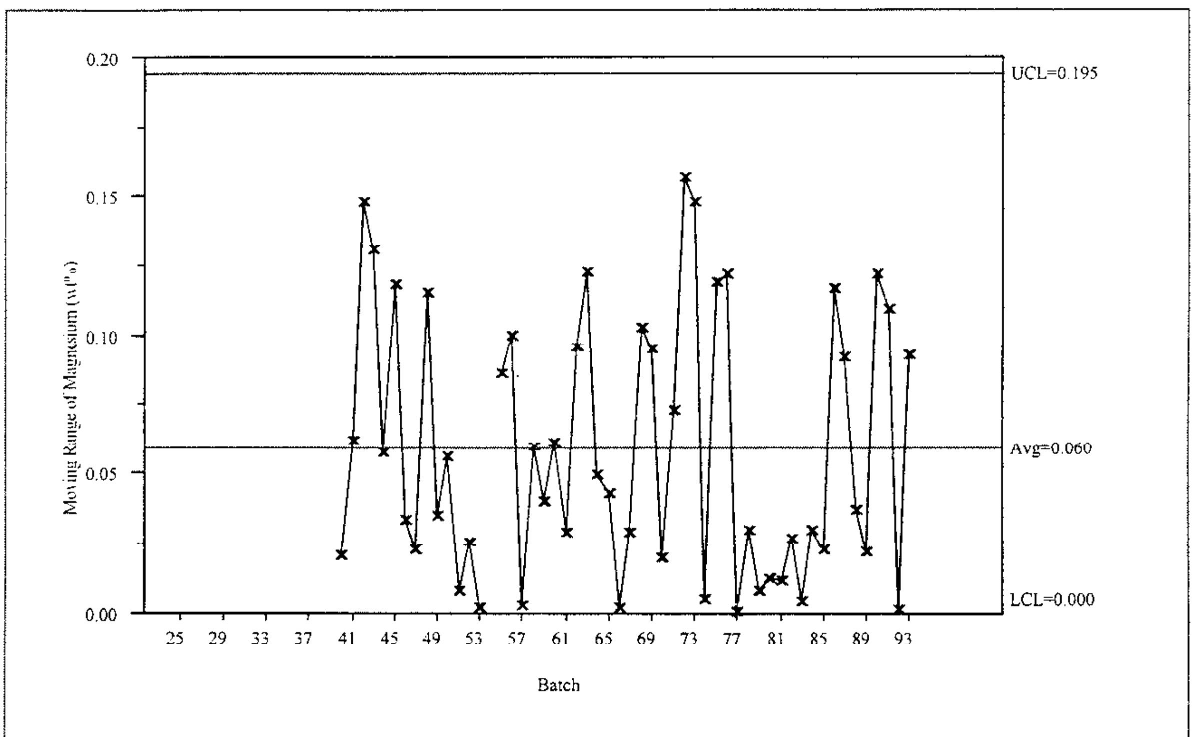


Moving Range of Lithium (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

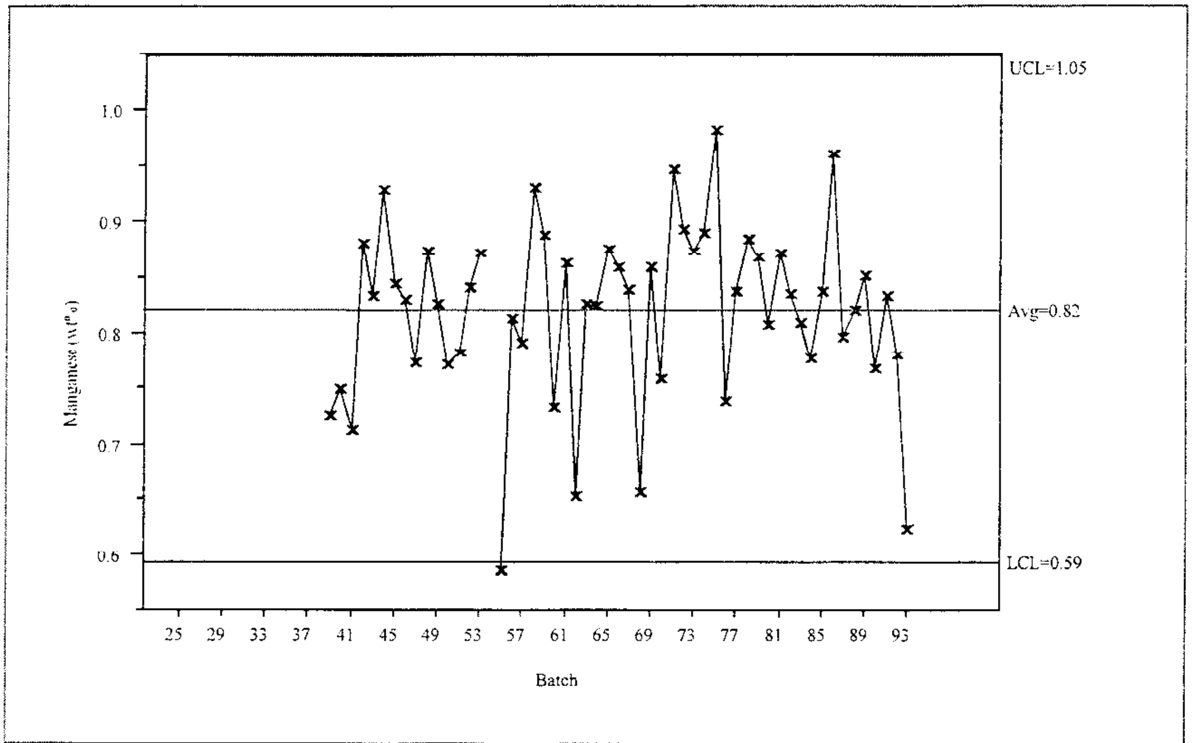


Magnesium (wt%)

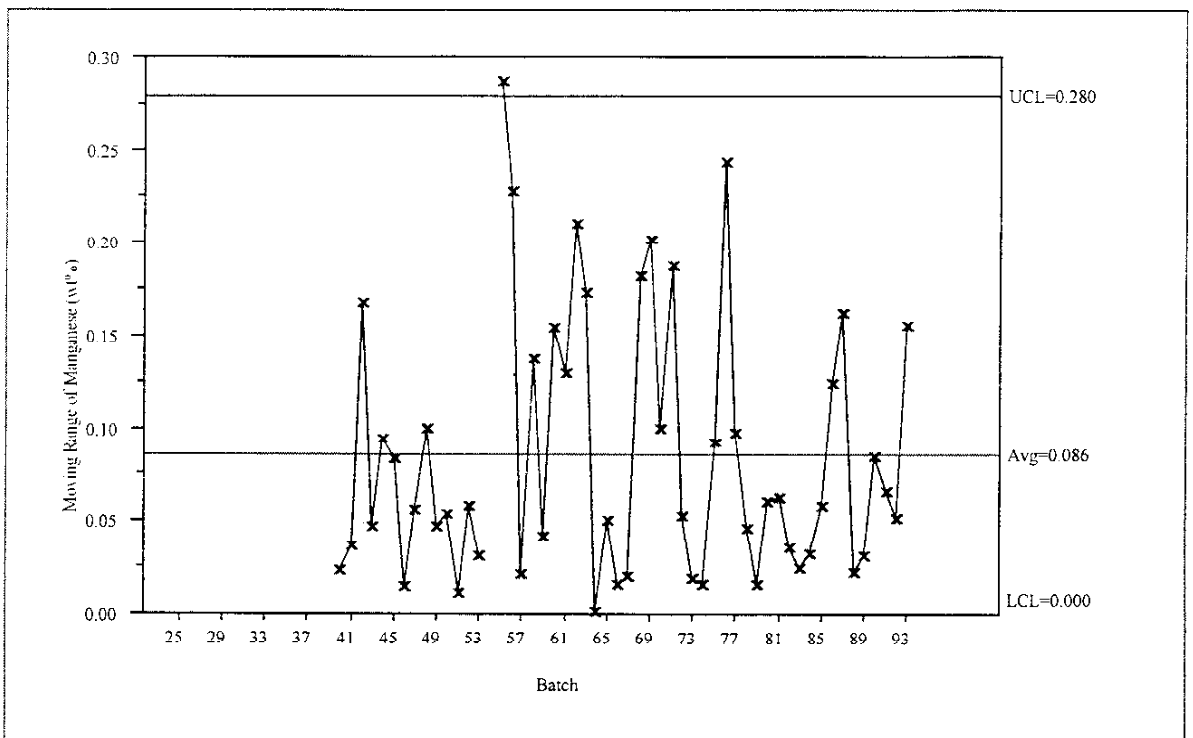


Moving Range of Magnesium (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

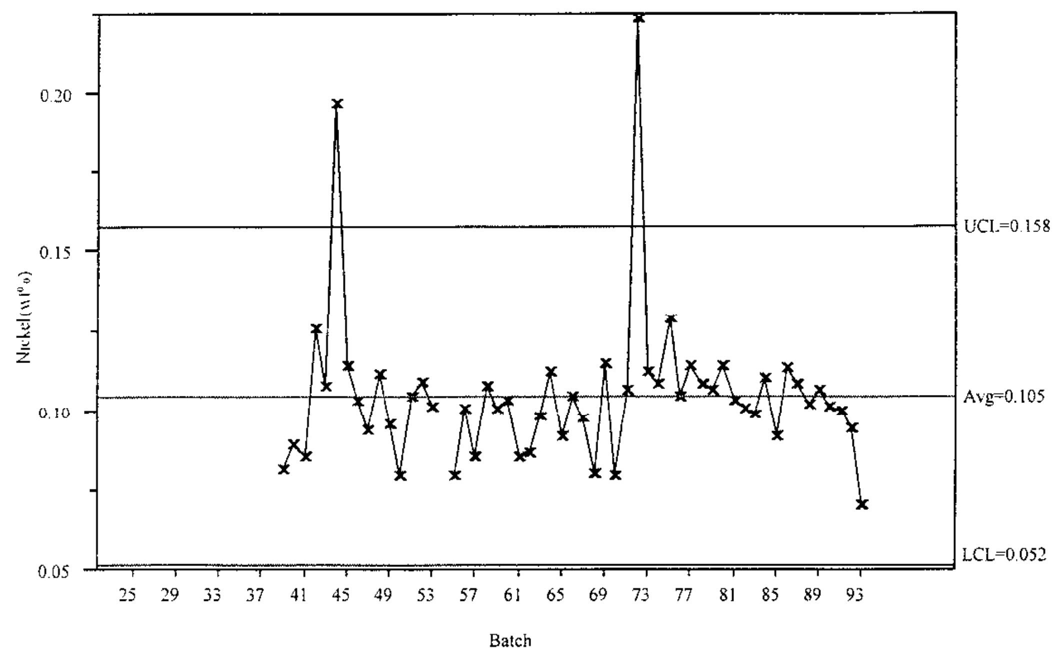


Manganese (wt%)

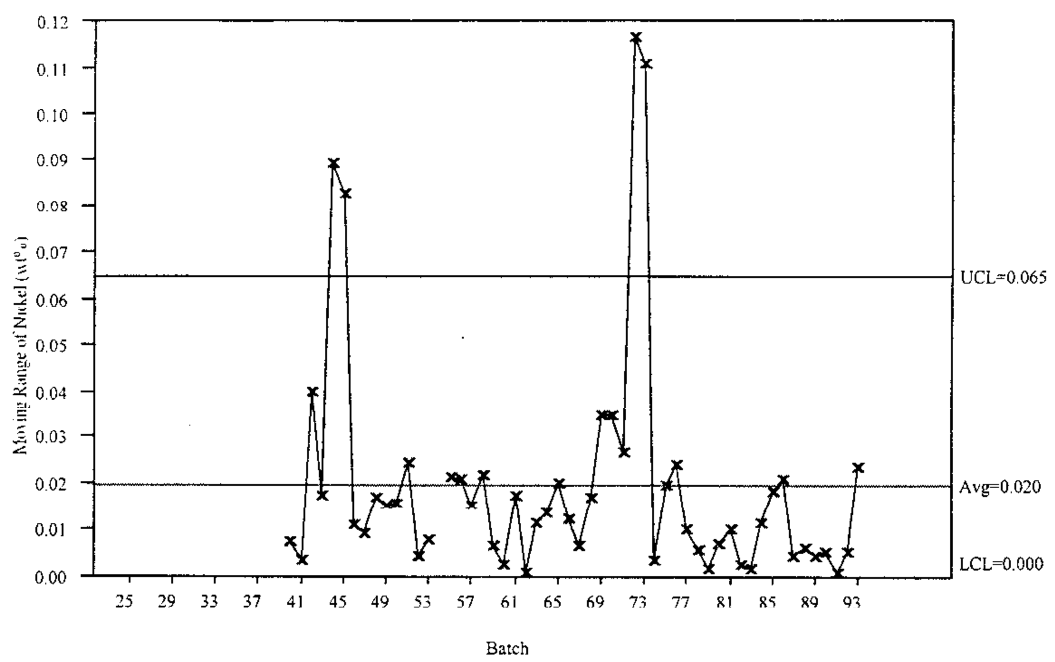


Moving Range of Manganese (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

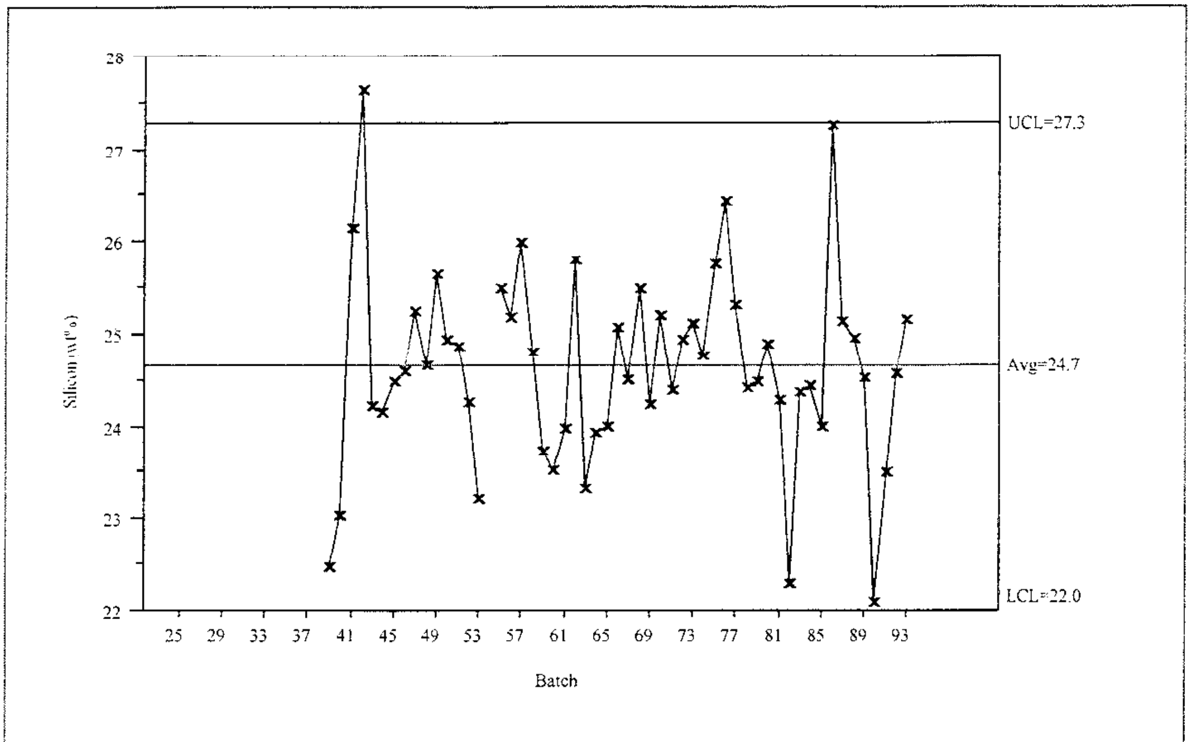


Nickel (wt%)

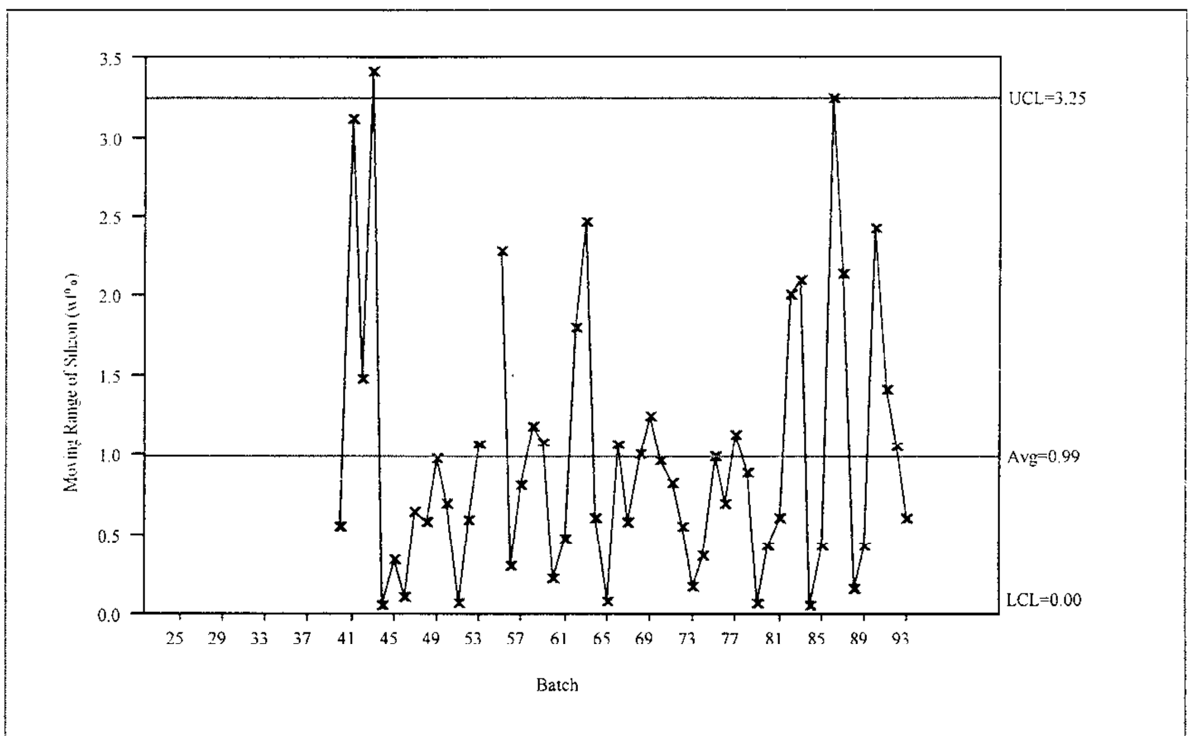


Moving Range of Nickel (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

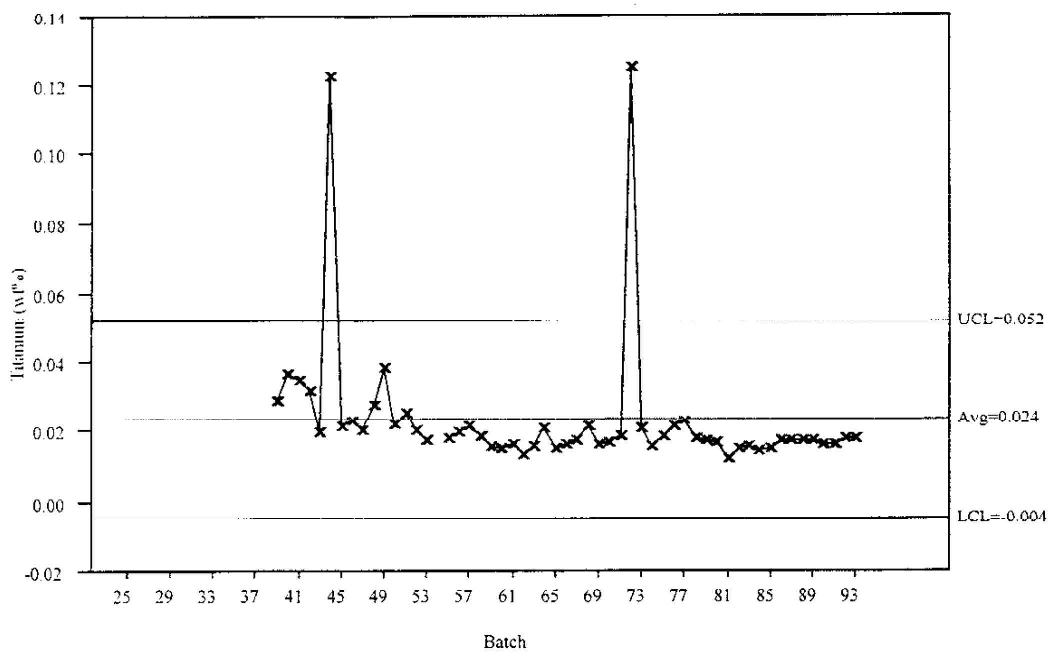


Silicon (wt%)

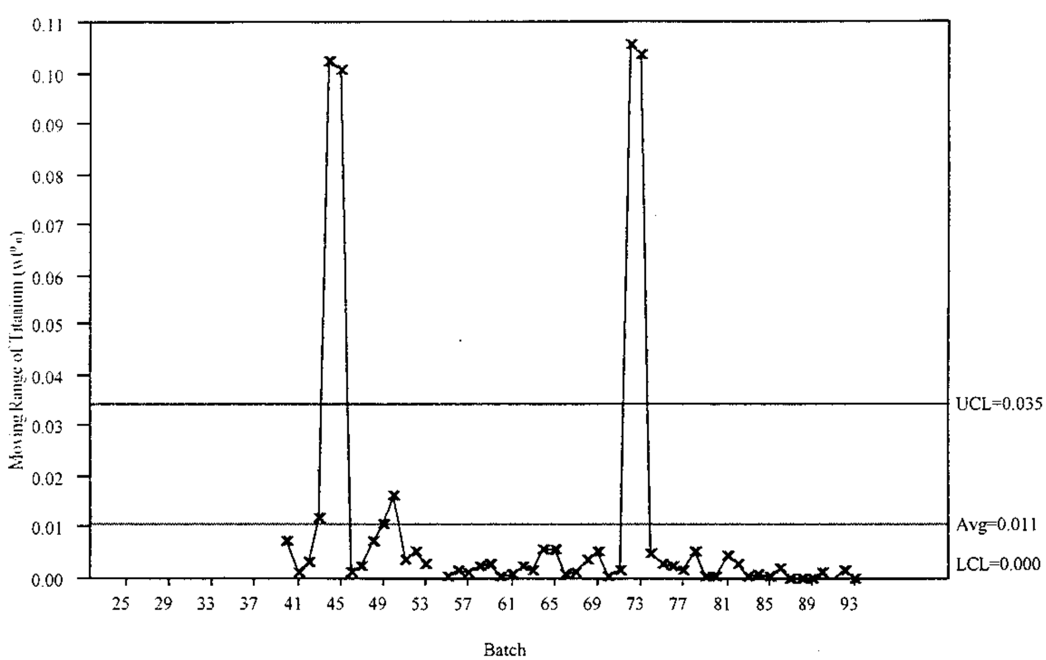


Moving Range of Silicon (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

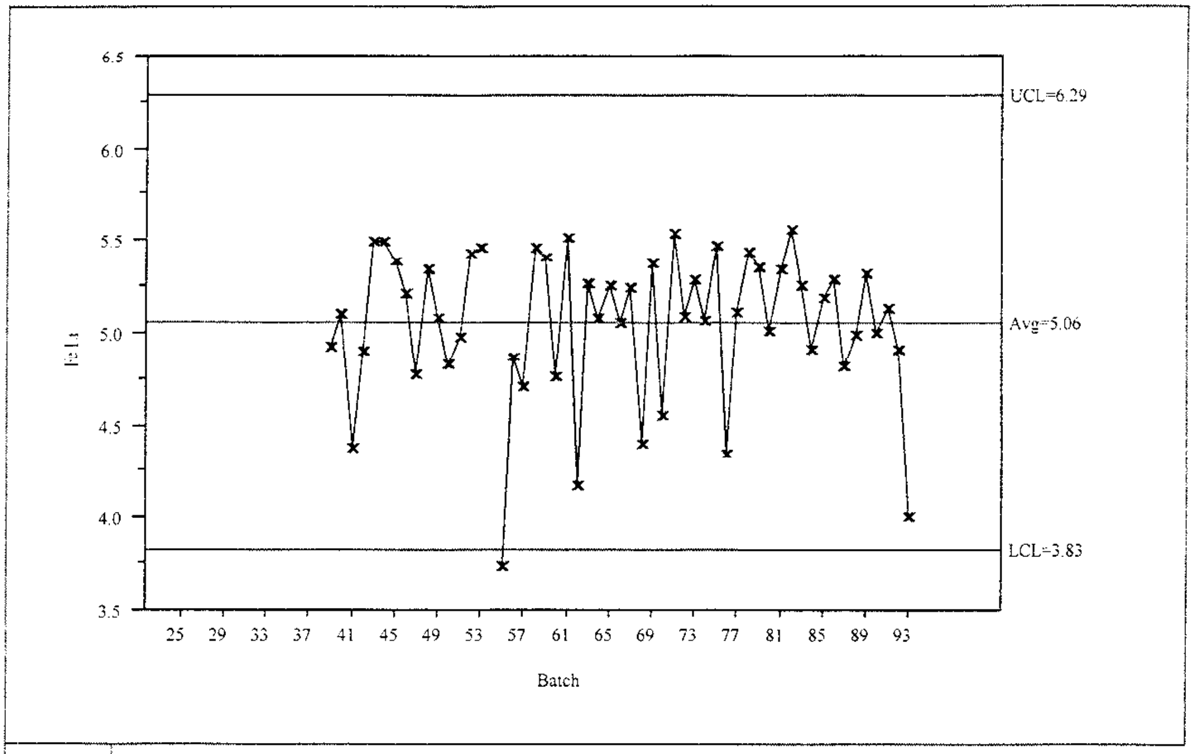


Titanium (wt%)

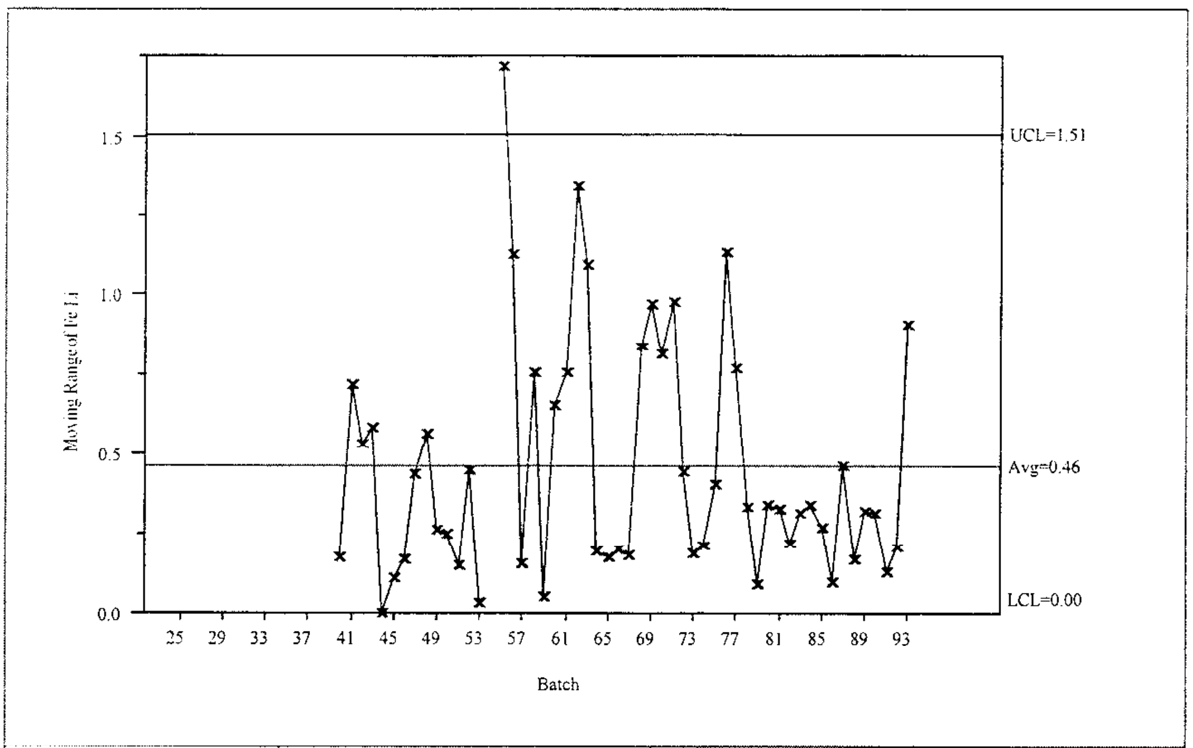


Moving Range of Titanium (wt%)

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte

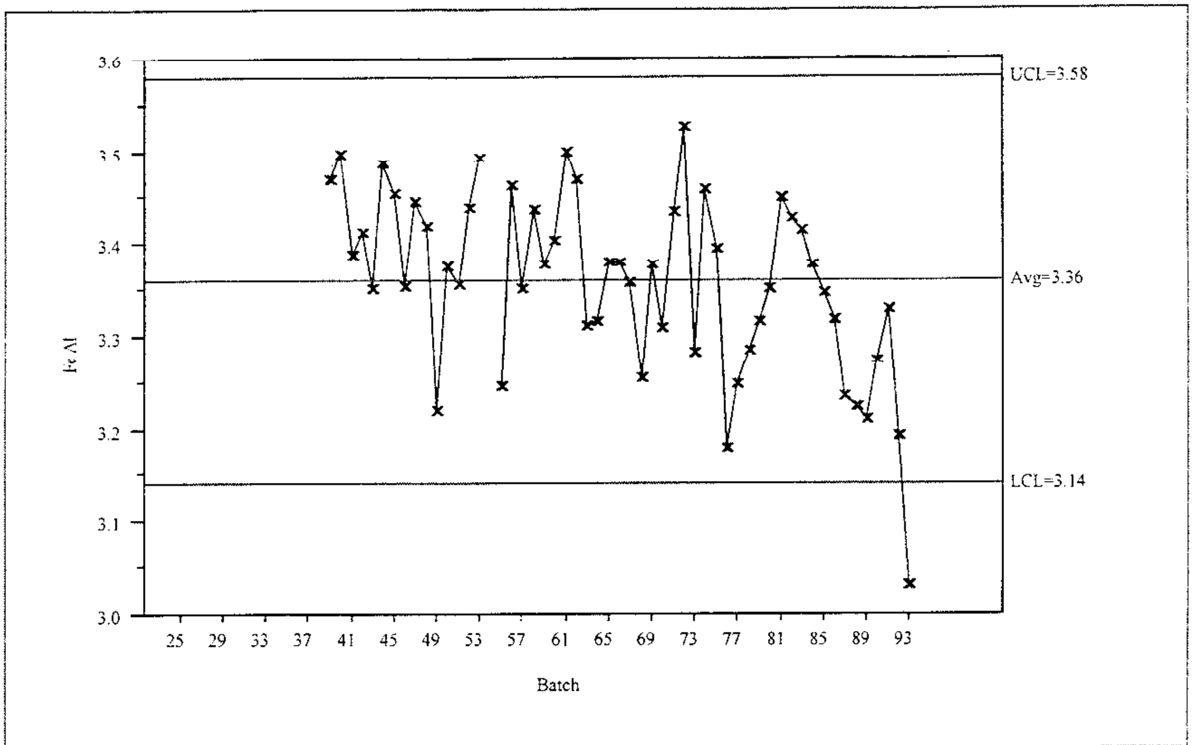


Fe/Li

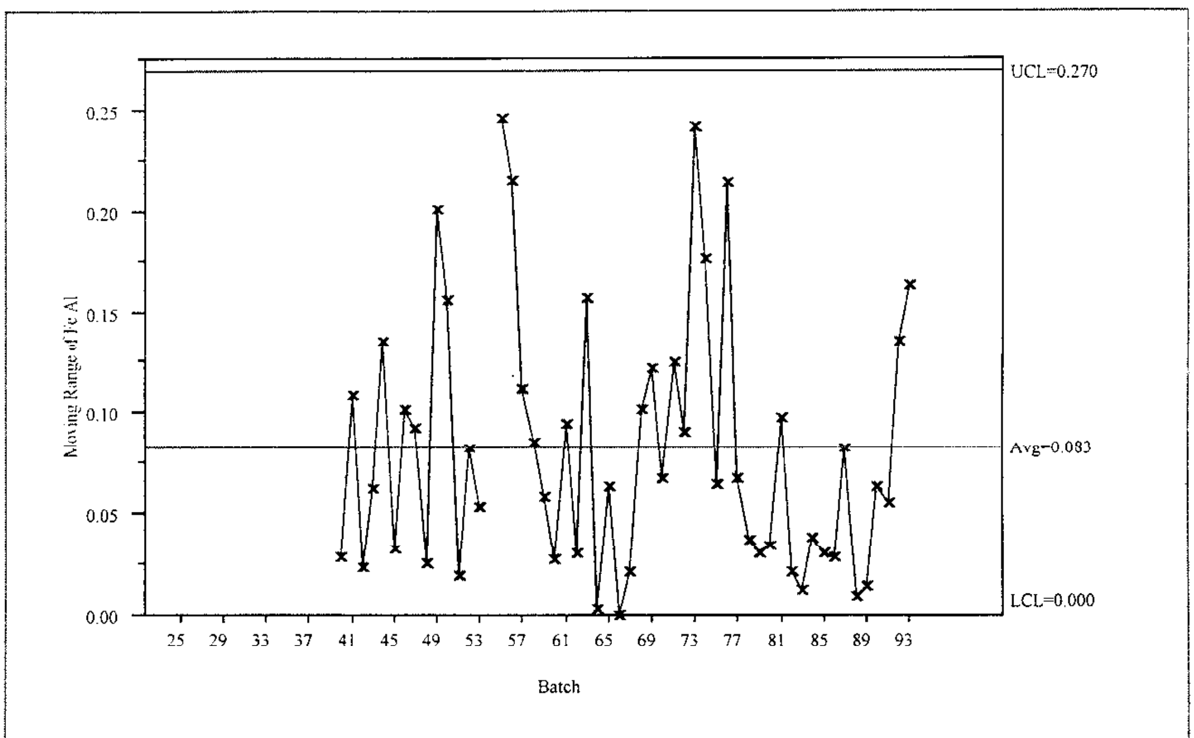


Moving Range of Fe/Li

Exhibit 9c: MFT Control Charts for Individual Batch Averages for PF Prep by Analyte



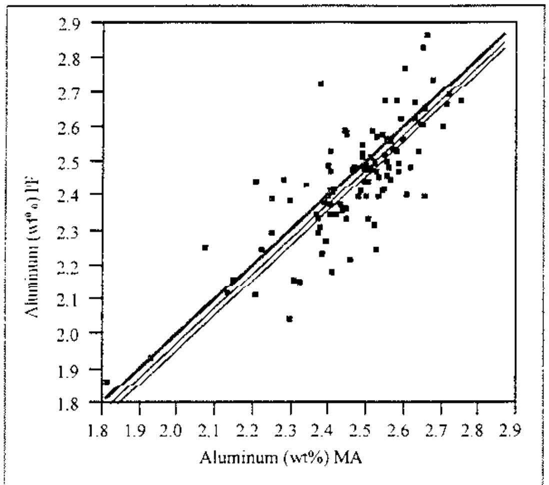
Fe/Al



Moving Range of Fe/Al

Exhibit 10: Paired Comparisons Between Dissolution Methods for SME and MFT Cations

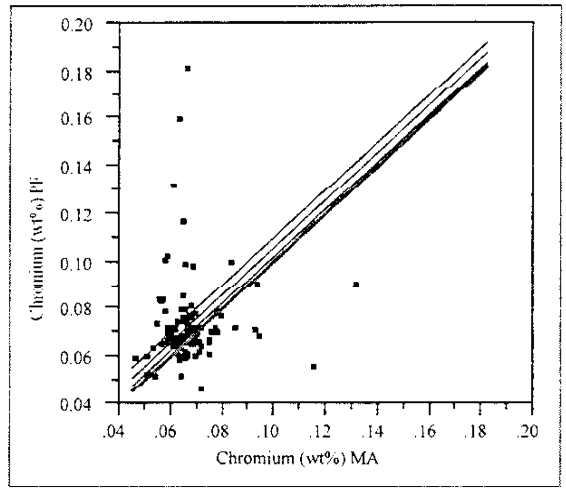
Aluminum (wt%)
PF By MA



Paired t-Test
Aluminum (wt%) MA - Aluminum (wt%) PF

Mean Difference	0.022667	Prob > |t| 0.0348
Std Error	0.010602	Prob > t 0.0174
t-Ratio	2.137933	Prob < t 0.9826
DF	105	

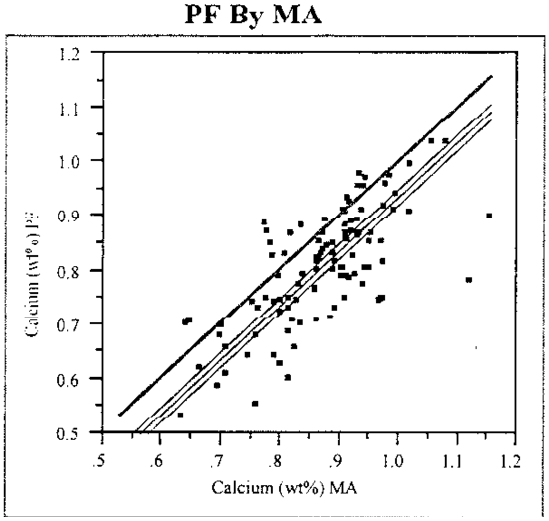
Chromium (wt%)
PF By MA



Paired t-Test
Chromium (wt%) MA - Chromium (wt%) PF

Mean Difference	-0.00592	Prob > |t| 0.0051
Std Error	0.002068	Prob > t 0.9975
t-Ratio	-2.86238	Prob < t 0.0025
DF	105	

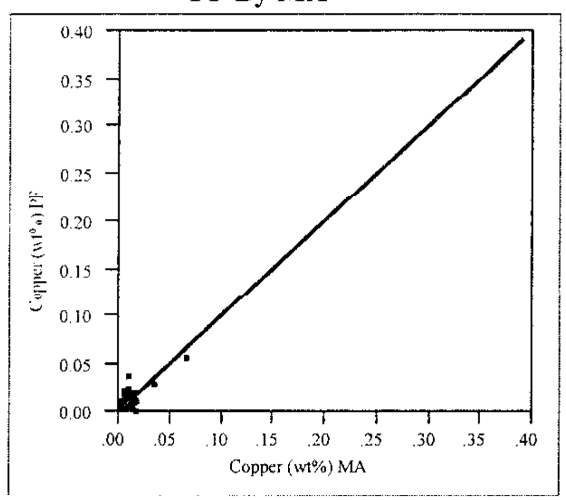
Calcium (wt%)
PF By MA



Paired t-Test
Calcium (wt%) MA - Calcium (wt%) PF

Mean Difference	0.065895	Prob > |t| <.0001
Std Error	0.00749	Prob > t <.0001
t-Ratio	8.797226	Prob < t 1.0000
DF	105	

Copper (wt%)
PF By MA

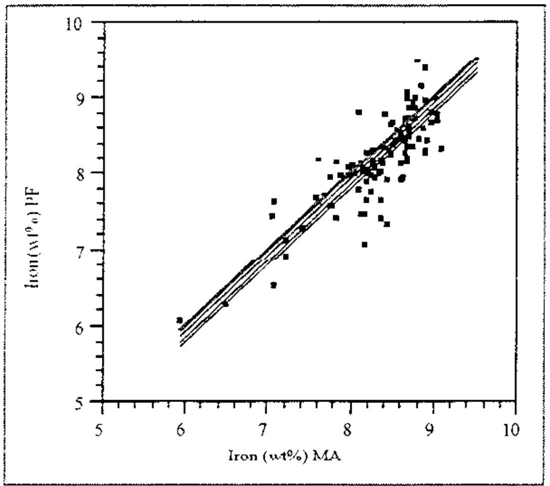


Paired t-Test
Copper (wt%) MA - Copper (wt%) PF

Mean Difference	-0.00139	Prob > |t| 0.0121
Std Error	0.000545	Prob > t 0.9940
t-Ratio	-2.55488	Prob < t 0.0060
DF	105	

Exhibit 10: Paired Comparisons Between Dissolution Methods for SME and MFT Cations

Iron (wt%) PF By MA

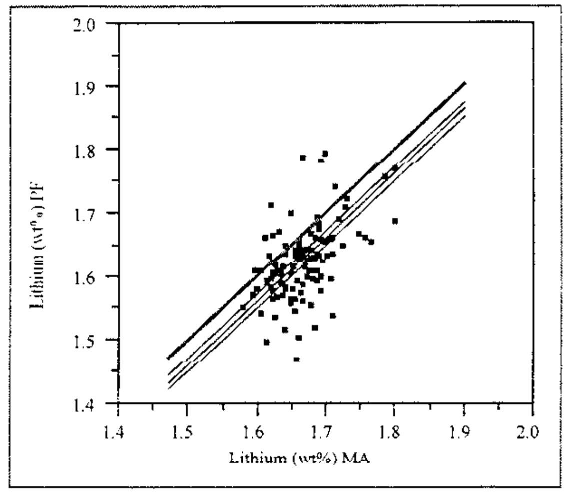


Paired t-Test

Iron (wt%) MA - Iron (wt%) PF

Mean Difference	0.144685	Prob > |t|<.0001
Std Error	0.033191	Prob > t <.0001
t-Ratio	4.359102	Prob < t 1.0000
DF	105	

Lithium (wt%) PF By MA

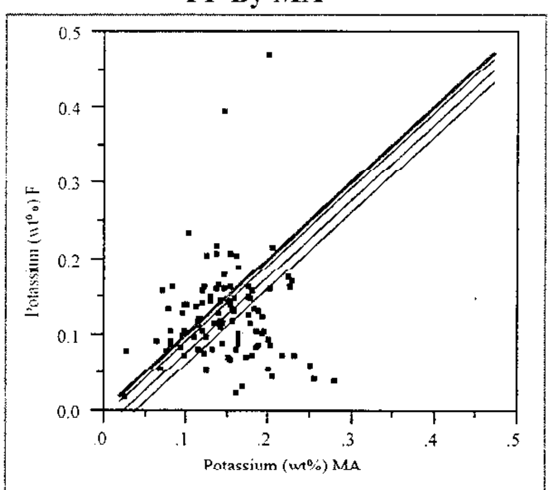


Paired t-Test

Lithium (wt%) MA - Lithium (wt%) PF

Mean Difference	0.038974	Prob > |t|<.0001
Std Error	0.005241	Prob > t <.0001
t-Ratio	7.435997	Prob < t 1.0000
DF	105	

Potassium (wt%) PF By MA



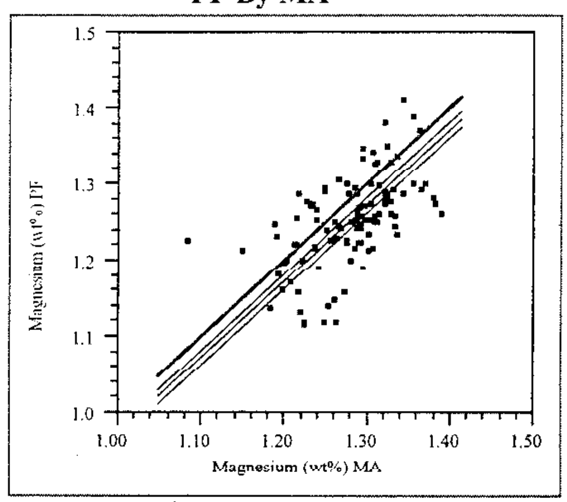
Paired t-Test

Potassium (wt%) MA - Potassium (wt%) PF

Mean Difference	0.022405	Prob > |t| 0.0036
Std Error	0.007523	Prob > t 0.0018
t-Ratio	2.978064	Prob < t 0.9982
DF	104	

(Negative values excluded.)

Magnesium (wt%) PF By MA



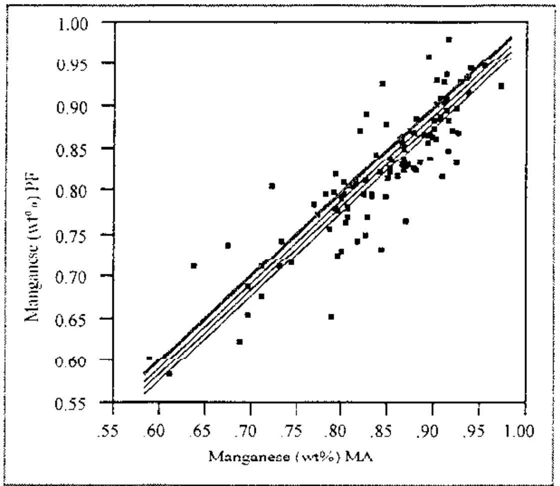
Paired t-Test

Magnesium (wt%) MA - Magnesium (wt%) PF

Mean Difference	0.02753	Prob > |t|<.0001
Std Error	0.005134	Prob > t <.0001
t-Ratio	5.361954	Prob < t 1.0000
DF	105	

Exhibit 10: Paired Comparisons Between Dissolution Methods for SME and MFT Cations

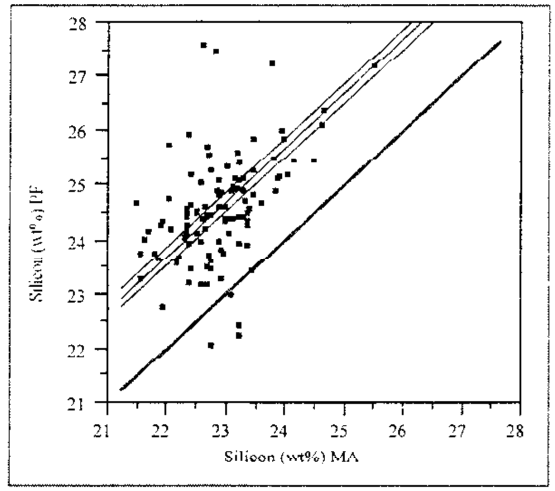
Manganese (wt%)
PF By MA



Paired t-Test
Manganese (wt%) MA - Manganese (wt%) PF

Mean Difference	0.017468	Prob > |t|<.0001
Std Error	0.003807	Prob > t <.0001
t-Ratio	4.587971	Prob < t 1.0000
DF	105	

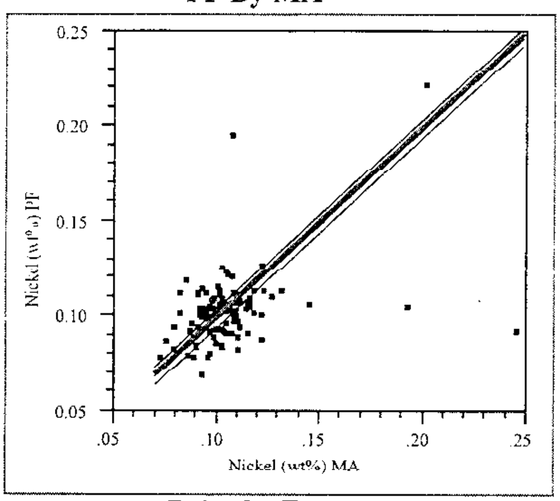
Silicon (wt%)
PF By MA



Paired t-Test
Silicon (wt%) MA - Silicon (wt%) PF

Mean Difference	-1.7029	Prob > |t|<.0001
Std Error	0.090028	Prob > t 1.0000
t-Ratio	-18.9151	Prob < t <.0001
DF	105	

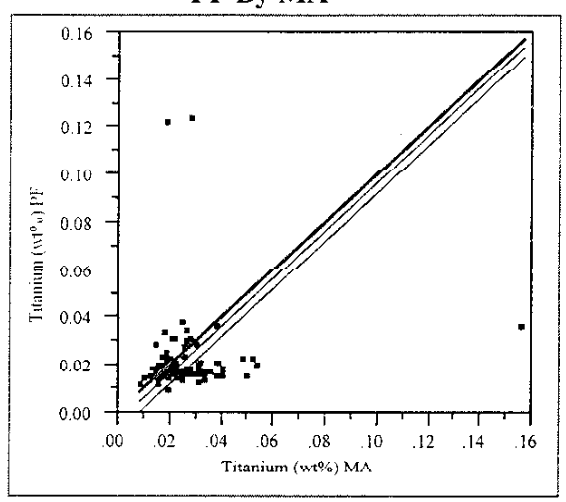
Nickel (wt%)
PF By MA



Paired t-Test
Nickel (wt%) MA - Nickel (wt%) PF

Mean Difference	0.001628	Prob > |t| 0.4726
Std Error	0.002259	Prob > t 0.2363
t-Ratio	0.720846	Prob < t 0.7637
DF	105	

Titanium (wt%)
PF By MA

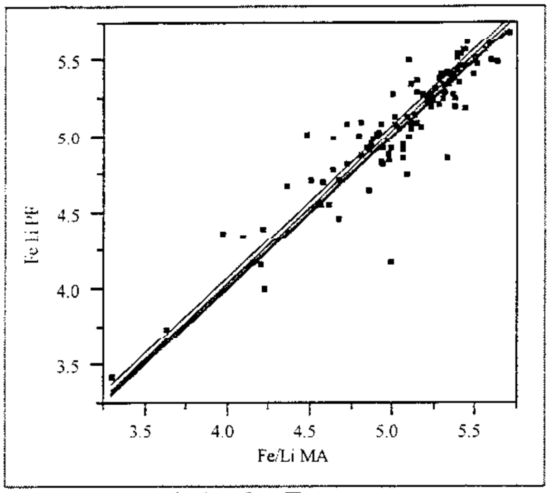


Paired t-Test
Titanium (wt%) MA - Titanium (wt%) PF

Mean Difference	0.003903	Prob > |t| 0.0564
Std Error	0.002023	Prob > t 0.0282
t-Ratio	1.929269	Prob < t 0.9718
DF	105	

Exhibit 10: Paired Comparisons Between Dissolution Methods for SME and MFT Cations

Fe/Li
PF By MA

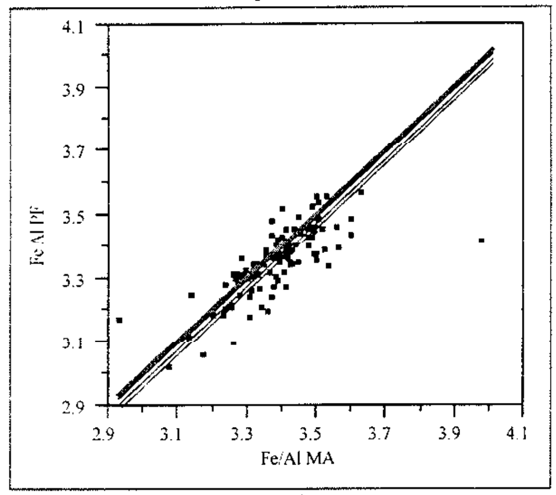


Paired t-Test

Fe/Li MA - Fe/Li PF

Mean Difference	-0.03189	Prob > |t| 0.0613
Std Error	0.016858	Prob > t 0.9693
t-Ratio	-1.8916	Prob < t 0.0307
DF	105	

Fe/Al
PF By MA



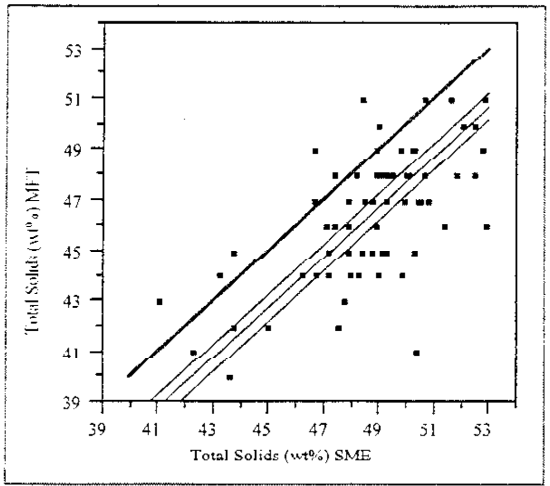
Paired t-Test

Fe/Al MA - Fe/Al PF

Mean Difference	0.029654	Prob > |t| 0.0006
Std Error	0.008345	Prob > t 0.0003
t-Ratio	3.553671	Prob < t 0.9997
DF	105	

Exhibit 11: Paired Comparisons By Batch Between MFT and SME Anions

Total Solids (wt%)
MFT By SME

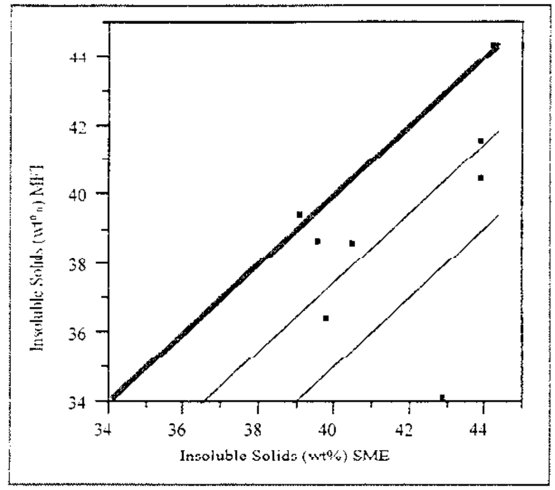


Paired t-Test

Total Solids (wt%) SME - Total Solids (wt%) MFT

Mean Difference	2.327449	Prob > |t|	<.0001
Std Error	0.260035	Prob > t	<.0001
t-Ratio	8.950517	Prob < t	1.0000
DF	68		

Insoluble Solids (wt%)
MFT By SME

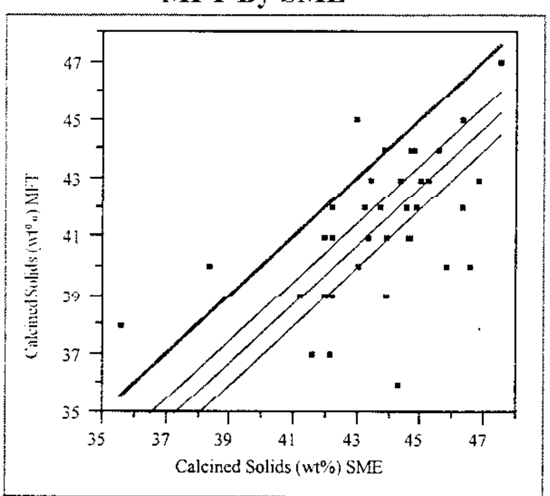


Paired t-Test

Insoluble Solids (wt%) SME - Insoluble Solids (wt%) MFT

Mean Difference	2.541875	Prob > |t|	0.0426
Std Error	1.027378	Prob > t	0.0213
t-Ratio	2.474139	Prob < t	0.9787
DF	7		

Calcined Solids (wt%)
MFT By SME

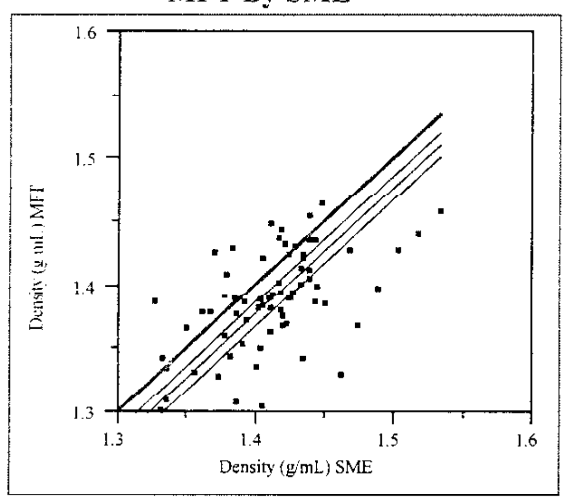


Paired t-Test

Calcined Solids (wt%) SME - Calcined Solids (wt%) MFT

Mean Difference	2.331872	Prob > |t|	<.0001
Std Error	0.371955	Prob > t	<.0001
t-Ratio	6.269233	Prob < t	1.0000
DF	36		

Density (g/mL)
MFT By SME



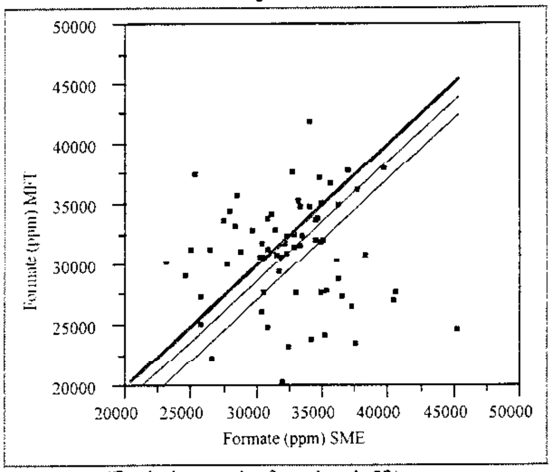
Paired t-Test

Density (g/mL) SME - Density (g/mL) MFT

Mean Difference	0.023029	Prob > |t|	<.0001
Std Error	0.004618	Prob > t	<.0001
t-Ratio	4.986705	Prob < t	1.0000
DF	69		

Exhibit 11: Paired Comparisons By Batch Between MFT and SME Anions

Formate (ppm)
MFT By SME



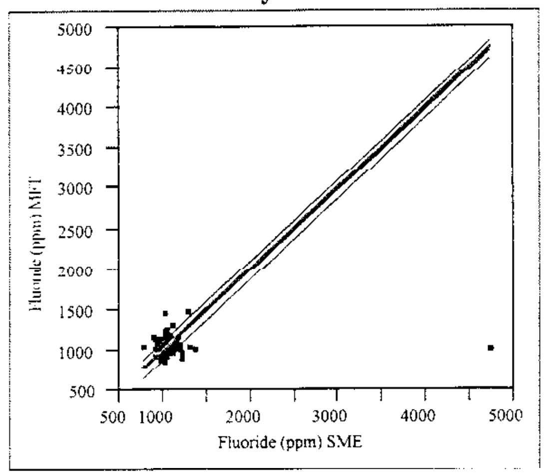
(Excludes results from batch 52)

Paired t-Test

Formate (ppm) SME - Formate (ppm) MFT

Mean Difference	1445.098	Prob > |t|	0.0537
Std Error	735.8953	Prob > t	0.0269
t-Ratio	1.963728	Prob < t	0.9731
DF	67		

Fluoride (ppm)
MFT By SME

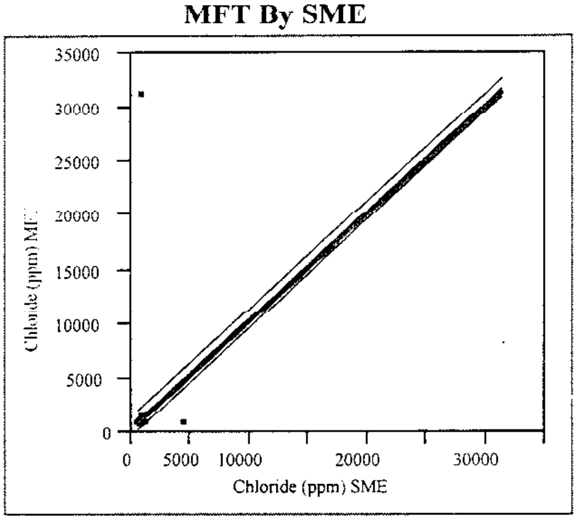


Paired t-Test

Fluoride (ppm) SME - Fluoride (ppm) MFT

Mean Difference	28.53321	Prob > |t|	0.6162
Std Error	56.66402	Prob > t	0.3081
t-Ratio	0.503551	Prob < t	0.6919
DF	68		

Chloride (ppm)
MFT By SME

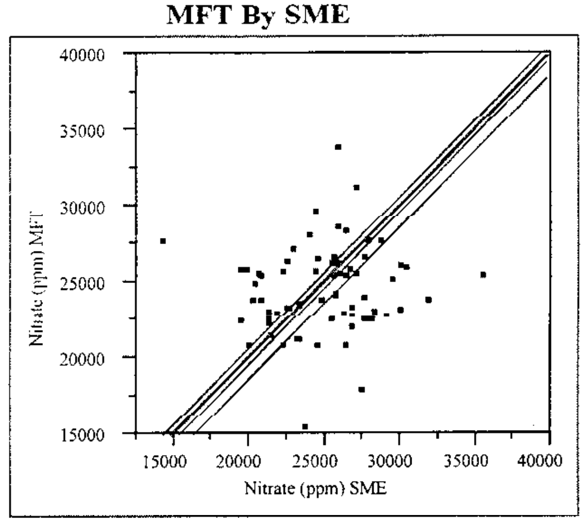


Paired t-Test

Chloride (ppm) SME - Chloride (ppm) MFT

Mean Difference	-416.619	Prob > |t|	0.3521
Std Error	444.6349	Prob > t	0.8240
t-Ratio	-0.93699	Prob < t	0.1760
DF	68		

Nitrate (ppm)
MFT By SME



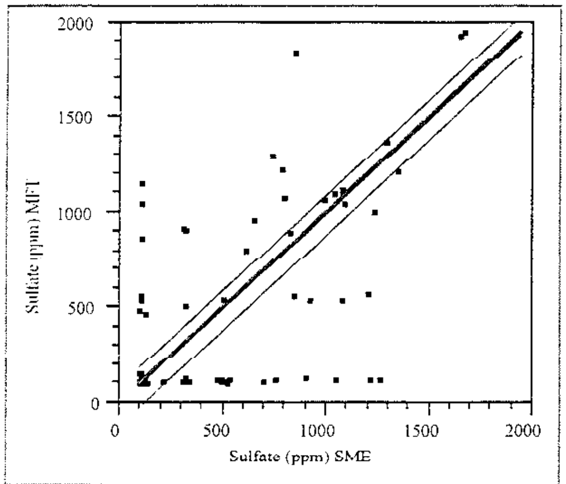
Paired t-Test

Nitrate (ppm) SME - Nitrate (ppm) MFT

Mean Difference	445.5918	Prob > |t|	0.3934
Std Error	518.7318	Prob > t	0.1967
t-Ratio	0.859002	Prob < t	0.8033
DF	68		

Exhibit 11: Paired Comparisons By Batch Between MFT and SME Anions

Sulfate (ppm)
MFT By SME



Paired t-Test

Sulfate (ppm) SME - Sulfate (ppm) MFT

Mean Difference	19.83274	Prob > |t|	0.7034
Std Error	51.87768	Prob > t	0.3517
t-Ratio	0.382298	Prob < t	0.6483
DF	69		

Exhibit 11: Paired Comparisons By Batch Between MFT and SME Anions

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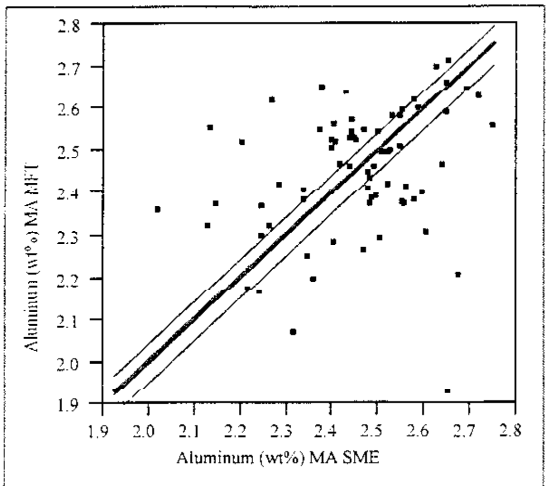
Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Aluminum (wt%)
MA MFT By MA SME

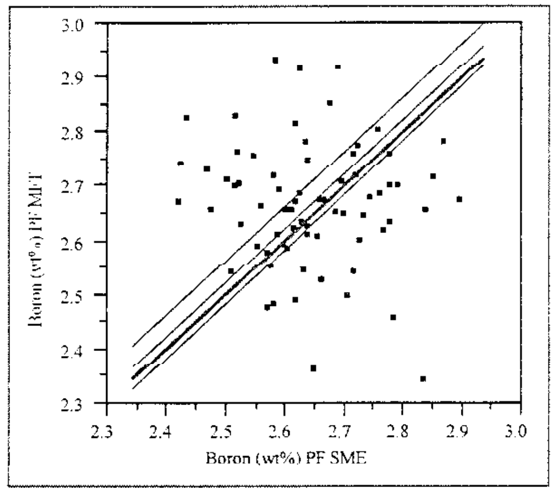


Paired t-Test

Aluminum (wt%) MA SME - Aluminum (wt%) MA MFT

Mean Difference	0.006317	Prob > |t|	0.7720
Std Error	0.021715	Prob > t	0.3860
t-Ratio	0.290888	Prob < t	0.6140
DF	69		

Boron (wt%)
PF MFT By PF SME

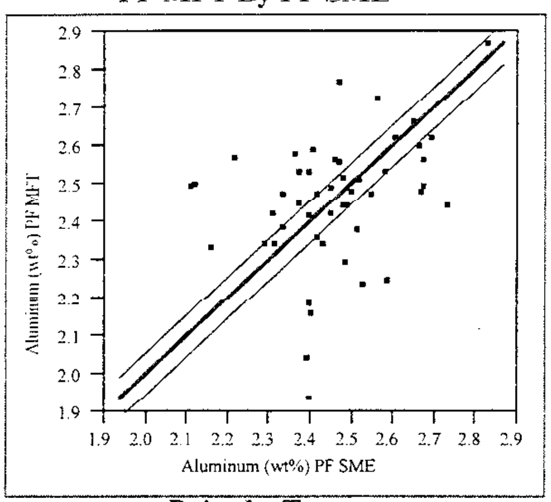


Paired t-Test

Boron (wt%) PF SME - Boron (wt%) PF MFT

Mean Difference	-0.02348	Prob > |t|	0.2418
Std Error	0.01989	Prob > t	0.8791
t-Ratio	-1.18073	Prob < t	0.1209
DF	69		

Aluminum (wt%)
PF MFT By PF SME

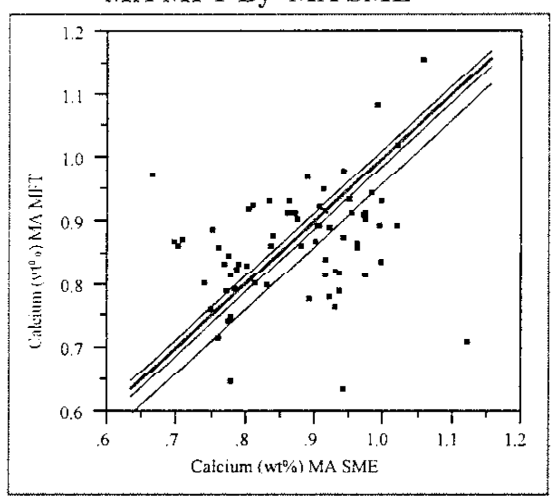


Paired t-Test

Aluminum (wt%) PF SME - Aluminum (wt%) PF MFT

Mean Difference	0.002572	Prob > |t|	0.9235
Std Error	0.026631	Prob > t	0.4617
t-Ratio	0.096584	Prob < t	0.5383
DF	48		

Calcium (wt%)
MA MFT By MA SME



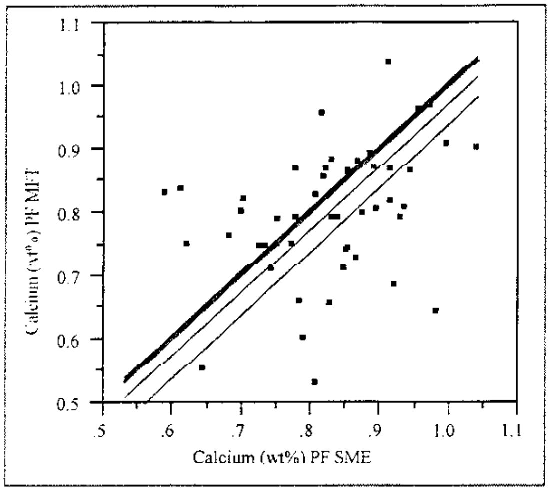
Paired t-Test

Calcium (wt%) MA SME - Calcium (wt%) MA MFT

Mean Difference	0.012809	Prob > |t|	0.3312
Std Error	0.01309	Prob > t	0.1656
t-Ratio	0.978535	Prob < t	0.8344
DF	69		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Calcium (wt%)
PF MFT By PF SME

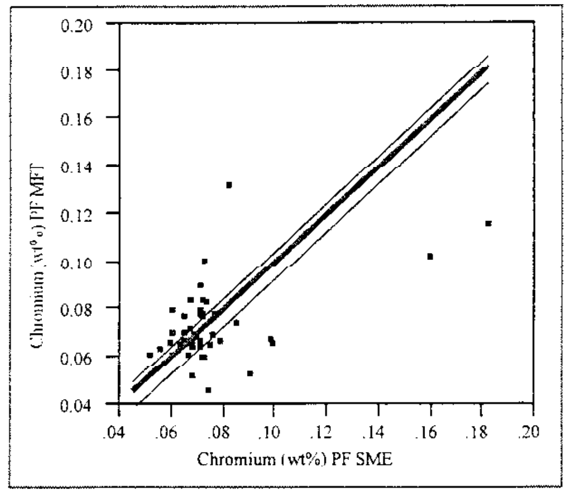


Paired t-Test

Calcium (wt%) PF SME - Calcium (wt%) PF MFT

Mean Difference	0.027354	Prob > |t|	0.1104
Std Error	0.016818	Prob > t	0.0552
t-Ratio	1.626502	Prob < t	0.9448
DF	48		

Chromium (wt%)
PF MFT By PF SME

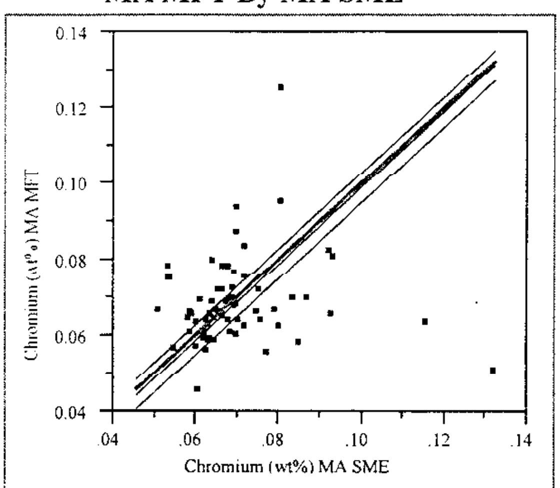


Paired t-Test

Chromium (wt%) PF SME - Chromium (wt%) PF MFT

Mean Difference	0.001902	Prob > |t|	0.4944
Std Error	0.002762	Prob > t	0.2472
t-Ratio	0.688614	Prob < t	0.7528
DF	48		

Chromium (wt%)
MA MFT By MA SME

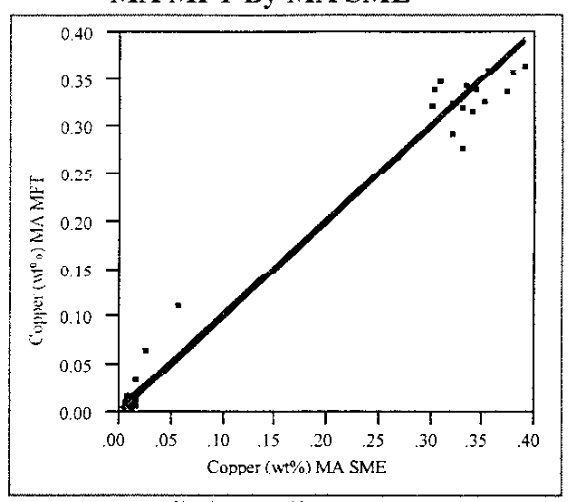


Paired t-Test

Chromium (wt%) MA SME - Chromium (wt%) MA MFT

Mean Difference	0.001151	Prob > |t|	0.5644
Std Error	0.001988	Prob > t	0.2822
t-Ratio	0.579061	Prob < t	0.7178
DF	69		

Copper (wt%)
MA MFT By MA SME



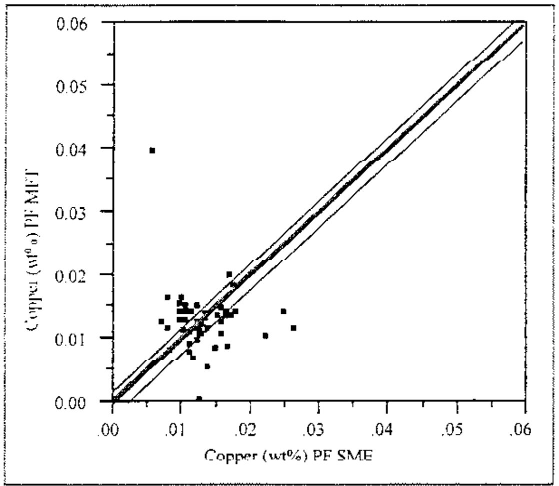
Paired t-Test

Copper (wt%) MA SME - Copper (wt%) MA MFT

Mean Difference	-0.00005	Prob > |t|	0.9800
Std Error	0.001843	Prob > t	0.5100
t-Ratio	-0.02519	Prob < t	0.4900
DF	69		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Copper (wt%) PF MFT By PF SME

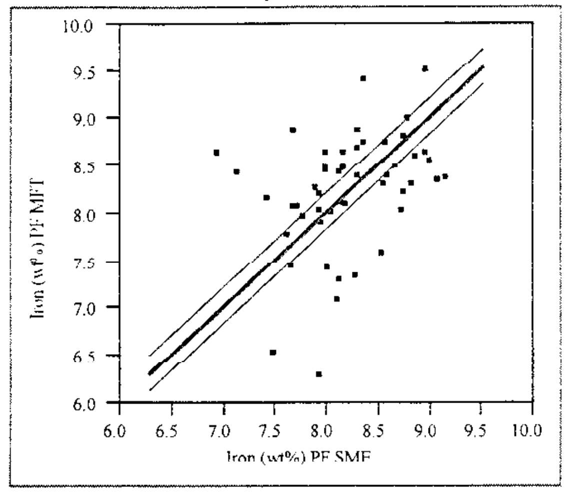


Paired t-Test

Copper (wt%) PF SME - Copper (wt%) PF MFT

Mean Difference	0.000516	Prob > |t|	0.6098
Std Error	0.001004	Prob > t	0.3049
t-Ratio	0.513754	Prob < t	0.6951
DF	48		

Iron (wt%) PF MFT By PF SME

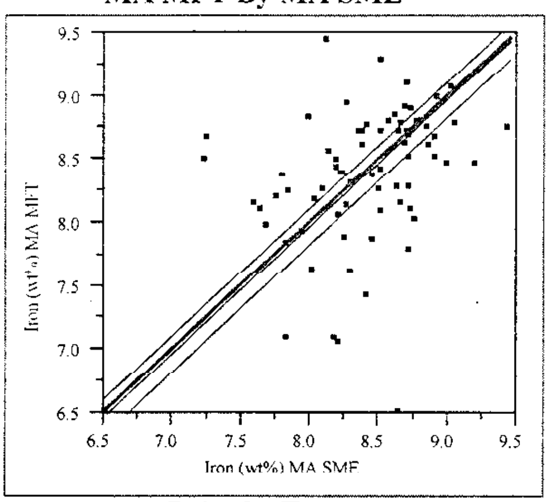


Paired t-Test

Iron (wt%) PF SME - Iron (wt%) PF MFT

Mean Difference	-0.01428	Prob > |t|	0.8801
Std Error	0.094098	Prob > t	0.5600
t-Ratio	-0.1517	Prob < t	0.4400
DF	48		

Iron (wt%) MA MFT By MA SME

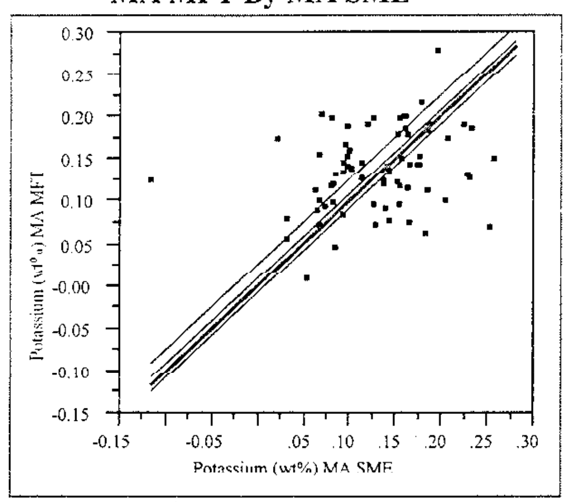


Paired t-Test

Iron (wt%) MA SME - Iron (wt%) MA MFT

Mean Difference	0.035477	Prob > |t|	0.6141
Std Error	0.070046	Prob > t	0.3071
t-Ratio	0.506475	Prob < t	0.6929
DF	69		

Potassium (wt%) MA MFT By MA SME



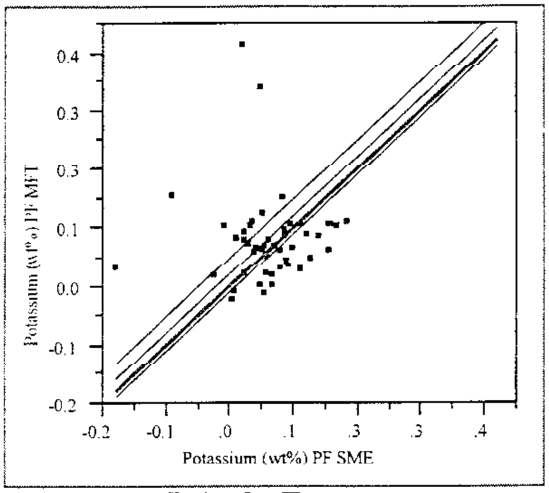
Paired t-Test

Potassium (wt%) MA SME - Potassium (wt%) MA MFT

Mean Difference	-0.00831	Prob > |t|	0.3107
Std Error	0.008134	Prob > t	0.8446
t-Ratio	-1.02125	Prob < t	0.1554
DF	69		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Potassium (wt%) PF MFT By PF SME

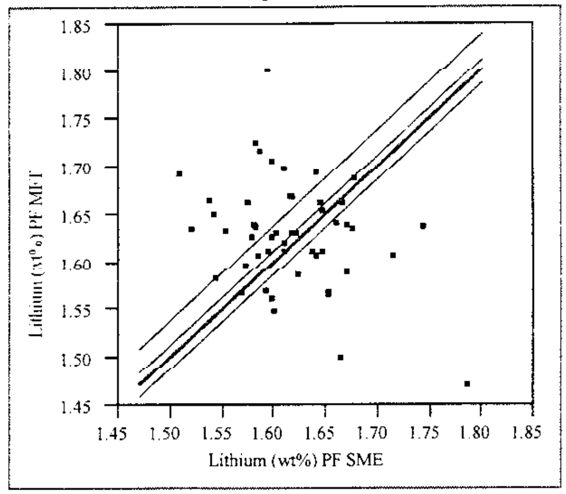


Paired t-Test

Potassium (wt%) PF SME - Potassium (wt%) PF MFT

Mean Difference	-0.01915	Prob > |t|	0.1796
Std Error	0.01406	Prob > t	0.9102
t-Ratio	-1.36181	Prob < t	0.0898
DF	48		

Lithium (wt%) PF MFT By PF SME

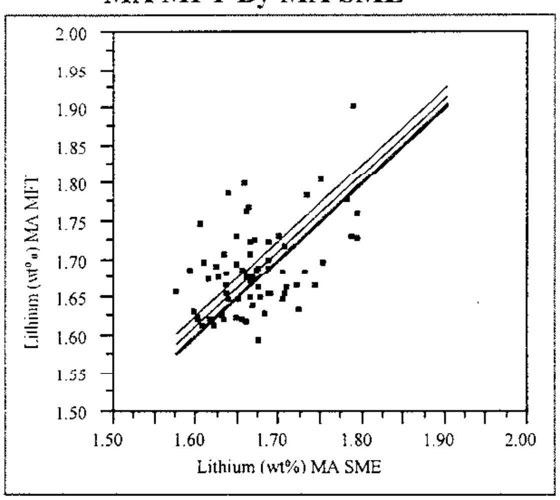


Paired t-Test

Lithium (wt%) PF SME - Lithium (wt%) PF MFT

Mean Difference	-0.01212	Prob > |t|	0.3481
Std Error	0.01279	Prob > t	0.8260
t-Ratio	-0.94758	Prob < t	0.1740
DF	48		

Lithium (wt%) MA MFT By MA SME

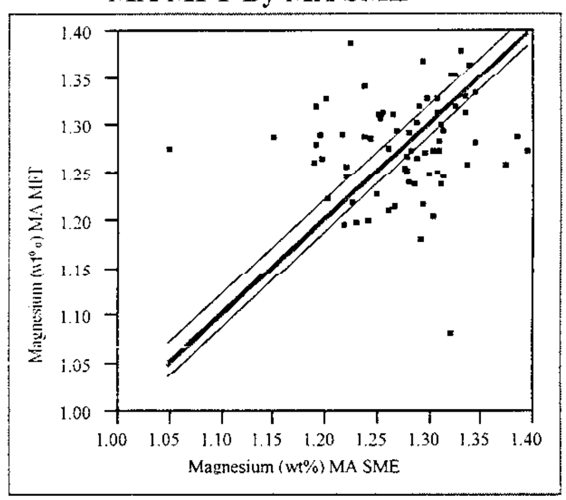


Paired t-Test

Lithium (wt%) MA SME - Lithium (wt%) MA MFT

Mean Difference	-0.01198	Prob > |t|	0.0759
Std Error	0.006648	Prob > t	0.9621
t-Ratio	-1.80237	Prob < t	0.0379
DF	69		

Magnesium (wt%) MA MFT By MA SME



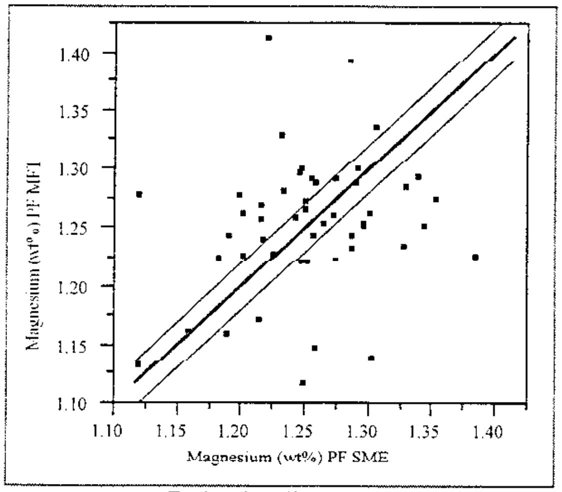
Paired t-Test

Magnesium (wt%) MA SME - Magnesium (wt%) MA MFT

Mean Difference	-0.00563	Prob > |t|	0.5252
Std Error	0.008811	Prob > t	0.7374
t-Ratio	-0.63866	Prob < t	0.2626
DF	69		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Magnesium (wt%)
PF MFT By PF SME

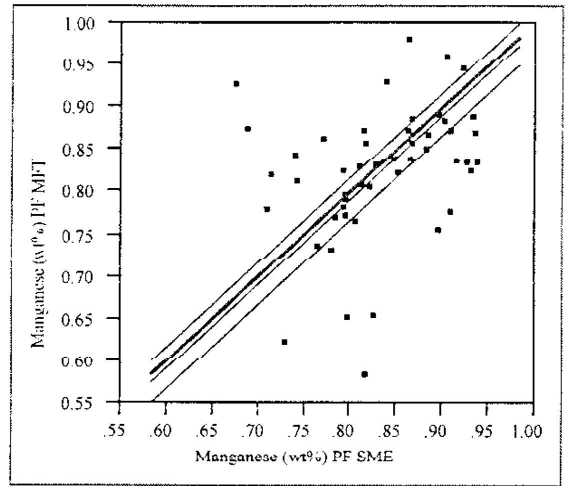


Paired t-Test

Magnesium (wt%) PF SME - Magnesium (wt%) PF MFT

Mean Difference	0.000833	Prob > |t|	0.9347
Std Error	0.01011	Prob > t	0.4673
t-Ratio	0.082393	Prob < t	0.5327
DF	48		

Manganese (wt%)
PF MFT By PF SME

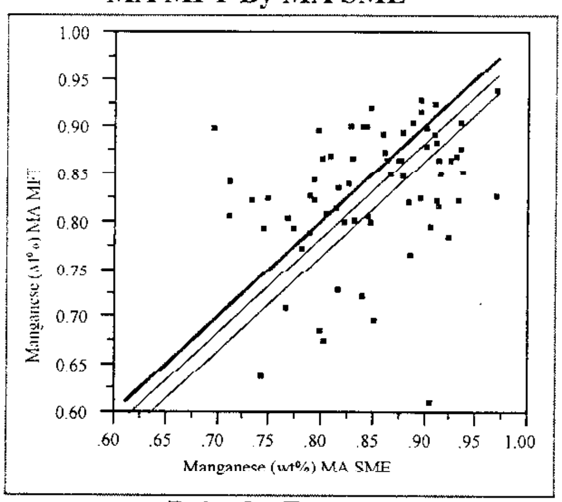


Paired t-Test

Manganese (wt%) PF SME - Manganese (wt%) PF MFT

Mean Difference	0.009557	Prob > |t|	0.4527
Std Error	0.012625	Prob > t	0.2264
t-Ratio	0.757	Prob < t	0.7736
DF	48		

Manganese (wt%)
MA MFT By MA SME

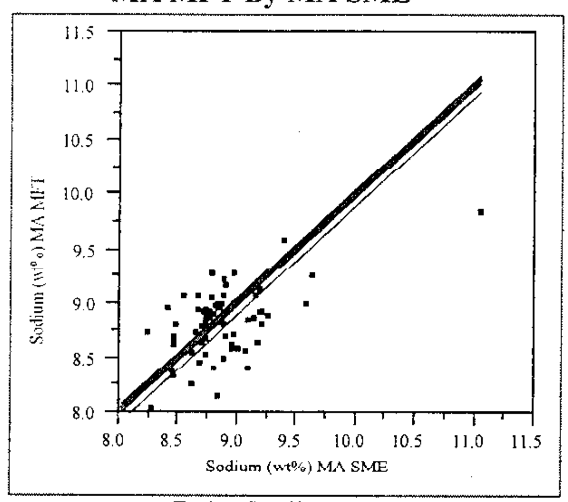


Paired t-Test

Manganese (wt%) MA SME - Manganese (wt%) MA MFT

Mean Difference	0.017395	Prob > |t|	0.0685
Std Error	0.009398	Prob > t	0.0342
t-Ratio	1.85096	Prob < t	0.9658
DF	69		

Sodium (wt%)
MA MFT By MA SME



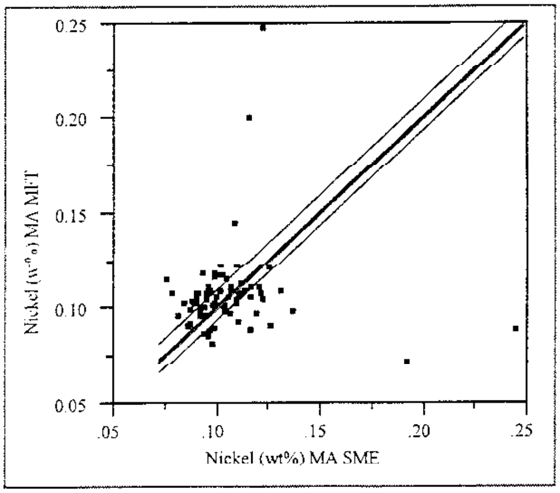
Paired t-Test

Sodium (wt%) MA SME - Sodium (wt%) MA MFT

Mean Difference	0.036285	Prob > |t|	0.3544
Std Error	0.038916	Prob > t	0.1772
t-Ratio	0.932402	Prob < t	0.8228
DF	69		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Nickel (wt%)
MA MFT MA SME

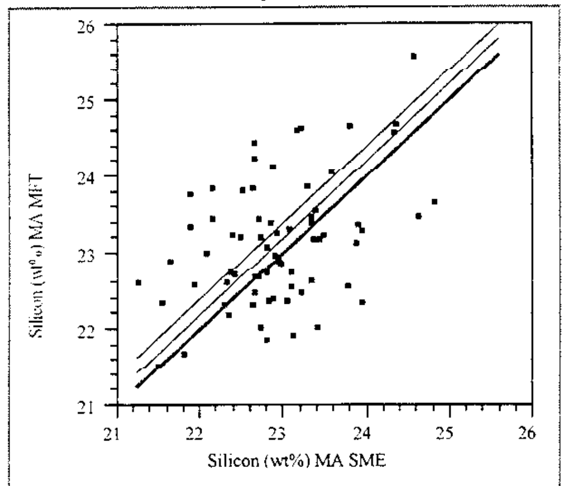


Paired t-Test

Nickel (wt%) MA SME - Nickel (wt%) MA MFT

Mean Difference	-0.00136	Prob > |t|	0.7338
Std Error	0.00399	Prob > t	0.6331
t-Ratio	-0.34152	Prob < t	0.3669
DF	69		

Silicon (wt%)
MA MFT By MA SME

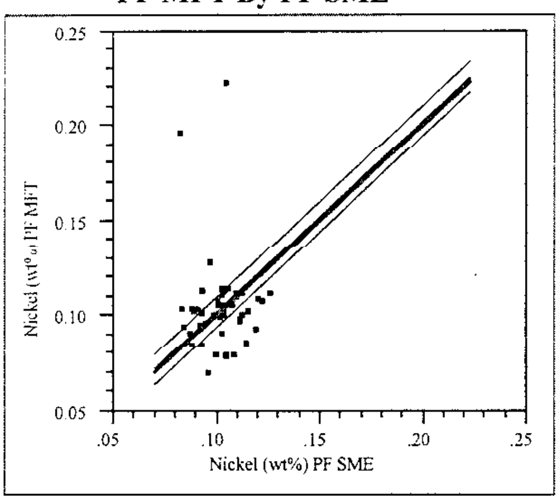


Paired t-Test

Silicon (wt%) MA SME - Silicon (wt%) MA MFT

Mean Difference	-0.19288	Prob > |t|	0.0582
Std Error	0.100152	Prob > t	0.9709
t-Ratio	-1.92588	Prob < t	0.0291
DF	69		

Nickel (wt%)
PF MFT By PF SME

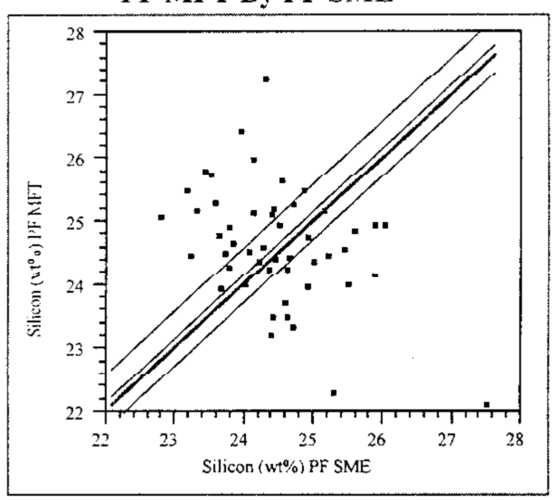


Paired t-Test

Nickel (wt%) PF SME - Nickel (wt%) PF MFT

Mean Difference	-0.00194	Prob > |t|	0.6222
Std Error	0.003917	Prob > t	0.6889
t-Ratio	-0.496	Prob < t	0.3111
DF	48		

Silicon (wt%)
PF MFT By PF SME



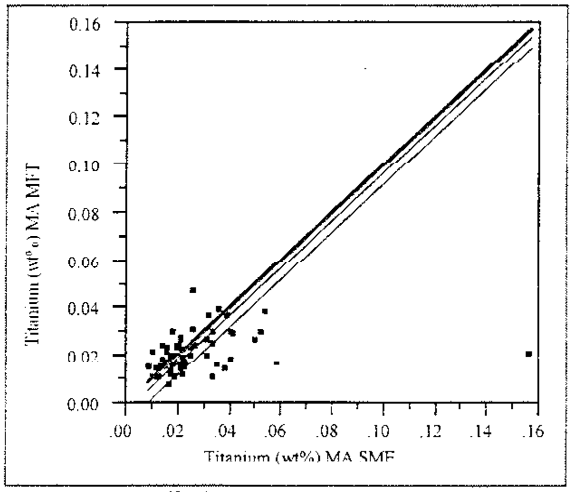
Paired t-Test

Silicon (wt%) PF SME - Silicon (wt%) PF MFT

Mean Difference	-0.14783	Prob > |t|	0.4983
Std Error	0.216645	Prob > t	0.7509
t-Ratio	-0.68238	Prob < t	0.2491
DF	48		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

Titanium (wt%) MA MFT By MA SME

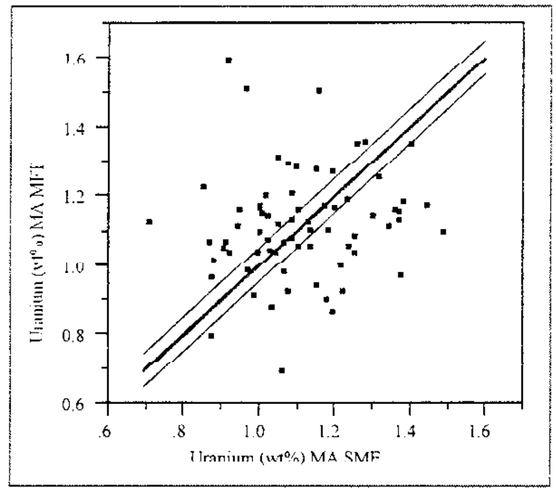


Paired t-Test

Titanium (wt%) MA SME - Titanium (wt%) MA MFT

Mean Difference	0.003444	Prob > |t|	0.1282
Std Error	0.002237	Prob > t	0.0641
t-Ratio	1.539819	Prob < t	0.9359
DF	69		

Uranium (wt%) MA MFT By Uranium (wt%) MA SME

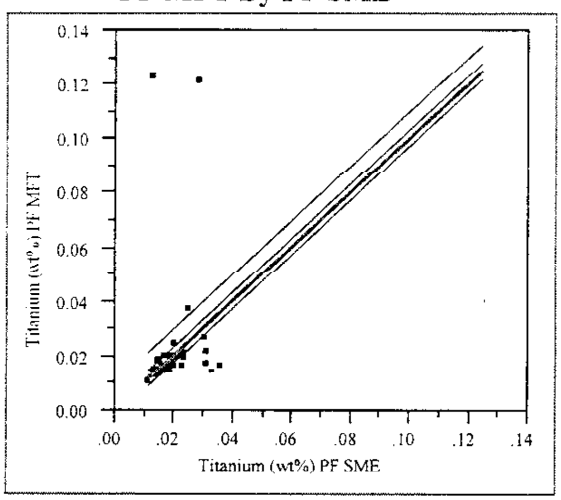


Paired t-Test

Uranium (wt%) MA SME - Uranium (wt%) MA MFT

Mean Difference	-0.00146	Prob > |t|	0.9544
Std Error	0.025434	Prob > t	0.5228
t-Ratio	-0.05745	Prob < t	0.4772
DF	69		

Titanium (wt%) PF MFT By PF SME

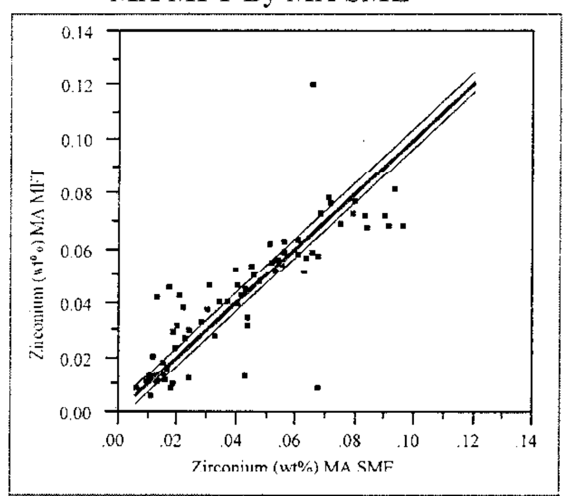


Paired t-Test

Titanium (wt%) PF SME - Titanium (wt%) PF MFT

Mean Difference	-0.00327	Prob > |t|	0.2925
Std Error	0.003071	Prob > t	0.8538
t-Ratio	-1.06435	Prob < t	0.1462
DF	48		

Zirconium (wt%) MA MFT By MA SME



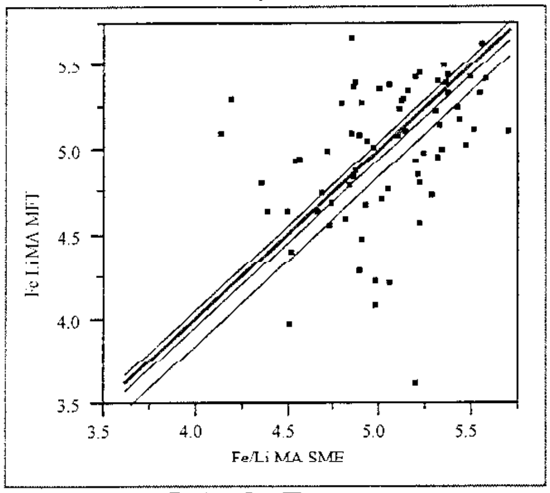
Paired t-Test

Zirconium (wt%) MA SME - Zirconium (wt%) MA MFT

Mean Difference	-0.00056	Prob > |t|	0.7472
Std Error	0.001719	Prob > t	0.6264
t-Ratio	-0.32359	Prob < t	0.3736
DF	69		

Exhibit 12: Paired Comparisons (by batch) Between the SME and MFT by Dissolution Method

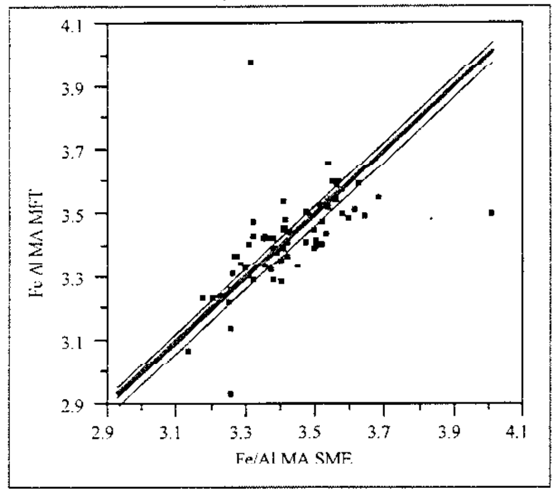
Fe/Li
MA MFT By MA SME



Paired t-Test
Fe/Li MA SME - Fe/Li MA MFT

Mean Difference	0.054631	Prob > |t|	0.2940
Std Error	0.051664	Prob > t	0.1470
t-Ratio	1.057421	Prob < t	0.8530
DF	69		

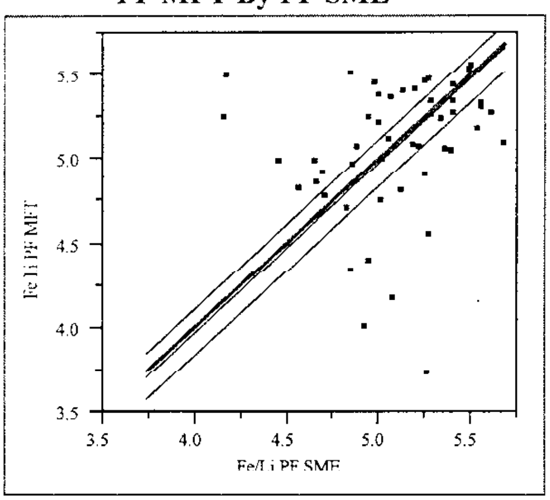
Fe/Al
MA MFT By Fe/Al MA SME



Paired t-Test
Fe/Al MA SME - Fe/Al MA MFT

Mean Difference	0.008503	Prob > |t|	0.5802
Std Error	0.0153	Prob > t	0.2901
t-Ratio	0.555721	Prob < t	0.7099
DF	69		

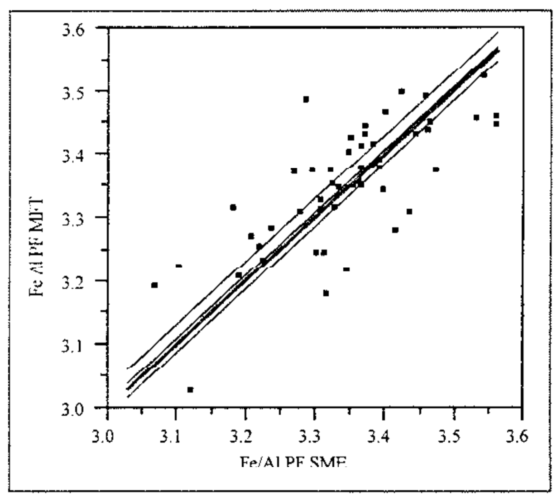
Fe/Li
PF MFT By PF SME



Paired t-Test
Fe/Li PF SME - Fe/Li PF MFT

Mean Difference	0.028678	Prob > |t|	0.6783
Std Error	0.068718	Prob > t	0.3392
t-Ratio	0.41732	Prob < t	0.6608
DF	48		

Fe/Al
PF MFT PF SME



Paired t-Test
Fe/Al PF SME - Fe/Al PF MFT

Mean Difference	-0.00682	Prob > |t|	0.5339
Std Error	0.010887	Prob > t	0.7331
t-Ratio	-0.62666	Prob < t	0.2669
DF	48		

Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Total Solids (wt%)

Summary of Fit

RSquare	0.988969
Root Mean Square Error	0.166579
Mean of Response	15.81092
Observations (or Sum Wgts)	284

Variance Component Estimates

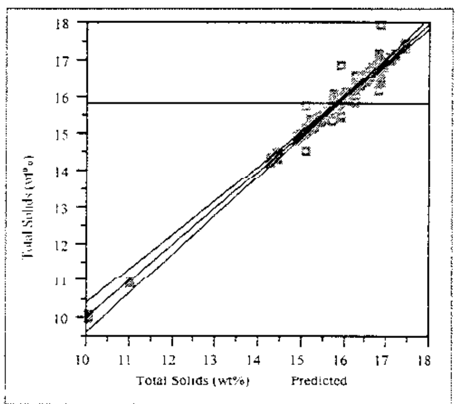
Component	Var Comp Est
Batch	1.895215
Residual	0.027749

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

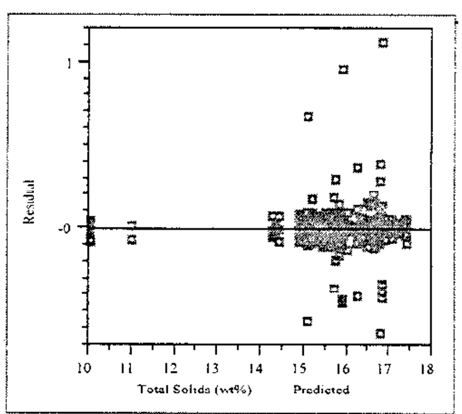
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	532.361	7.71538	69	278.0458	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	532.36136	7.71538	278.0458
Error	214	5.93820	0.02775	**Prob>F**
C Total	283	538.29956		<.0001



Response: Calcined Solids (wt%)

Summary of Fit

RSquare	0.931004
Root Mean Square Error	0.311313
Mean of Response	13.43221
Observations (or Sum Wgts)	226

Variance Component Estimates

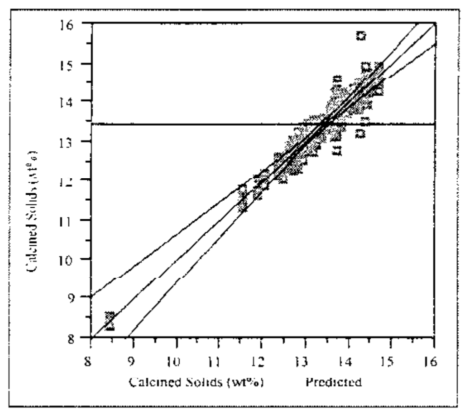
Component	Var Comp Est
Batch	0.970964
Residual	0.096916

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	221.007	3.94656	56	40.7216	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	56	221.00715	3.94656	40.7216
Error	169	16.37874	0.09692	**Prob>F**
C Total	225	237.38589		<.0001

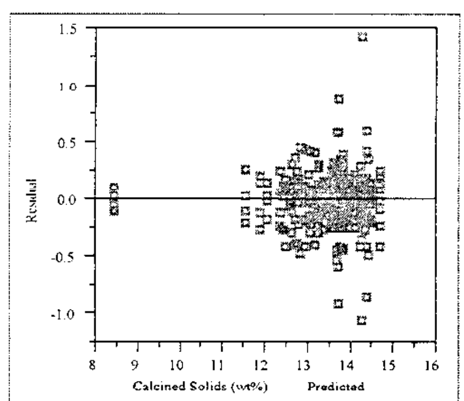


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Insoluble Solids (wt%)

Summary of Fit

RSquare	0.810236
Root Mean Square Error	0.343496
Mean of Response	12.01125
Observations (or Sum Wgts)	40

Variance Component Estimates

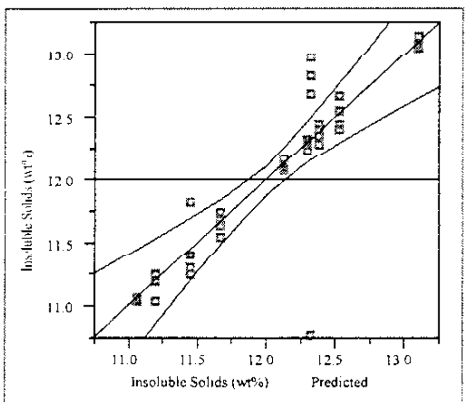
Component	Var Comp Est
Batch	0.390318
Residual	0.117989

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

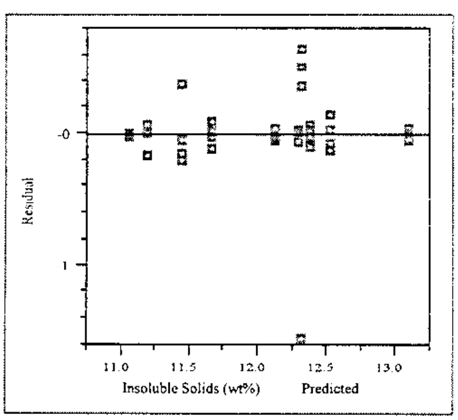
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	15.1134	1.67926	9	14.2323	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	9	15.113363	1.67926	14.2323
Error	30	3.539675	0.11799	**Prob>F**
C Total	39	18.653037		<.0001



Response: Density (g/mL)

Summary of Fit

RSquare	0.822276
Root Mean Square Error	0.01273
Mean of Response	1.07822
Observations (or Sum Wgts)	286

Variance Component Estimates

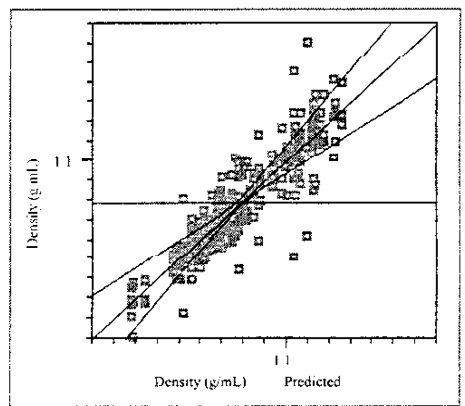
Component	Var Comp Est
Batch	0.000532
Residual	0.000162

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.16121	0.0023	70	14.2106	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	0.16121304	0.002303	14.2106
Error	215	0.03484408	0.000162	**Prob>F**
C Total	285	0.19605712		<.0001

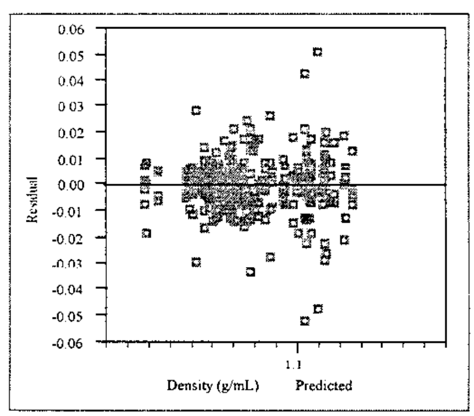


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Total Hydroxide (eq/L)

Summary of Fit

RSquare	0.979344
Root Mean Square Error	0.017305
Mean of Response	0.176852
Observations (or Sum Wgts)	73

Variance Component Estimates

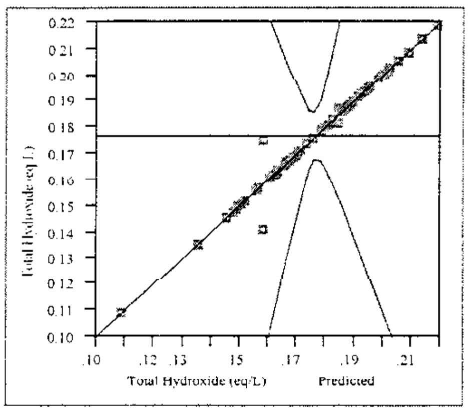
Component	Var Comp Est
Batch	0.000103
Residual	0.000299

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

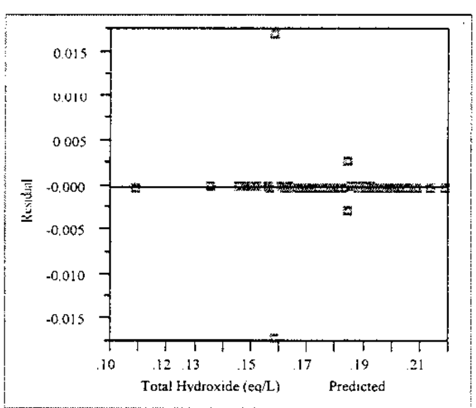
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.0284	0.00041	70	1.3546	0.5183

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	0.02839540	0.000406	1.3546
Error	2	0.00059891	0.000299	**Prob>F**
C Total	72	0.02899431		0.5183



Response: Formate (ppm)

Summary of Fit

RSquare	0.957516
Root Mean Square Error	192.4118
Mean of Response	4139.225
Observations (or Sum Wgts)	284

Variance Component Estimates

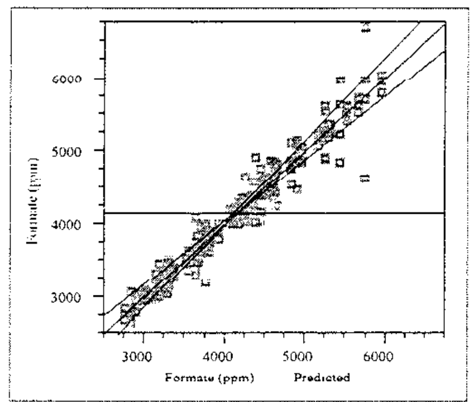
Component	Var Comp Est
Batch	625491.9
Residual	37022.3

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.777e8	2538990	70	68.5800	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	177729280	2538990	68.5800
Error	213	7885750	37022	**Prob>F**
C Total	283	185615030		<.0001

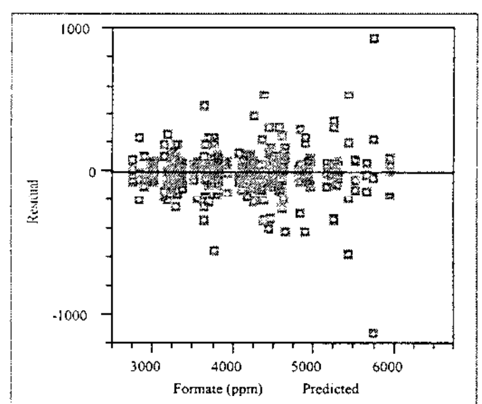


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Chloride (ppm)
Summary of Fit

RSquare	0.383333
Root Mean Square Error	90.14784
Mean of Response	1025.4
Observations (or Sum Wgts)	40

Variance Component Estimates

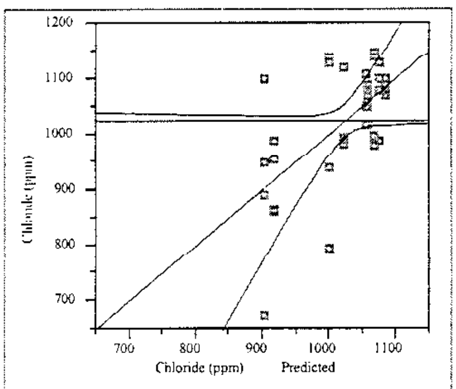
Component	Var Comp Est
Batch	2178.081
Residual	8126.633

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

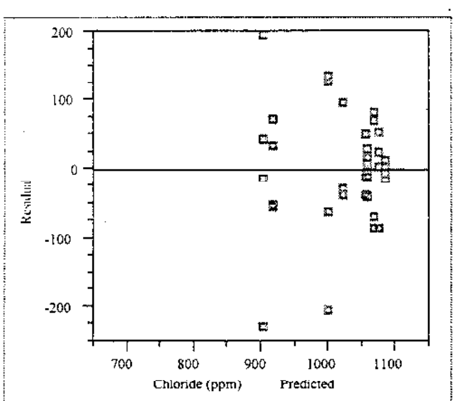
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	151551	16839	9	2.0721	0.0652

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	9	151550.60	16839.0	2.0721
Error	30	243799.00	8126.6	**Prob>F**
C Total	39	395349.60		0.0652



Response: Fluoride (ppm)
Summary of Fit

RSquare	0.383333
Root Mean Square Error	90.14784
Mean of Response	1025.4
Observations (or Sum Wgts)	40

Variance Component Estimates

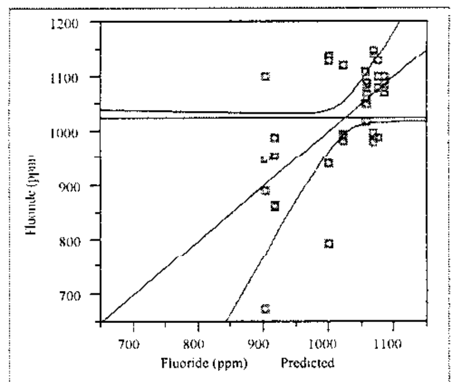
Component	Var Comp Est
Batch	2178.081
Residual	8126.633

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	151551	16839	9	2.0721	0.0652

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	9	151550.60	16839.0	2.0721
Error	30	243799.00	8126.6	**Prob>F**
C Total	39	395349.60		0.0652

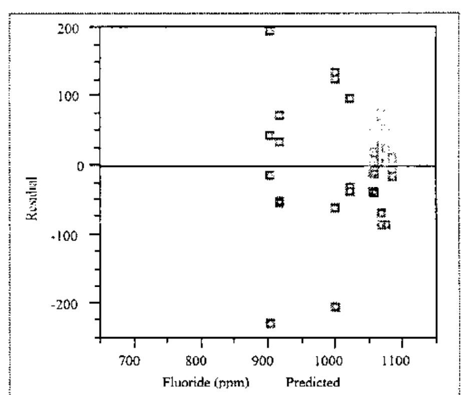


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Nitrate (ppm)

Summary of Fit

RSquare	0.904372
Root Mean Square Error	508.7749
Mean of Response	12441.34
Observations (or Sum Wgts)	284

Variance Component Estimates

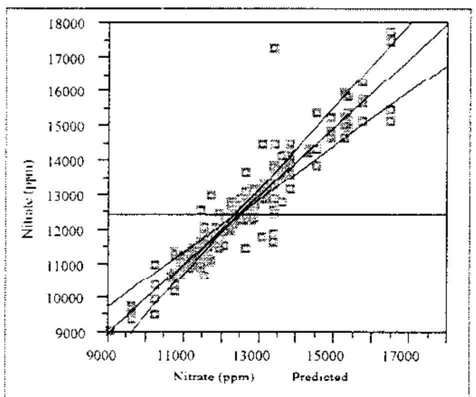
Component	Var Comp Est
Batch	1797529
Residual	258851.9

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

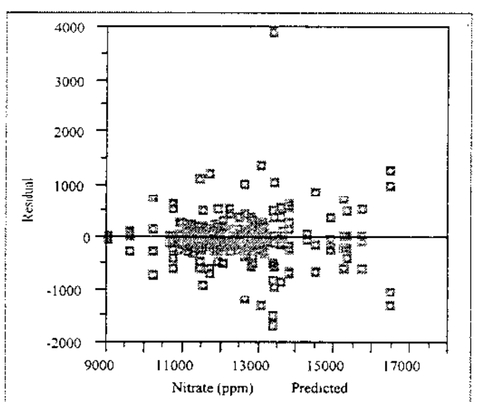
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.214e8	7448969	70	28.7770	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	521427842	7448969	28.7770
Error	213	55135450	258852	**Prob>F**
C Total	283	576563292		<.0001



Response: Nitrite (ppm)

Summary of Fit

RSquare	0.899566
Root Mean Square Error	195.4416
Mean of Response	7276.549
Observations (or Sum Wgts)	284

Variance Component Estimates

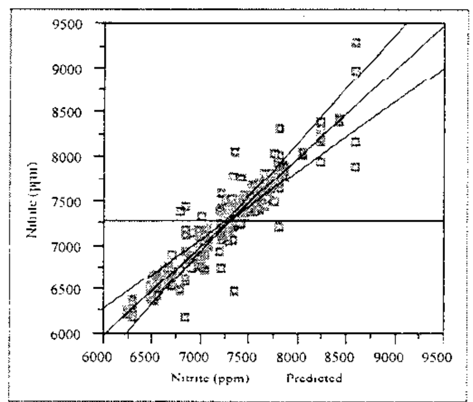
Component	Var Comp Est
Batch	250709.8
Residual	38197.42

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	7.287e7	1041037	70	27.2541	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	72872568	1041037	27.2541
Error	213	8136050	38197	**Prob>F**
C Total	283	81008618		<.0001

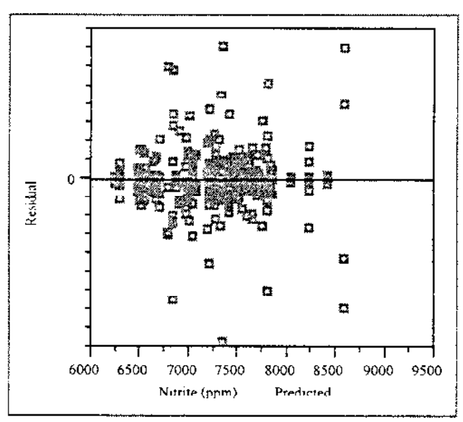


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Sulfate (ppm)

Summary of Fit

RSquare	0.642159
Root Mean Square Error	64.79314
Mean of Response	1075.482
Observations (or Sum Wgts)	284

Variance Component Estimates

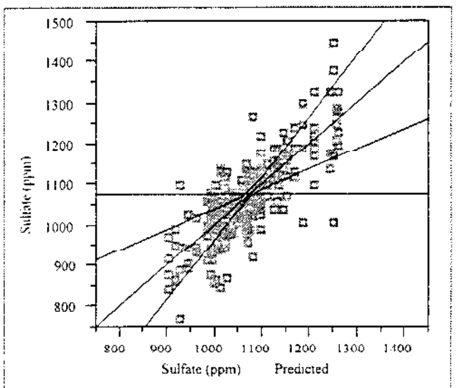
Component	Var Comp Est
Batch	4681.479
Residual	4198.151

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

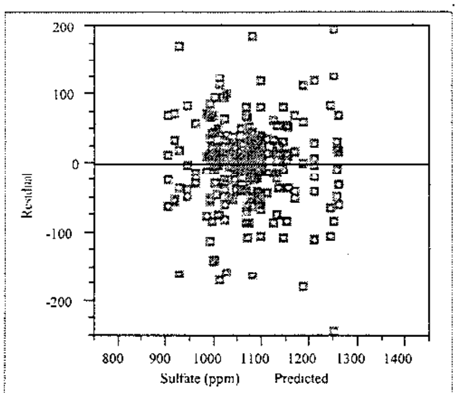
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1604685	22924.1	70	5.4605	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	1604684.7	22924.1	5.4605
Error	213	894206.2	4198.2	**Prob>F**
C Total	283	2498890.9		<.0001



Response: Aluminum (wt%)

Summary of Fit

RSquare	0.622141
Root Mean Square Error	0.196362
Mean of Response	6.763656
Observations (or Sum Wgts)	61

Variance Component Estimates

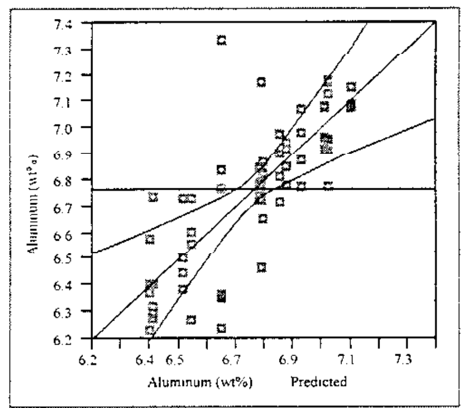
Component	Var Comp Est
Batch	0.04392
Residual	0.038558

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	2.98382	0.22952	13	5.9527	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	2.9838164	0.229524	5.9527
Error	47	1.8122314	0.038558	**Prob>F**
C Total	60	4.7960478		<.0001

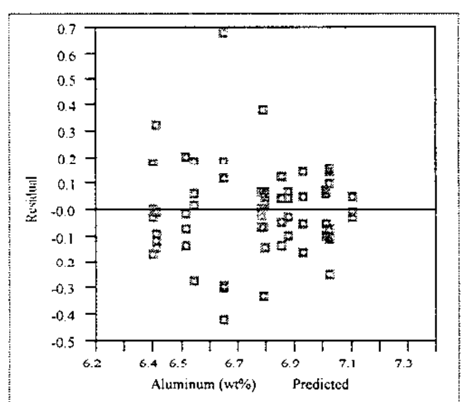


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Calcium (wt%)

Summary of Fit

RSquare	0.85995
Root Mean Square Error	0.081225
Mean of Response	2.440852
Observations (or Sum Wgts)	61

Variance Component Estimates

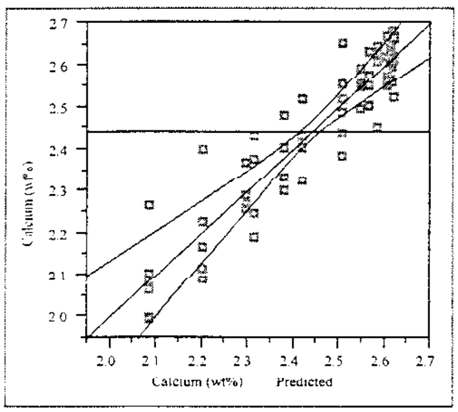
Component	Var Comp Est
Batch	0.032167
Residual	0.006598

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

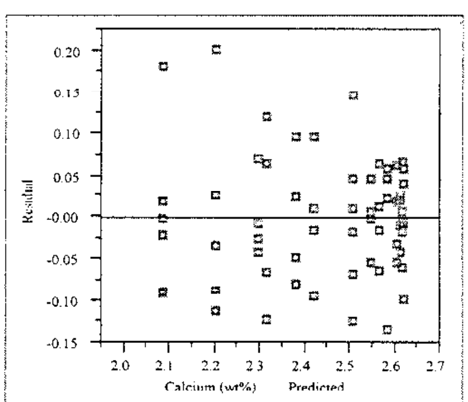
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.90401	0.14646	13	22.1996	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	1.9040148	0.146463	22.1996
Error	47	0.3100849	0.006598	**Prob>F**
C Total	60	2.2140997		<.0001



Response: Chromium (wt%)

Summary of Fit

RSquare	0.405309
Root Mean Square Error	0.031417
Mean of Response	0.179803
Observations (or Sum Wgts)	61

Variance Component Estimates

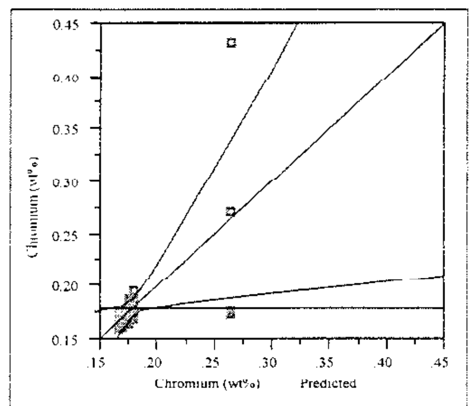
Component	Var Comp Est
Batch	0.000332
Residual	0.000987

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.03162	0.00243	13	2.4641	0.0121

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.03161722	0.002432	2.4641
Error	47	0.04639042	0.000987	**Prob>F**
C Total	60	0.07800764		0.0121

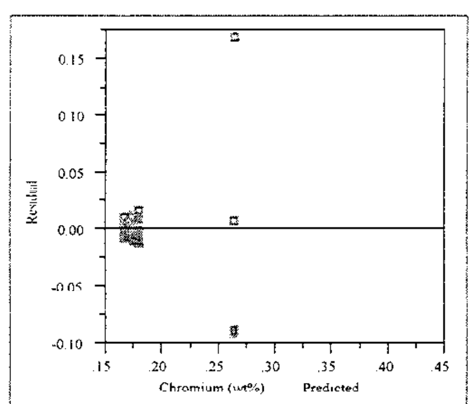


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Copper (wt%)

Summary of Fit

RSquare	0.981833
Root Mean Square Error	0.018165
Mean of Response	0.326459
Observations (or Sum Wgts)	61

Variance Component Estimates

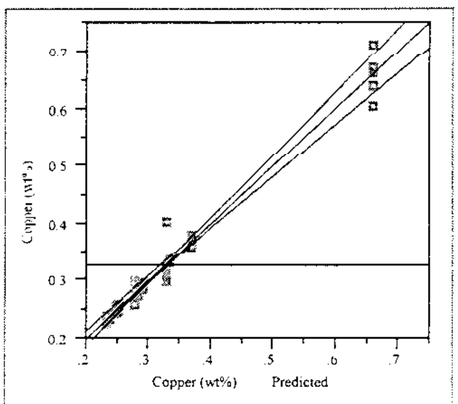
Component	Var Comp Est
Batch	0.014752
Residual	0.00033

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

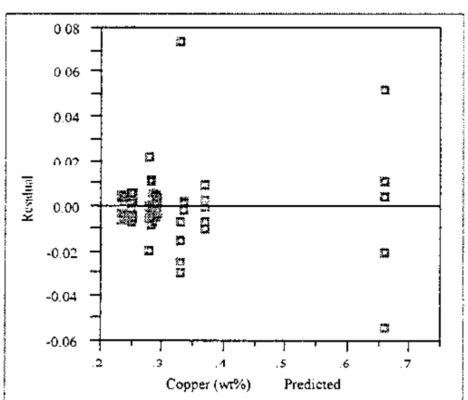
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.83816	0.06447	13	195.3930	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.83815661	0.064474	195.393
Error	47	0.01550853	0.000330	**Prob>F**
C Total	60	0.85366515		<.0001



Response: Iron (wt%)

Summary of Fit

RSquare	0.784033
Root Mean Square Error	0.612254
Mean of Response	25.9583
Observations (or Sum Wgts)	61

Variance Component Estimates

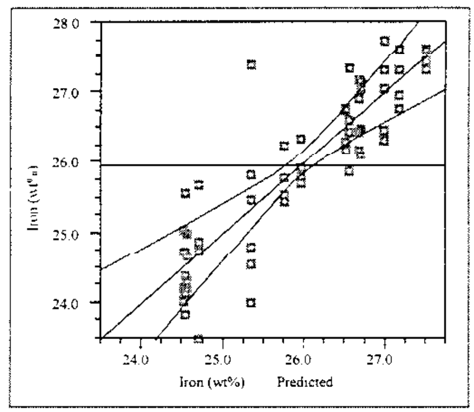
Component	Var Comp Est
Batch	1.045333
Residual	0.374855

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	63.9602	4.92001	13	13.1251	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	63.960162	4.92001	13.1251
Error	47	17.618199	0.37486	**Prob>F**
C Total	60	81.578361		<.0001

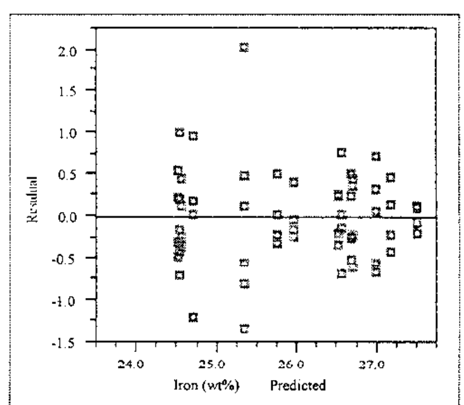


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Potassium (wt%)

Summary of Fit

RSquare	0.72516
Root Mean Square Error	0.012448
Mean of Response	0.03877
Observations (or Sum Wgts)	61

Variance Component Estimates

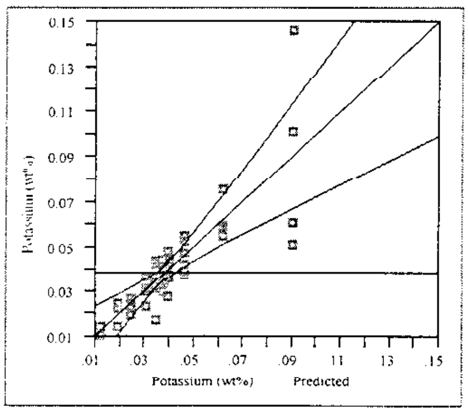
Component	Var Comp Est
Batch	0.000304
Residual	0.000155

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

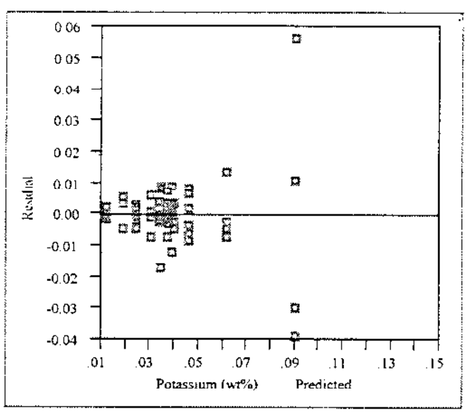
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.01922	0.00148	13	9.5391	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.01921587	0.001478	9.5391
Error	47	0.00728292	0.000155	**Prob>F**
C Total	60	0.02649879		<.0001



Response: Magnesium (wt%)

Summary of Fit

RSquare	0.858126
Root Mean Square Error	0.055191
Mean of Response	1.232672
Observations (or Sum Wgts)	61

Variance Component Estimates

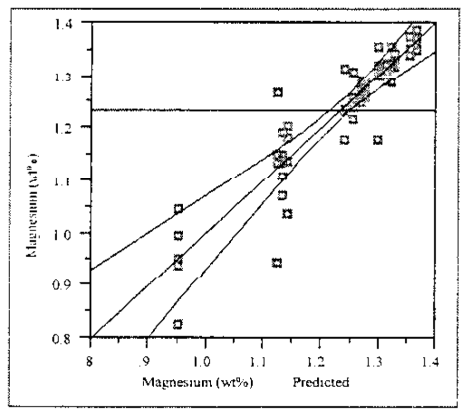
Component	Var Comp Est
Batch	0.014619
Residual	0.003046

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.86593	0.06661	13	21.8676	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.8659273	0.066610	21.8676
Error	47	0.1431642	0.003046	**Prob>F**
C Total	60	1.0090914		<.0001

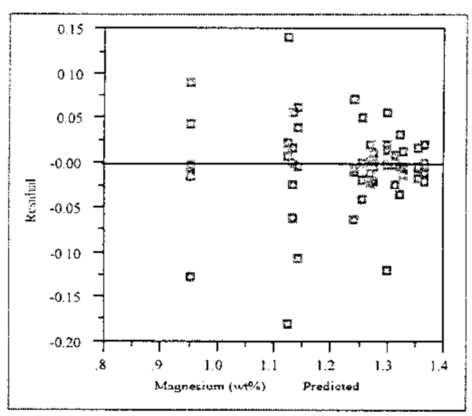


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Manganese (wt%)

Summary of Fit

RSquare	0.78666
Root Mean Square Error	0.062417
Mean of Response	2.736852
Observations (or Sum Wgts)	61

Variance Component Estimates

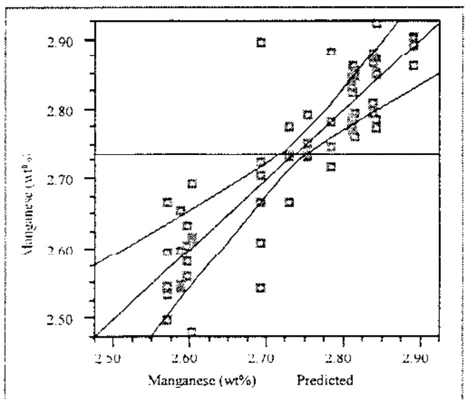
Component	Var Comp Est
Batch	0.011049
Residual	0.003896

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

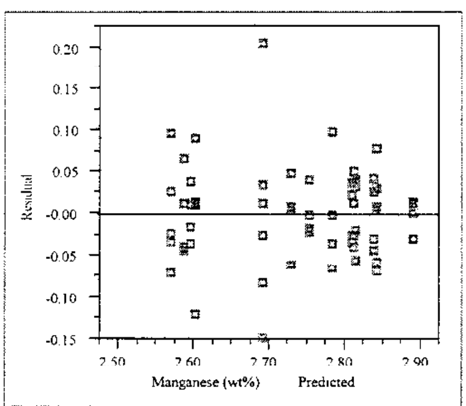
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.67518	0.05194	13	13.3312	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.67518189	0.051937	13.3312
Error	47	0.18310778	0.003896	**Prob>F**
C Total	60	0.85828967		<.0001



Response: Sodium (wt%)

Summary of Fit

RSquare	0.811398
Root Mean Square Error	0.533121
Mean of Response	6.412754
Observations (or Sum Wgts)	61

Variance Component Estimates

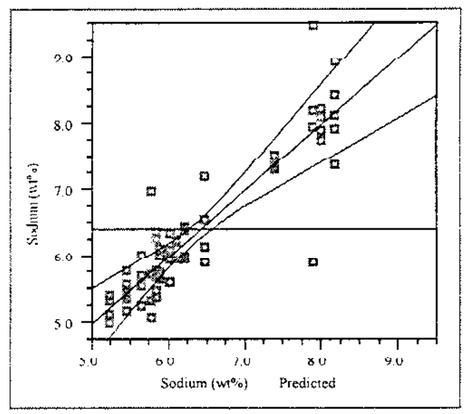
Component	Var Comp Est
Batch	0.951348
Residual	0.284218

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	57.4694	4.42072	13	15.5540	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	57.469372	4.42072	15.5540
Error	47	13.358231	0.28422	**Prob>F**
C Total	60	70.827603		<.0001

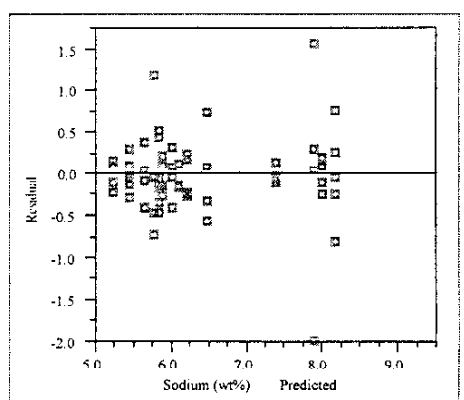


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Nickel (wt%)

Summary of Fit

RSquare	0.586071
RSquare Adj	0.47158
Root Mean Square Error	0.013921
Mean of Response	0.296721
Observations (or Sum Wgts)	61

Variance Component Estimates

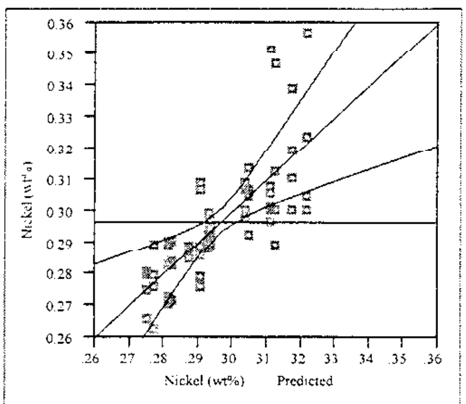
Component	Var Comp Est
Batch	0.000184
Residual	0.000194

These estimates based on equating Mean Squares to Expected Value

Tests wrt Random Effects

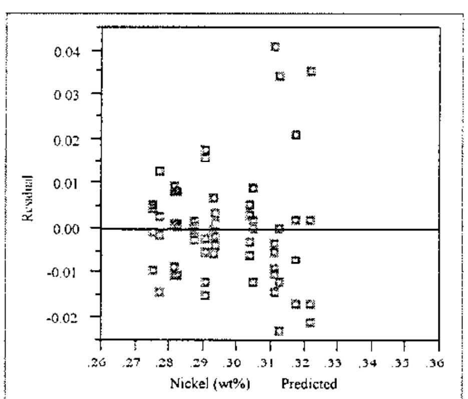
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.0129	0.00099	13	5.1189	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.01289606	0.000992	5.1189
Error	47	0.00910820	0.000194	**Prob>F**
C Total	60	0.02200426		<.0001



Response: Silicon (wt%)

Summary of Fit

RSquare	0.702015
Root Mean Square Error	0.219834
Mean of Response	0.842754
Observations (or Sum Wgts)	61

Variance

Variance Component Estimates

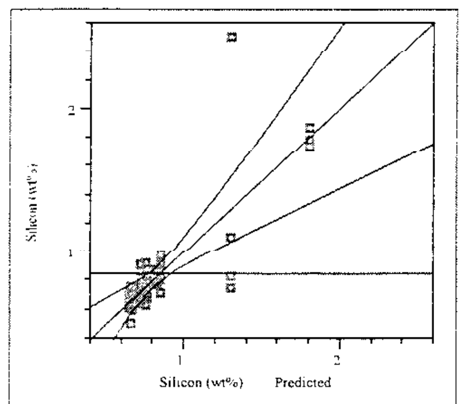
Component	Var Comp Est
Batch	0.083553
Residual	0.048327

These estimates based on equating Mean Squares to Expected Value

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.35108	0.41162	13	8.5174	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	5.3510793	0.411621	8.5174
Error	47	2.2713780	0.048327	**Prob>F**
C Total	60	7.6224573		<.0001

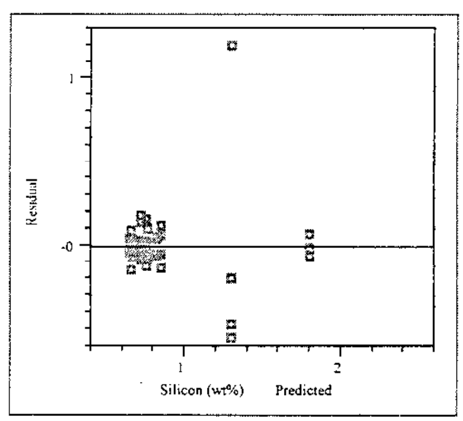


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Titanium (wt%)

Summary of Fit

RSquare	0.655627
Root Mean Square Error	0.005512
Mean of Response	0.016377
Observations (or Sum Wgts)	61

Variance Component Estimates

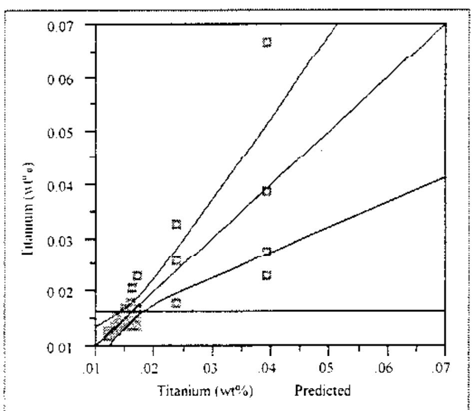
Component	Var Comp Est
Batch	0.000041
Residual	0.00003

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

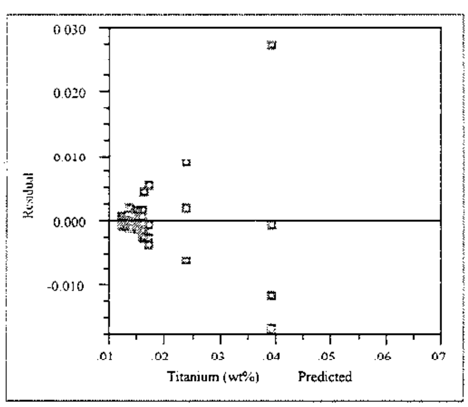
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.00272	0.00021	13	6.8831	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.00271844	0.000209	6.8831
Error	47	0.00142788	0.000030	**Prob>F**
C Total	60	0.00414633		<.0001



Response: Uranium (wt%)

Summary of Fit

RSquare	0.776258
Root Mean Square Error	0.064672
Mean of Response	2.861197
Observations (or Sum Wgts)	61

Variance Component Estimates

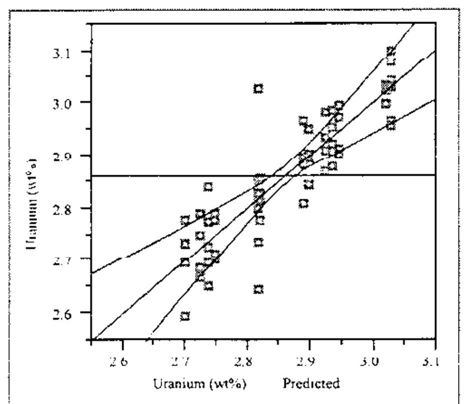
Component	Var Comp Est
Batch	0.011104
Residual	0.004182

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.68201	0.05246	13	12.5433	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.68200901	0.052462	12.5433
Error	47	0.19657663	0.004182	**Prob>F**
C Total	60	0.87858564		<.0001

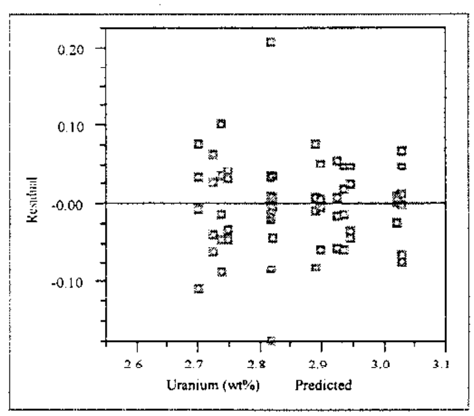


Exhibit 13: Random Effects Study for SRAT Receipt by Analyte

Response: Zirconium (wt%)

Summary of Fit

RSquare	0.642673
Root Mean Square Error	0.019339
Mean of Response	0.026738
Observations (or Sum Wgts)	61

Variance Component Estimates

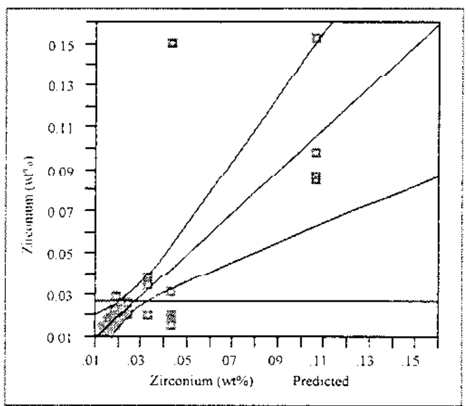
Component	Var Comp Est
Batch	0.000473
Residual	0.000374

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

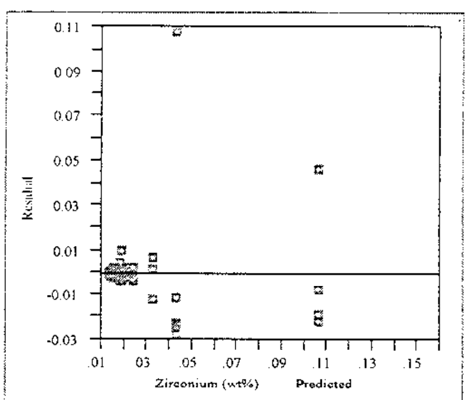
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.03162	0.00243	13	6.5025	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.03161552	0.002432	6.5025
Error	47	0.01757828	0.000374	**Prob>F**
C Total	60	0.04919380		<.0001



Response: TIC (ppm)

Summary of Fit

RSquare	0.963122
Root Mean Square Error	33.98965
Mean of Response	584.6057
Observations (or Sum Wgts)	247

Variance Component Estimates

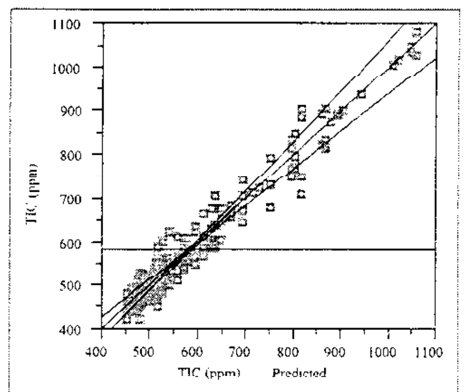
Component	Var Comp Est
Batch	21637.49
Residual	1155.296

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

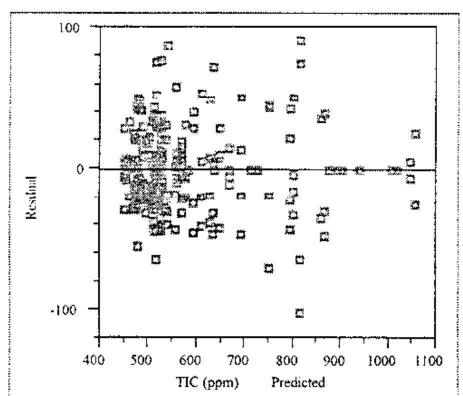
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5340516	77398.8	69	66.9947	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	5340516.5	77398.8	66.9947
Error	177	204487.5	1155.3	**Prob>F**
C Total	246	5545003.9		<.0001



Response: Fe/Al
Summary of Fit

RSquare	0.436641
Root Mean Square Error	0.064888
Mean of Response	3.838125
Observations (or Sum Wgts)	61

Variance Component Estimates

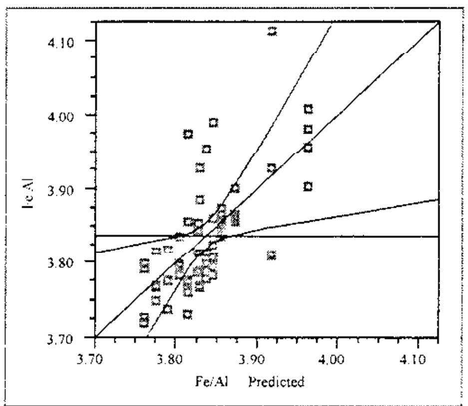
Component	Var Comp Est
Batch	0.001745
Residual	0.00421

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.15338	0.0118	13	2.8022	0.0049

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	0.15337914	0.011798	2.8022
Error	47	0.19789168	0.004210	**Prob>F**
C Total	60	0.35127081		0.0049

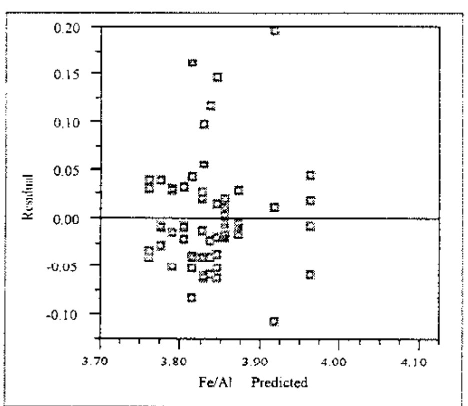


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Total Solids (wt%)

Summary of Fit

RSquare	0.946867
Root Mean Square Error	0.425524
Mean of Response	22.33421
Observations (or Sum Wgts)	280

Variance Component Estimates

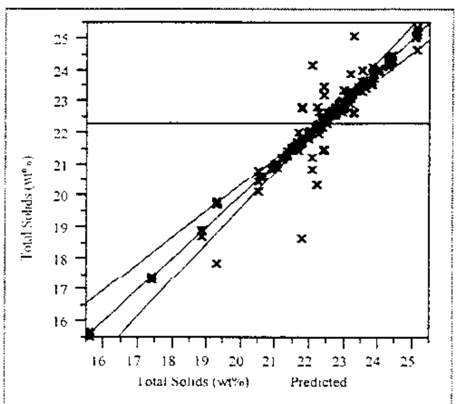
Component	Var Comp Est
Batch	2.409923
Residual	0.181071

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

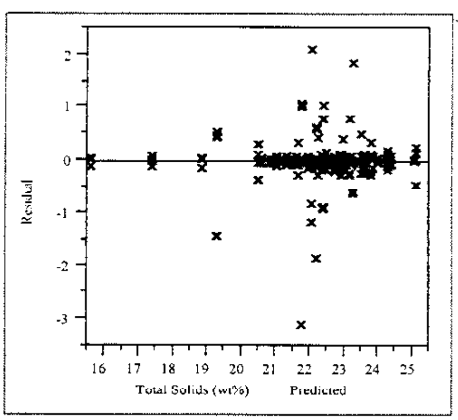
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	677.633	9.82076	69	54.2372	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	677.63258	9.82076	54.2372
Error	210	38.02485	0.18107	**Prob>F**
C Total	279	715.65743		<.0001



Response: Calcined Solids (wt%)

Summary of Fit

RSquare	0.905599
Root Mean Square Error	0.553193
Mean of Response	17.55246
Observations (or Sum Wgts)	280

Variance Component Estimates

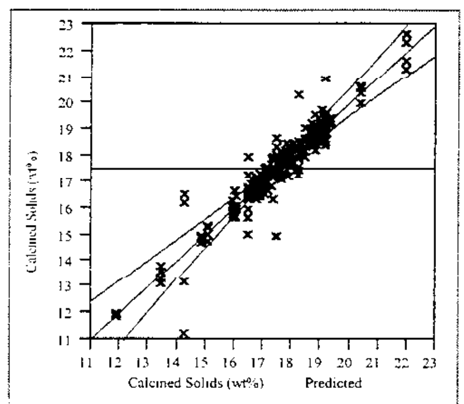
Component	Var Comp Est
Batch	2.157191
Residual	0.306023

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	616.5	8.93479	69	29.1965	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	616.50027	8.93479	29.1965
Error	210	64.26473	0.30602	**Prob>F**
C Total	279	680.76500		<.0001

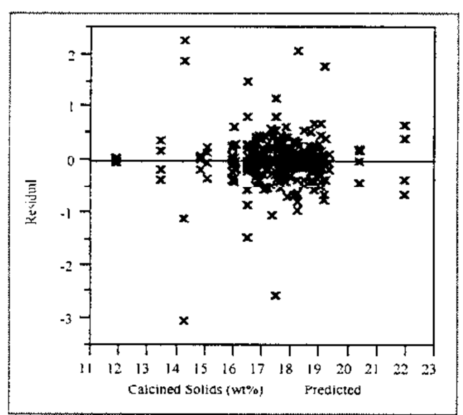


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Insoluble Solids (wt%)

Summary of Fit

RSquare	0.724617
Root Mean Square Error	1.026023
Mean of Response	14.80941
Observations (or Sum Wgts)	68

Variance Component Estimates

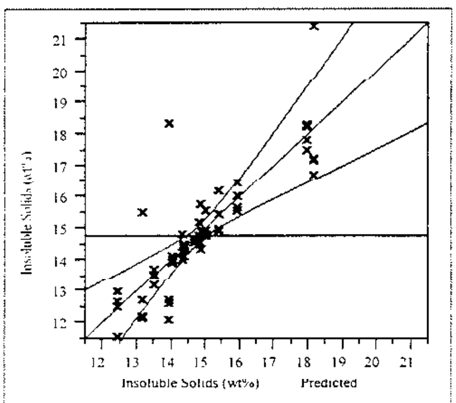
Component	Var Comp Est
Batch	1.944196
Residual	1.052723

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

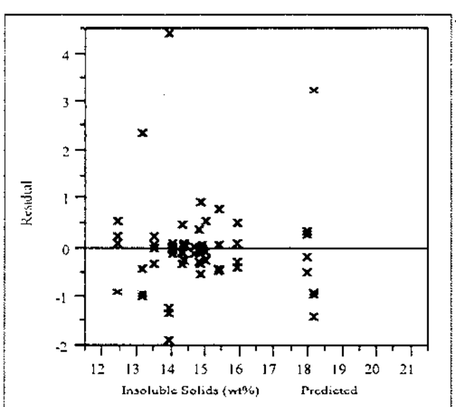
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	141.272	8.82951	16	8.3873	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	16	141.27213	8.82951	8.3873
Error	51	53.68885	1.05272	**Prob>F**
C Total	67	194.96098		<.0001



Response: Density (g/mL)

Summary of Fit

RSquare	0.788787
Root Mean Square Error	0.013858
Mean of Response	1.147143
Observations (or Sum Wgts)	280

Variance Component Estimates

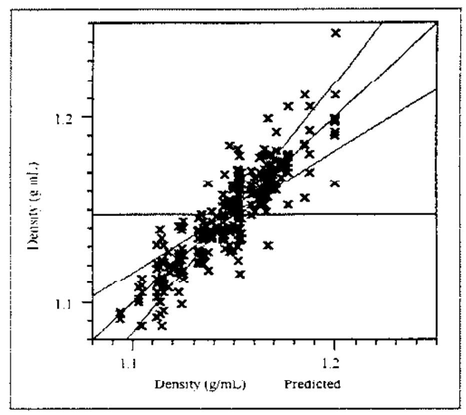
Component	Var Comp Est
Batch	0.000498
Residual	0.000192

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.15061	0.00218	69	11.3660	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	0.15061429	0.002183	11.3660
Error	210	0.04033000	0.000192	**Prob>F**
C Total	279	0.19094429		<.0001

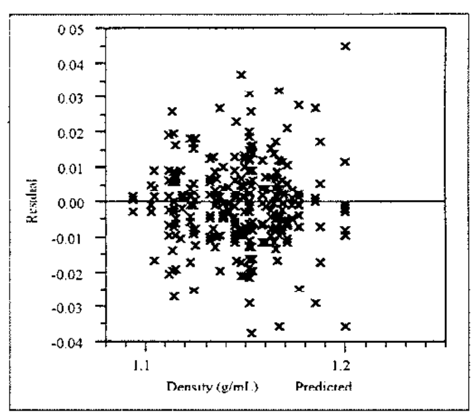


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Formate (ppm)

Summary of Fit

RSquare	0.916156
Root Mean Square Error	1529.721
Mean of Response	20902.82
Observations (or Sum Wgts)	284

Variance Component Estimates

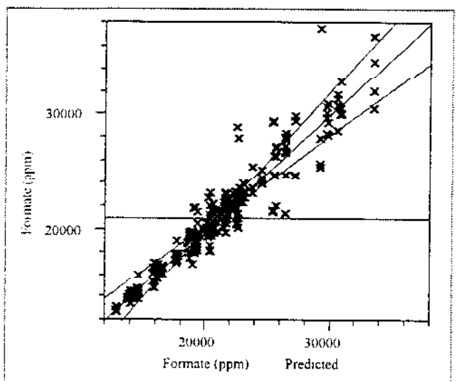
Component	Var Comp Est
Batch	18866087
Residual	2340047

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

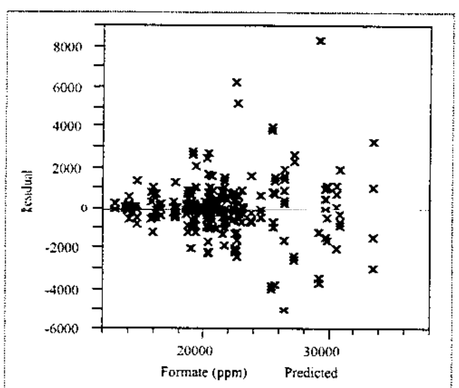
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.446e9	7.78e+7	70	33.2491	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	5446307746	77804396	33.2491
Error	213	498430000	2340047	**Prob>F**
C Total	283	5944737746		<.0001



Response: Chloride (ppm)

Summary of Fit

RSquare	0.590718
Root Mean Square Error	74.53958
Mean of Response	1074.568
Observations (or Sum Wgts)	280

Variance Component Estimates

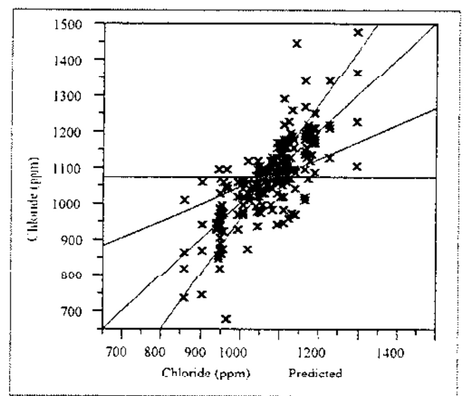
Component	Var Comp Est
Batch	4712.526
Residual	5556.149

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1684031	24406.3	69	4.3927	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	1684031.5	24406.3	4.3927
Error	210	1166791.2	5556.1	**Prob>F**
C Total	279	2850822.7		<.0001

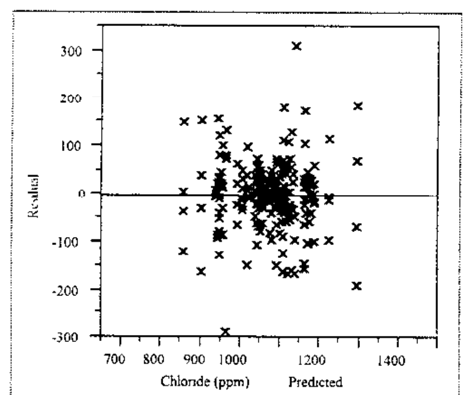


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Fluoride (ppm)

Summary of Fit

RSquare	0.532694
Root Mean Square Error	83.14685
Mean of Response	1081.437
Observations (or Sum Wgts)	284

Variance Component Estimates

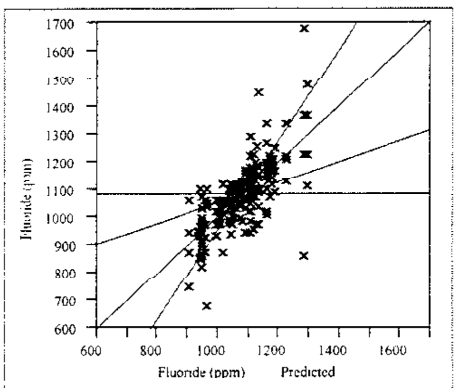
Component	Var Comp Est
Batch	4266.65
Residual	6913.399

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

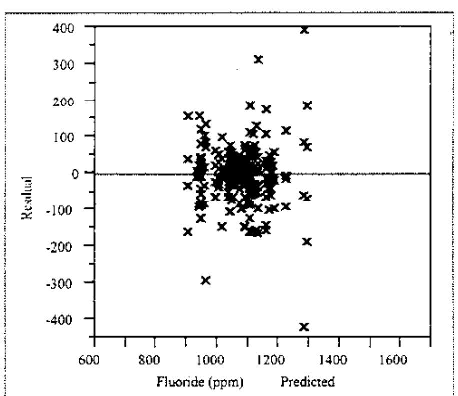
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1678600	23980	70	3.4686	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	1678599.9	23980.0	3.4686
Error	213	1472554.0	6913.4	**Prob>F**
C Total	283	3151153.9		<.0001



Response: Nitrate (ppm)

Summary of Fit

RSquare	0.878485
Root Mean Square Error	1823.468
Mean of Response	36598.21
Observations (or Sum Wgts)	280

Variance Component Estimates

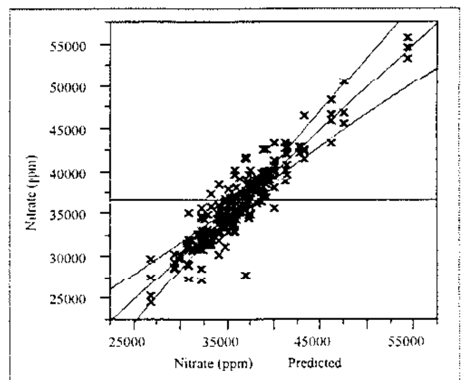
Component	Var Comp Est
Batch	17458638
Residual	3325036

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.048e9	7.316e7	69	22.0026	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	5048011607	73159589	22.0026
Error	210	698257500	3325036	**Prob>F**
C Total	279	5746269107		<.0001

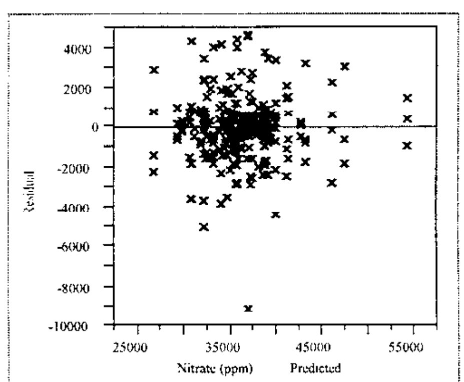


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Nitrite (ppm)

Summary of Fit

RSquare	0.904073
Root Mean Square Error	73.51017
Mean of Response	1109.686
Observations (or Sum Wgts)	280

Variance Component Estimates

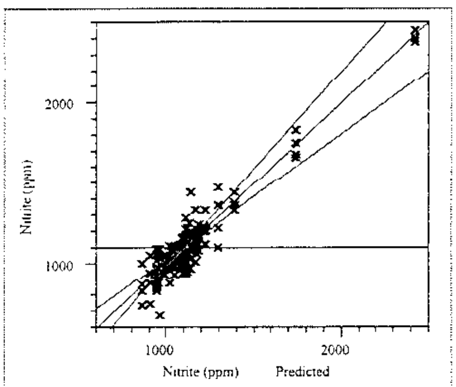
Component	Var Comp Est
Batch	37398.53
Residual	5403.745

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

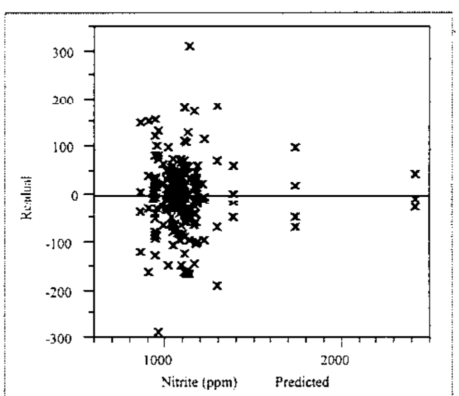
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.069e7	154998	69	28.6834	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	10694854	154998	28.6834
Error	210	1134786	5404	**Prob>F**
C Total	279	11829640		<.0001



Response: Phosphate (ppm)

Summary of Fit

RSquare	0.621752
Root Mean Square Error	74.63105
Mean of Response	1084.11
Observations (or Sum Wgts)	272

Variance Component Estimates

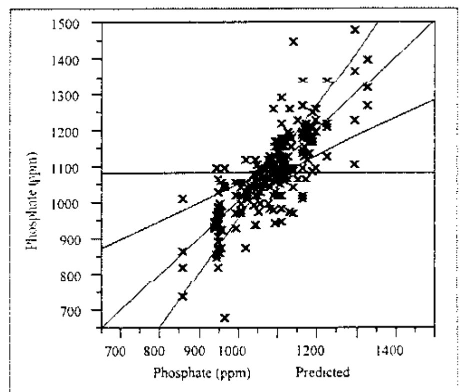
Component	Var Comp Est
Batch	5576.621
Residual	5569.794

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1867711	27876.3	67	5.0049	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	67	1867710.7	27876.3	5.0049
Error	204	1136238.0	5569.8	**Prob>F**
C Total	271	3003948.7		<.0001

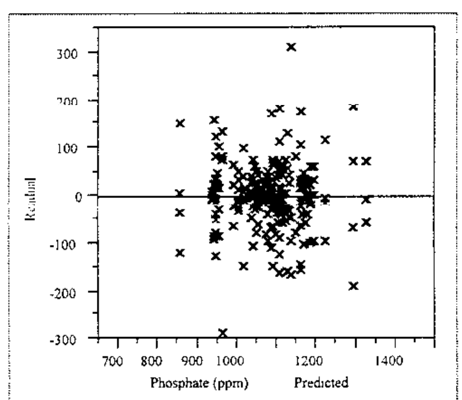


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Sulfate (ppm)

Summary of Fit

RSquare	0.778744
Root Mean Square Error	78.3595
Mean of Response	1213.521
Observations (or Sum Wgts)	280

Variance Component Estimates

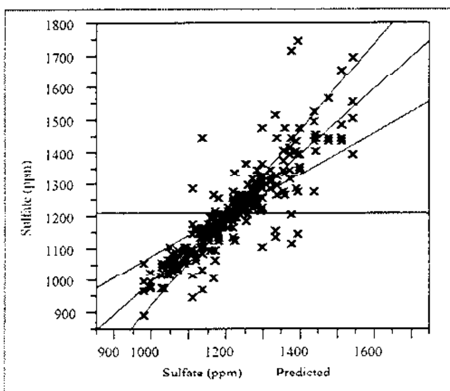
Component	Var Comp Est
Batch	14908.39
Residual	6140.212

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

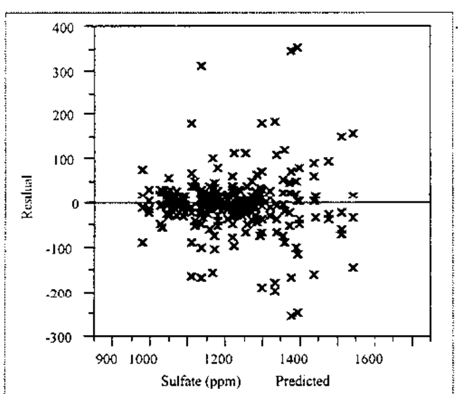
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	4538389	65773.8	69	10.7120	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	4538389.4	65773.8	10.7120
Error	210	1289444.5	6140.2	**Prob>F**
C Total	279	5827833.9		<.0001



Response: Aluminum (wt%)

Summary of Fit

RSquare	0.738289
Root Mean Square Error	0.26669
Mean of Response	6.214109
Observations (or Sum Wgts)	349

Variance Component Estimates

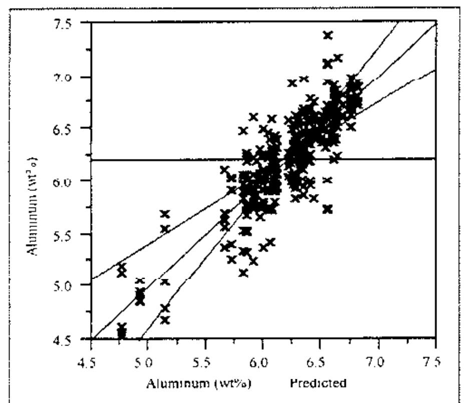
Component	Var Comp Est
Batch	0.151807
Residual	0.071123

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	56.7811	0.87356	65	12.2823	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	56.781139	0.873556	12.2823
Error	283	20.127916	0.071123	**Prob>F**
C Total	348	76.909056		<.0001

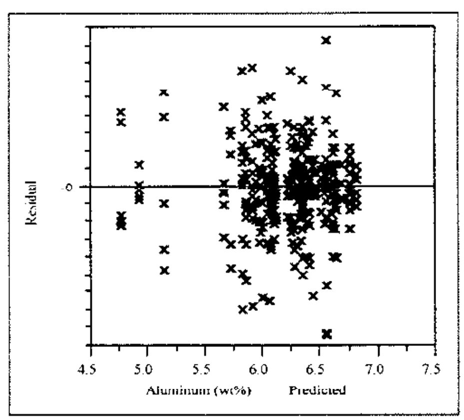


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Calcium (wt%)

Summary of Fit

RSquare	0.73568
Root Mean Square Error	0.085118
Mean of Response	2.011817
Observations (or Sum Wgts)	349

Variance Component Estimates

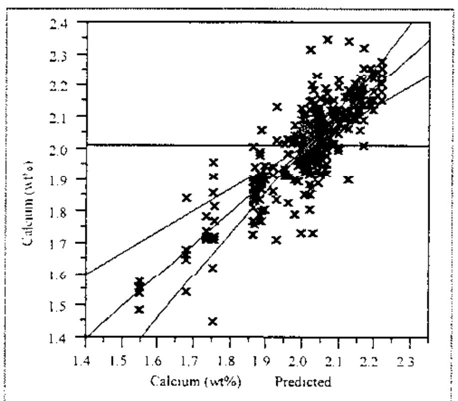
Component	Var Comp Est
Batch	0.015239
Residual	0.007245

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

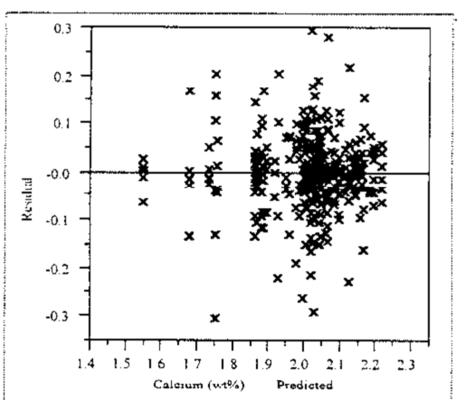
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.70675	0.0878	65	12.1180	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	5.7067480	0.087796	12.1180
Error	283	2.0503603	0.007245	**Prob>F**
C Total	348	7.7571083		<.0001



Response: Chromium (wt%)

Summary of Fit

RSquare	0.654056
Root Mean Square Error	0.007582
Mean of Response	0.161665
Observations (or Sum Wgts)	349

Variance Component Estimates

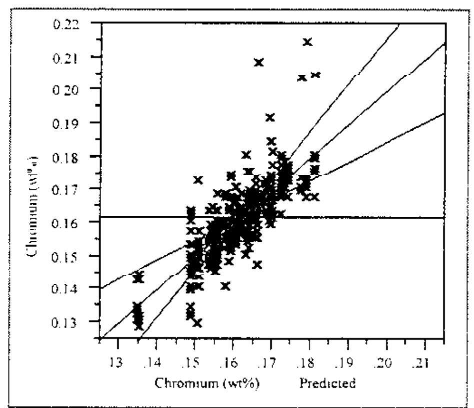
Component	Var Comp Est
Batch	0.000079
Residual	0.000057

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.03076	0.00047	65	8.2316	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	0.03075879	0.000473	8.2316
Error	283	0.01626898	0.000057	**Prob>F**
C Total	348	0.04702778		<.0001

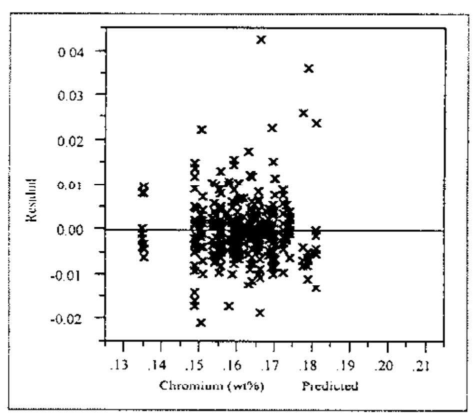


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Copper (wt%)

Summary of Fit

RSquare	0.999078
Root Mean Square Error	0.010187
Mean of Response	0.135232
Observations (or Sum Wgts)	349

Variance Component Estimates

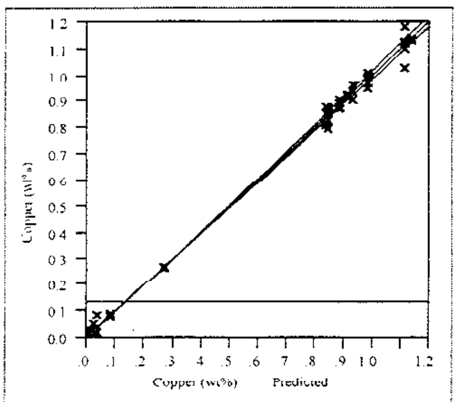
Component	Var Comp Est
Batch	0.092565
Residual	0.000104

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

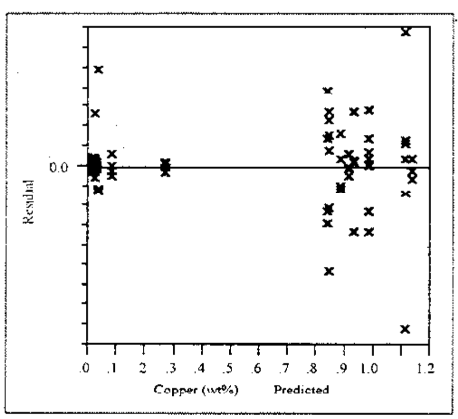
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	31.8105	0.48939	65	4715.87	0.0000

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	31.810484	0.489392	4715.87
Error	283	0.029368	0.000104	**Prob>F**
C Total	348	31.839852		0.0000



Response: Iron (wt%)

Summary of Fit

RSquare	0.810669
Root Mean Square Error	0.809755
Mean of Response	23.47355
Observations (or Sum Wgts)	349

Variance Component Estimates

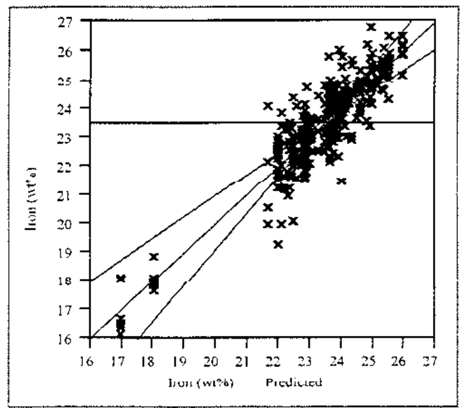
Component	Var Comp Est
Batch	2.188467
Residual	0.655703

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	794.538	12.2237	65	18.6421	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	794.53790	12.2237	18.6421
Error	283	185.56409	0.6557	**Prob>F**
C Total	348	980.10198		<.0001

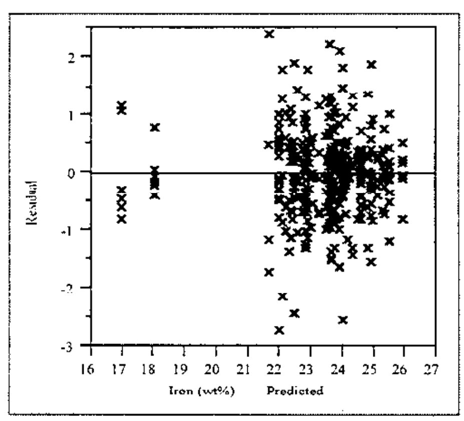


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Potassium (wt%)

Summary of Fit

RSquare	0.80374
Root Mean Square Error	0.008721
Mean of Response	0.039521
Observations (or Sum Wgts)	349

Variance Component Estimates

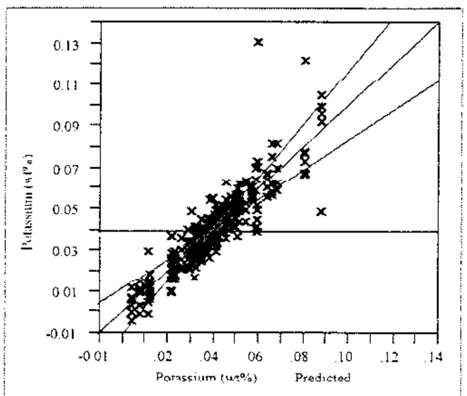
Component	Var Comp Est
Batch	0.000242
Residual	0.000076

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

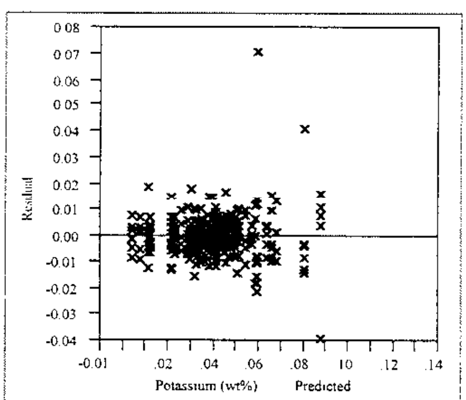
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.08815	0.00136	65	17.8303	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	0.08815191	0.001356	17.8303
Error	283	0.02152518	0.000076	**Prob>F**
C Total	348	0.10967709		<.0001



Response: Magnesium (wt%)

Summary of Fit

RSquare	0.71246
Root Mean Square Error	0.062692
Mean of Response	0.945433
Observations (or Sum Wgts)	349

Variance Component Estimates

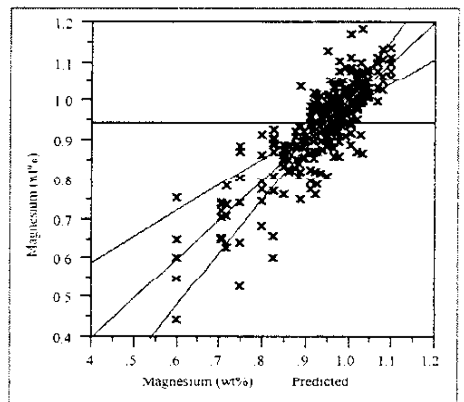
Component	Var Comp Est
Batch	0.007278
Residual	0.00393

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	2.75593	0.0424	65	10.7879	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	2.7559287	0.042399	10.7879
Error	283	1.1122590	0.003930	**Prob>F**
C Total	348	3.8681877		<.0001

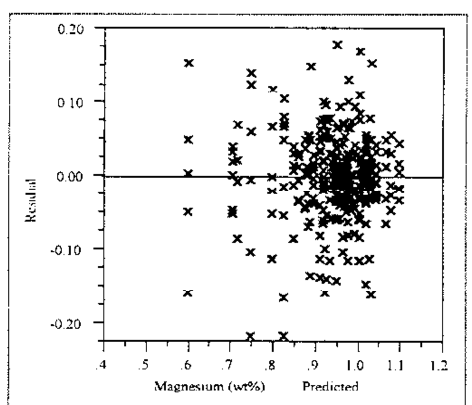


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Manganese (wt%)

Summary of Fit

RSquare	0.853185
Root Mean Square Error	0.075014
Mean of Response	2.449582
Observations (or Sum Wgts)	349

Variance Component Estimates

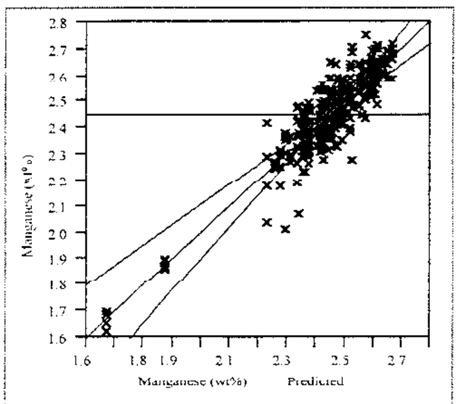
Component	Var Comp Est
Batch	0.02587
Residual	0.005627

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

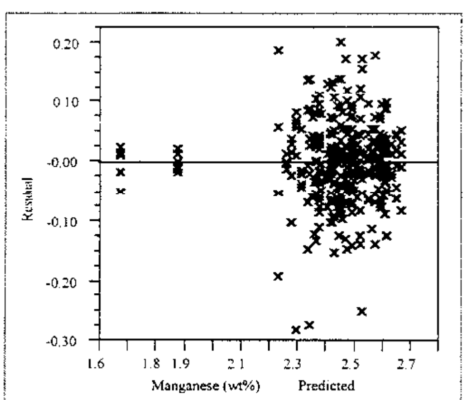
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	9.25437	0.14237	65	25.3014	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	9.254374	0.142375	25.3014
Error	283	1.592483	0.005627	**Prob>F**
C Total	348	10.846857		<.0001



Response: Sodium (wt%)

Summary of Fit

RSquare	0.860009
Root Mean Square Error	0.470886
Mean of Response	7.16796
Observations (or Sum Wgts)	349

Variance Component Estimates

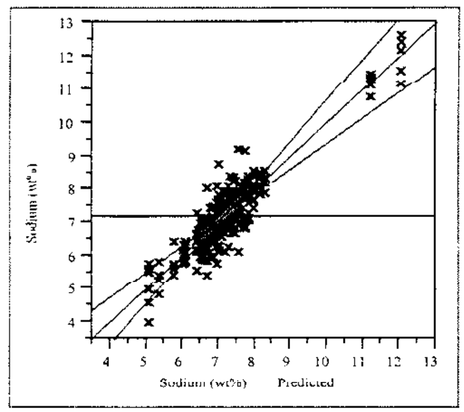
Component	Var Comp Est
Batch	1.080043
Residual	0.221734

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	385.496	5.9307	65	26.7470	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	385.49575	5.93070	26.7470
Error	283	62.75059	0.22173	**Prob>F**
C Total	348	448.24634		<.0001

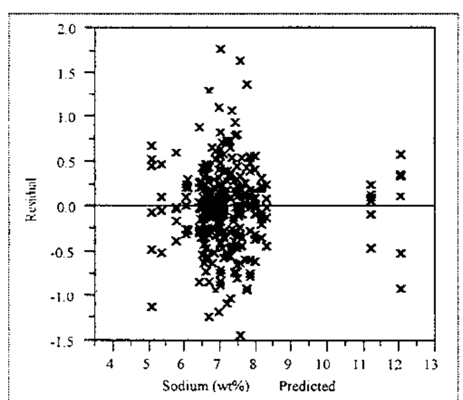


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Nickel (wt%)

Summary of Fit

RSquare	0.598769
Root Mean Square Error	0.017243
Mean of Response	0.26796
Observations (or Sum Wgts)	349

Variance Component Estimates

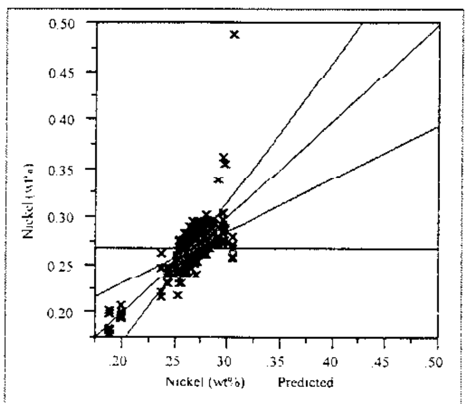
Component	Var Comp Est
Batch	0.000309
Residual	0.000297

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

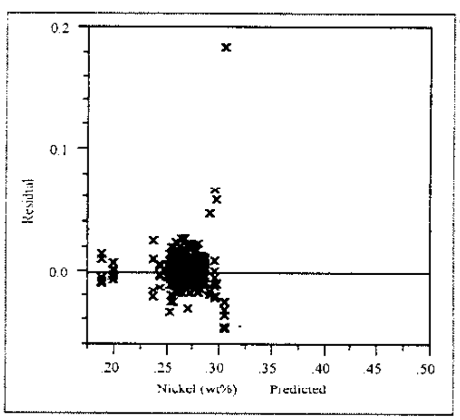
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.12557	0.00193	65	6.4974	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	0.12556756	0.001932	6.4974
Error	283	0.08414188	0.000297	**Prob>F**
C Total	348	0.20970944		<.0001



Response: Silicon (wt%)

Summary of Fit

RSquare	0.603223
Root Mean Square Error	0.127012
Mean of Response	0.711444
Observations (or Sum Wgts)	349

Variance Component Estimates

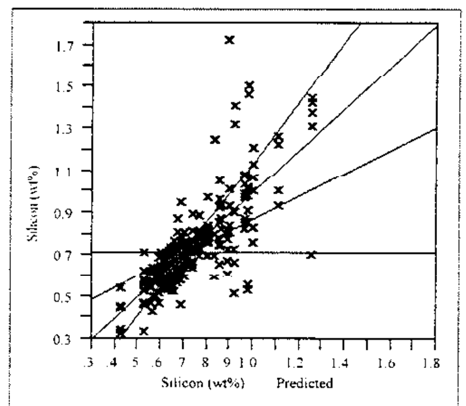
Component	Var Comp Est
Batch	0.017149
Residual	0.016132

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	6.94081	0.10678	65	6.6192	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	6.940815	0.106782	6.6192
Error	283	4.565402	0.016132	**Prob>F**
C Total	348	11.506216		<.0001

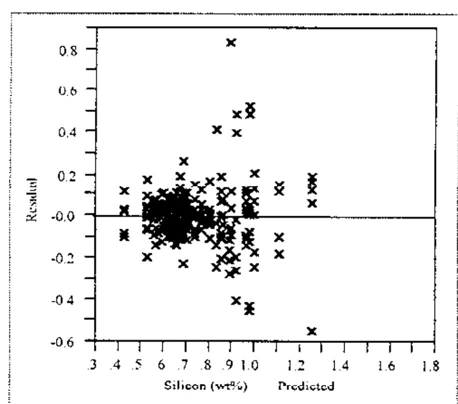


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Titanium (wt%)

Summary of Fit

RSquare	0.812203
Root Mean Square Error	0.007657
Mean of Response	0.01888
Observations (or Sum Wgts)	349

Variance Component Estimates

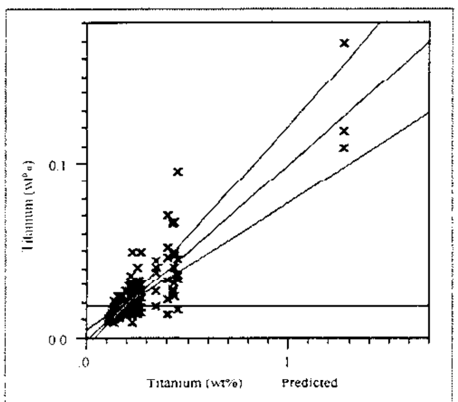
Component	Var Comp Est
Batch	0.000198
Residual	0.000059

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

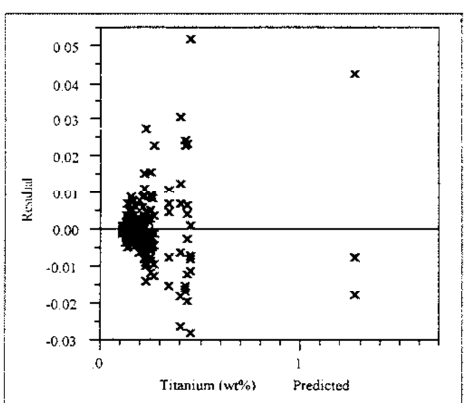
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.07176	0.0011	65	18.8299	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	0.07175565	0.001104	18.8299
Error	283	0.01659130	0.000059	**Prob>F**
C Total	348	0.08834695		<.0001



Response: Uranium (wt%)

Summary of Fit

RSquare	0.797285
Root Mean Square Error	0.094388
Mean of Response	2.647381
Observations (or Sum Wgts)	349

Variance Component Estimates

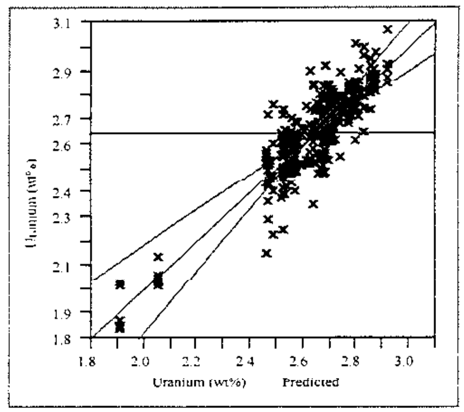
Component	Var Comp Est
Batch	0.027176
Residual	0.008909

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	9.91621	0.15256	65	17.1238	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	9.916211	0.152557	17.1238
Error	283	2.521264	0.008909	**Prob>F**
C Total	348	12.437474		<.0001

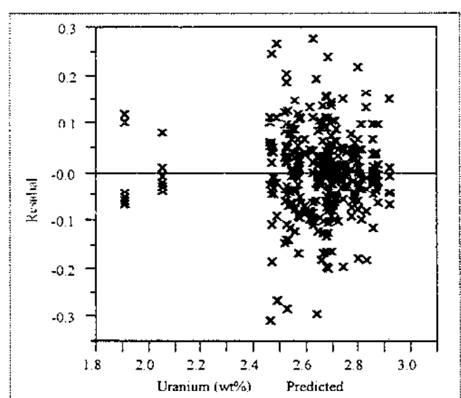


Exhibit 14: Random Effects Study for SRAT Product by Analyte

Response: Zirconium (wt%)

Summary of Fit

RSquare	0.790974
Root Mean Square Error	0.00676
Mean of Response	0.016771
Observations (or Sum Wgts)	349

Variance Component Estimates

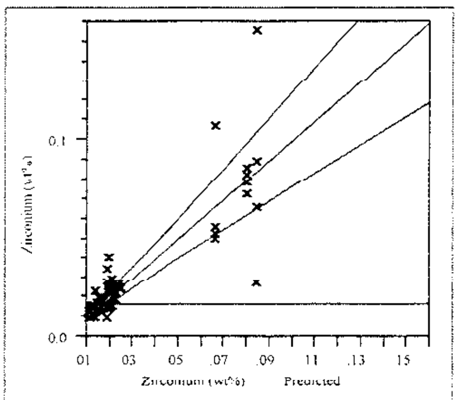
Component	Var Comp Est
Batch	0.000134
Residual	0.000046

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

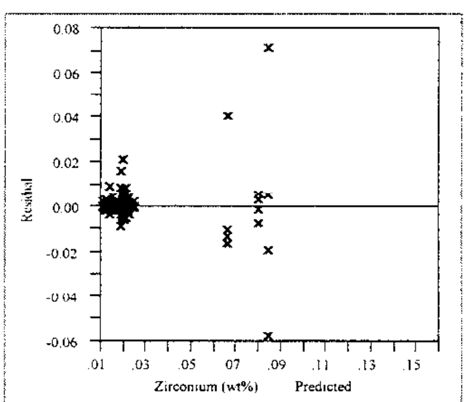
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.04893	0.00075	65	16.4753	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	0.04893095	0.000753	16.4753
Error	283	0.01293072	0.000046	**Prob>F**
C Total	348	0.06186166		<.0001



Response: Fe/Al

Summary of Fit

RSquare	0.694407
Root Mean Square Error	0.088482
Mean of Response	3.78092
Observations (or Sum Wgts)	349

Variance Component Estimates

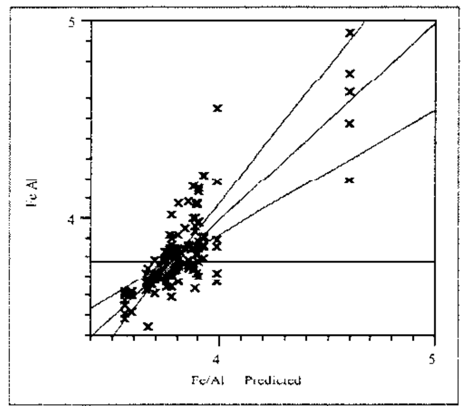
Component	Var Comp Est
Batch	0.013172
Residual	0.007829

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.0346	0.07746	65	9.8933	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	65	5.0345986	0.077455	9.8933
Error	283	2.2156195	0.007829	**Prob>F**
C Total	348	7.2502181		<.0001

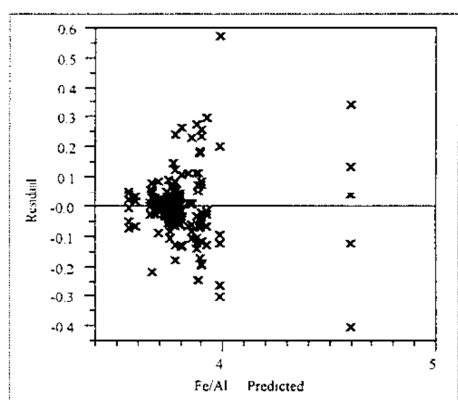


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Exhibit 15: Random Effects Study for SME by Anion

Response: Total Solids (wt%)

Summary of Fit

RSquare	0.876352
Root Mean Square Error	1.112606
Mean of Response	48.82135
Observations (or Sum Wgts)	297

Variance Component Estimates

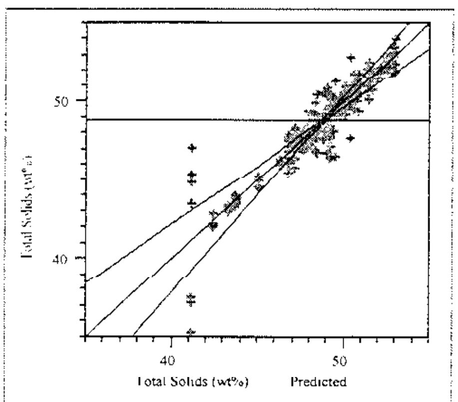
Component	Var Comp Est
Batch	6.442512
Residual	1.237893

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

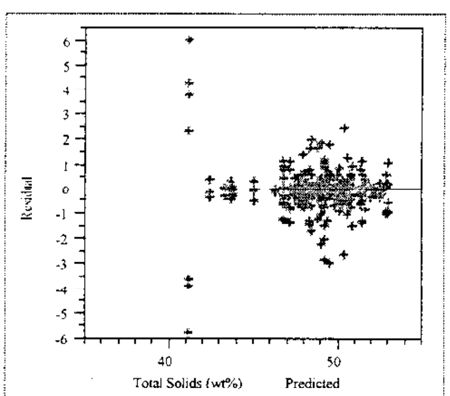
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1974.05	27.8035	71	22.4604	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	71	1974.0498	27.8035	22.4604
Error	225	278.5259	1.2379	**Prob>F**
C Total	296	2252.5757		<.0001



Response: Calcined Solids (wt%)

Summary of Fit

RSquare	0.838115
Root Mean Square Error	1.24286
Mean of Response	43.09811
Observations (or Sum Wgts)	297

Variance Component Estimates

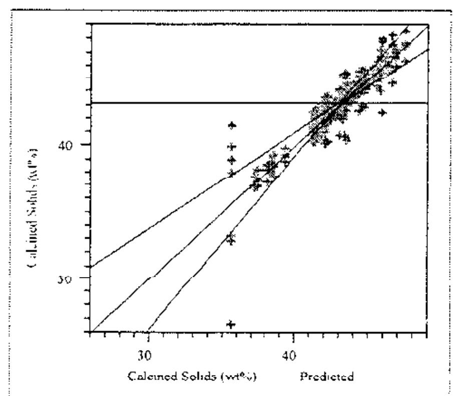
Component	Var Comp Est
Batch	5.771507
Residual	1.544701

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1799.38	25.3434	71	16.4067	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	71	1799.3845	25.3434	16.4067
Error	225	347.5576	1.5447	**Prob>F**
C Total	296	2146.9421		<.0001

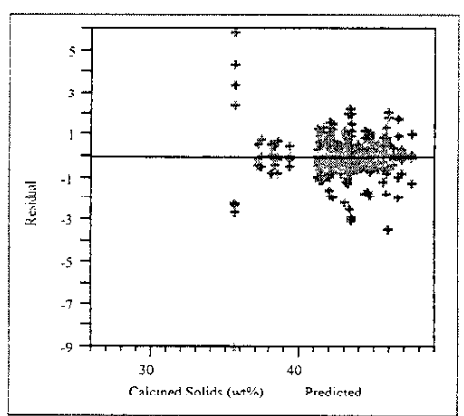


Exhibit 15: Random Effects Study for SME by Anion

Response: Insoluble Solids (wt%)

Summary of Fit

RSquare	0.934941
Root Mean Square Error	0.752659
Mean of Response	40.76357
Observations (or Sum Wgts)	56

Variance Component Estimates

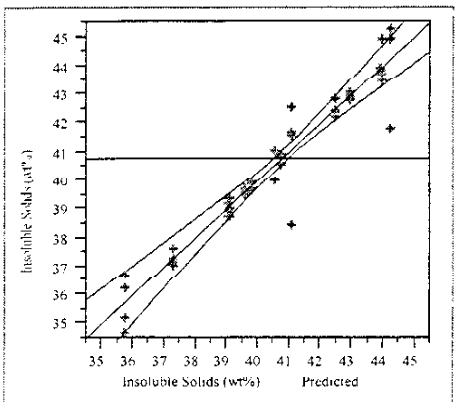
Component	Var Comp Est
Batch	6.433689
Residual	0.566495

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

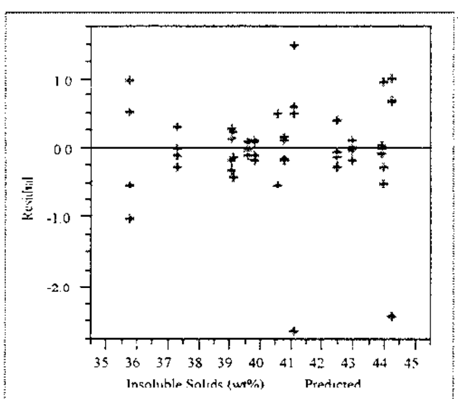
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	341.916	26.3013	13	46.4280	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	13	341.91629	26.3013	46.4280
Error	42	23.79280	0.5665	**Prob>F**
C Total	55	365.70909		<.0001



Response: Density (g/mL)

Summary of Fit

RSquare	0.872605
Root Mean Square Error	0.018226
Mean of Response	1.414685
Observations (or Sum Wgts)	298

Variance Component Estimates

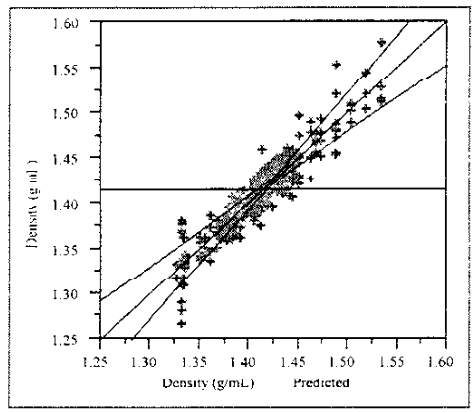
Component	Var Comp Est
Batch	0.001671
Residual	0.000332

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.51425	0.00724	71	21.8030	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	71	0.51425085	0.007243	21.8030
Error	226	0.07507750	0.000332	**Prob>F**
C Total	297	0.58932835		<.0001

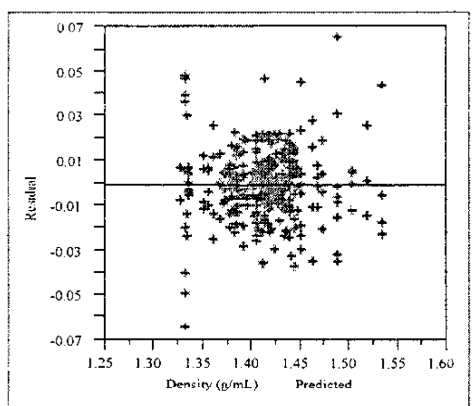


Exhibit 15: Random Effects Study for SME by Anion

Response: Formate (ppm)

Summary of Fit

RSquare	0.871203
Root Mean Square Error	2166.301
Mean of Response	32735.19
Observations (or Sum Wgts)	324

Variance Component Estimates

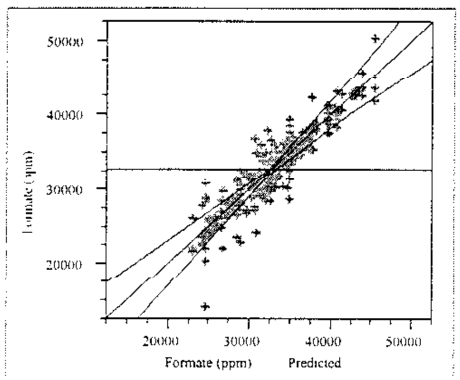
Component	Var Comp Est
Batch	23544805
Residual	4692860

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

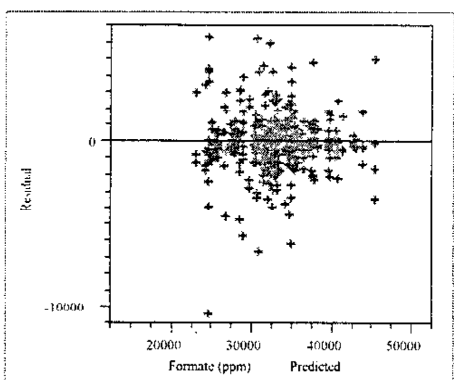
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	7.872e9	1.05e+8	75	22.3669	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	7872349722	1.0496e8	22.3669
Error	248	1163829167	4692860	**Prob>F**
C Total	323	9036178889		<.0001



Response: Chloride (ppm)

Summary of Fit

RSquare	0.486327
Root Mean Square Error	677.8373
Mean of Response	1159.614
Observations (or Sum Wgts)	324

Variance Component Estimates

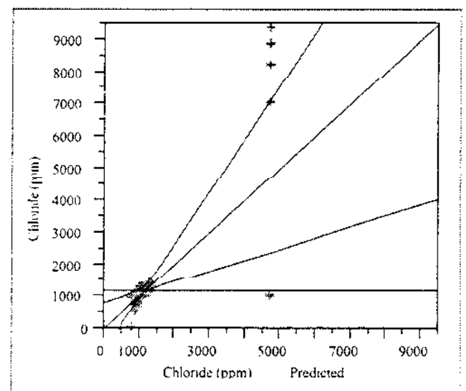
Component	Var Comp Est
Batch	229866.8
Residual	459463.4

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.079e8	1438412	75	3.1306	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	107880907	1438412	3.1306
Error	248	113946936	459463	**Prob>F**
C Total	323	221827843		<.0001

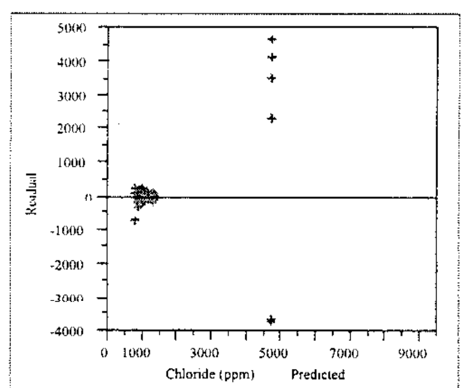


Exhibit 15: Random Effects Study for SME by Anion

Response: Fluoride (ppm)

Summary of Fit

RSquare	0.485941
Root Mean Square Error	678.1098
Mean of Response	1160.75
Observations (or Sum Wgts)	324

Variance Component Estimates

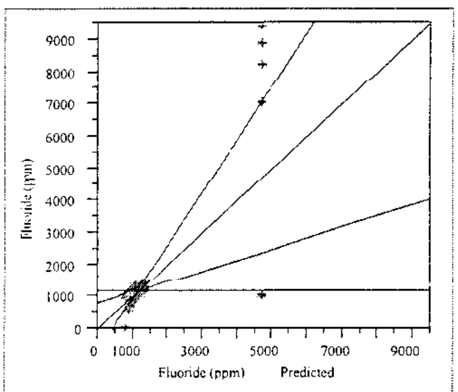
Component	Var Comp Est
Batch	229529.6
Residual	459832.9

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

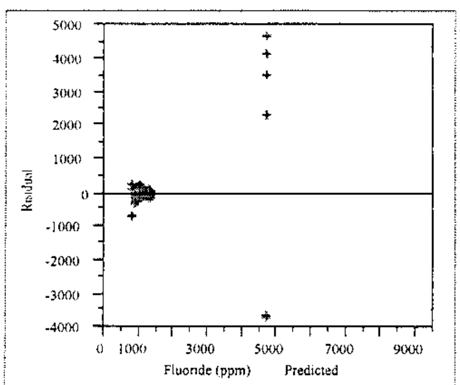
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.078e8	1437346	75	3.1258	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	107800917	1437346	3.1258
Error	248	114038568	459833	**Prob>F**
C Total	323	221839485		<.0001



Response: Nitrate (ppm)

Summary of Fit

RSquare	0.878834
Root Mean Square Error	1748.168
Mean of Response	25244.14
Observations (or Sum Wgts)	324

Variance Component Estimates

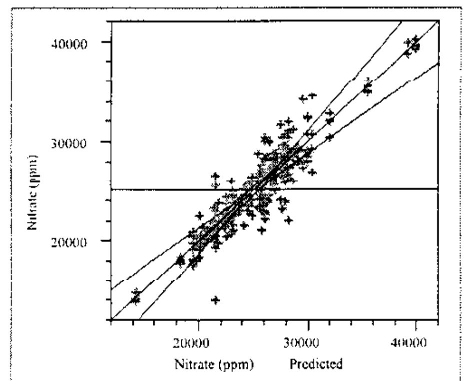
Component	Var Comp Est
Batch	16493110
Residual	3056090

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.497e9	7.33e+7	75	23.9837	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	5497228441	73296379	23.9837
Error	248	757910417	3056090	**Prob>F**
C Total	323	6255138858		<.0001

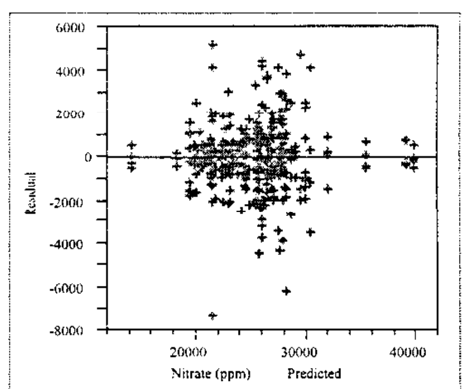


Exhibit 15: Random Effects Study for SME by Anion

Response: Nitrite (ppm)

Summary of Fit

RSquare	0.486327
Root Mean Square Error	677.8373
Mean of Response	1159.614
Observations (or Sum Wgts)	324

Variance Component Estimates

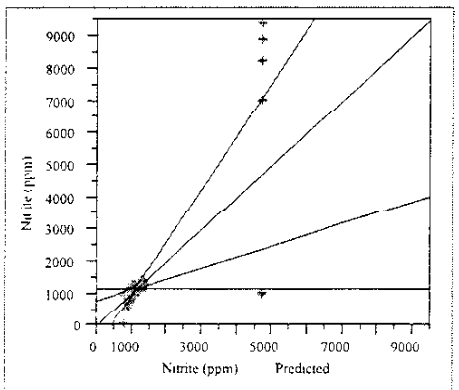
Component	Var Comp Est
Batch	229866.8
Residual	459463.4

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

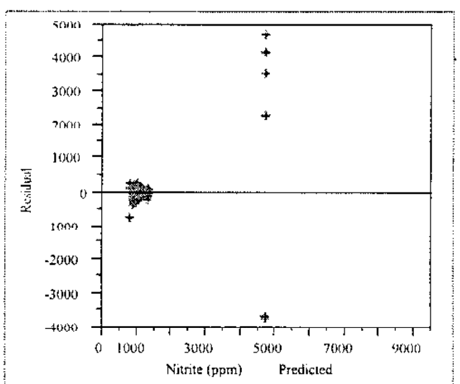
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.079e8	1438412	75	3.1306	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	107880907	1438412	3.1306
Error	248	113946936	459463	**Prob>F**
C Total	323	221827843		<.0001



Response: Phosphate (ppm)

Summary of Fit

RSquare	0.54196
Root Mean Square Error	705.6939
Mean of Response	1358.256
Observations (or Sum Wgts)	324

Variance Component Estimates

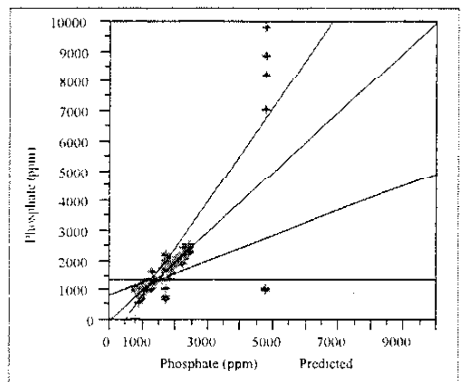
Component	Var Comp Est
Batch	340577.3
Residual	498003.9

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.461e8	1948443	75	3.9125	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	146133196	1948443	3.9125
Error	248	123504956	498004	**Prob>F**
C Total	323	269638152		<.0001

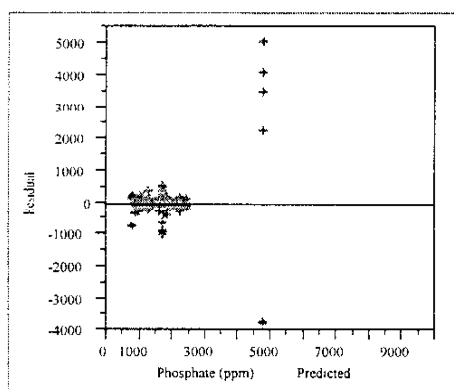


Exhibit 15: Random Effects Study for SME by Anion

Response: Sulfate (ppm)

Summary of Fit

RSquare	0.487503
Root Mean Square Error	678.2695
Mean of Response	1205.448
Observations (or Sum Wgts)	324

Variance Component Estimates

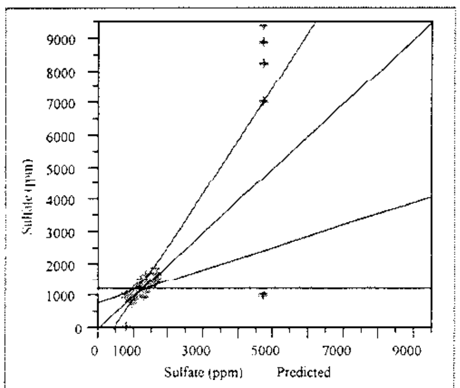
Component	Var Comp Est
Batch	231755.2
Residual	460049.6

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.085e8	1447041	75	3.1454	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	75	108528054	1447041	3.1454
Error	248	114092296	460050	**Prob>F**
C Total	323	222620350		<.0001

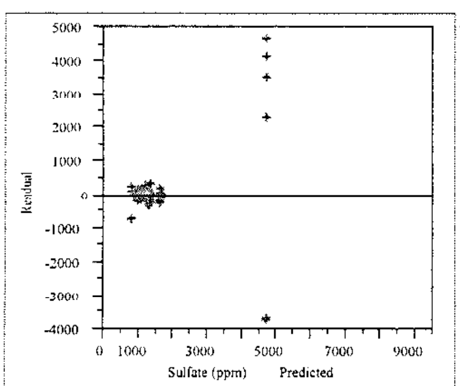


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Aluminum (wt%)

Summary of Fit

RSquare	0.508153
Root Mean Square Error	0.168259
Mean of Response	2.452694
Observations (or Sum Wgts)	291

Variance Component Estimates

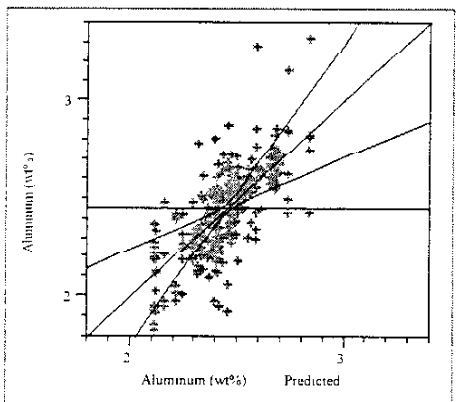
Component	Var Comp Est
Batch	0.019861
Residual	0.028311

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

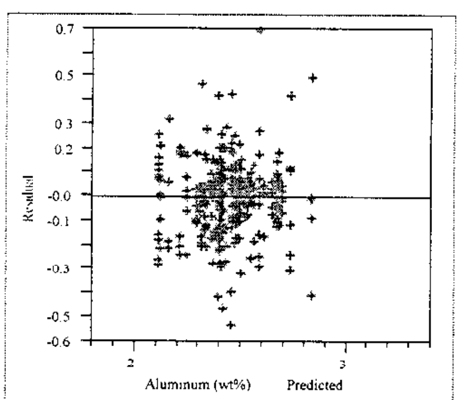
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	7.04919	0.14386	49	5.0814	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	7.049195	0.143861	5.0814
Error	241	6.823007	0.028311	**Prob>F**
C Total	290	13.872202		<.0001



Response: Boron (wt%)

Summary of Fit

RSquare	0.39372
Root Mean Square Error	0.147044
Mean of Response	2.645247
Observations (or Sum Wgts)	396

Variance Component Estimates

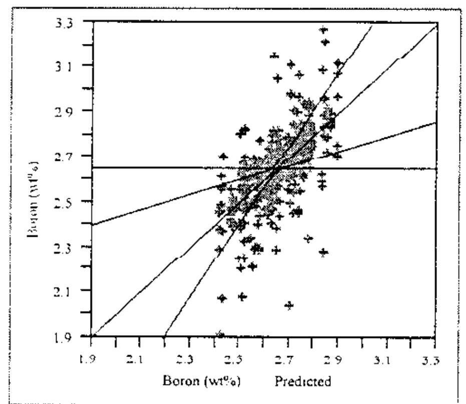
Component	Var Comp Est
Batch	0.007815
Residual	0.021622

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	4.56342	0.06519	70	3.0151	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	4.563415	0.065192	3.0151
Error	325	7.027099	0.021622	**Prob>F**
C Total	395	11.590514		<.0001

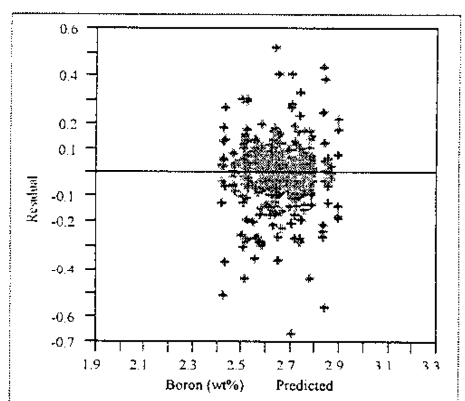


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Calcium (wt%)

Summary of Fit

RSquare	0.64744
Root Mean Square Error	0.084267
Mean of Response	0.823467
Observations (or Sum Wgts)	291

Variance Component Estimates

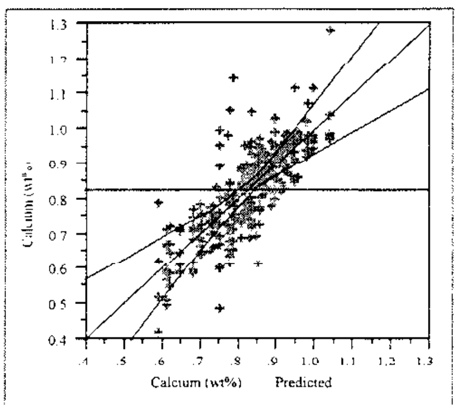
Component	Var Comp Est
Batch	0.009803
Residual	0.007101

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

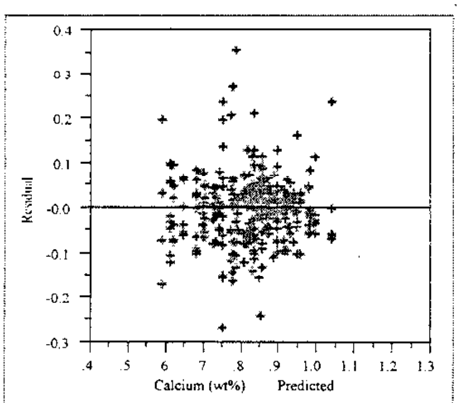
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	3.14266	0.06414	49	9.0321	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	3.1426627	0.064136	9.0321
Error	241	1.7113238	0.007101	**Prob>F**
C Total	290	4.8539864		<.0001



Response: Chromium (wt%)

Summary of Fit

RSquare	0.698584
Root Mean Square Error	0.01541
Mean of Response	0.07421
Observations (or Sum Wgts)	291

Variance Component Estimates

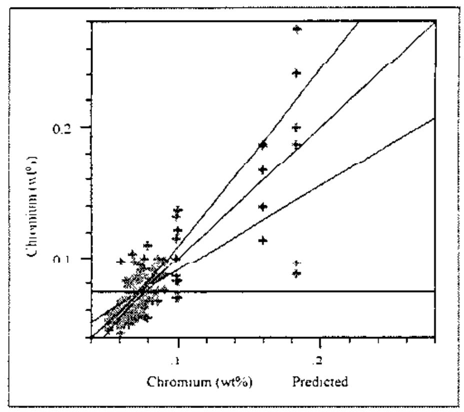
Component	Var Comp Est
Batch	0.000424
Residual	0.000237

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.13264	0.00271	49	11.3992	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	0.13264308	0.002707	11.3992
Error	241	0.05723113	0.000237	**Prob>F**
C Total	290	0.18987421		<.0001

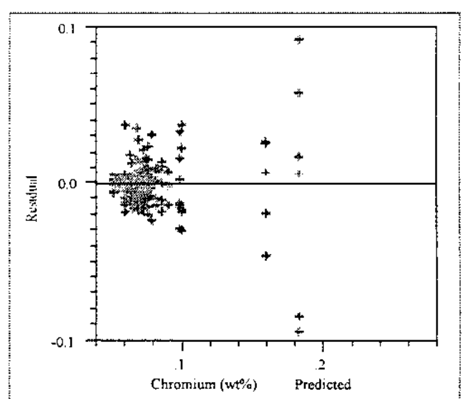


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Copper (wt%)

Summary of Fit

RSquare	0.51593
Root Mean Square Error	0.004266
Mean of Response	0.01346
Observations (or Sum Wgts)	291

Variance Component Estimates

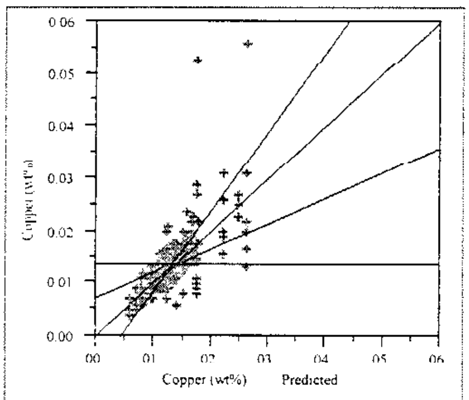
Component	Var Comp Est
Batch	0.000013
Residual	0.000018

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

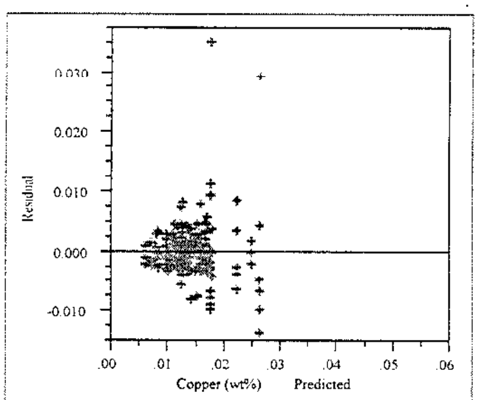
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.00467	0.0001	49	5.2421	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	0.00467448	0.000095	5.2421
Error	241	0.00438582	0.000018	**Prob>F**
C Total	290	0.00906030		<.0001



Response: Iron (wt%)

Summary of Fit

RSquare	0.519779
Root Mean Square Error	0.556147
Mean of Response	8.205206
Observations (or Sum Wgts)	291

Variance Component Estimates

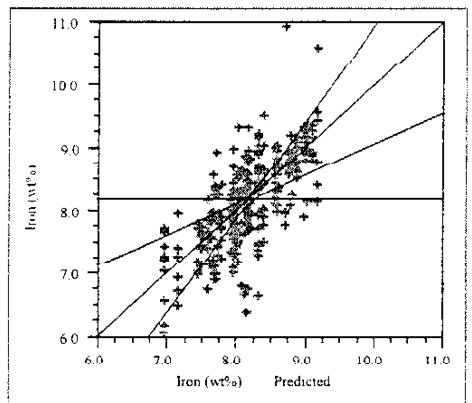
Component	Var Comp Est
Batch	0.229851
Residual	0.3093

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	80.6814	1.64656	49	5.3235	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	80.68143	1.64656	5.3235
Error	241	74.54120	0.30930	**Prob>F**
C Total	290	155.22264		<.0001

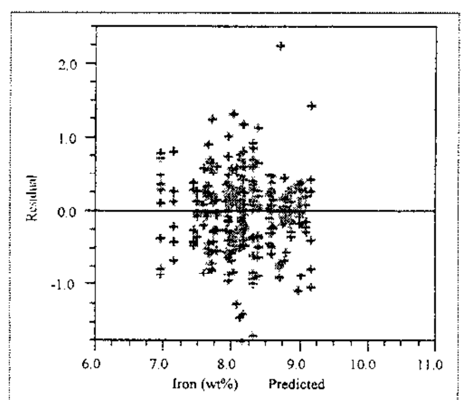


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Potassium (wt%)

Summary of Fit

RSquare	0.75105
Root Mean Square Error	0.039752
Mean of Response	0.113787
Observations (or Sum Wgts)	291

Variance Component Estimates

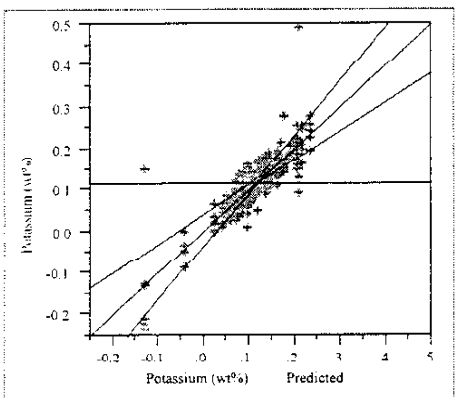
Component	Var Comp Est
Batch	0.003759
Residual	0.00158

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

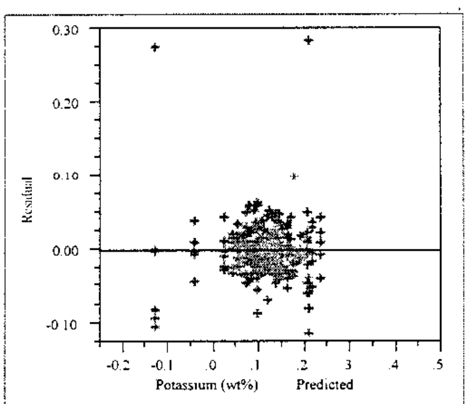
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.14894	0.02345	49	14.8381	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	1.1489390	0.023448	14.8381
Error	241	0.3808378	0.001580	**Prob>F**
C Total	290	1.5297768		<.0001



Response: Lithium (wt%)

Summary of Fit

RSquare	0.299168
Root Mean Square Error	0.088108
Mean of Response	1.620354
Observations (or Sum Wgts)	291

Variance Component Estimates

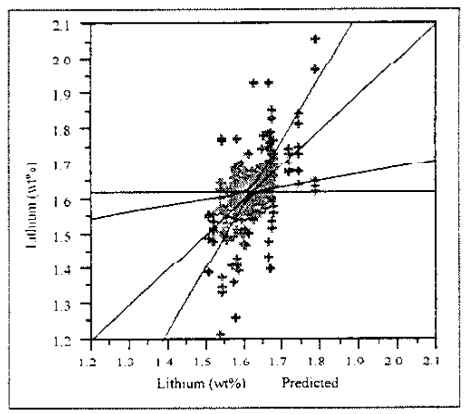
Component	Var Comp Est
Batch	0.001467
Residual	0.007763

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.79864	0.0163	49	2.0995	0.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	0.7986440	0.016299	2.0995
Error	241	1.8709066	0.007763	**Prob>F**
C Total	290	2.6695505		0.0001

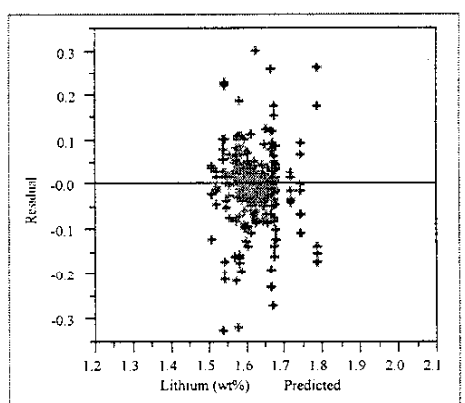


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Magnesium (wt%)

Summary of Fit

RSquare	0.450908
Root Mean Square Error	0.065718
Mean of Response	1.253945
Observations (or Sum Wgts)	291

Variance Component Estimates

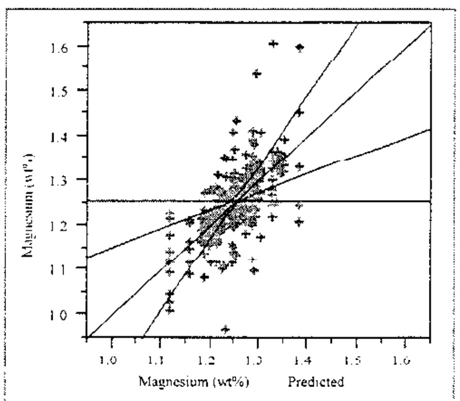
Component	Var Comp Est
Batch	0.002256
Residual	0.004319

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

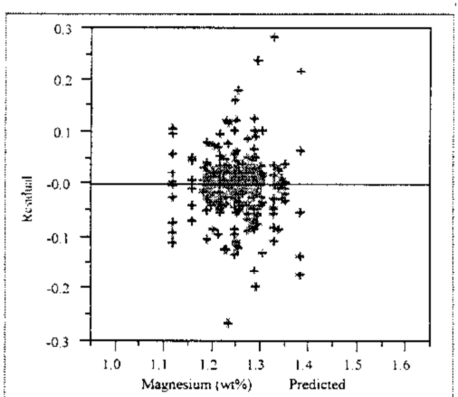
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.85474	0.01744	49	4.0389	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	0.8547422	0.017444	4.0389
Error	241	1.0408589	0.004319	**Prob>F**
C Total	290	1.8956011		<.0001



Response: Manganese (wt%)

Summary of Fit

RSquare	0.616109
Root Mean Square Error	0.062832
Mean of Response	0.829694
Observations (or Sum Wgts)	291

Variance Component Estimates

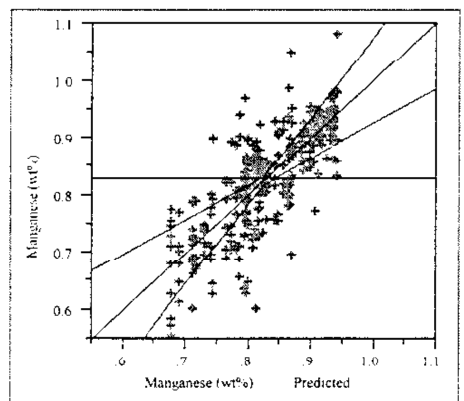
Component	Var Comp Est
Batch	0.004678
Residual	0.003948

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.52695	0.03116	49	7.8935	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	1.5269544	0.031162	7.8935
Error	241	0.9514293	0.003948	**Prob>F**
C Total	290	2.4783838		<.0001

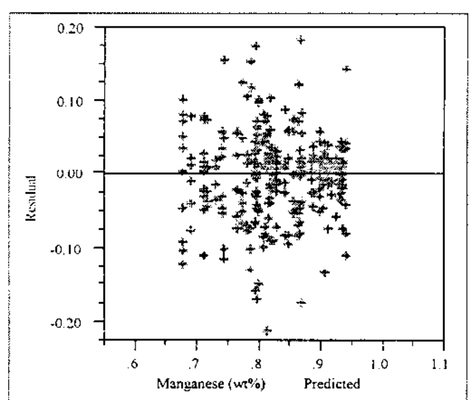


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Nickel (wt%)

Summary of Fit

RSquare	0.450566
Root Mean Square Error	0.012523
Mean of Response	0.103031
Observations (or Sum Wgts)	291

Variance Component Estimates

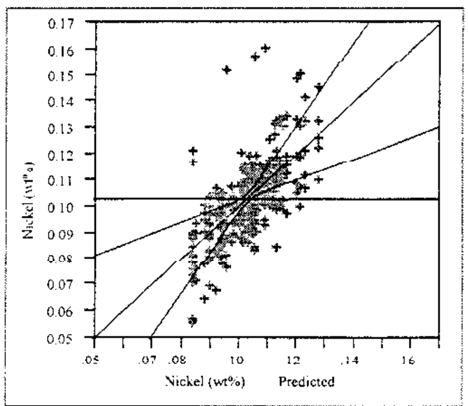
Component	Var Comp Est
Batch	0.000082
Residual	0.000157

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

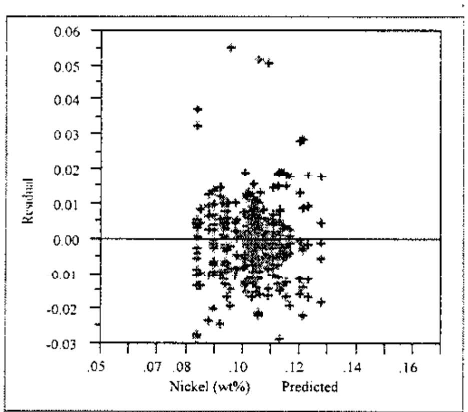
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.03099	0.00063	49	4.0333	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	0.03099385	0.000633	4.0333
Error	241	0.03779487	0.000157	**Prob>F**
C Total	290	0.06878872		<.0001



Response: Silicon (wt%)

Summary of Fit

RSquare	0.359443
Root Mean Square Error	1.262315
Mean of Response	24.52288
Observations (or Sum Wgts)	291

Variance Component Estimates

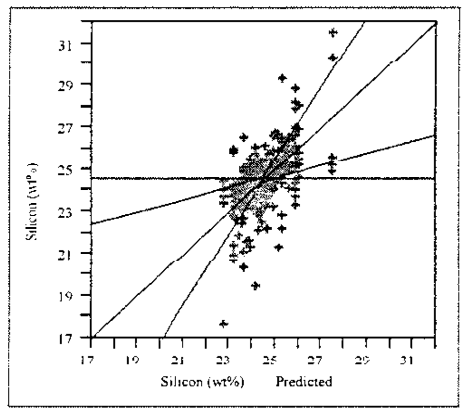
Component	Var Comp Est
Batch	0.482006
Residual	1.593438

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	215.488	4.39772	49	2.7599	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	215.48841	4.39772	2.7599
Error	241	384.01854	1.59344	**Prob>F**
C Total	290	599.50695		<.0001

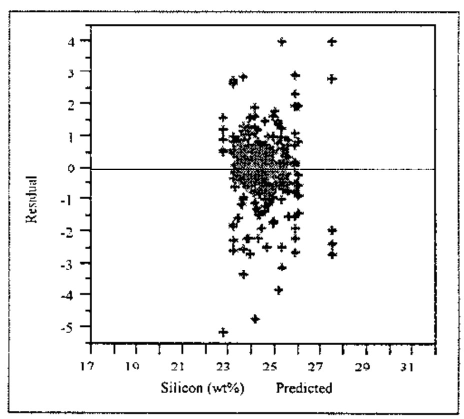


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Titanium (wt%)

Summary of Fit

RSquare	0.351959
Root Mean Square Error	0.008266
Mean of Response	0.020048
Observations (or Sum Wgts)	291

Variance Component Estimates

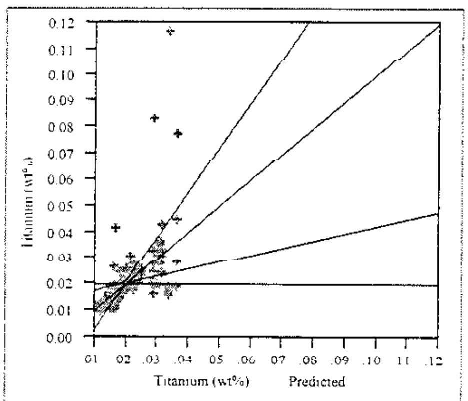
Component	Var Comp Est
Batch	0.00002
Residual	0.000068

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

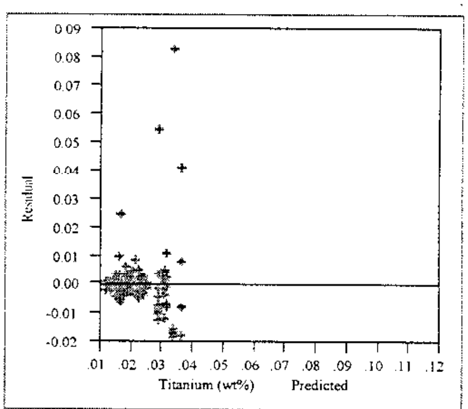
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.00894	0.00018	49	2.6712	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	0.00894233	0.000182	2.6712
Error	241	0.01646500	0.000068	**Prob>F**
C Total	290	0.02540733		<.0001



Response: Fe/Li

Summary of Fit

RSquare	0.591548
Root Mean Square Error	0.333371
Mean of Response	5.076177
Observations (or Sum Wgts)	291

Variance Component Estimates

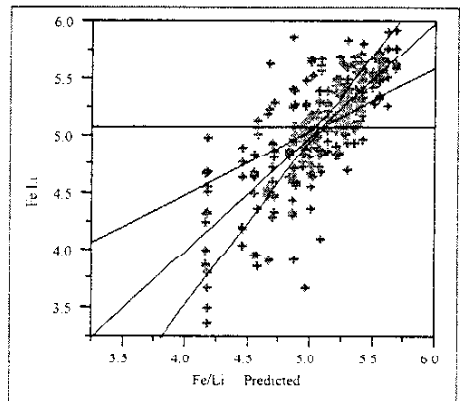
Component	Var Comp Est
Batch	0.116966
Residual	0.111136

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	38.7902	0.79164	49	7.1231	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	38.790164	0.791636	7.1231
Error	241	26.783880	0.111136	**Prob>F**
C Total	290	65.574044		<.0001

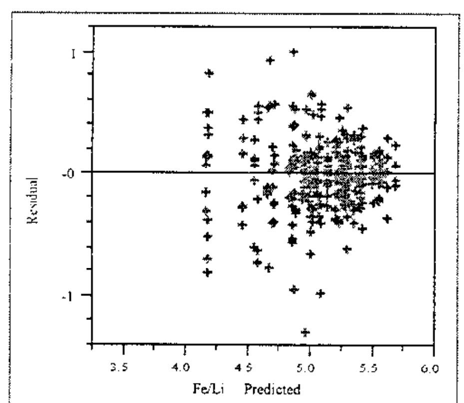


Exhibit 16: Random Effects Study for SME by Cation from PF Dissolution Method

Response: Fe/Al

Summary of Fit

RSquare	0.696765
Root Mean Square Error	0.076233
Mean of Response	3.347665
Observations (or Sum Wgts)	291

Variance Component Estimates

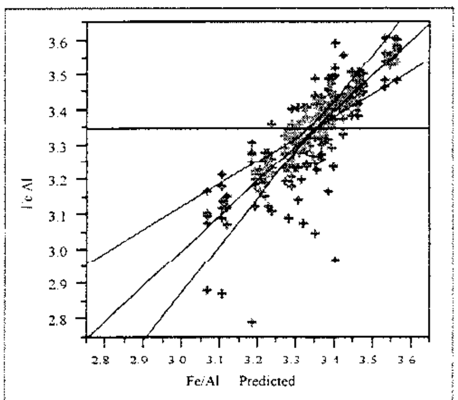
Component	Var Comp Est
Batch	0.01029
Residual	0.005812

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	3.2182	0.06568	49	11.3013	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	49	3.2181994	0.065678	11.3013
Error	241	1.4005740	0.005812	**Prob>F**
C Total	290	4.6187734		<.0001

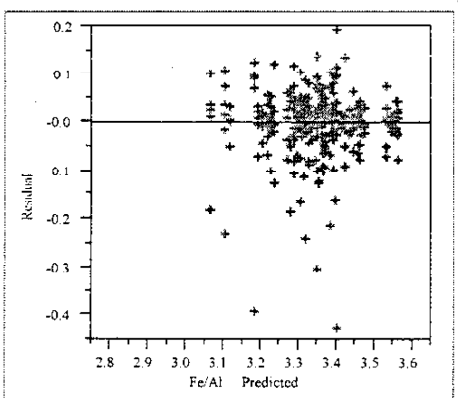


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Aluminum (wt%)

Summary of Fit

RSquare	0.594097
Root Mean Square Error	0.144757
Mean of Response	2.45187
Observations (or Sum Wgts)	424

Variance Component Estimates

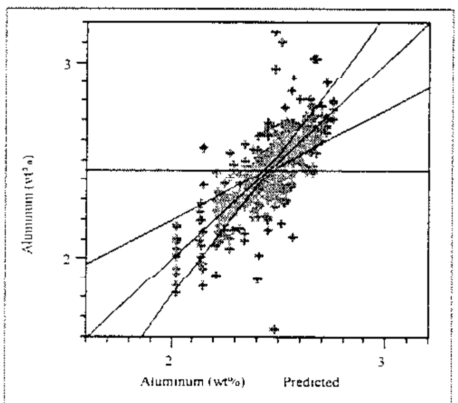
Component	Var Comp Est
Batch	0.022025
Residual	0.020955

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

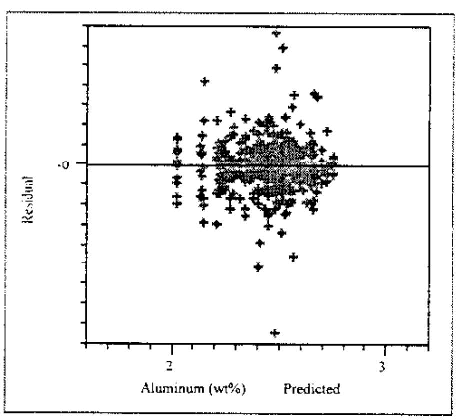
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	10.7345	0.14705	73	7.0175	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	10.734486	0.147048	7.0175
Error	350	7.334094	0.020955	**Prob>F**
C Total	423	18.068580		<.0001



Response: Calcium (wt%)

Summary of Fit

RSquare	0.625436
Root Mean Square Error	0.084108
Mean of Response	0.877323
Observations (or Sum Wgts)	424

Variance Component Estimates

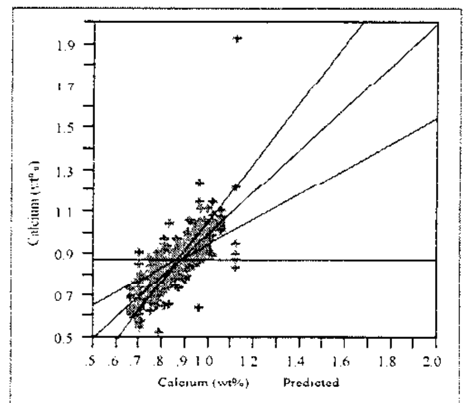
Component	Var Comp Est
Batch	0.008657
Residual	0.007074

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	4.13425	0.05663	73	8.0058	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	4.1342470	0.056634	8.0058
Error	350	2.4759337	0.007074	**Prob>F**
C Total	423	6.6101807		<.0001

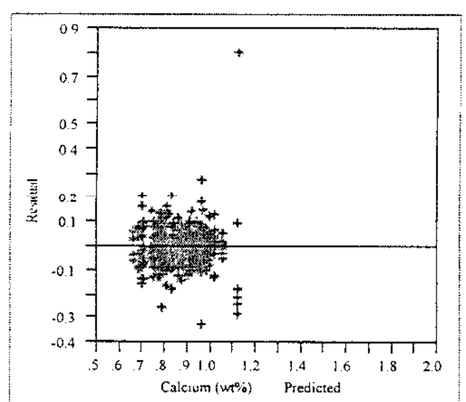


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Chromium (wt%)

Summary of Fit

RSquare	0.274965
Root Mean Square Error	0.021682
Mean of Response	0.069401
Observations (or Sum Wgts)	424

Variance Component Estimates

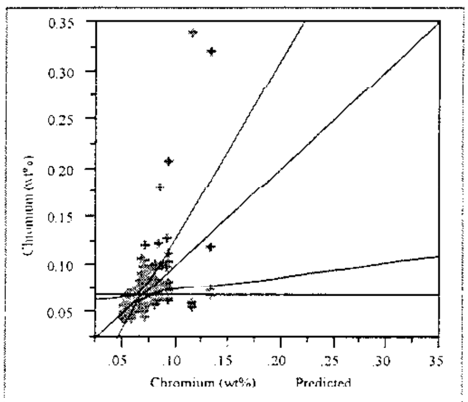
Component	Var Comp Est
Batch	0.000067
Residual	0.00047

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

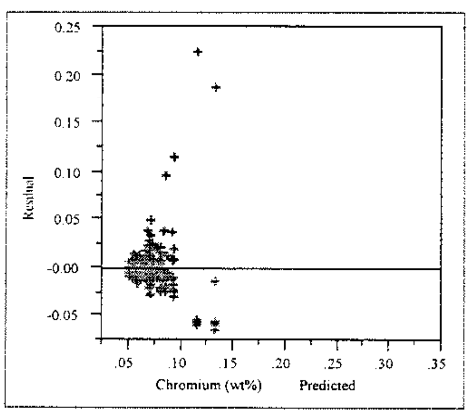
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.0624	0.00085	73	1.8183	0.0002

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	0.06240153	0.000855	1.8183
Error	350	0.16454231	0.000470	**Prob>F**
C Total	423	0.22694384		0.0002



Response: Copper (wt%)

Summary of Fit

RSquare	0.997409
Root Mean Square Error	0.006848
Mean of Response	0.070059
Observations (or Sum Wgts)	424

Variance Component Estimates

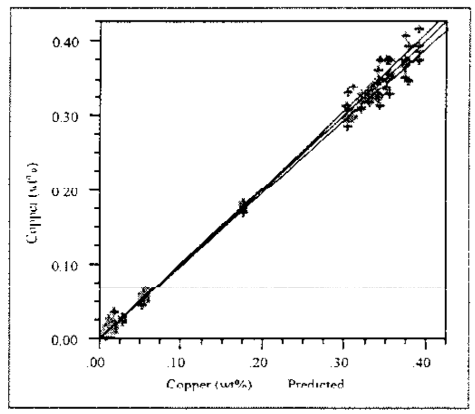
Component	Var Comp Est
Batch	0.015106
Residual	0.000047

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	6.31659	0.08653	73	1845.325	0.0000

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	6.3165898	0.086529	1845.325
Error	350	0.0164118	0.000047	**Prob>F**
C Total	423	6.3330015		0.0000

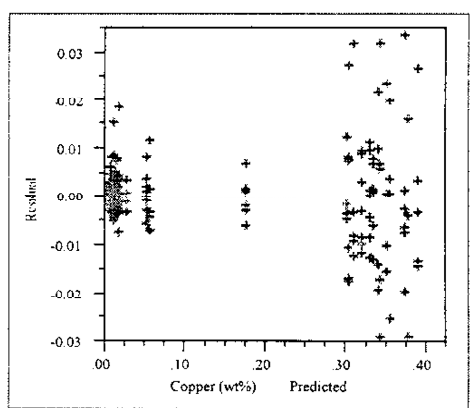


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Iron (wt%)

Summary of Fit

RSquare	0.539515
Root Mean Square Error	0.480534
Mean of Response	8.393351
Observations (or Sum Wgts)	424

Variance Component Estimates

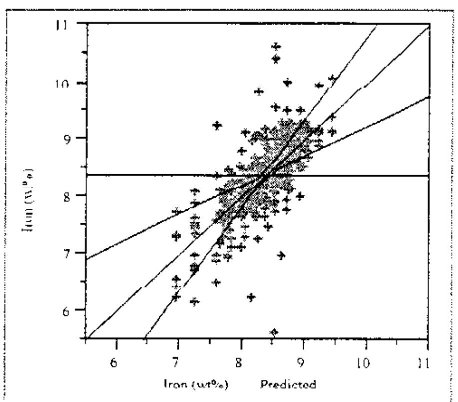
Component	Var Comp Est
Batch	0.186238
Residual	0.230913

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

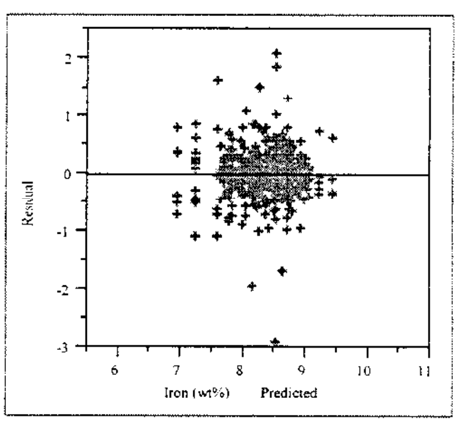
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	94.6902	1.29713	73	5.6174	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	94.69018	1.29713	5.6174
Error	350	80.81949	0.23091	**Prob>F**
C Total	423	175.50967		<.0001



Response: Potassium (wt%)

Summary of Fit

RSquare	0.872747
Root Mean Square Error	0.025156
Mean of Response	0.130248
Observations (or Sum Wgts)	424

Variance Component Estimates

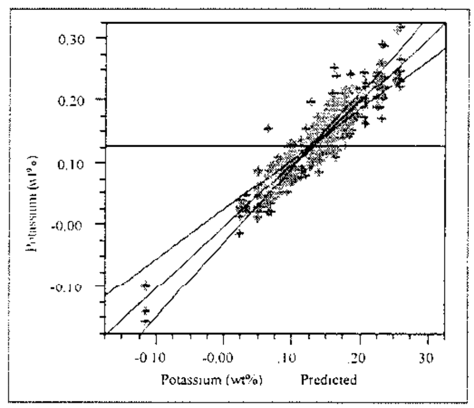
Component	Var Comp Est
Batch	0.003524
Residual	0.000633

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.519	0.02081	73	32.8824	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	1.5190006	0.020808	32.8824
Error	350	0.2214824	0.000633	**Prob>F**
C Total	423	1.7404830		<.0001

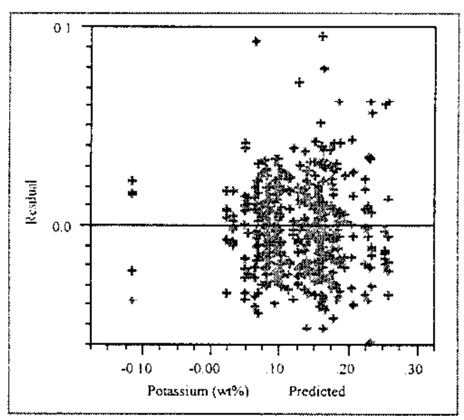


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Lithium (wt%)

Summary of Fit

RSquare	0.446526
Root Mean Square Error	0.062227
Mean of Response	1.673986
Observations (or Sum Wgts)	424

Variance Component Estimates

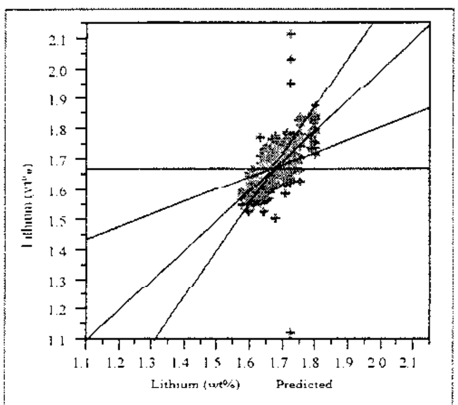
Component	Var Comp Est
Batch	0.00194
Residual	0.003872

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

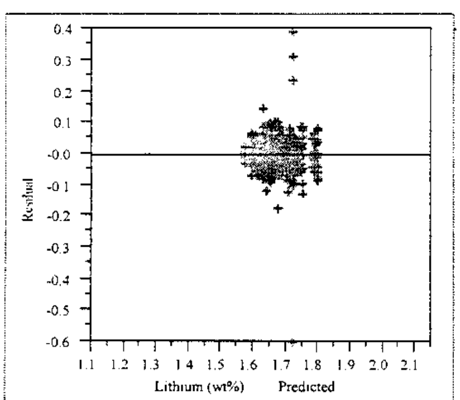
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.0934	0.01498	73	3.8681	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	1.0933993	0.014978	3.8681
Error	350	1.3552806	0.003872	**Prob>F**
C Total	423	2.4486799		<.0001



Response: Magnesium (wt%)

Summary of Fit

RSquare	0.551646
Root Mean Square Error	0.056143
Mean of Response	1.275392
Observations (or Sum Wgts)	424

Variance Component Estimates

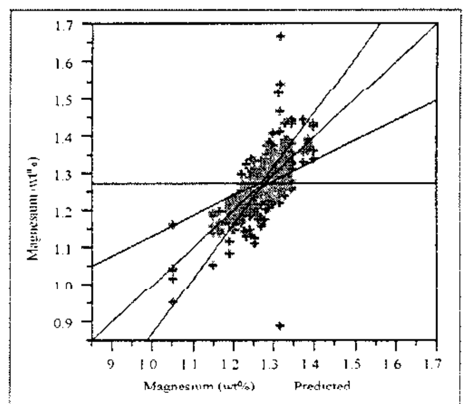
Component	Var Comp Est
Batch	0.002697
Residual	0.003152

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.35736	0.01859	73	5.8991	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	1.3573584	0.018594	5.8991
Error	350	1.1032026	0.003152	**Prob>F**
C Total	423	2.4605610		<.0001

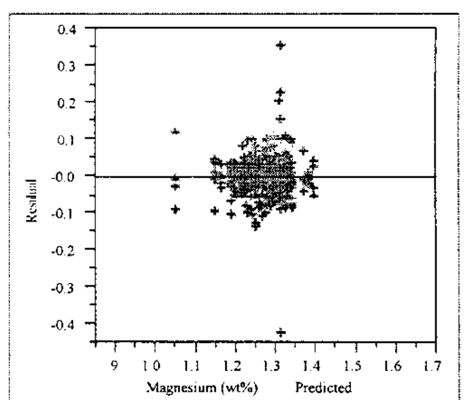


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Manganese (wt%)

Summary of Fit

RSquare	0.639825
Root Mean Square Error	0.05651
Mean of Response	0.849042
Observations (or Sum Wgts)	424

Variance Component Estimates

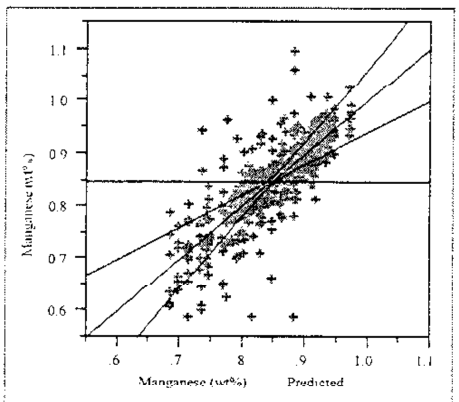
Component	Var Comp Est
Batch	0.004193
Residual	0.003193

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

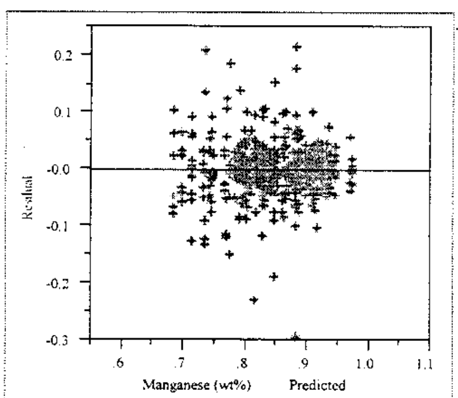
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.98551	0.0272	73	8.5171	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	1.9855051	0.027199	8.5171
Error	350	1.1176941	0.003193	**Prob>F**
C Total	423	3.1031992		<.0001



Response: Sodium (wt%)

Summary of Fit

RSquare	0.586534
Root Mean Square Error	0.329169
Mean of Response	8.859892
Observations (or Sum Wgts)	424

Variance Component Estimates

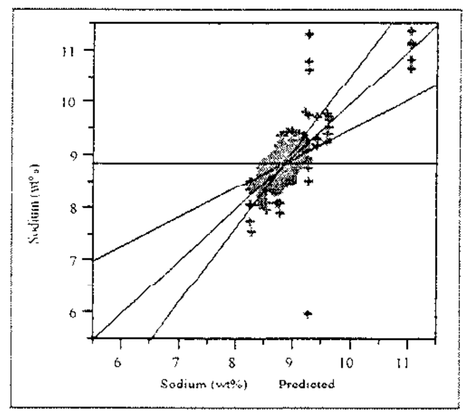
Component	Var Comp Est
Batch	0.109799
Residual	0.108352

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	53.7973	0.73695	73	6.8014	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	53.797305	0.736949	6.8014
Error	350	37.923358	0.108352	**Prob>F**
C Total	423	91.720663		<.0001

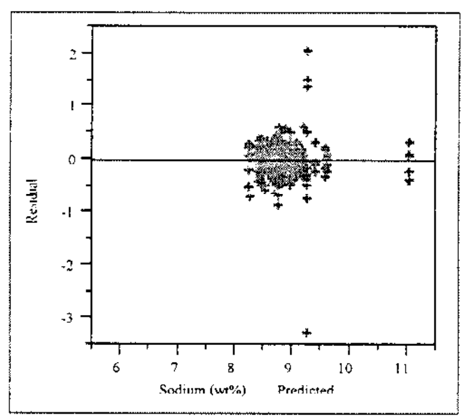


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Nickel (wt%)

Summary of Fit

RSquare	0.243632
Root Mean Square Error	0.042652
Mean of Response	0.105375
Observations (or Sum Wgts)	424

Variance Component Estimates

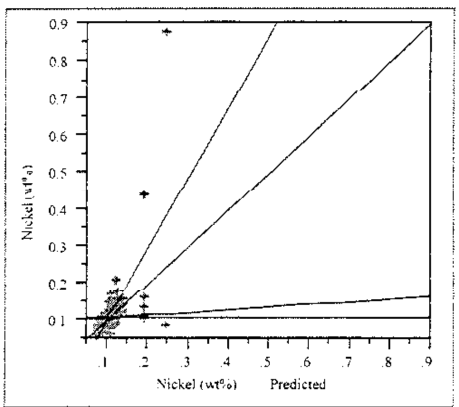
Component	Var Comp Est
Batch	0.000173
Residual	0.001819

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

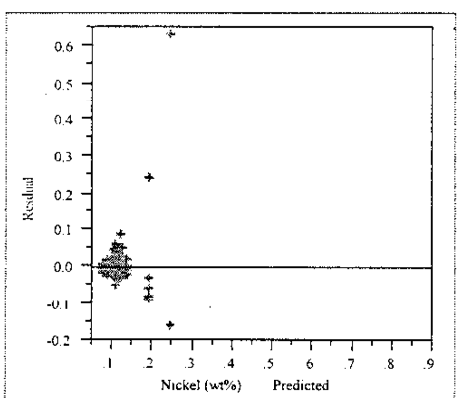
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.20509	0.00281	73	1.5443	0.0056

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	0.20509139	0.002809	1.5443
Error	350	0.63671798	0.001819	**Prob>F**
C Total	423	0.84180938		0.0056



Response: Silicon (wt%)

Summary of Fit

RSquare	0.359626
Root Mean Square Error	1.134884
Mean of Response	22.88123
Observations (or Sum Wgts)	424

Variance Component Estimates

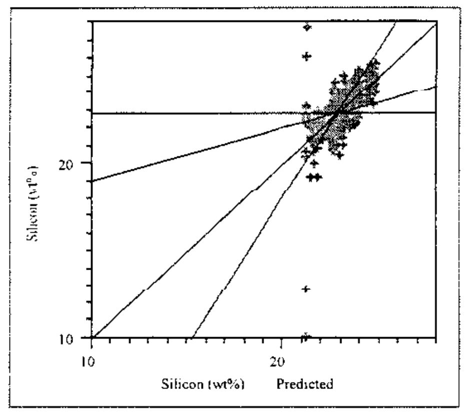
Component	Var Comp Est
Batch	0.380773
Residual	1.287962

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	253.156	3.46789	73	2.6925	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	253.15570	3.46789	2.6925
Error	350	450.78680	1.28796	**Prob>F**
C Total	423	703.94250		<.0001

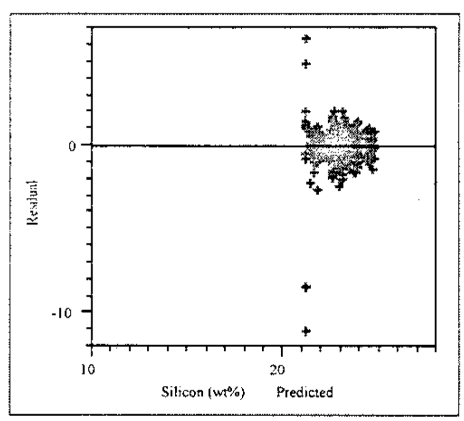


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Titanium (wt%)

Summary of Fit

RSquare	0.227526
Root Mean Square Error	0.038109
Mean of Response	0.025748
Observations (or Sum Wgts)	424

Variance Component Estimates

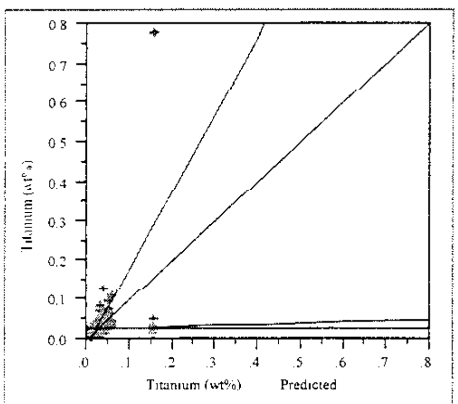
Component	Var Comp Est
Batch	0.000105
Residual	0.001452

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

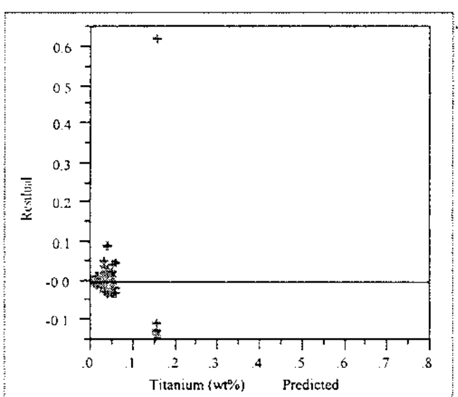
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.14971	0.00205	73	1.4122	0.0225

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	0.14971352	0.002051	1.4122
Error	350	0.50829248	0.001452	**Prob>F**
C Total	423	0.65800600		0.0225



Response: Uranium (wt%)

Summary of Fit

RSquare	0.816597
Root Mean Square Error	0.08506
Mean of Response	1.112059
Observations (or Sum Wgts)	424

Variance Component Estimates

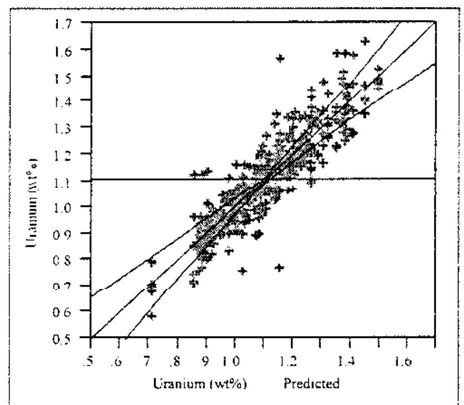
Component	Var Comp Est
Batch	0.025715
Residual	0.007235

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	11.2751	0.15445	73	21.3475	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	11.275085	0.154453	21.3475
Error	350	2.532318	0.007235	**Prob>F**
C Total	423	13.807404		<.0001

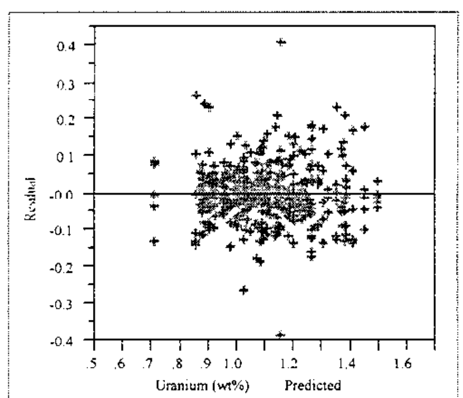


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Zirconium (wt%)

Summary of Fit

RSquare	0.975409
Root Mean Square Error	0.004393
Mean of Response	0.042587
Observations (or Sum Wgts)	424

Variance Component Estimates

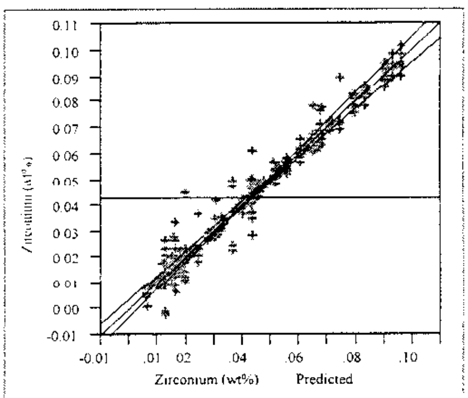
Component	Var Comp Est
Batch	0.000638
Residual	0.000019

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

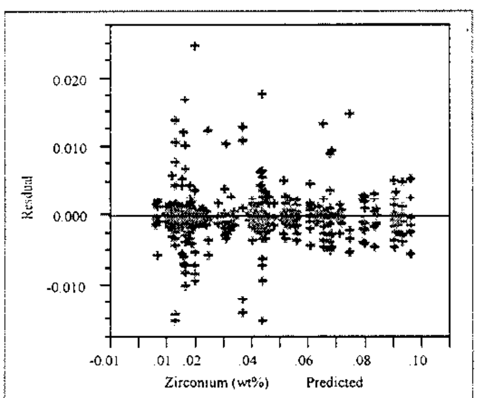
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.26796	0.00367	73	190.1731	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	0.26795916	0.003671	190.1731
Error	350	0.00675561	0.000019	**Prob>F**
C Total	423	0.27471477		<.0001



Response: Fe/Li

Summary of Fit

RSquare	0.622096
Root Mean Square Error	0.32035
Mean of Response	5.027451
Observations (or Sum Wgts)	424

Variance Component Estimates

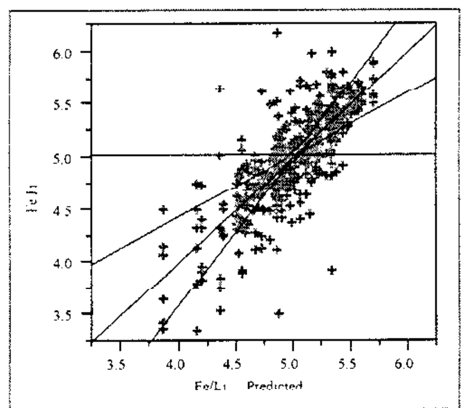
Component	Var Comp Est
Batch	0.123555
Residual	0.102624

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	59.1281	0.80997	73	7.8926	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	59.128092	0.809974	7.8926
Error	350	35.918522	0.102624	**Prob>F**
C Total	423	95.046613		<.0001

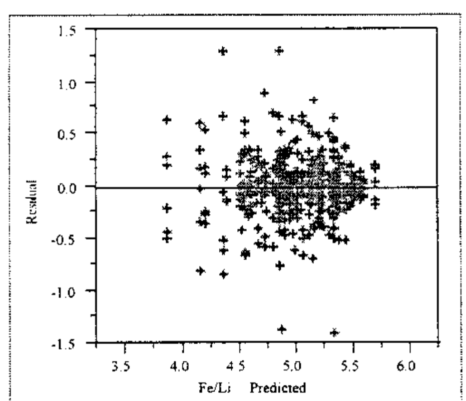


Exhibit 17: Random Effects Study for SME by Cation from MA Dissolution Method

Response: Fe/Al

Summary of Fit

RSquare	0.694769
Root Mean Square Error	0.097551
Mean of Response	3.428974
Observations (or Sum Wgts)	424

Variance Component Estimates

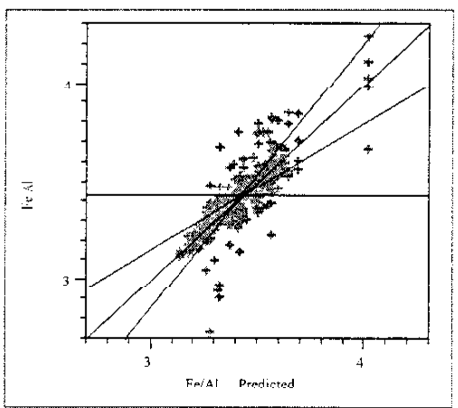
Component	Var Comp Est
Batch	0.016478
Residual	0.009516

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	7.58126	0.10385	73	10.9133	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	73	7.581262	0.103853	10.9133
Error	350	3.330659	0.009516	**Prob>F**
C Total	423	10.911921		<.0001

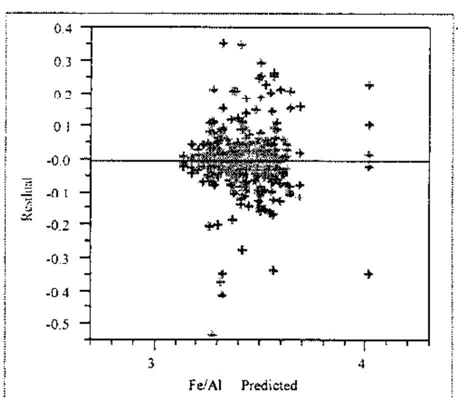


Exhibit 18: Random Effects Study for MFT by Anion

Response: Insoluble Solids (wt%)

Summary of Fit

RSquare	0.21648
Root Mean Square Error	6.417342
Mean of Response	39.23875
Observations (or Sum Wgts)	32

Variance Component Estimates

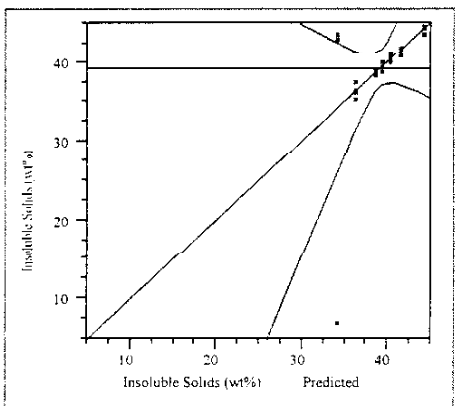
Component	Var Comp Est
Batch	-0.54274
Residual	41.18227

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

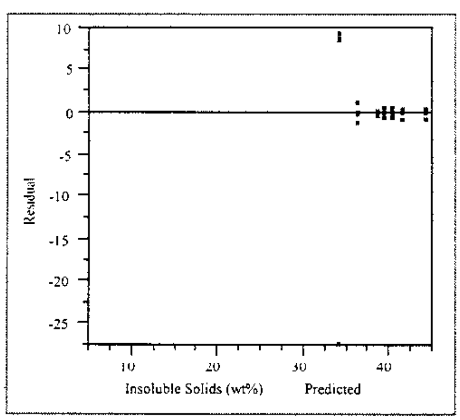
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	273.079	39.0113	7	0.9473	0.4899

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	7	273.0792	39.0113	0.9473
Error	24	988.3745	41.1823	**Prob>F**
C Total	31	1261.4537		0.4899



Response: Formate (ppm)

Summary of Fit

RSquare	0.968743
Root Mean Square Error	1391.28
Mean of Response	30804.34
Observations (or Sum Wgts)	144

Variance Component Estimates

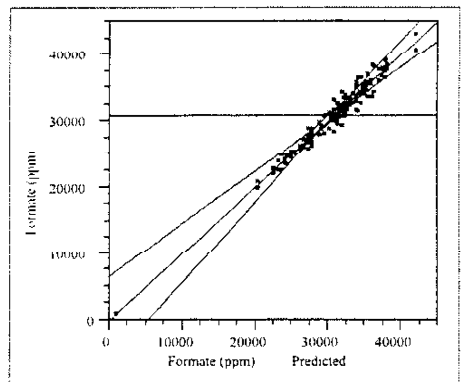
Component	Var Comp Est
Batch	29898662
Residual	1935659

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	4.379e9	6.256e7	70	32.3215	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	4379445100	62563501	32.3215
Error	73	141303112	1935659	**Prob>F**
C Total	143	4520748212		<.0001

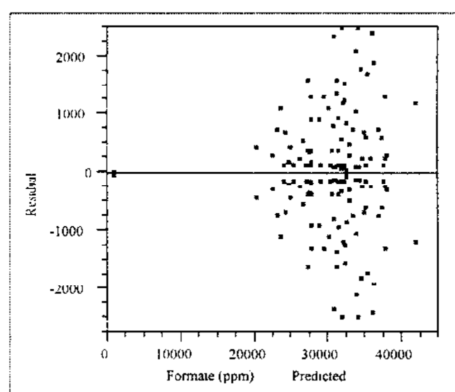


Exhibit 18: Random Effects Study for MFT by Anion

Response: Chloride (ppm)

Summary of Fit

RSquare	0.998624
Root Mean Square Error	185.2788
Mean of Response	1518.021
Observations (or Sum Wgts)	144

Variance Component Estimates

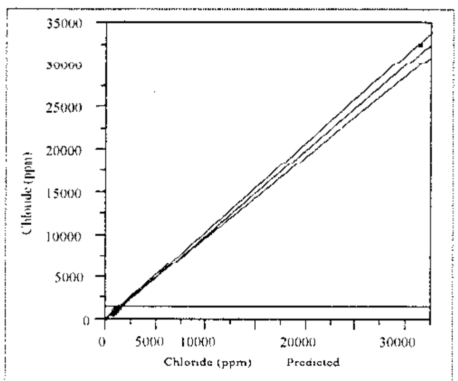
Component	Var Comp Est
Batch	12797524
Residual	34328.24

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

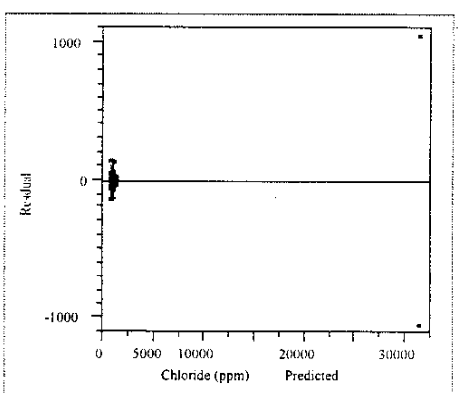
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.819e9	2.598e7	70	756.9529	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	1818940379	25984863	756.9529
Error	73	2505961.75	34328.24	**Prob>F**
C Total	143	1821446341		<.0001



Response: Fluoride (ppm)

Summary of Fit

RSquare	0.861403
Root Mean Square Error	65.80401
Mean of Response	1092.694
Observations (or Sum Wgts)	144

Variance Component Estimates

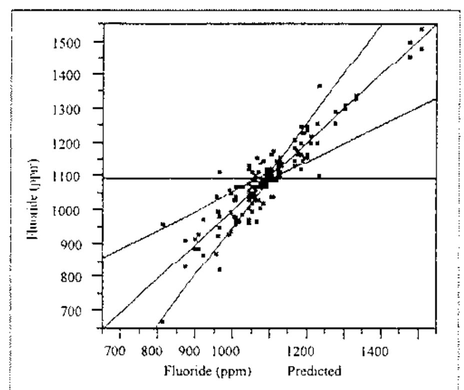
Component	Var Comp Est
Batch	11705.36
Residual	4330.168

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1964622	28066	70	6.4815	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	1964622.3	28066.0	6.4815
Error	73	316102.3	4330.2	**Prob>F**
C Total	143	2280724.6		<.0001

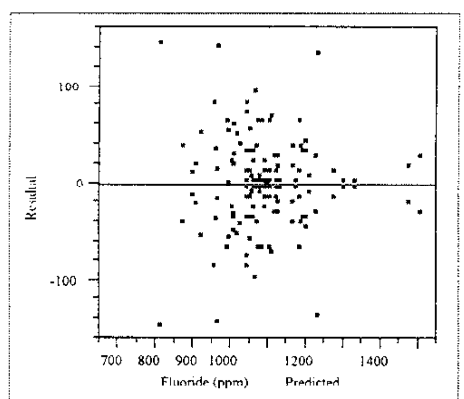


Exhibit 18: Random Effects Study for MFT by Anion

Response: Nitrate (ppm)

Summary of Fit

RSquare	0.904087
Root Mean Square Error	1288.795
Mean of Response	24556.94
Observations (or Sum Wgts)	144

Variance Component Estimates

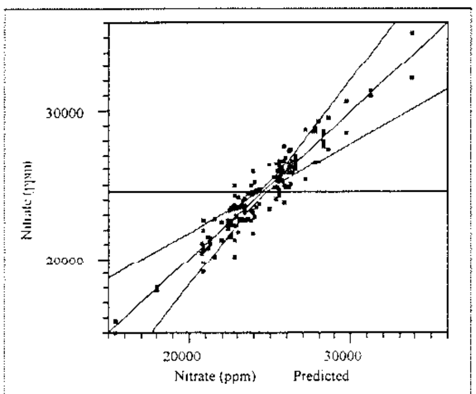
Component	Var Comp Est
Batch	7232907
Residual	1660993

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

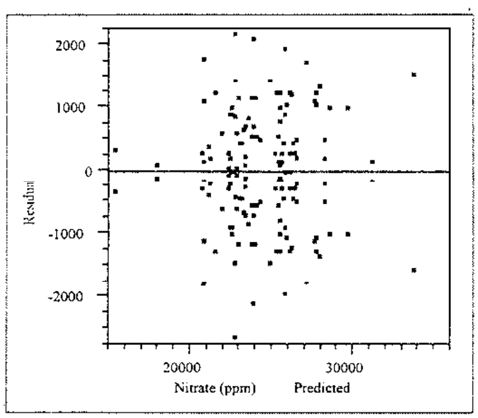
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.143e9	1.633e7	70	9.8301	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	1142940556	16327722	9.8301
Error	73	121252500	1660993	**Prob>F**
C Total	143	1264193056		<.0001



Response: Sulfate (ppm)

Summary of Fit

RSquare	0.941765
Root Mean Square Error	69.57181
Mean of Response	1147.583
Observations (or Sum Wgts)	144

Variance Component Estimates

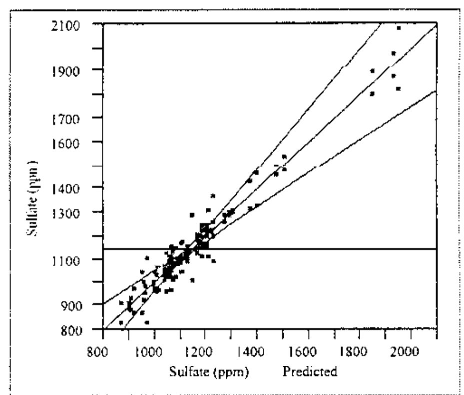
Component	Var Comp Est
Batch	37868.8
Residual	4840.236

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5714082	81629.7	70	16.8648	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	70	5714081.8	81629.7	16.8648
Error	73	353337.2	4840.2	**Prob>F**
C Total	143	6067419.0		<.0001

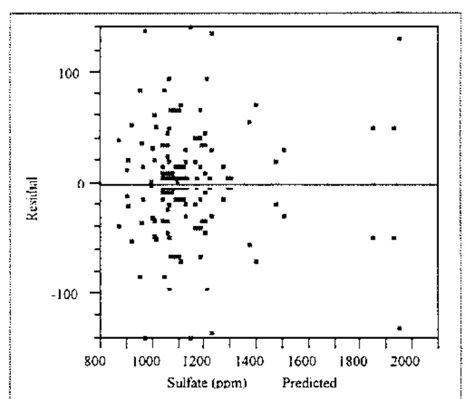


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Aluminum (wt%)

Summary of Fit

RSquare	0.510778
Root Mean Square Error	0.181292
Mean of Response	2.449732
Observations (or Sum Wgts)	306

Variance Component Estimates

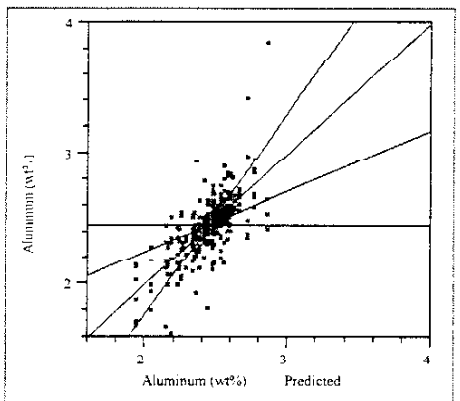
Component	Var Comp Est
Batch	0.022772
Residual	0.032867

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

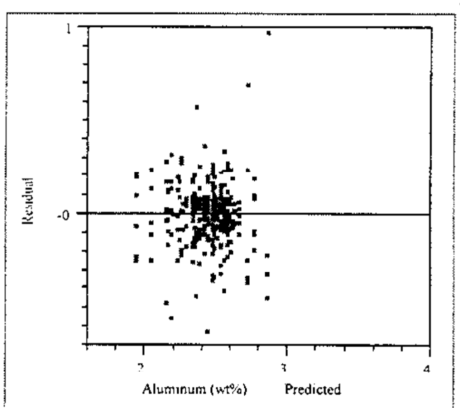
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	8.61305	0.1595	54	4.8530	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	8.613049	0.159501	4.8530
Error	251	8.249543	0.032867	**Prob>F**
C Total	305	16.862592		<.0001



Response: Boron (wt%)

Summary of Fit

RSquare	0.352013
Root Mean Square Error	0.167208
Mean of Response	2.668859
Observations (or Sum Wgts)	382

Variance Component Estimates

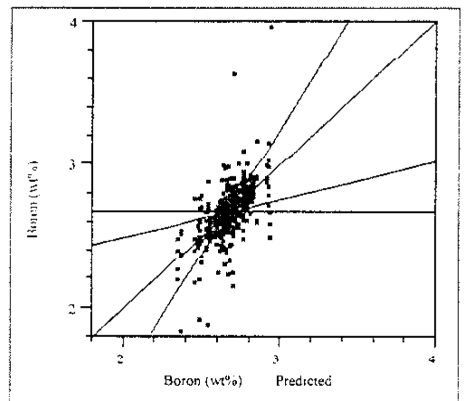
Component	Var Comp Est
Batch	0.007464
Residual	0.027959

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	4.73873	0.06868	69	2.4564	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	4.738726	0.068677	2.4564
Error	312	8.723061	0.027959	**Prob>F**
C Total	381	13.461786		<.0001

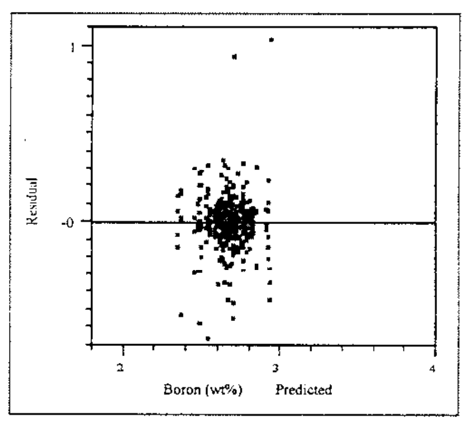


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Calcium (wt%)

Summary of Fit

RSquare	0.630832
Root Mean Square Error	0.08519
Mean of Response	0.794614
Observations (or Sum Wgts)	306

Variance Component Estimates

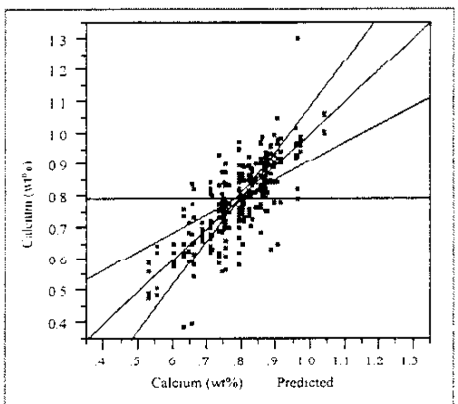
Component	Var Comp Est
Batch	0.009061
Residual	0.007257

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

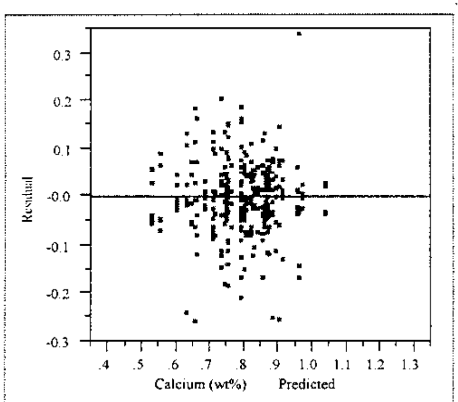
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	3.11271	0.05764	54	7.9427	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	3.1127105	0.057643	7.9427
Error	251	1.8215860	0.007257	**Prob>F**
C Total	305	4.9342965		<.0001



Response: Chromium (wt%)

Summary of Fit

RSquare	0.649932
Root Mean Square Error	0.012132
Mean of Response	0.072771
Observations (or Sum Wgts)	306

Variance Component Estimates

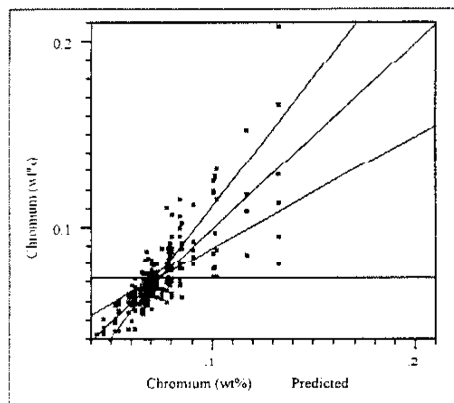
Component	Var Comp Est
Batch	0.000202
Residual	0.000147

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.06859	0.00127	54	8.6297	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	0.06858994	0.001270	8.6297
Error	251	0.03694405	0.000147	**Prob>F**
C Total	305	0.10553399		<.0001

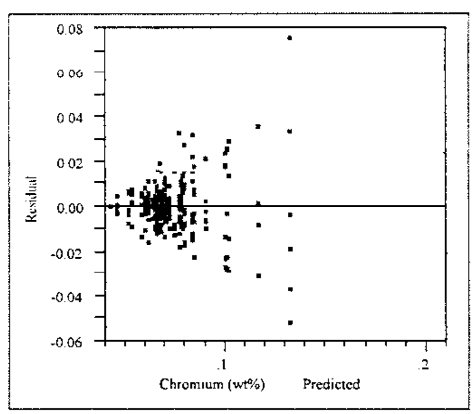


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Copper (wt%)

Summary of Fit

RSquare	0.852581
Root Mean Square Error	0.009016
Mean of Response	0.01548
Observations (or Sum Wgts)	306

Variance Component Estimates

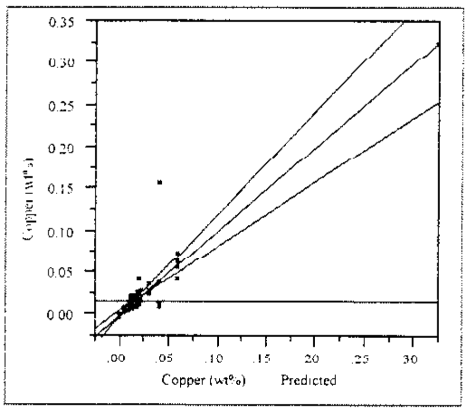
Component	Var Comp Est
Batch	0.000378
Residual	0.000081

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

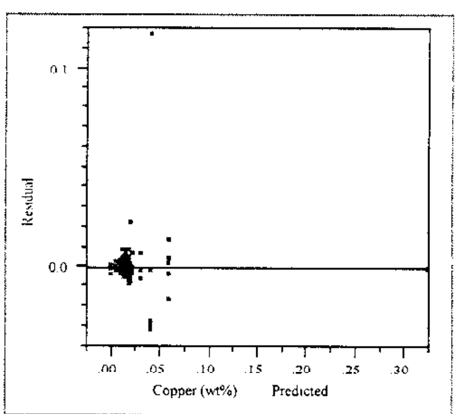
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.118	0.00219	54	26.8820	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	0.11800090	0.002185	26.8820
Error	251	0.02040348	0.000081	**Prob>F**
C Total	305	0.13840438		<.0001



Response: Iron (wt%)

Summary of Fit

RSquare	0.536781
Root Mean Square Error	0.624242
Mean of Response	8.233895
Observations (or Sum Wgts)	306

Variance Component Estimates

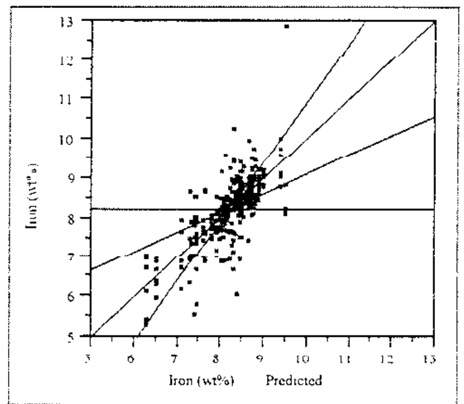
Component	Var Comp Est
Batch	0.307364
Residual	0.389678

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	113.342	2.09893	54	5.3863	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	113.34221	2.09893	5.3863
Error	251	97.80928	0.38968	**Prob>F**
C Total	305	211.15149		<.0001

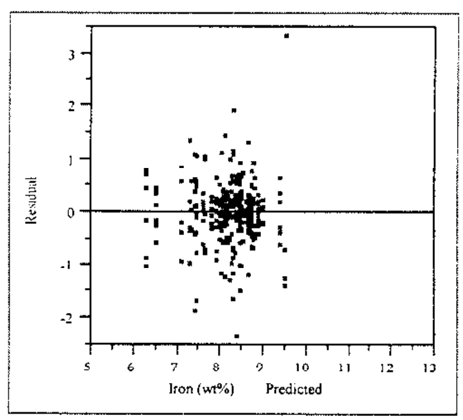


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Potassium (wt%)

Summary of Fit

RSquare	0.194681
Root Mean Square Error	0.165301
Mean of Response	0.131118
Observations (or Sum Wgts)	306

Variance Component Estimates

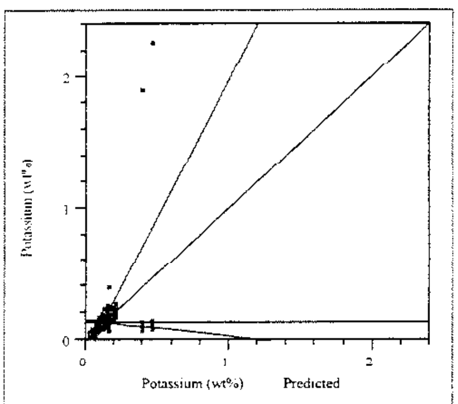
Component	Var Comp Est
Batch	0.000608
Residual	0.027325

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

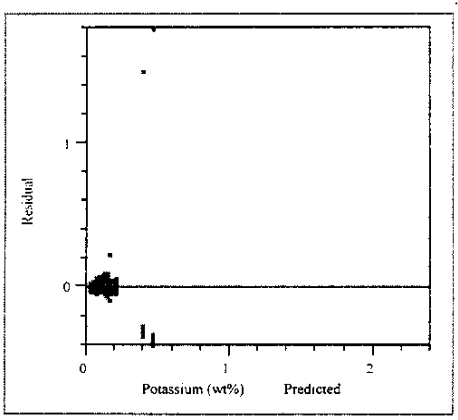
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.65799	0.0307	54	1.1237	0.2739

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	1.6579924	0.030704	1.1237
Error	251	6.8584613	0.027325	**Prob>F**
C Total	305	8.5164538		0.2739



Response: Lithium (wt%)

Summary of Fit

RSquare	0.289054
Root Mean Square Error	0.107588
Mean of Response	1.633748
Observations (or Sum Wgts)	306

Variance Component Estimates

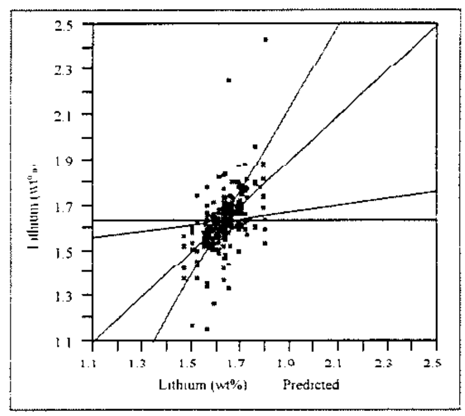
Component	Var Comp Est
Batch	0.001852
Residual	0.011575

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.18126	0.02188	54	1.8898	0.0006

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	1.1812605	0.021875	1.8898
Error	251	2.9053891	0.011575	**Prob>F**
C Total	305	4.0866496		0.0006

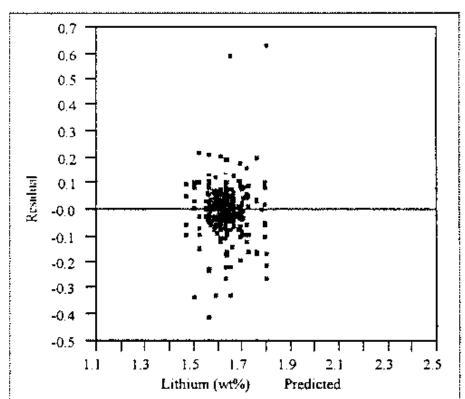


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Magnesium (wt%)

Summary of Fit

RSquare	0.309995
Root Mean Square Error	0.099327
Mean of Response	1.250141
Observations (or Sum Wgts)	306

Variance Component Estimates

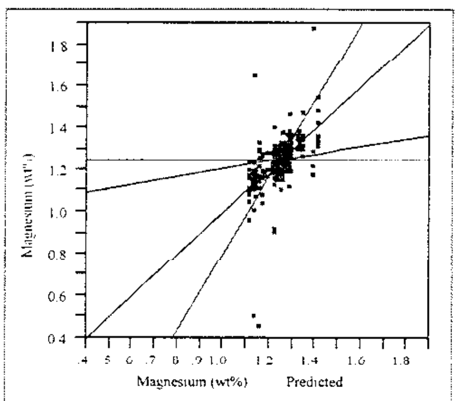
Component	Var Comp Est
Batch	0.001931
Residual	0.009866

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

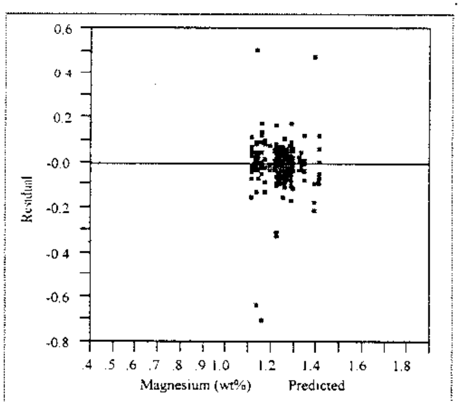
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.11253	0.0206	54	2.0883	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	1.1125281	0.020602	2.0883
Error	251	2.4763248	0.009866	**Prob>F**
C Total	305	3.5888530		<.0001



Response: Manganese (wt%)

Summary of Fit

RSquare	0.529869
Root Mean Square Error	0.081934
Mean of Response	0.820255
Observations (or Sum Wgts)	306

Variance Component Estimates

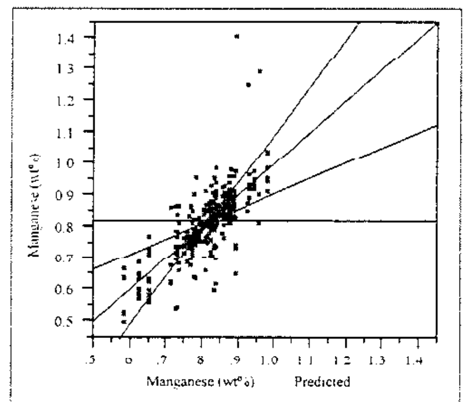
Component	Var Comp Est
Batch	0.005117
Residual	0.006713

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.89913	0.03517	54	5.2388	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	1.8991332	0.035169	5.2388
Error	251	1.6850230	0.006713	**Prob>F**
C Total	305	3.5841561		<.0001

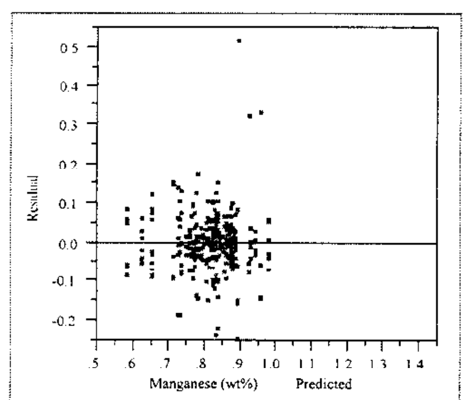


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Nickel (wt%)

Summary of Fit

RSquare	0.190659
Root Mean Square Error	0.055926
Mean of Response	0.105052
Observations (or Sum Wgts)	306

Variance Component Estimates

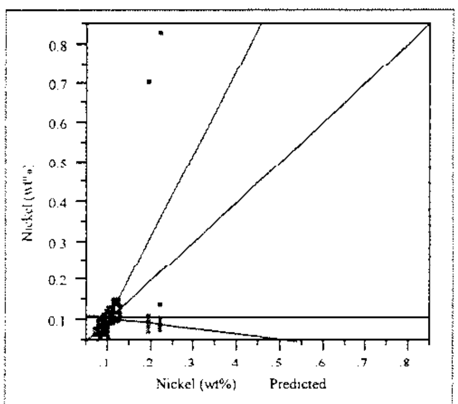
Component	Var Comp Est
Batch	0.000053
Residual	0.003128

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

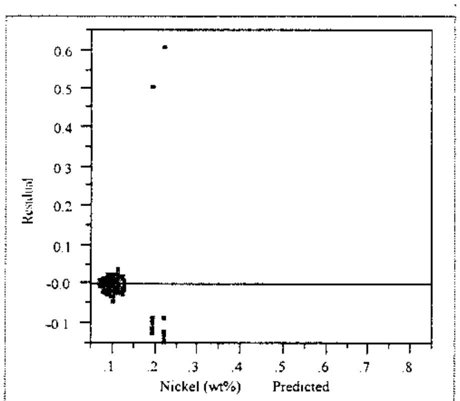
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.18494	0.00342	54	1.0950	0.3168

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	0.18493908	0.003425	1.0950
Error	251	0.78506208	0.003128	**Prob>F**
C Total	305	0.97000116		0.3168



Response: Silicon (wt%)

Summary of Fit

RSquare	0.31817
Root Mean Square Error	1.662353
Mean of Response	24.66783
Observations (or Sum Wgts)	306

Variance Component Estimates

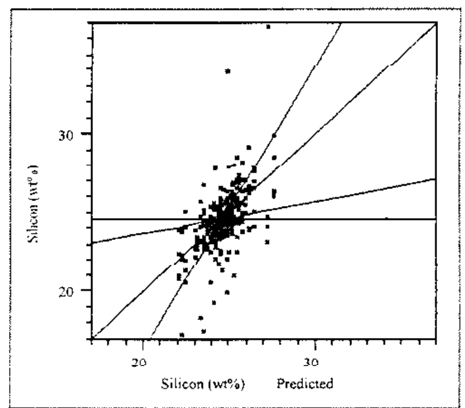
Component	Var Comp Est
Batch	0.580915
Residual	2.763416

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	323.67	5.99389	54	2.1690	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	323.6699	5.99389	2.1690
Error	251	693.6174	2.76342	**Prob>F**
C Total	305	1017.2873		<.0001

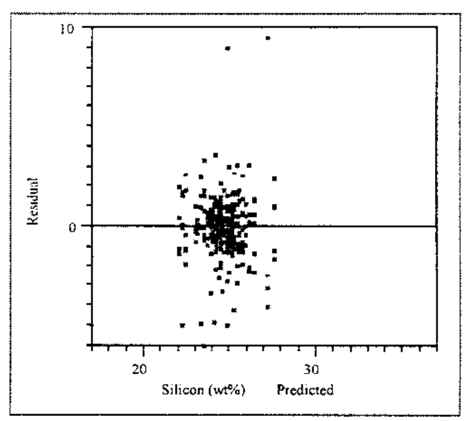


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Titanium (wt%)

Summary of Fit

RSquare	0.173731
Root Mean Square Error	0.050291
Mean of Response	0.024105
Observations (or Sum Wgts)	306

Variance Component Estimates

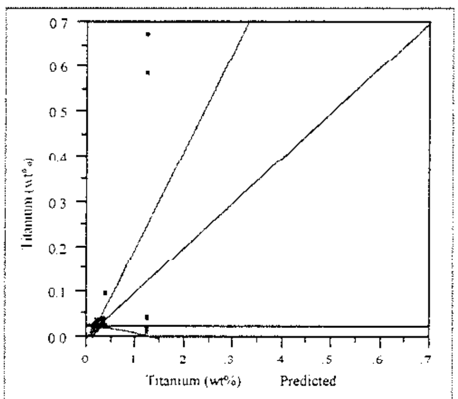
Component	Var Comp Est
Batch	-0.00001
Residual	0.002529

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

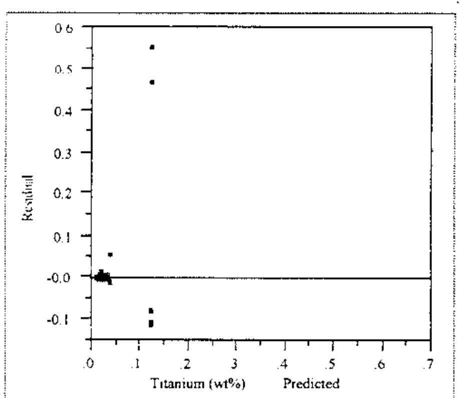
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.13348	0.00247	54	0.9773	0.5247

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	0.13347727	0.002472	0.9773
Error	251	0.63482138	0.002529	**Prob>F**
C Total	305	0.76829865		0.5247



Response: Fe/Li

Summary of Fit

RSquare	0.59703
Root Mean Square Error	0.366973
Mean of Response	5.054695
Observations (or Sum Wgts)	306

Variance Component Estimates

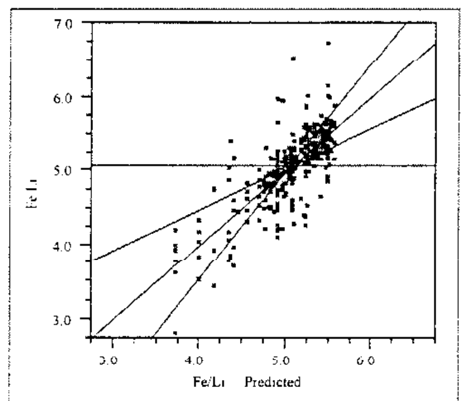
Component	Var Comp Est
Batch	0.142554
Residual	0.134669

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	50.0802	0.92741	54	6.8866	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	50.080151	0.927410	6.8866
Error	251	33.801950	0.134669	**Prob>F**
C Total	305	83.882101		<.0001

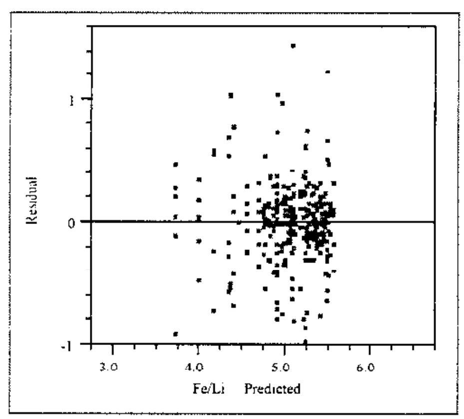


Exhibit 19: Random Effects Study for MFT by Cation from PF Dissolution Method

Response: Fe/Al

Summary of Fit

RSquare	0.572785
Root Mean Square Error	0.094897
Mean of Response	3.361595
Observations (or Sum Wgts)	306

Variance Component Estimates

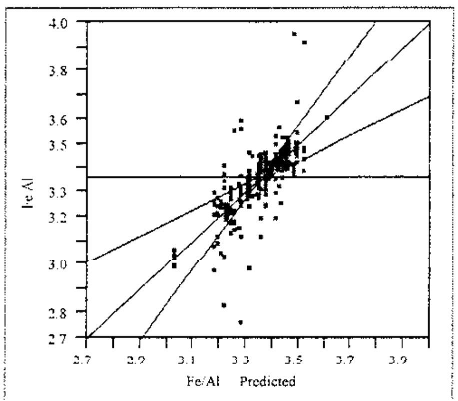
Component	Var Comp Est
Batch	0.008473
Residual	0.009005

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	3.03058	0.05612	54	6.2320	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	54	3.0305841	0.056122	6.2320
Error	251	2.2603762	0.009005	**Prob>F**
C Total	305	5.2909603		<.0001

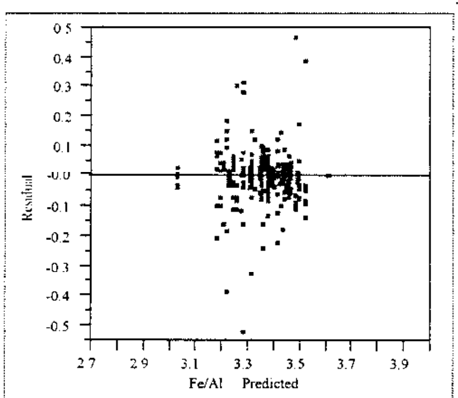


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Aluminum (wt%)

Summary of Fit

RSquare	0.638798
Root Mean Square Error	0.125203
Mean of Response	2.457095
Observations (or Sum Wgts)	368

Variance Component Estimates

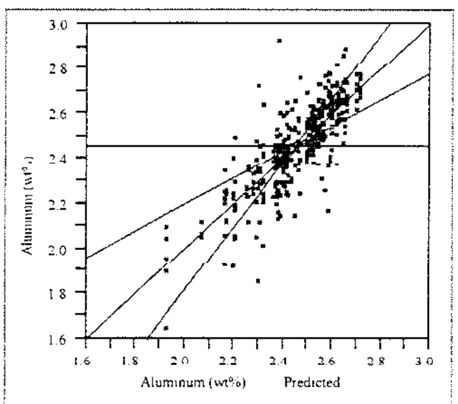
Component	Var Comp Est
Batch	0.0198
Residual	0.015676

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

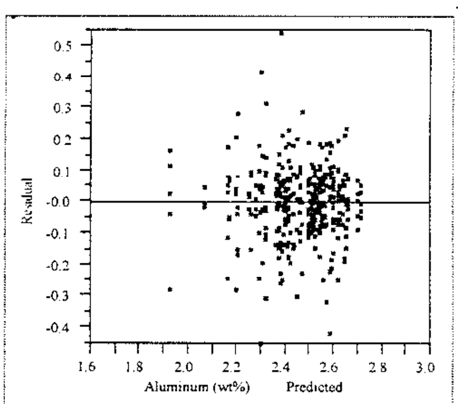
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	8.26153	0.11973	69	7.6380	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	8.261527	0.119732	7.6380
Error	298	4.671394	0.015676	**Prob>F**
C Total	367	12.932922		<.0001



Response: Calcium (wt%)

Summary of Fit

RSquare	0.64151
Root Mean Square Error	0.072726
Mean of Response	0.868302
Observations (or Sum Wgts)	368

Variance Component Estimates

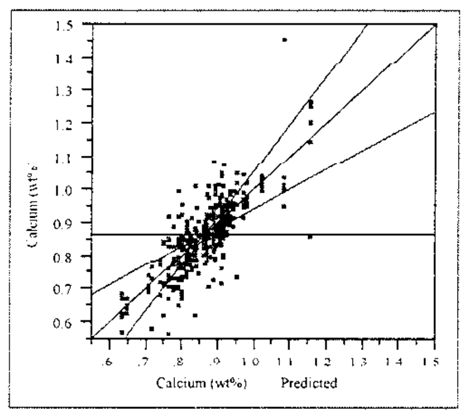
Component	Var Comp Est
Batch	0.006772
Residual	0.005289

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	2.82049	0.04088	69	7.7285	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	2.8204945	0.040877	7.7285
Error	298	1.5761550	0.005289	**Prob>F**
C Total	367	4.3966495		<.0001

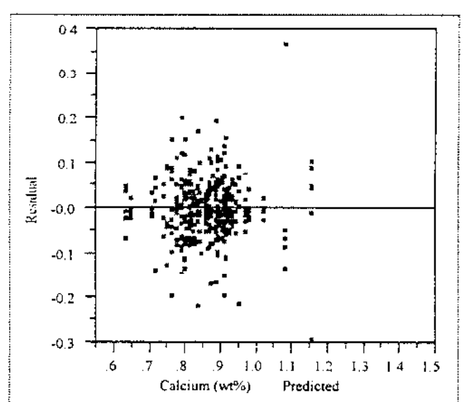


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Chromium (wt%)

Summary of Fit

RSquare	0.480233
Root Mean Square Error	0.01228
Mean of Response	0.068614
Observations (or Sum Wgts)	368

Variance Component Estimates

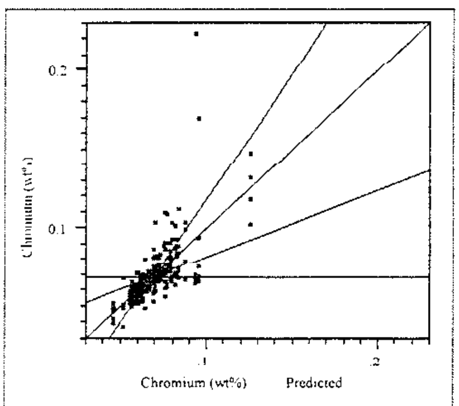
Component	Var Comp Est
Batch	0.000086
Residual	0.000151

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

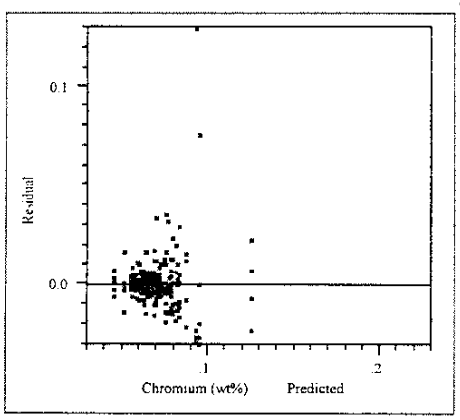
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.04152	0.0006	69	3.9903	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	0.04151929	0.000602	3.9903
Error	298	0.04493721	0.000151	**Prob>F**
C Total	367	0.08645649		<.0001



Response: Copper (wt%)

Summary of Fit

RSquare	0.994807
Root Mean Square Error	0.009962
Mean of Response	0.073929
Observations (or Sum Wgts)	368

Variance Component Estimates

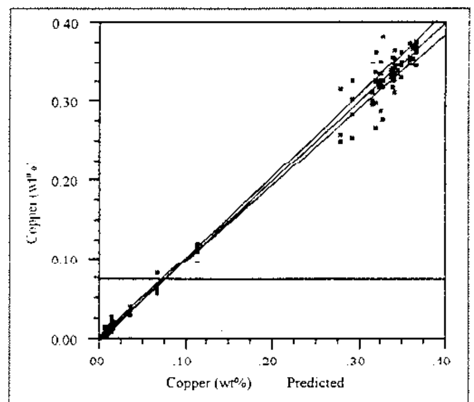
Component	Var Comp Est
Batch	0.015603
Residual	0.000099

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	5.66491	0.0821	69	827.3561	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	5.6649071	0.082100	827.356
Error	298	0.0295711	0.000099	**Prob>F**
C Total	367	5.6944782		<.0001

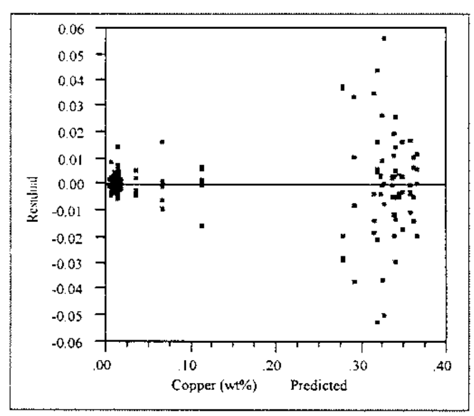


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Iron (wt%)

Summary of Fit

RSquare	0.675789
Root Mean Square Error	0.408587
Mean of Response	8.384696
Observations (or Sum Wgts)	368

Variance Component Estimates

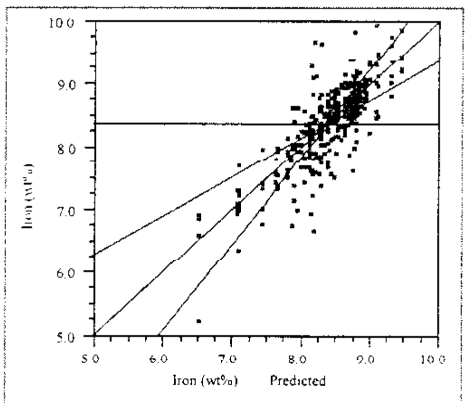
Component	Var Comp Est
Batch	0.254201
Residual	0.166943

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

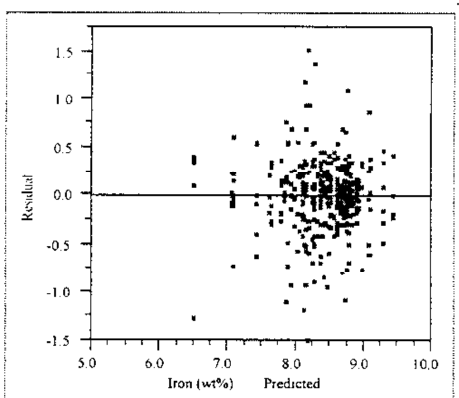
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	103.697	1.50286	69	9.0022	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	103.69735	1.50286	9.0022
Error	298	49.74903	0.16694	**Prob>F**
C Total	367	153.44638		<.0001



Response: Potassium (wt%)

Summary of Fit

RSquare	0.753301
Root Mean Square Error	0.030226
Mean of Response	0.141128
Observations (or Sum Wgts)	368

Variance Component Estimates

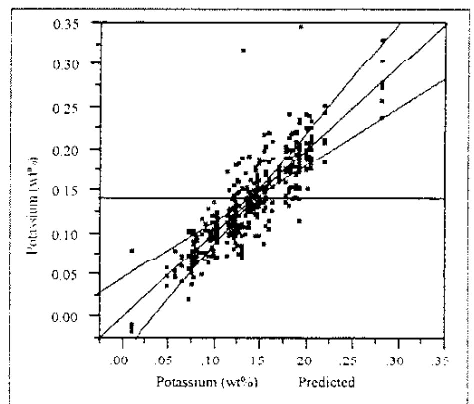
Component	Var Comp Est
Batch	0.002119
Residual	0.000914

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.83135	0.01205	69	13.1877	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	0.8313500	0.012049	13.1877
Error	298	0.2722590	0.000914	**Prob>F**
C Total	367	1.1036090		<.0001

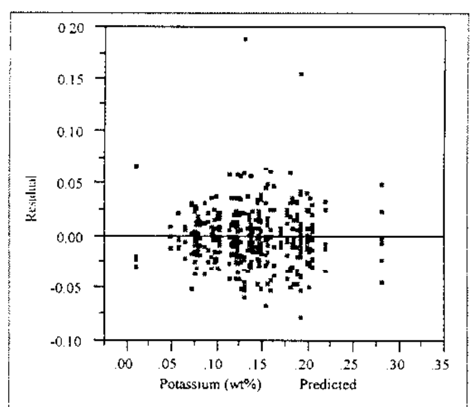


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Lithium (wt%)

Summary of Fit

RSquare	0.694447
RSquare Adj	0.623698
Root Mean Square Error	0.040458
Mean of Response	1.684823
Observations (or Sum Wgts)	368

Variance Component Estimates

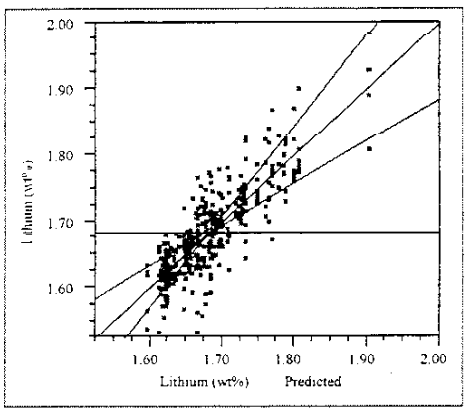
Component	Var Comp Est
Batch	0.002746
Residual	0.001637

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

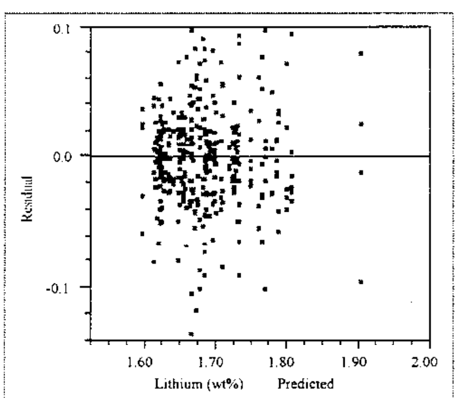
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.10858	0.01607	69	9.8157	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	1.1085838	0.016066	9.8157
Error	298	0.4877717	0.001637	**Prob>F**
C Total	367	1.5963555		<.0001



Response: Magnesium (wt%)

Summary of Fit

RSquare	0.637698
Root Mean Square Error	0.04388
Mean of Response	1.281552
Observations (or Sum Wgts)	368

Variance Component Estimates

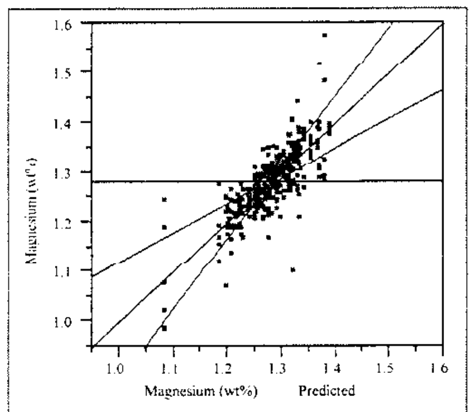
Component	Var Comp Est
Batch	0.002419
Residual	0.001925

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.00992	0.01464	69	7.6017	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	1.0099239	0.014637	7.6017
Error	298	0.5737791	0.001925	**Prob>F**
C Total	367	1.5837030		<.0001

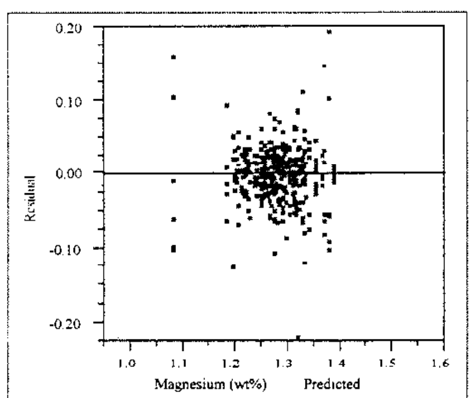


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Manganese (wt%)

Summary of Fit

RSquare	0.652567
Root Mean Square Error	0.055598
Mean of Response	0.835079
Observations (or Sum Wgts)	368

Variance Component Estimates

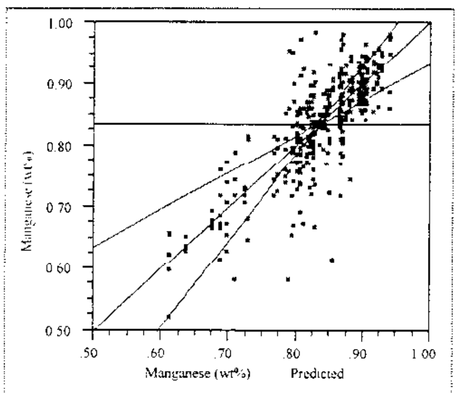
Component	Var Comp Est
Batch	0.004183
Residual	0.003091

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

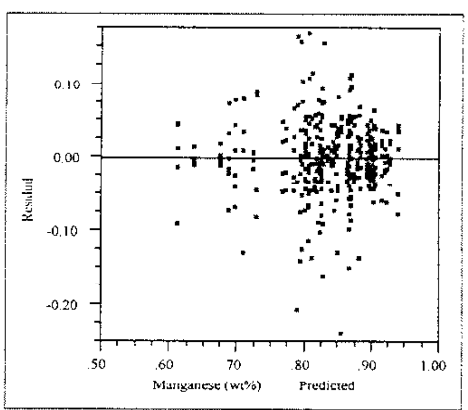
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	1.73018	0.02508	69	8.1119	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	1.7301830	0.025075	8.1119
Error	298	0.9211677	0.003091	**Prob>F**
C Total	367	2.6513507		<.0001



Response: Sodium (wt%)

Summary of Fit

RSquare	0.639623
Root Mean Square Error	0.249212
Mean of Response	8.846212
Observations (or Sum Wgts)	368

Variance Component Estimates

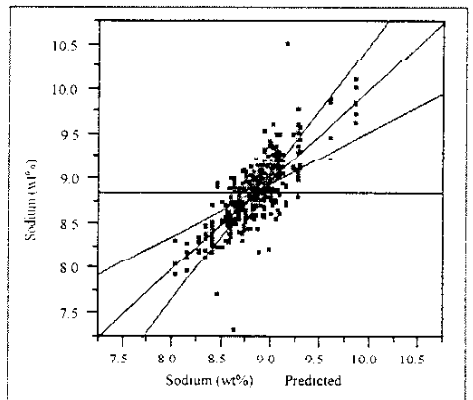
Component	Var Comp Est
Batch	0.07877
Residual	0.062107

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	32.849	0.47607	69	7.6654	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	32.848986	0.476072	7.6654
Error	298	18.507816	0.062107	**Prob>F**
C Total	367	51.356801		<.0001

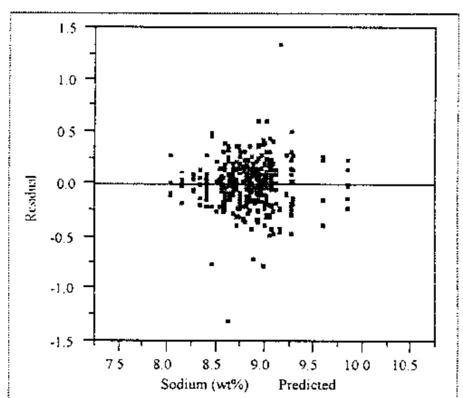


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Nickel (wt%)

Summary of Fit

RSquare	0.669147
Root Mean Square Error	0.017329
Mean of Response	0.107818
Observations (or Sum Wgts)	368

Variance Component Estimates

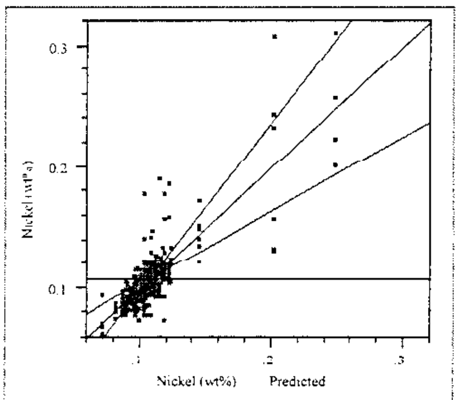
Component	Var Comp Est
Batch	0.000442
Residual	0.0003

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

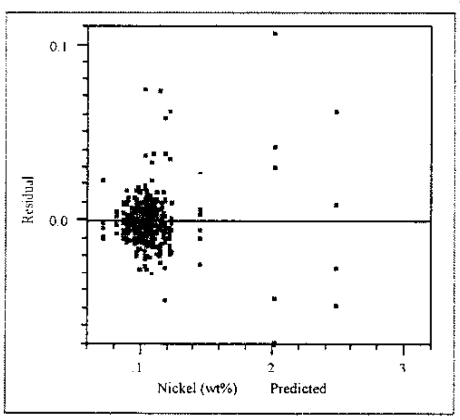
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.18099	0.00262	69	8.7348	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	0.18099273	0.002623	8.7348
Error	298	0.08949007	0.000300	**Prob>F**
C Total	367	0.27048280		<.0001



Response: Silicon (wt%)

Summary of Fit

RSquare	0.633636
Root Mean Square Error	0.661416
Mean of Response	23.12764
Observations (or Sum Wgts)	368

Variance Component Estimates

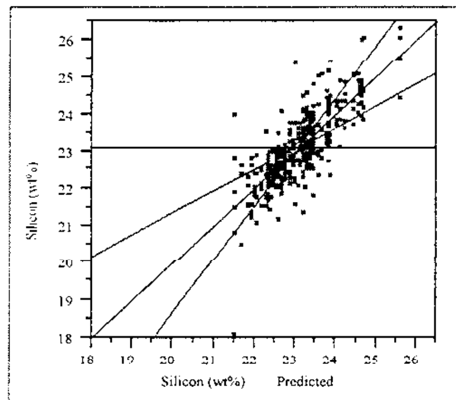
Component	Var Comp Est
Batch	0.538543
Residual	0.437472

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	225.472	3.26771	69	7.4695	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	225.47180	3.26771	7.4695
Error	298	130.36652	0.43747	**Prob>F**
C Total	367	355.83832		<.0001

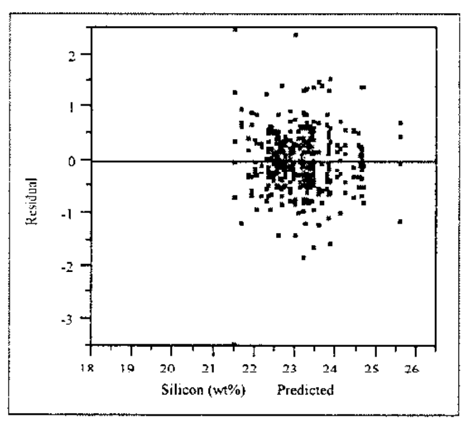


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Titanium (wt%)

Summary of Fit

RSquare	0.602765
Root Mean Square Error	0.007026
Mean of Response	0.02297
Observations (or Sum Wgts)	368

Variance Component Estimates

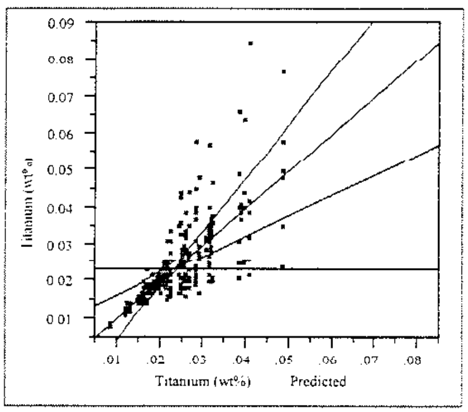
Component	Var Comp Est
Batch	0.000052
Residual	0.000049

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

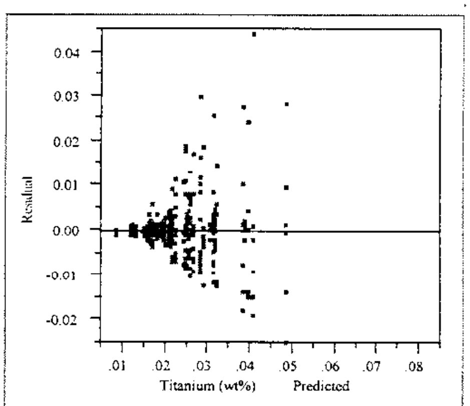
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.02232	0.00032	69	6.5534	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	0.02232320	0.000324	6.5534
Error	298	0.01471147	0.000049	**Prob>F**
C Total	367	0.03703467		<.0001



Response: Uranium (wt%)

Summary of Fit

RSquare	0.821613
Root Mean Square Error	0.081926
Mean of Response	1.123565
Observations (or Sum Wgts)	368

Variance Component Estimates

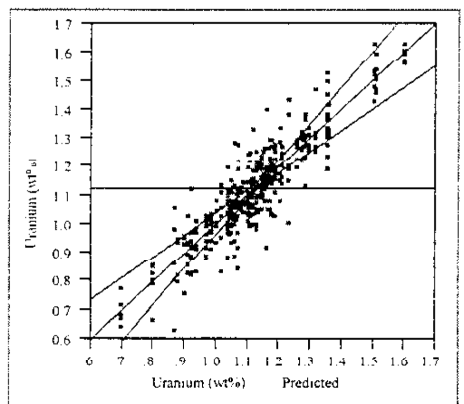
Component	Var Comp Est
Batch	0.024128
Residual	0.006712

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	9.21226	0.13351	69	19.8917	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	9.212256	0.133511	19.8917
Error	298	2.000147	0.006712	**Prob>F**
C Total	367	11.212402		<.0001

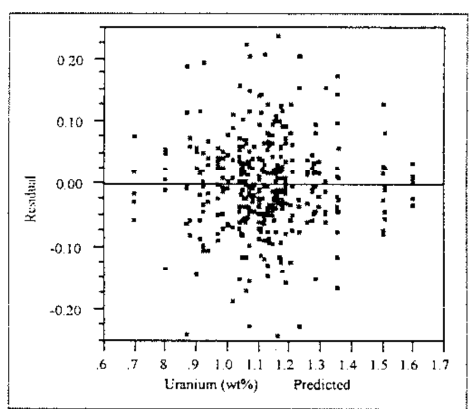


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Zirconium (wt%)

Summary of Fit

RSquare	0.60057
Root Mean Square Error	0.02164
Mean of Response	0.043859
Observations (or Sum Wgts)	368

Variance Component Estimates

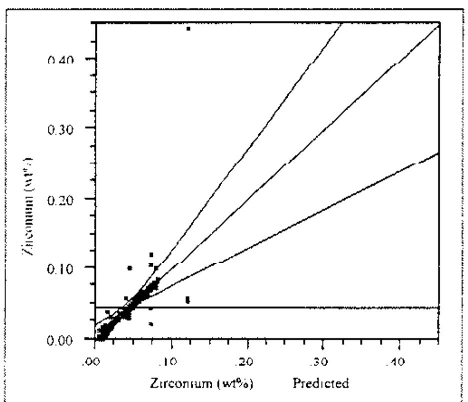
Component	Var Comp Est
Batch	0.00049
Residual	0.000468

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

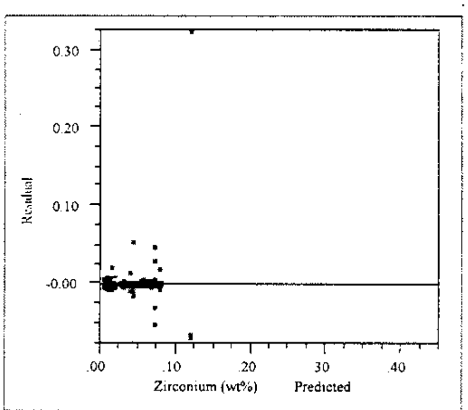
Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	0.20983	0.00304	69	6.4937	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	0.20982765	0.003041	6.4937
Error	298	0.13955300	0.000468	**Prob>F**
C Total	367	0.34938065		<.0001



Response: Fe/Li

Summary of Fit

RSquare	0.686585
Root Mean Square Error	0.307847
Mean of Response	4.990823
Observations (or Sum Wgts)	368

Variance Component Estimates

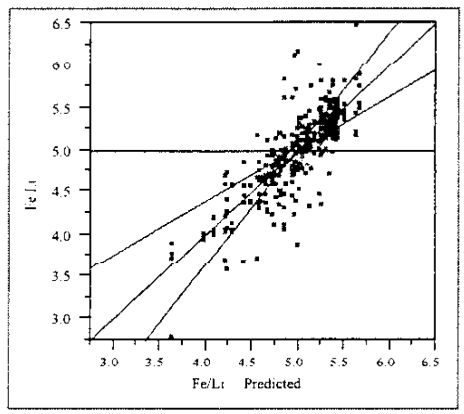
Component	Var Comp Est
Batch	0.152578
Residual	0.09477

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	61.867	0.89662	69	9.4611	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	61.867039	0.896624	9.4611
Error	298	28.241319	0.094770	**Prob>F**
C Total	367	90.108358		<.0001

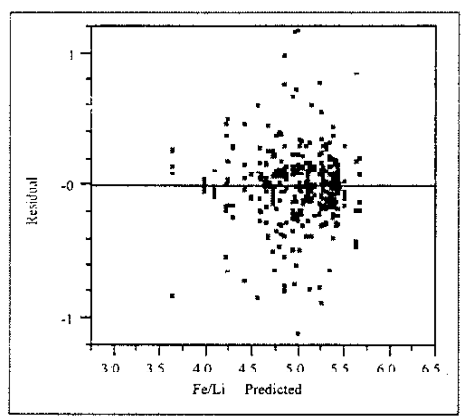


Exhibit 20: Random Effects Study for MFT by Cation from MA Dissolution Method

Response: Fe/Al

Summary of Fit

RSquare	0.782142
Root Mean Square Error	0.086224
Mean of Response	3.416207
Observations (or Sum Wgts)	368

Variance Component Estimates

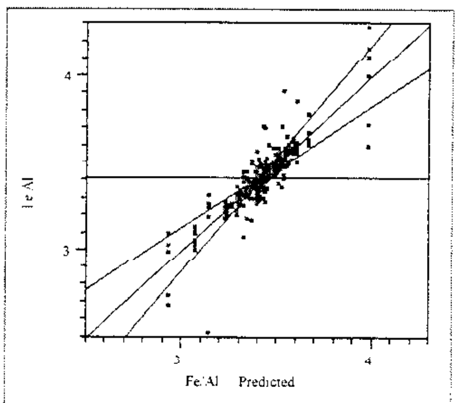
Component	Var Comp Est
Batch	0.02052
Residual	0.007434

These estimates based on equating Mean Squares to Expected Value.

Tests wrt Random Effects

Source	SS	MS Num	DF Num	F Ratio	Prob>F
Batch	7.95388	0.11527	69	15.5052	<.0001

Whole-Model Test



Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	69	7.953882	0.115274	15.5052
Error	298	2.215481	0.007434	**Prob>F**
C Total	367	10.169362		<.0001