PAGE

ENGINEERING CHANGE NOTICE

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1. ECN 629009

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	3a. USQ Required?	4. Date
Supplemental [] Direct Revision [X] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	John H. Baldwin, Data Assessment & Interpretation, R2-12, 373-4533	[] Yes [X] No	02/13/96
	5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Approval Designator
	Tank 241-BY-108, Core Samples 98 & 104	N/A	Q
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.)	9. Related ECN No(s).	10. Related PO No.
	WHC-SD-WM-DP-145, Rev. 1	N/A	N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	N/A	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

The purpose of this ECN is to submit the final narrative and summary tables, plus add the Reactive System Screening Tool (RSST) information to the existing document.

13a. Justification (mark one)

Criteria Change	[X]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

13b. Justification Details

This ECN completes the hardcopy documentation for this tank.

14. Distribution (include name, MSIN, and no. of copies)

See Attached Distribution Sheet.

RELEASE STAMP

DATE: FEB 29 1996

STA: 4

HANFORD RELEASE

ID: 2

A-7900-013-2 (11/94) GEF095

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 629009

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[X] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

	Signature	Date		Signature	Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER		
Cog. Eng. John H. Baldwin	John Baldwin	2/12/96	PE		
Cog. Mgr. John G. Kristofzski	John Kristofzski	2/28/96	QA		
AEQA E. W. Miller	E.W. Miller	2/23/96	Safety		
QA T. L. Tung	Tu L. Tung	2/23/96	Design		
Environ.			Environ.		
Other			Other		
Production Planning & Control A. D. Rice	A. D. Rice	2-28-96			
			DEPARTMENT OF ENERGY		
			Signature or a Control Number that tracks the Approval Signature		
			ADDITIONAL		

FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104

John H. Baldwin
Westinghouse Hanford Company, Richland, WA 99352
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RECORD OF REVISION	(1) Document Number WHC-SD-WM-DP-145	Page 1

(2) Title

FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104

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WHC-SD-WM-DP-145, REV. 1A

ANALYTICAL SERVICES

FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104

Project Coordinator: JOHN H. BALDWIN

Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management

by

Westinghouse Hanford Company
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Richland, Washington

54-7800-075

Hanford Operations and Engineering Contractor for the US Department of Energy

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WHC-SD-WM-DP-145, REV. 1A

NARRATIVE

FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES, CORE 98 AND CORE 104

ANALYTICAL SUMMARY

Core samples from tank 241-BY-108 (BY-108) were received at the 222-S Laboratories and underwent analysis to satisfy the analytical requirments of the *Tank 241-BY-108 Rotary Mode Core Sampling and Analysis Plan* (SAP)[1]). Applicable Data Quality Objectives (DQO) for this Tank Characterization Plan (TCP) included Safety Screening, Ferrocyanide, Pretreatment and Organic.

As required by the *Tank Safety Screening DQO* [2], a 95% confidence interval was calculated for those sample results exceeding an action limit. The precision requirements of the SAP were satisfied by comparing a one-sided 95% confidence interval of the mean for each sample to the action limit, rather than requiring a relative percent difference between sample and duplicate results of less than 10%. The DSC analysis at the 95% confidence level found the Differential Scanning Calorimetry Differential Scanning Calorimetry (DSC) results of three samples exceeded the maximum limit stated in the DQO (Table 4). Table 4, as presented herein has been updated to reflect corrected final results. Notifications, by the Chemist and Project Coordinator concerning DSC values that exceeded the action limit were made as required.

Before samples were removed from BY-108, an industrial hygiene technician field tested the tank vapors. The technician purged the vapor probe sample tube for five minutes then field measured vapor stream contents using a combustible gas indicator (CGI) and an organic vapor meter (OVM). The technician reported an Lower Flammability Limit (LFL) of 5.0%, an oxygen content of 20 %, and a total organic carbon content of 71.8 ppm using the OVM. The tank headspace gas and vapor characterization results are reported in reference [3]

When compared to the decision rules in the safety screening DQO, the tank can be considered "safe".

SCOPE

This document provides additional analytical data not provided in the 60-day report, reference [4] for the tank BY-108 core samples collected on July 27 through August 16, 1995 (Core 98, Segments 1-4 and Core 104 Segments 1-5). The 222-S Laboratories received, extruded, and analyzed each sample in accordance with the TCP. Partial BY-108 core segments from cores 97, 100 and 102 were received from BY-108 but were not analyzed as they duplicated segments of cores 98 and 104. Core 99, a core taken from the same riser as core 98, was sent to Pacific Northwest Laboratory (PNL) 325 Laboratory for analysis and the results of those analyses are reported by PNL in reference [5].

SAMPLE RECEIPT, EXTRUSION, AND SUBSAMPLING

The subject core samples reported herein were taken from Tank BY-108. The two samples are identified as Core 98 and Core 104. These core segment samples were received at the 222-S Laboratory between July 28 and August 21, 1995 and extruded between August 1 and August 24, 1995. Table 1 provides the sampling and extrusion report for the two core samples. With the exception of segment 1, of both cores, the recovery was good and each segment was broken into quarter segments and homogenized. Segment 1, for both cores, was treated as a "whole" segment and homogenized. Additional extrusion results are presented in Table 2.

As shown in Table 1, there were some quarter segments missing upon extrusion, that is, there was a gap where that quarter segment would have been expected. Where drainable liquid was obtained, it is believed the liquid originally occupied this gap and accounts for the missing quarter segment. Subsamples for laboratory analyses and archiving were created per the tank SAP.

TABLE 1: SUMMARY DESCRIPTION OF AUGER SAMPLES

Core and Segment* Number	Riser	Sample Total Weight (Grams)	Sample Collection General Description
Core 98 Segment 1(W)	12A	366.8	Extruded approx. 5-6 inches of sample. Sample was wet. Texture of sample was crystalline and tended to "melt" on the sample tray. Sample was light brown to dirty white in color. Collected 170 ml of drainable liquid. Color of liquid was yellow and opaque.
Core 98 Segment 2 (A),(C), (D)	12A	416.0	Collected 100 ml of drainable liquid, which was yellow brown in color and opaque. Extruded approx. 12 inches of sample. Facies present; sample was divided into quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown, beige and dirty white saltcake.
Core 98 Segment 3 (A),(C), (D)	12A	406.5	Collected 60 ml of drainable liquid, which was light brown in color and opaque. Extruded approx. 16.5 inches of sample. Facies present; Sample was divided into quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown, beige and dirty white saltcake.

Core 98 Segment 4 (A),(B), (C),(D)	12A	490.0	No drainable liquid observed or collected. Extruded approx. 19.0 inches of sample; sample retained its shape. Facies present; sample was divided into quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown sludge with white saltcake.
Core 104 Segment 1(W)	7	131.3	Extruded approx. 6-7 inches of sample. Sample was tan in color, dry, crystalline and granular in shape. No drainable liquids.
Core 104 Segment 2 (A),(B), (C)	7	383.5	No drainable liquid. Extruded approx. 19.0 inches of sample; Upper half segment retained its shape, lower half segment crumbled during extrusion. Facies present in upper quarter segment (crumbly saltcake to sludge). Sample was divided into three quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown sludge with saltcake.
Core 104 Segment 3 (A),(C), (D)	7	288.8	No drainable liquid. Extruded approx. 17.0 inches of sample; sample was wet, granular and did not retained its shape. Sample was divided into three quarter segments. Sample texture resembled a brown saltcake.
Core 104 Segment 4 (A),(C), (D)	7	318.3	No drainable liquid. Extruded approx. 18.0 inches of sample. Sample was wet, granular, crumbly and ranged from a yellow to brown crystalline saltcake. Sample was divided into three quarter segments.
Core 104 Segment 5 (A),(B), (C),(D)	7	422.7	No drainable liquid. Extruded approx. 18 inches of sample. Lower half retained its shape and was medium to dark brown, whereas the upper half was dark brown and partially retained its shape. Texture of material resembled a sludge. Sample was divided into four quarter segments.

* (x) represents the quarter segment where "W" represents a whole segment and "A", "B", "C" and "D" represent the quarter segment location with "A" the top of the segment and "D" the bottom of the segment.

ANALYTICAL RESULTS

Analytical results are presented in Table 2.

Total Organic Carbon (TOC)

TOC analyses were performed in duplicate according to procedure LA-342-100, Rev. C-0. The relative percent difference (RPD) for sample S95T001977 exceeded the required ± 10% range. A "triplicate" analysis was performed with a TOC result of 1.39 ug/g which closely resembles the "duplicate" value.

Cyanide

Cyanide analyses were performed in duplicate according to procedure LA-695-102, Rev. D-0. The cyanide levels peaked at 3080 ug/g in segment 4 of core 98. Cyanide levels were generally very low relative to the limit of 39,000 ug/g throughout the rest of the core.

Core 104 Segment 5, which is at the same depth in the tank as core 98 segment 4, did not have a coresponding peak in the cyanide level. The cyanide levels in core 104 were uniformly low with a peak in segment 2C of 390.0 ug/g. Cyanide levels were generally very low relative to the limit of 39,000 ug/g throughout the rest of the core.

Some RPD's drifted outside the preferred ± 10% band but were within the laboratory control limit. Spike recoveries were within laboratory control limits of ± 20% for the majority of samples. Due to the low cyanide levels, no re-runs were made for samples with spike recoveries or RPD's outside the control band.

Inductively Coupled Plasma (ICP) Acid Digest

An ICP for all metals was performed using procedure LA-505-151, Rev. A-1. Although the SAP only required ICP results for Nickel in sludge, Nickel was analyzed for in all segments of Core 98. In addition, ICP results for all metals were obtained for all segments of Core 104. A single spike was performed for a batch of samples with a similar matrix. The high levels of Sodium in the ICP samples required high dilutions. The high dilution in turn caused poor (or meaningless) spike recoveries for those elements that were either very high relative to the detection limit or close to the detection limit. Standard recoveries and RPD's were also similarly affected for these elements.

The out-of-range standard recovery for Silicon is most likely a result of hydrofluoric acid, present in the standard, leaching silicate from the borosilicate glassware used for the standard prep. Hydrofluoric acid is not used in the preparation of the samples. The out-of-range standard recovery for Sodium is a result of normally expected contamination due to the natural abundance of this material in the environment. A few other elements had

standard recoveries slightly below 90% but are the best achievable results in light of the high dilutions.

The ICP also analyzed for Lithium to check for contamination of the samples by Hydrostatic Head Fluid (HHF). HHF was used to rinse the drill string. Lithium was below detection limits for all but the top segments of cores 98 and 104. The top segments of both cores showed small levels of lithium, indicating intrusion into those samples of the drill string wash water.

Ion Chromatography (IC)

Ion chromatography measurements were performed using procedure LA-533-105, Rev. D-1 to look for anions of Bromide, Chloride, Fluoride, Nitrite, Nitrate, Oxalate, Phosphate, and Sulfate. Standard and spike recoveries were generally good. The RPD's varied considerably due to the heterogeneity of the tank material. Single spikes were performed for each batch of samples with a similar matrix.

Flame Ionization Detector/Gas Chromatograph FID/GC

The FID/GC was performed per procedure LA-523-437, Rev. A-0 An organic screen was performed on the solid samples to determine if organic material, originally floating on the water surface, had been trapped in the saltcake or sludge as the water had been drained from the tank. The organics analyzed for were Nonane, Decane, Undecane, Dodecane, Tridecane, Tetradecane, Pentadecane and Tri-n-buylphosphate.

The organic results and organic quality assurance (QA) are presented in Table 2, however, the organic analyses do not translate well in this format. Standard recovery is not shown in the table as the instrument is calibrated against a suite of organic compounds where the recovery of each must be within 15%. A batch of samples are then analyzed against that calibration.

In organic analysis, the spike is actually a triplicate sample with the addition of Nonane and Tri-n-butylphosphate. Therefore the only "Spikes" that are shown are those for Nonane and Tri-n butylphosphate. The "Spikes" for these compounds represent the percent recovery of those compounds from that "spiked" sample. Recoveries of ± 20% are considered very good.

The manner in which sample results are reported also differ from those of the inorganic samples. A "U" followed by a value of zero is interpreted as "Undetected" *i.e.* none of this compound was detected in the sample. A "J" followed by a non-zero value is interpreted as an "Estimated Concentration" *i.e.* the compound is clearly present but the sample size used in the measurement did not produce a value that exceeded the detection limit. A compound with a value that is not preceded with a "U" or "J" indicates a reproducible measurement of the concentration of that compound. The RPD's in the organic analysis reflected the same heterogeneity of the material as the inorganic analyses.

All Organic QA and sample analysis results are retained in an electronic format and are archived by the Organic Chemistry Department at 222-S Laboratory. Additional information is available upon request.

Responsible Project Coordinator: J. H. Baldwin

REFERENCE

[1] J. H. Baldwin, *Tank 241-BY-108 Rotary Mode Core Sampling and Analysis Plan*, WHC-SD-WM-TSAP-059, Rev. 0, Westinghouse Hanford Company, Richland, Washington, July 19, 1995.

[2] H. Babad, J. W. Hunt, and K. S. Redus, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 1, Westinghouse Hanford Company, Richland, Washington, April 27, 1995.

[3] J. L. Huckaby and D. R. Bratzel, *Tank 241-BY-108 Headspace Gas and Vapor Characterization Results for Samples Collected in March 1994 and October 1994.*, WHC-SD-WM-ER-422, Rev. 2, UC-2070, Westinghouse Hanford Company, Richland, Washington, September 26, 1995.

[4] J. H. Baldwin, *60-Day safety Screening and Ferocyanide Results for Tank 241-BY-108, Rotary Samples, Core 98 and Core 104*, WHC-SD-WM-DP-145, Rev. 0, Westinghouse Hanford Company, Richland, Washington, October 18, 1995.

[5] K. L. Silvers, L. R. Greenwood, R. T. Steele, J. M. Tingey, M. W. Urie, *Single Shell Tank Waste Chacterization, Core 99, Tank BY-108* Rev. 1, Pacific Northwest Laboratory, Richland, Washington, September 29, 1995.

Table 4. 95% Upper Confidence Interval Limits for DSC (Units are in joules/g).

Sample Description	Sample Number	Differential Scanning Calorimetry (DSC) Dry Basis				TGA* Average
		Sample Result (J/g)	Dup. Result (J/g)	Average Result (J/g)	95 % UL	(%H20)
Quarter Segment B from Core 98 Segment 4	S95T001420	509.1	438.1	473.6	697.75	35.61
Rerun	S95T001420	481.3	409.5	445.4	672.0	35.61
Quarter Segment B from Core 104 Segment 5	S95T001976	593.5	552.6	573.05	702.17	36.66
Quarter Segment C from Core 104 Segment 5	S95T001977	548.7	507.9	528.3	657.1	35.50

TGA = Thermogravimetric Analysis
Quarter Segment B is approximately the second 5 inches of material of the segment. Quarter segment C is approximately the third 5 inches of material from the top of the segment.

REACTIVE SYSTEM SCREENING TOOL (RSST) TESTS OF S95T002639 AND S95T003174

REACTIVE SYSTEM SCREENING TOOL (RSST) TESTS OF S95T002639 AND S95T003174

BY D. B. BECHTOLD

SUMMARY/CONCLUSIONS

Sample S95T002639 was dried over low heat to remove 27.3% moisture, and size-reduced to place in the RSST under 7 barg nitrogen. It self-heated strongly immediately after traversing an endotherm at 225°C, to attain 599°C in the RSST at an apparent peak rate of 1725°C/min. Concurrently it raised the pressure in the containment by 3.7 bar at a peak rate of 6.9 bar/min.

Sample S95T003174 was flushed into a dryer and dried to remove 32.1% of its original moisture, before being size reduced and loaded into the RSST under 7 barg nitrogen. Instrument heater failure, combined with a lack of self-heating response from the sample, resulted in a peak temperature of only 312°C. A possible explanation for the lack of self-heating lies in the relatively weak melt endotherm observed, which itself could have been due to inherently low oxidizer content, or inadvertent oxidizer removal during sample transfers by flushing. This sample generated condensate and noncondensible gas too, but, for the gas, to a lesser extent than the previous sample.

PERFORMANCE OF WORK

Work was performed according to test plan WHC-SD-WM-TP-104, and calculations were made as outlined in WHC-SD-WM-DTR-026. Sample treatment and experimental data were logged in WHC-N-1014-1, pg. 37-59, and separate hard/copies of instrumental data were retained to back up electronic copies.

SAMPLE TREATMENT

There were two samples submitted for RSST analysis from the BY-108 tank[1]. Table 1. identifies them and reports the various states of moisture/volatiles loss each sample experienced.

---

[1] Three samples reported in WHC-SD-WM-DP-145 Rev. 1, had DSC values that exceeded the BY-108 Tank Characterization Plan limit of 481 J/g on a dry basis. RSST analysis were requested by the Ferrocyanide Program. Only the two samples identified in Table 1 had material remaining for analysis, the third sample had been totaly depleted by prior analyses. The RSST analysis totally depleted the material for the two samples analyzed. All of these samples came from the bottom of the waste tank in a region 10cm - 35 cm above the bottom of the tank.

Table 1. Sample Identification and Percent Volatiles From As Received to Various States

Test ID	Sample	%H_2O Lost to Prepared State[a]	%H_2O Lost to Dry State[b]	%Total Volatiles Lost to Reacted State[c]
951229	S95T002639 Vial 7442 BY-108 C98S4B	27.29	35.6	39.91
960123	S95T003174 Vial 8683 BY-108 C104S5B	32.09	36.6	40.47

[a] Weight loss from as-received to as-prepared for RSST.

[b] Weight loss by 222-S lab reported results for as-delivered to as-dry, i.e the dry weight basis.

[c] Calculated from loss on reaction in RSST and loss on preparation. Usually low due to condensate on sample insulation sheath.

As received, the two samples were wet, sticky materials that needed to be dried and size-reduced in order to make them suitable for RSST analysis. This is done for two reasons:

1) To be able to get the sample into the RSST sample vessel, and

2) To prevent the evolution of large amounts of water, which creates sample voids, tends to push sample out of the sample holder, and compromises the thermal insulation around the holder.

Sample S95T002639 was dried in a beaker sitting on a hot plate at low heat for several days. After having been dried, it was ground up and dispensed into the RSST holder. The same was done for sample S95T003174, except that it was necessary to flush this sample into the drying beaker with water, because so little sample was available that no mechanical losses could be tolerated.

Each sample was run in turn in the RSST under approximately 7 barg nitrogen (assured by first flushing the bomb with nitrogen twice before a final fill). The heating rates for both samples were approximately 1°C/min. Sample S95T003174 suffered a partial heater failure in the RSST during its run, and subsequently was reheated again after repairs were made. Unfortunately, the repairs were unsuccessful and no further information was gathered in the reheat test.

THERMAL RESULTS

Test 951229

Figures 1 and 2 illustrate the thermal response from test 951229, and these results are summarized in Table 3. (Note that the dry-weight-basis results reported there are based on TGA results on original samples from the core segment, not on RSST sample preparation results). Between approximately 130°C and 220°C, the instrumentally driven heat rate was perturbed and depressed by passage of the sample through an endothermic regime. By 225°C, it was clear that the sample had finished traversing this regime and was contributing internally generated heat. The heat rate continued to accelerate with temperature, hesitating slightly in the vicinity of 300°C, then sharply accelerating to about 1200°C/min. This apparent rate was held until approximately 480°C was reached, whereupon a brief acceleration to a rate above 1700°C/min was reached before reactant exhaustion stopped the exothermic reaction near 600°C.

The general shape of the temperature rate curve in Figure 2 is more complex than would be obtained from a simple first order reaction. This is borne out by DSC thermograms taken of the same core segment material that show broad, multi-reaction energy releases from 210°C to over 400°C. The hesitation and acceleration occurring near 300°C could possibly be due to the melt of more oxidizer, consequently followed by increased oxidation rates. The flatness of the dT/dt curve atC/min is symptomatic of heat transfer limits to the sensing thermocouple from semisolid samples, and of thermocouple response times. A true propagation in the RSST usually drives the dT/dt curve to values of 7000 to 9000°C/min in an interval of one or two data points, as the reaction front passes by the thermocouple. On this basis, the sample in test 951229 did not show any indication of propagation.

The initial stages of the self-heating event (where changes in reactant stoichiometry are not yet significant) were fitted by Arrhenius parameters and a fixed value of baseline heating rate. The baseline value of 0.8122°C/min was determined by fitting baseline data at temperatures below the endothermic regime. These parameters are listed in Table 3.

The ϕ factor appearing in the tables, and defined by the footnote, removes the effects of instrument heat capacity from the initial stage and final state results. It is by definition always greater than unity, but is likely to be less than 1.1 in value. To estimate its value, one needs to provide an estimate of the average heat capacity that the sample possess while the exothermic reaction is occurring.

The exothermic energy content of the sample may be calculated from the baseline-corrected temperature change (see calculations) and an estimated average reacting heat capacity. A graphical relationship between estimated heat capacity and dry-weight-basis energy release is provided for convenience in Figure 7.

Test 960123

Figures 8 and 9 comprise the thermal response results for this test. Subsequent checks of the instrument verified that a partial heater failure occurred during the test, which limited the ultimate temperature obtained in the run to 312°C. More importantly, the sample showed no significant self-heating response and make no contribution to raising its temperature. The endothermic regime was evident in this sample, but was much weaker than in the previous test. This could have been a result of a lack of oxidizer in this sample. A lack of oxidizer in turn could have been inherent in the sample, or a result of flushing operations when the sample was transferred from its vial to the dryer. Care was taken in sample transfers to ensure completeness, all flushings were subsequently evaporated in the dryer, and dryer contents were thoroughly mixed as much as possible in the hot cell, but the possibility exists that soluble oxidizing salts may have been partially partitioned from the sample during these operations. The data in Table 3 reflects the lack of observed thermal response in the sample.

GAS PRODUCTION RESULTS

Test 951229

Pressure evolution data and gas production calculation results appear in Figures 3 through 6 and Tables 2 and 4. Figure 6 was calculated from the instrumental data as suggested in the footnotes to Table 4 (see WHC-SD-WM-DTR-026). However, this calculation depends on there being steady state or equilibrium temperatures in effect in containment, a situation normally satisfied when dT/dt values are below 5-10°C/min. In this test, the assumption was invalid during the rapid heatup interval. On the other hand, the rapid evolution of gas was not sufficiently quick to even momentarily bring the entire containment gas to the sample temperature. As a result, the maximum rate of noncondensible gas production could not be calculated by either the steady state approximation or the isothermal approximation. Hence, only the maximum pressure attained and the maximum rate of specific pressure increase can be reported for this sample. Fortunately, once the sample had cooled back down to ambient, the steady state approximation regained sufficient validity to permit a calculation of total moles noncondensible gas from Figure 6.

Table 4 compares the quantities so determined with those computed from the auxiliary pressure data in Table 2. The comparison is reasonably good, and is consistent with past experience that the auxiliary data usually gives production numbers equal to or less than the real-time-data calculation, because auxiliary data is more vulnerable to slow leakage from the RSST containment bomb. The computed average molecular weights of gases, as usual, suffer from the evolution of condensate which contributes to weight loss but not to pressure.

Test 960123

Data for this test are illustrated in Figures 10 through 13, and results are collected in Tables 2 and 4. This sample also generated condensate and noncondensible gas upon heatup, only not as much as did the previous sample. In contrast to the last sample, the steady state temperature approximation remained valid through the heatup phase of this test, permitting the calculation of Figures 12 and 13, and tabulation of results therefrom.

Table 2. BY-108 Auxiliary Test Data.

Test ID	At start of run sample at ambient T			At Peak of Run Sample at T		At end of run sample cooled to ambient T				Comment
	P_o (barg)	T_o (°C)	W_s^{prep} (g)	max. T (°C) Observed at t (min) from Start	max. P (barg) Observed at t (min) from Start	P_f (barg)	T_f (°C)	W_s^{react} (g)	$\%(\Delta W_s/W_s)^{react}$ (%)	
951229	6.972	18.26	11.52	599°C at 301.1 min	10.66 barg at 301.1 min	8.42	18.6	9.52	-17.36	Condensate on sheath decreases $\%_{\Delta W}$ magnitude
960123	6.848	19.28	8.75	312°C at 398.3 min	9.342 barg at 487.2 min	7.569	17.6	7.67	-12.34	Partial Heater Failure reduced Max. T

Table 3. BY-108 Self-Heat Results.

Test ID	T_{onset} (°C)	ΔT_{true}* (°C)	Max. dT/dt (uncorr.) (°C/min), at T (°C)* or t (min) from onset	Initial E_a (KJ/mole)	Initial K (C°/min) at T (°C)	Comments
951229	225	ϕ x 359	ϕ x 1725°C/min at 495°C or 19.4 min from onset	116±2.3	2.68±0.12 at 250°C	B value fixed at 0.8122 °C/min
960123	none detected	none detected	none detected	none detected	none detected	none detected

*ϕ = [1+(0.0879/(avg. C_{ps})^{react}], C_{ps} in Joule/g/°C, see calculations

Table 4. BY-108 Gas Production Results.

Test ID	F[a]	$\Delta N/W_s^{prep}$ by calc.[b] (mol/g)	$\Delta N/W_s^{dry}$ by calc.[b] (mol/g)	$M_{avg.}$ by calc.[c] (g/mol)	Max. $(dP/dt)/W_s^{prep}$ [d] (uncorr.) (bar/min/g) at T°C or t minutes from onset	Max. $(dN/dt)/W_s$[d] (uncorr.) (bar/min/g) at t minutes from onset	$\Delta N/W_s^{prep}$ by auxiliary data[b] (mol/g)	$\Delta N/W_s^{dry}$ by auxiliary data[b] (mol/g)	$M_{avg.}$ by auxiliary data[c] (g/mol)
951229	0.2152	2.03×10^{-3}	2.29×10^{-3}	85	0.60 bar/min/g at 537°C or 19.4 min from onset	Invalid due to rapid dT/dt	1.72×10^{-3}	1.95×10^{-3}	101
960123	0.2007	1.26×10^{-3}	1.35×10^{-3}	98	dN/dt Calculation valid	1.04×10^{-4} at 240°C (no onset)	1.21×10^{-3}	1.30×10^{-3}	102

[a] $PV = NRT_{effective}$, $T_{effective} = F \times T_{sample} + (1 - F) \times T_{ambient}$, $F = (dP/dT)_0 \times T_0/P_0$ in absolute units.

[b]Noncondensible gases only

[c]High because of condensate solvent that contributes weight loss but not pressure.

[d]Offered when dN/dt calculation invalid due to semi-rapid rates of heat and gas production. $V = 335\ cm^3$

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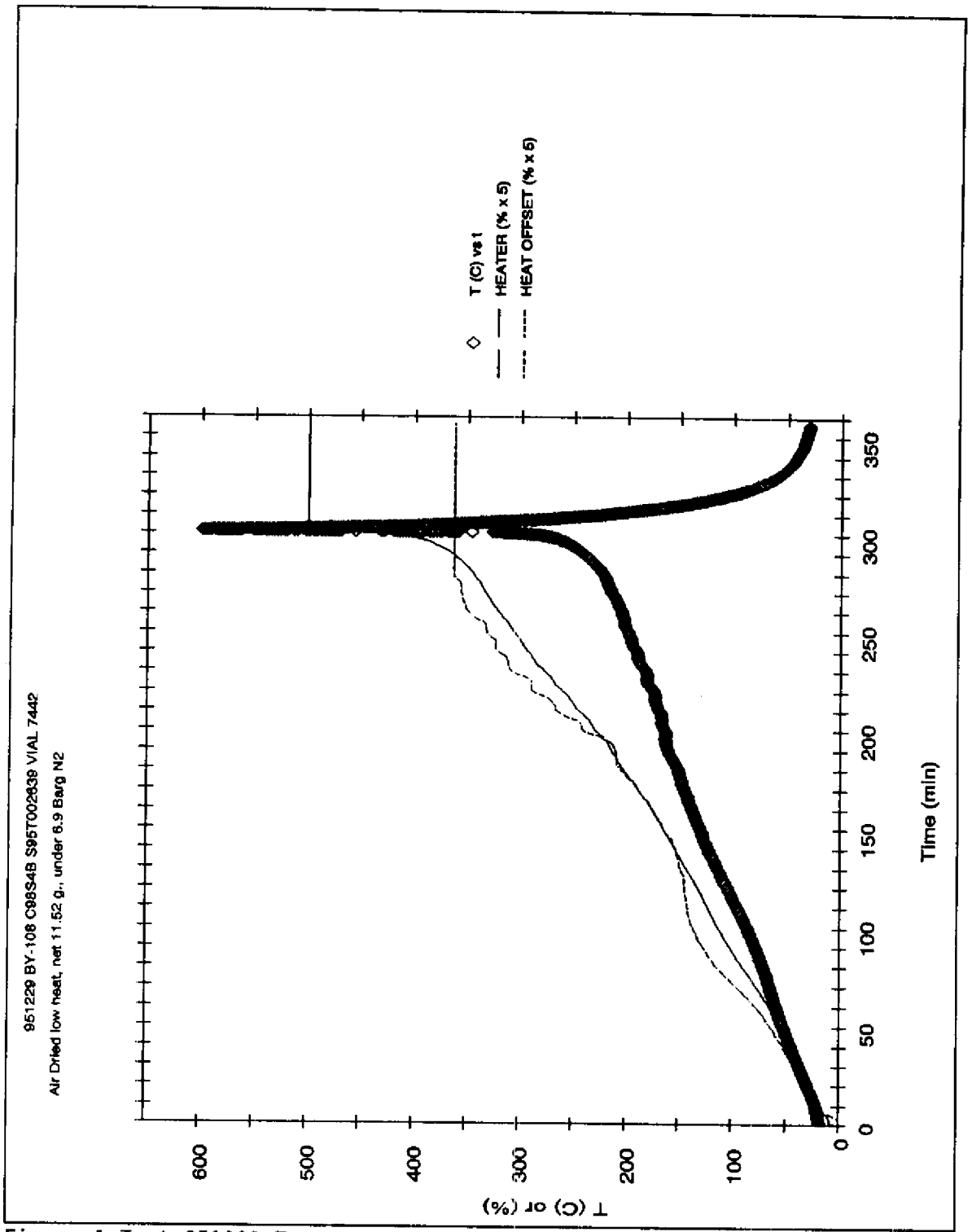

Figure 1.Test 951229 Temperature vs Time plot.

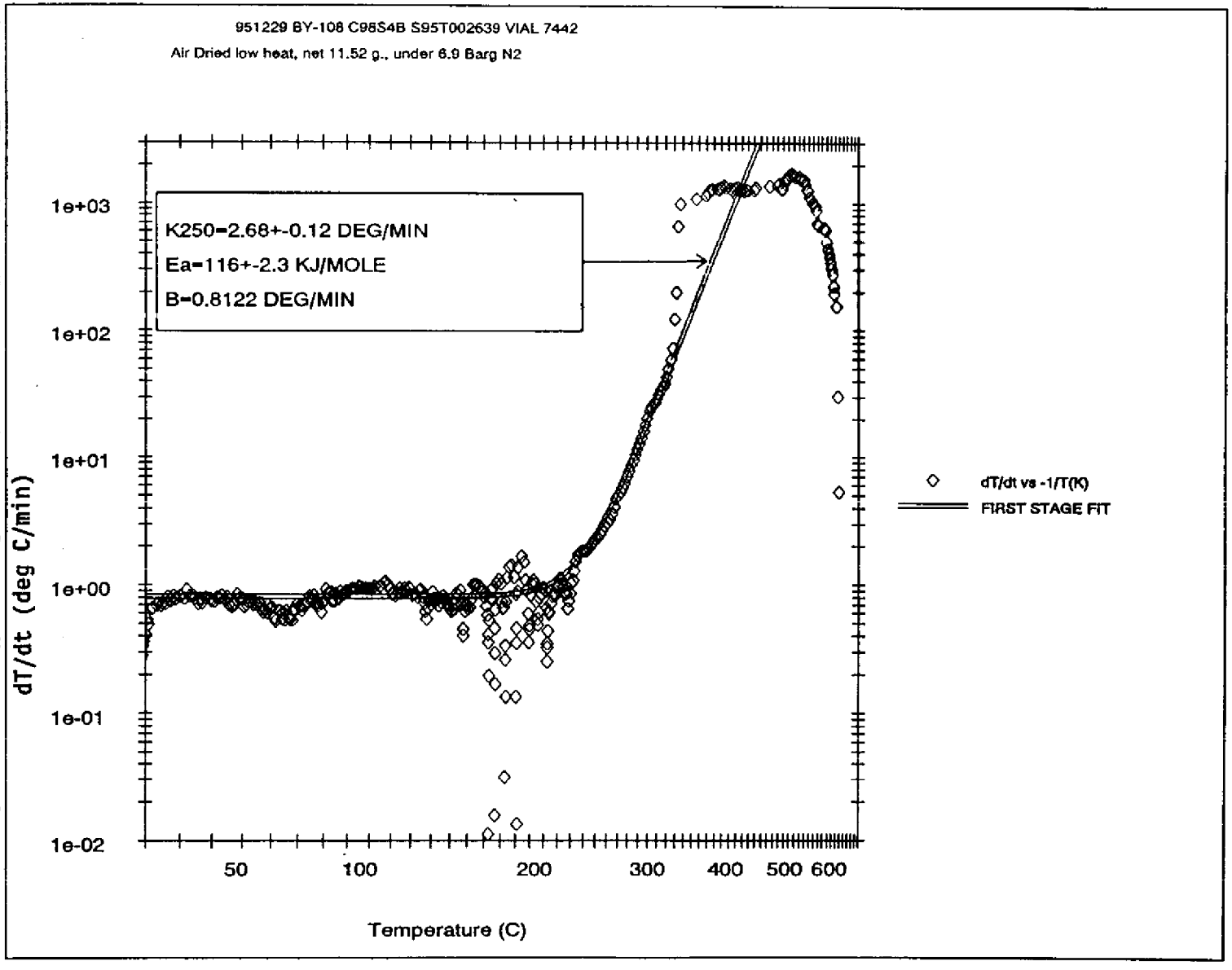

Figure 2.Test 951229 Temperature Rate vs Inverse Temperature Plot.

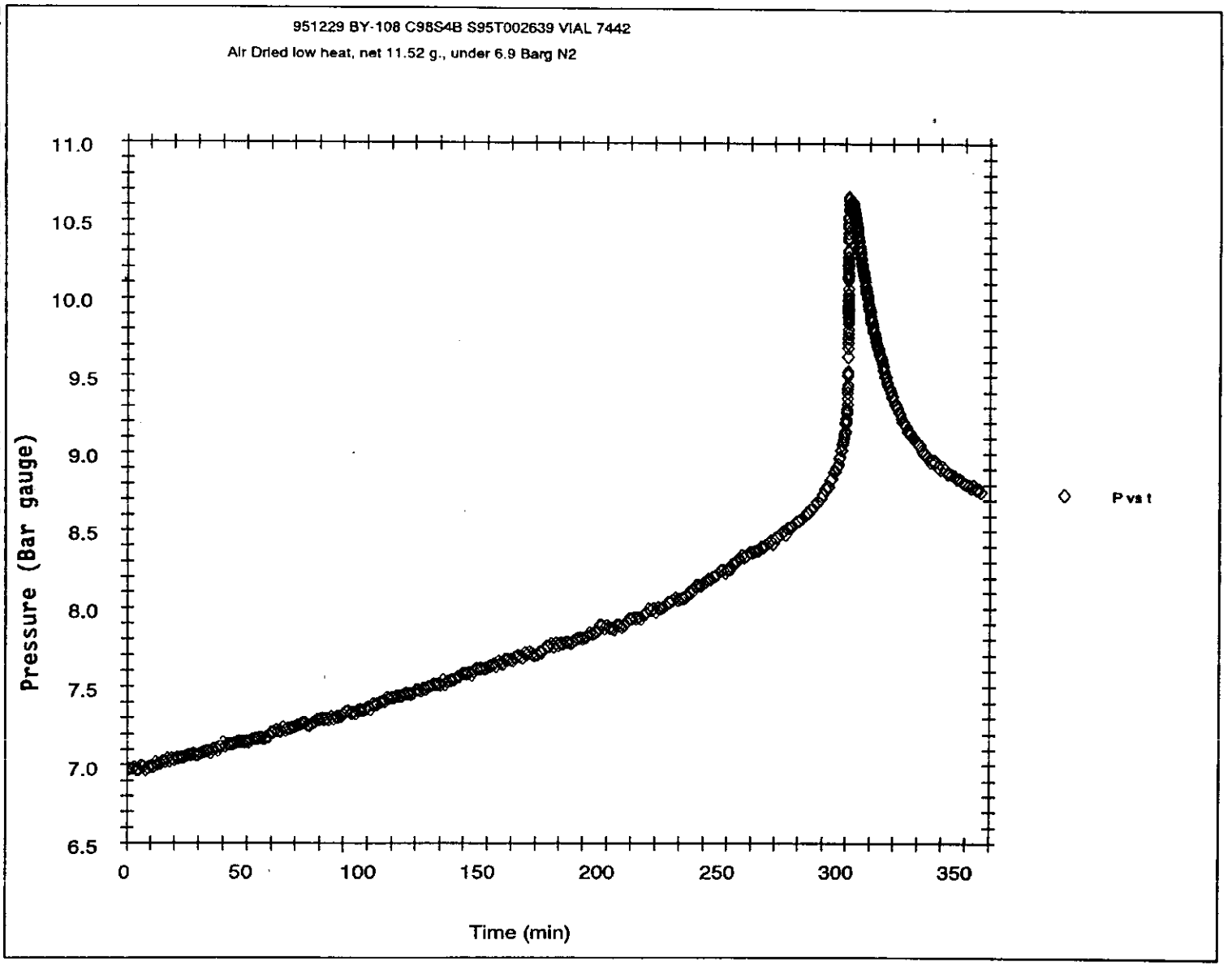

Figure 3.Test 951229 Pressure vs Time Plot.

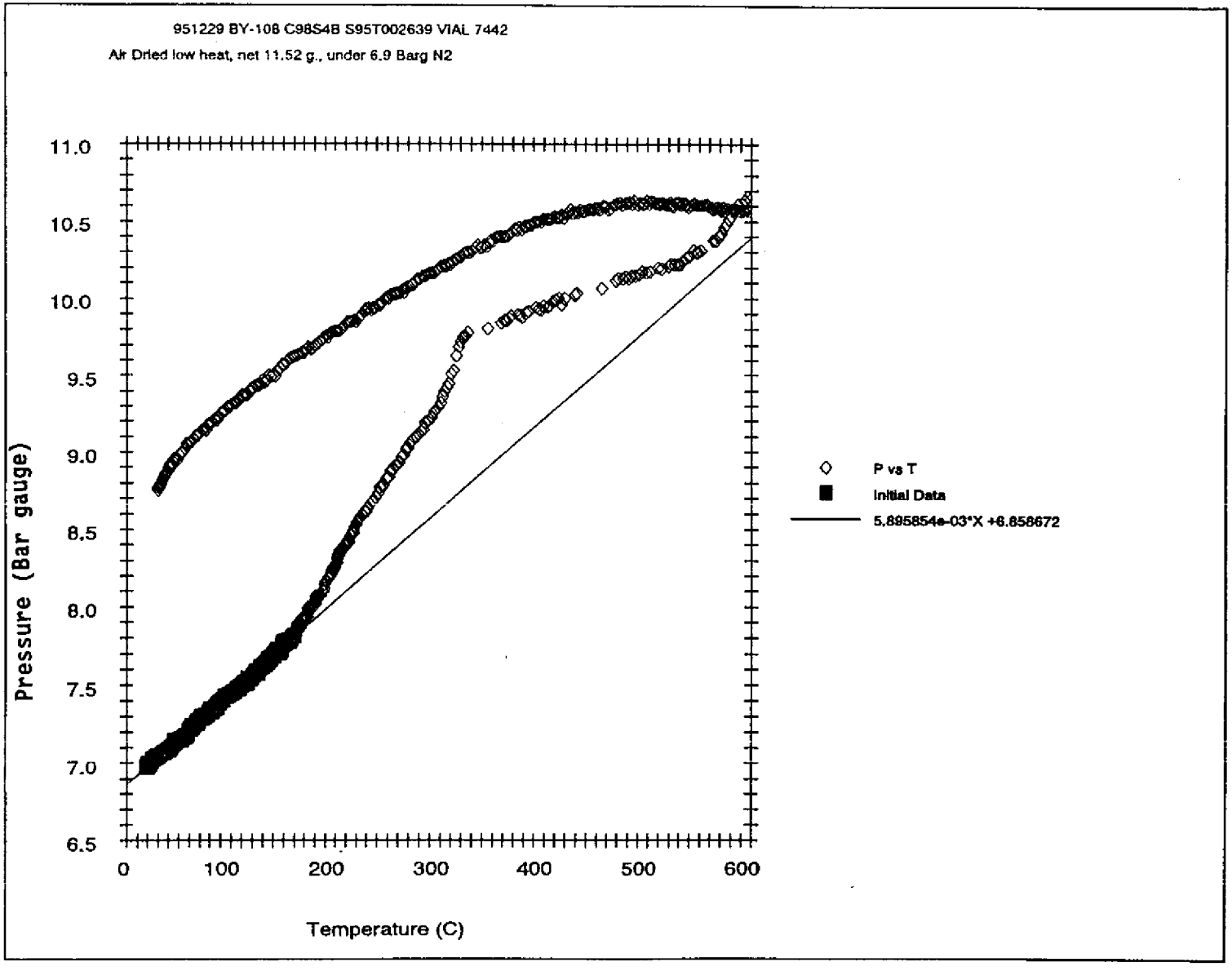

Figure 4.Test 951229 Pressure vs Temperature Plot.

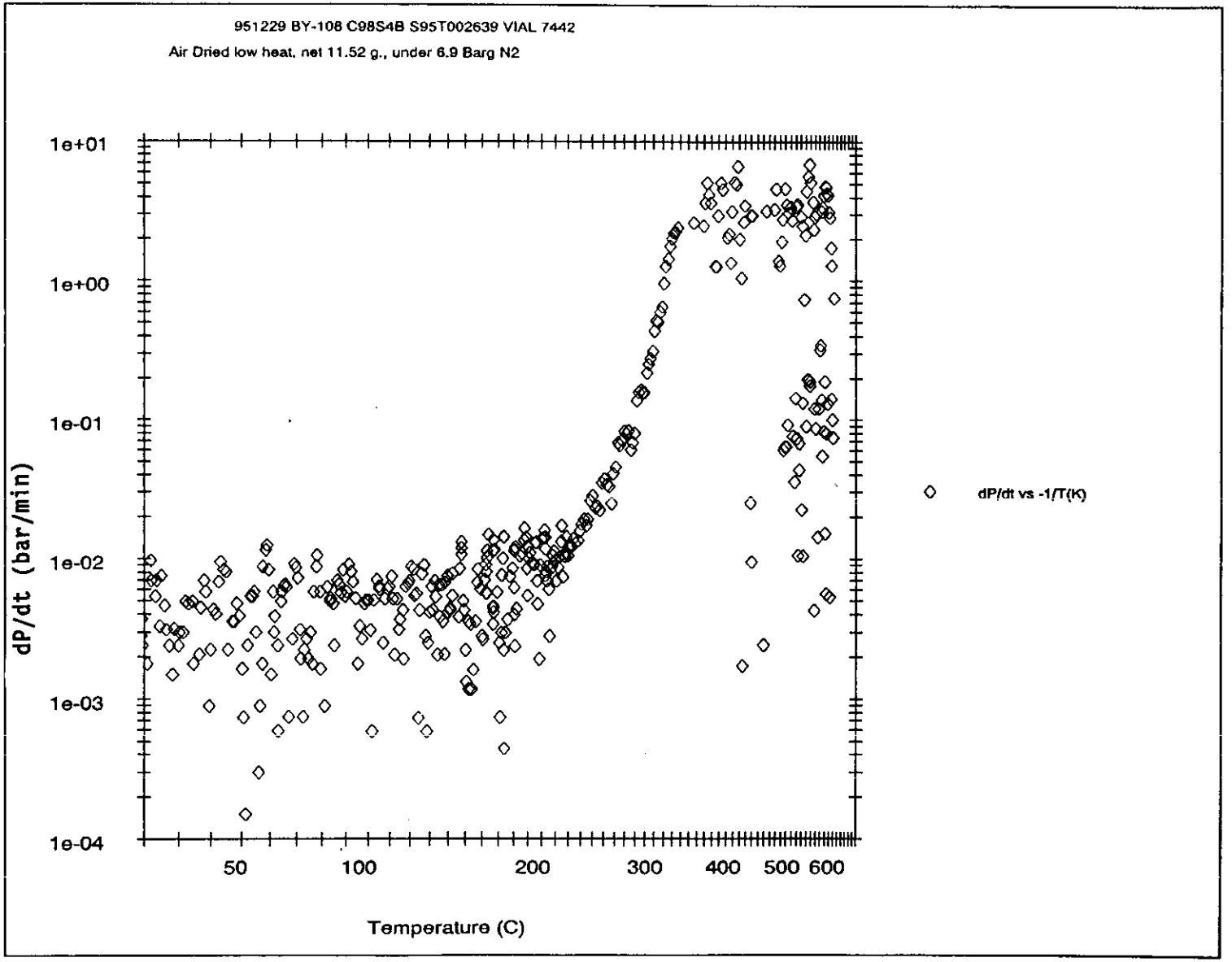

Figure 5.Test 951229 Pressure Rate vs Inverse Temperature Plot.

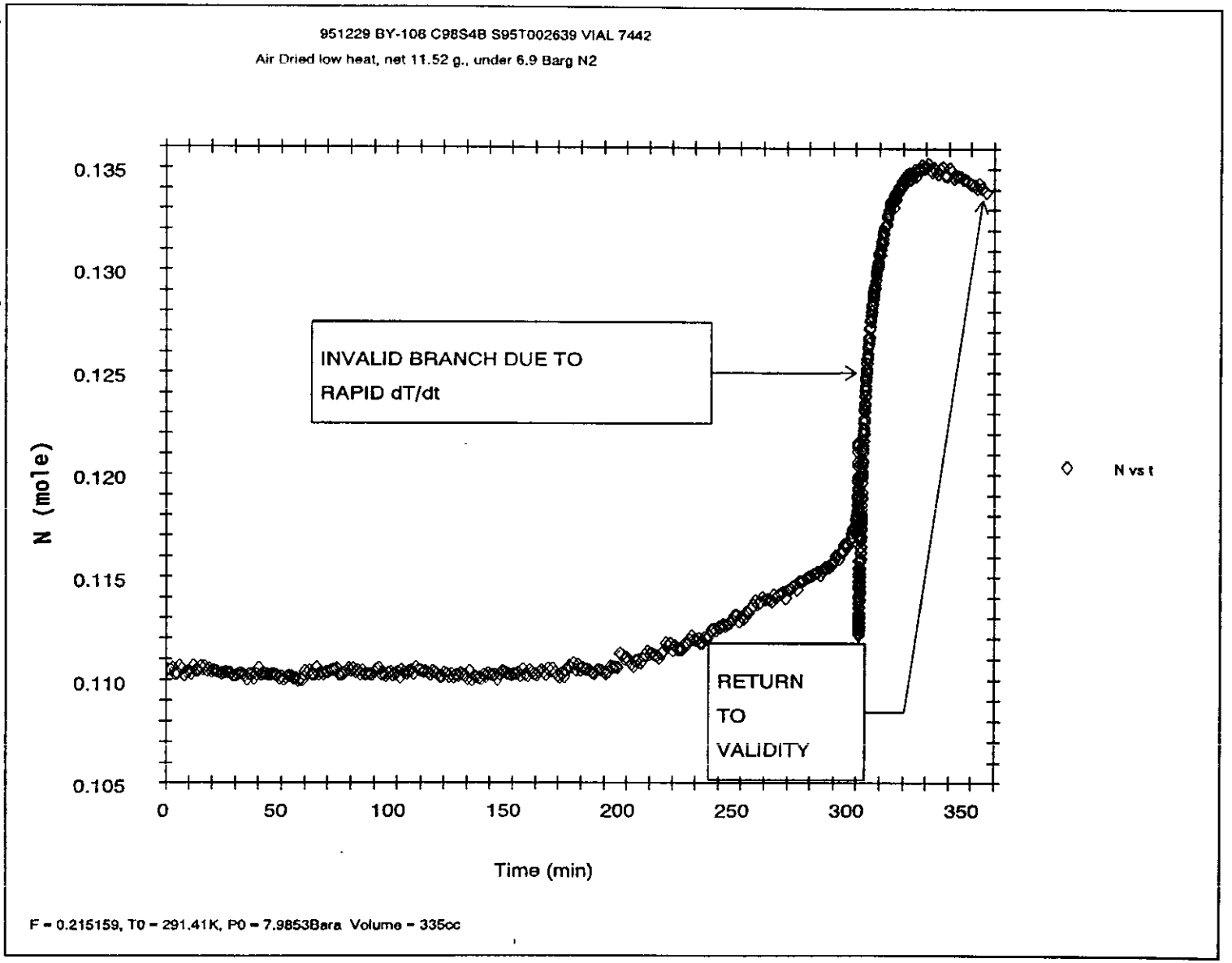

Figure 6.Test 951229 Moles Noncondensible Gas vs Time Plot.

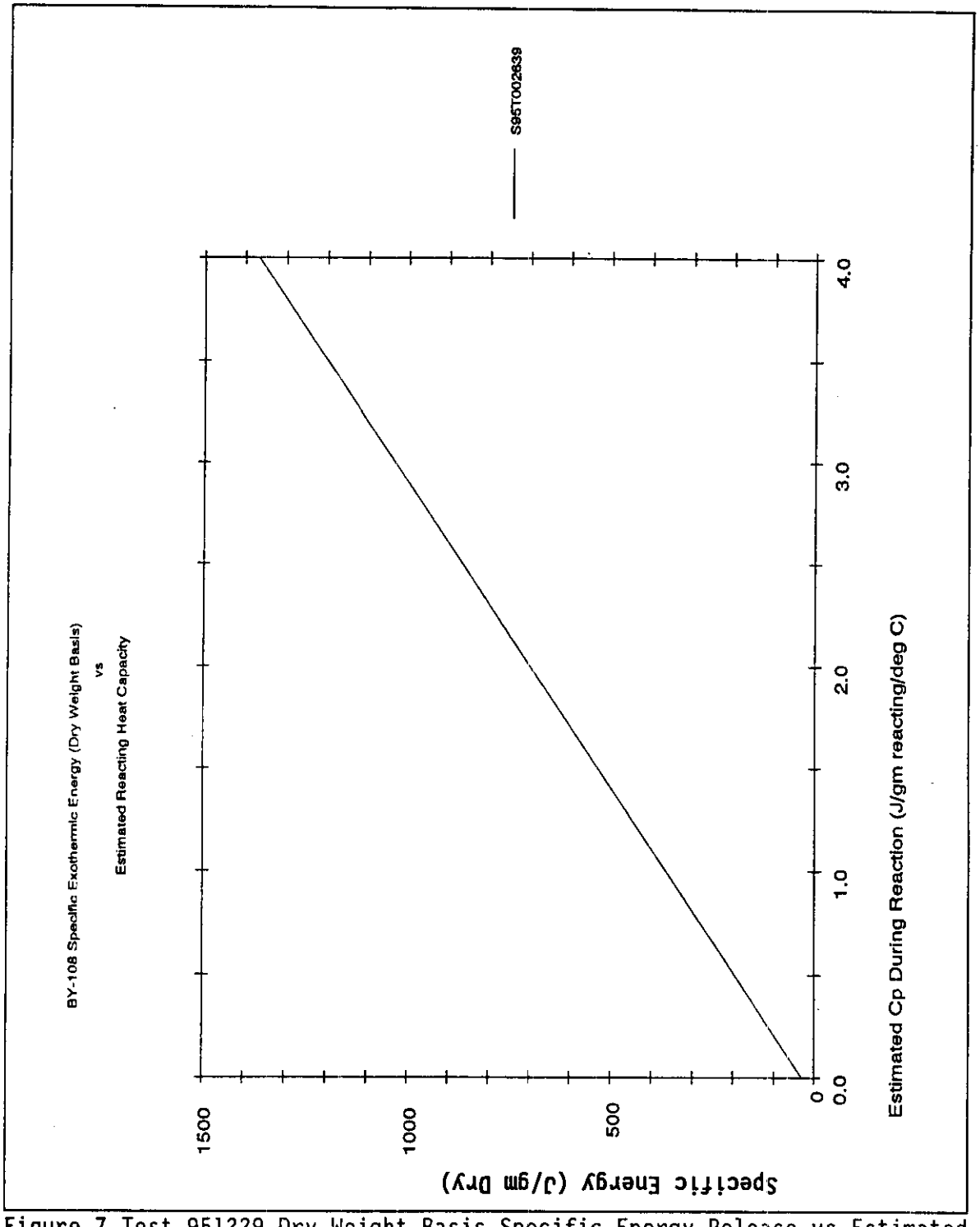

Figure 7.Test 951229 Dry Weight Basis Specific Energy Release vs Estimated Reacting Heat Capacity.

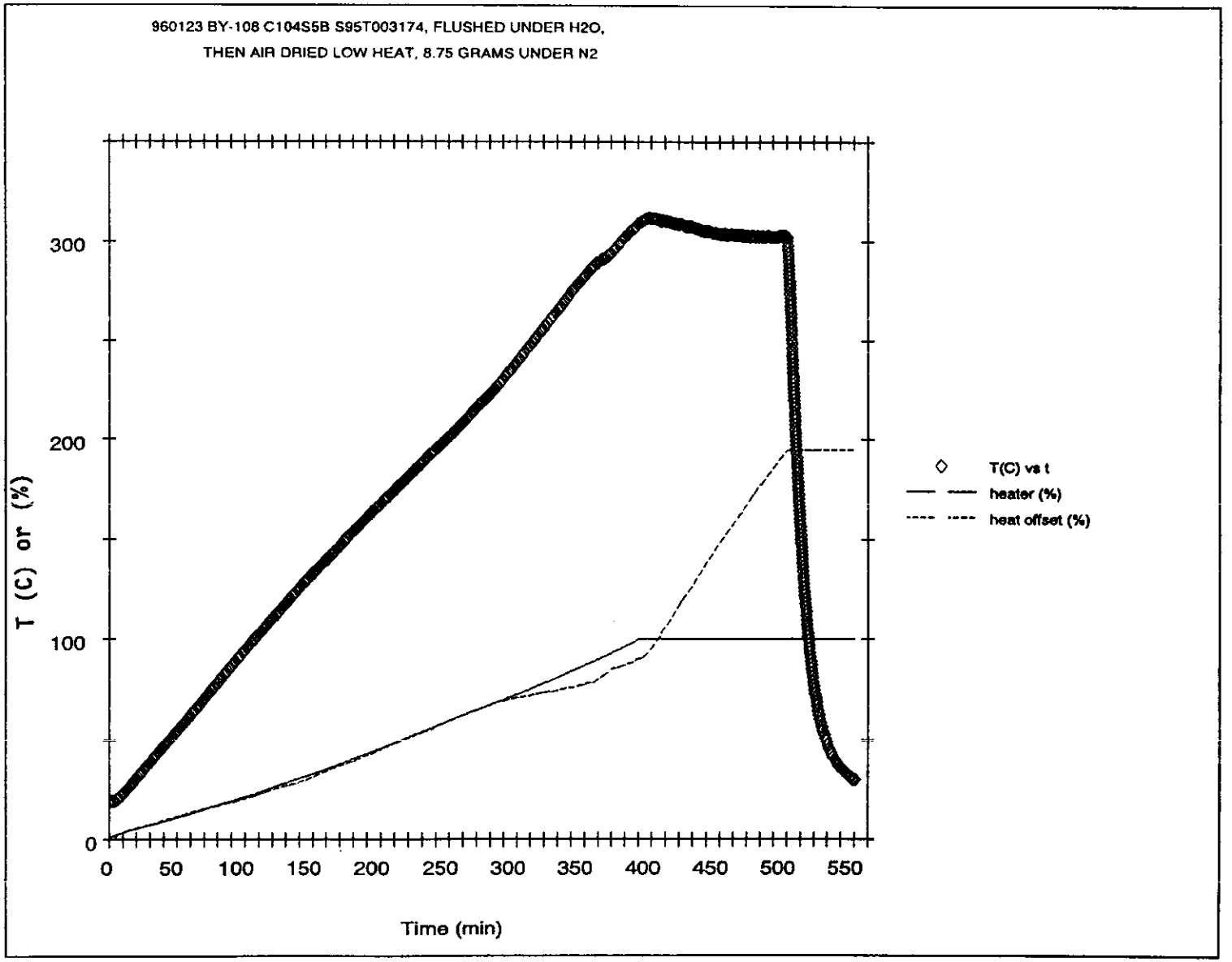

Figure 8.Test 960123 Temperature vs Time Plot.

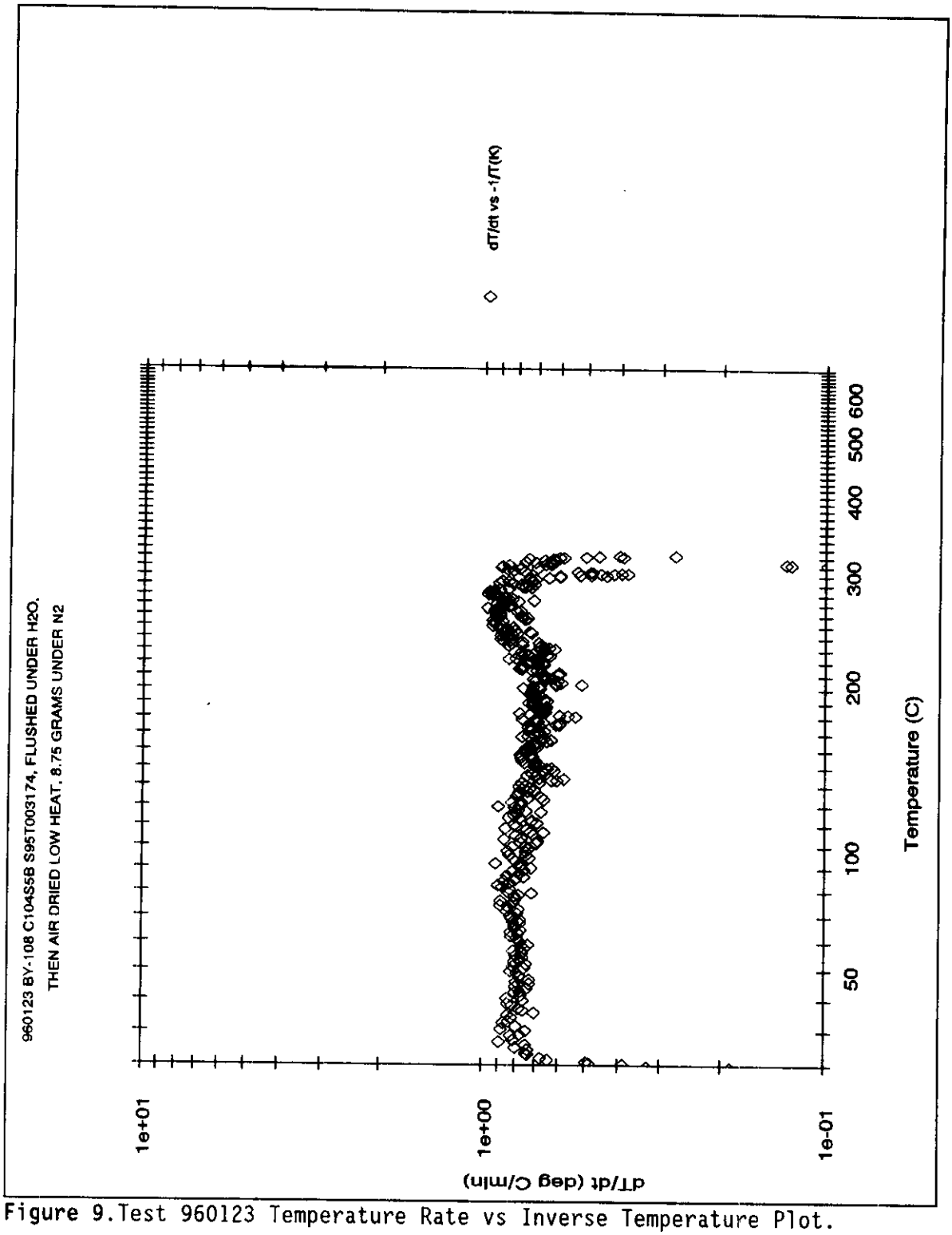

Figure 9.Test 960123 Temperature Rate vs Inverse Temperature Plot.

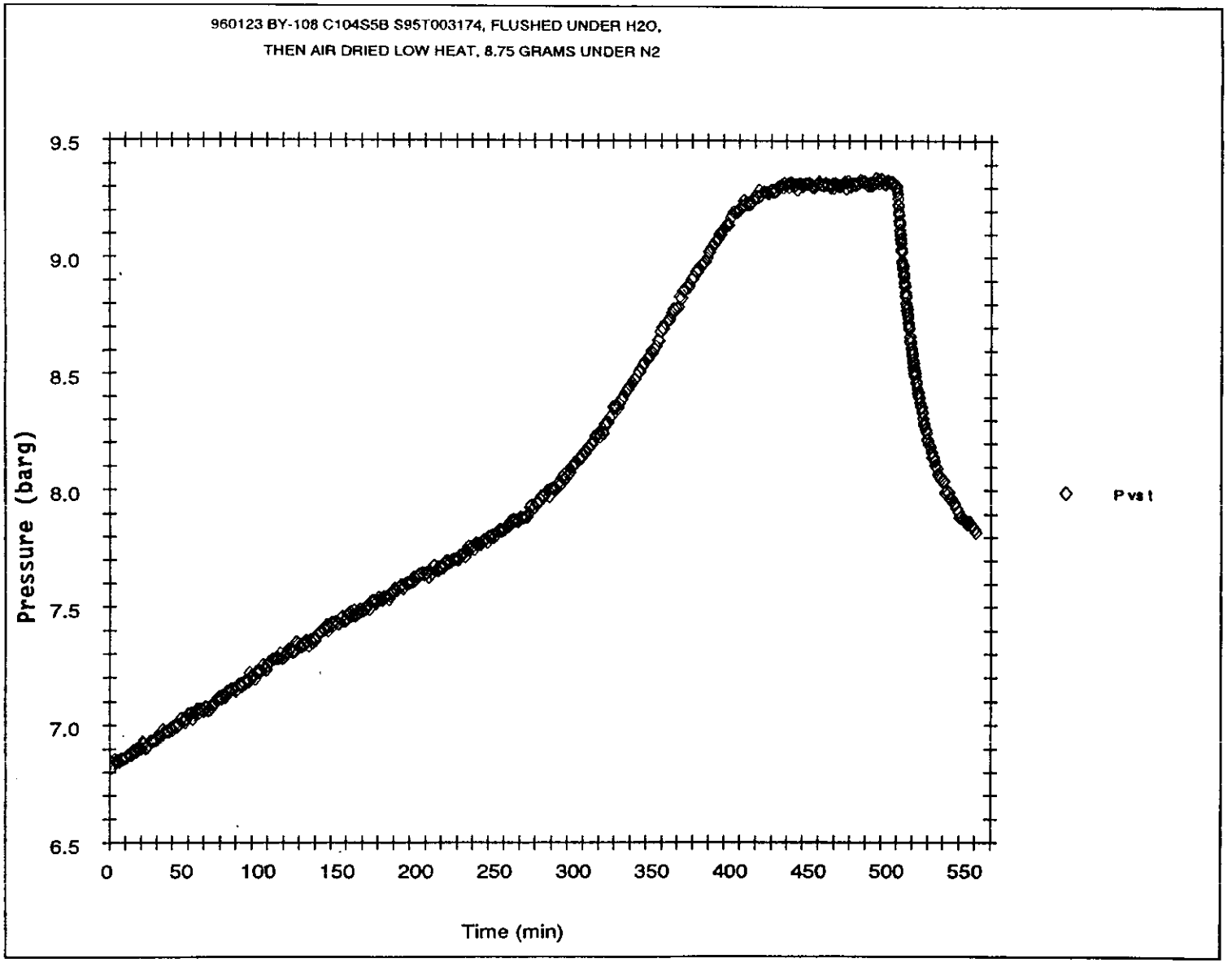

Figure 10. Test 960123 Pressure vs Time Plot.

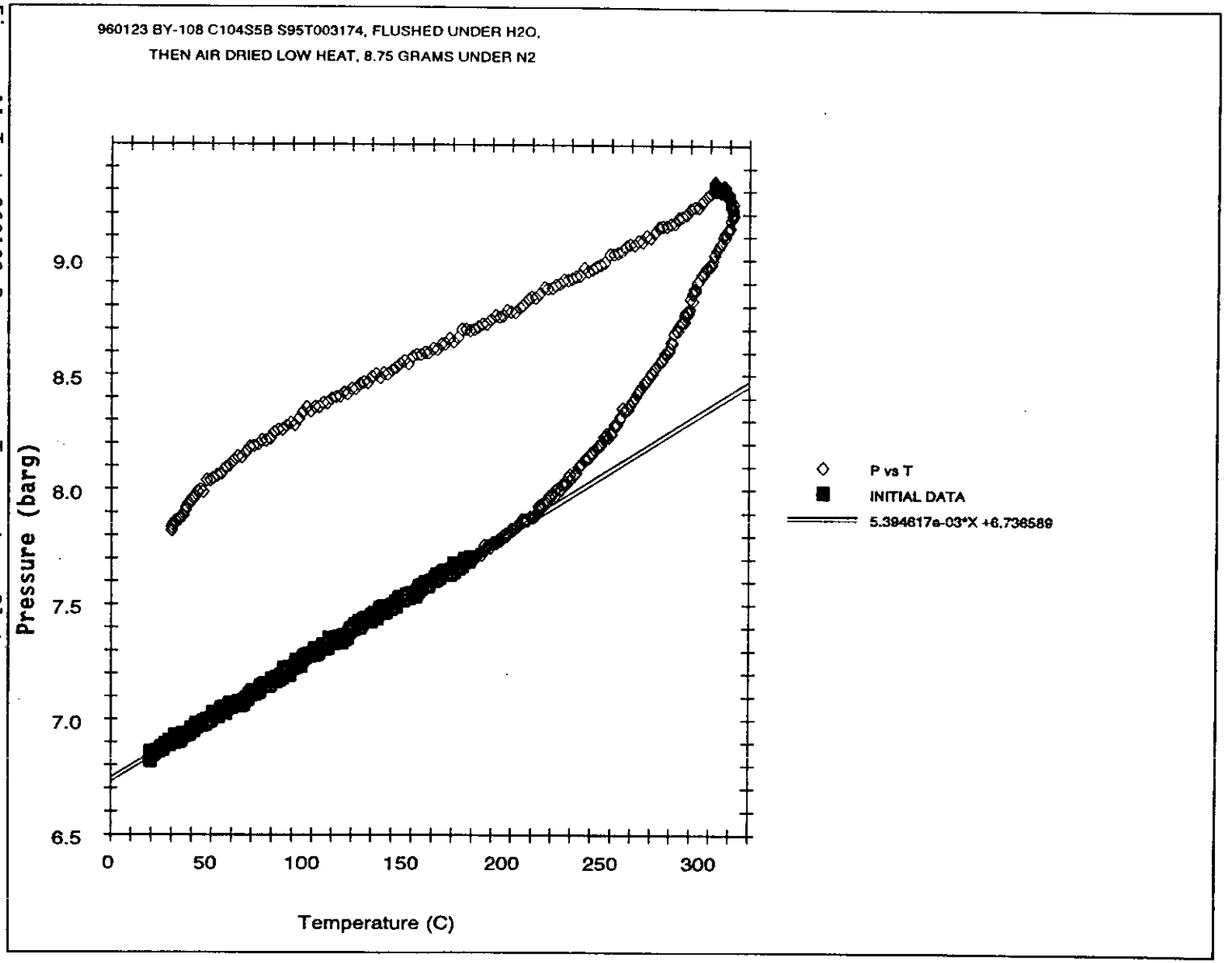

Figure 11. Test 960123 Pressure vs Temperature Plot.

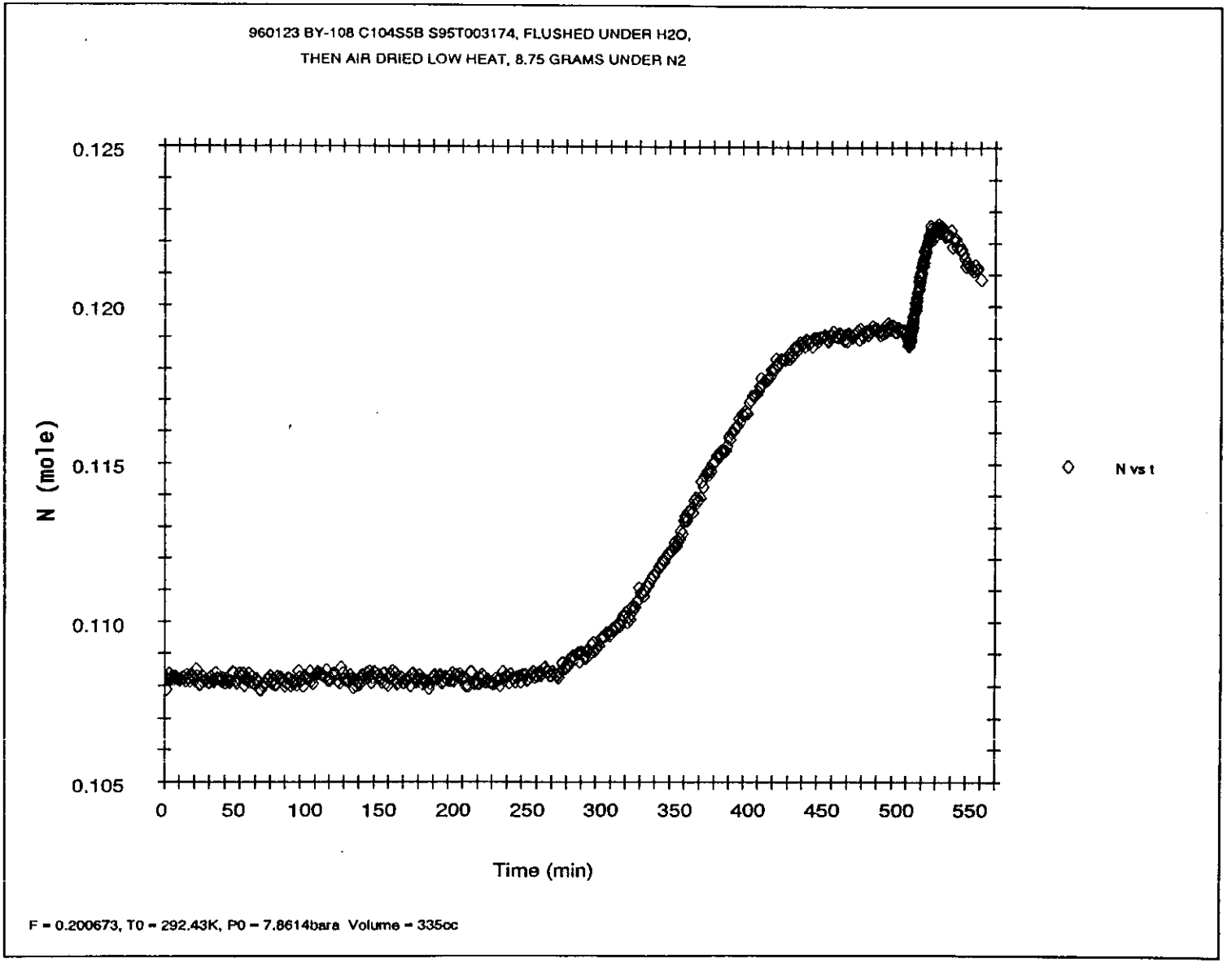

Figure 12. Test 960123 Moles Noncondensible Gas vs Time Plot.

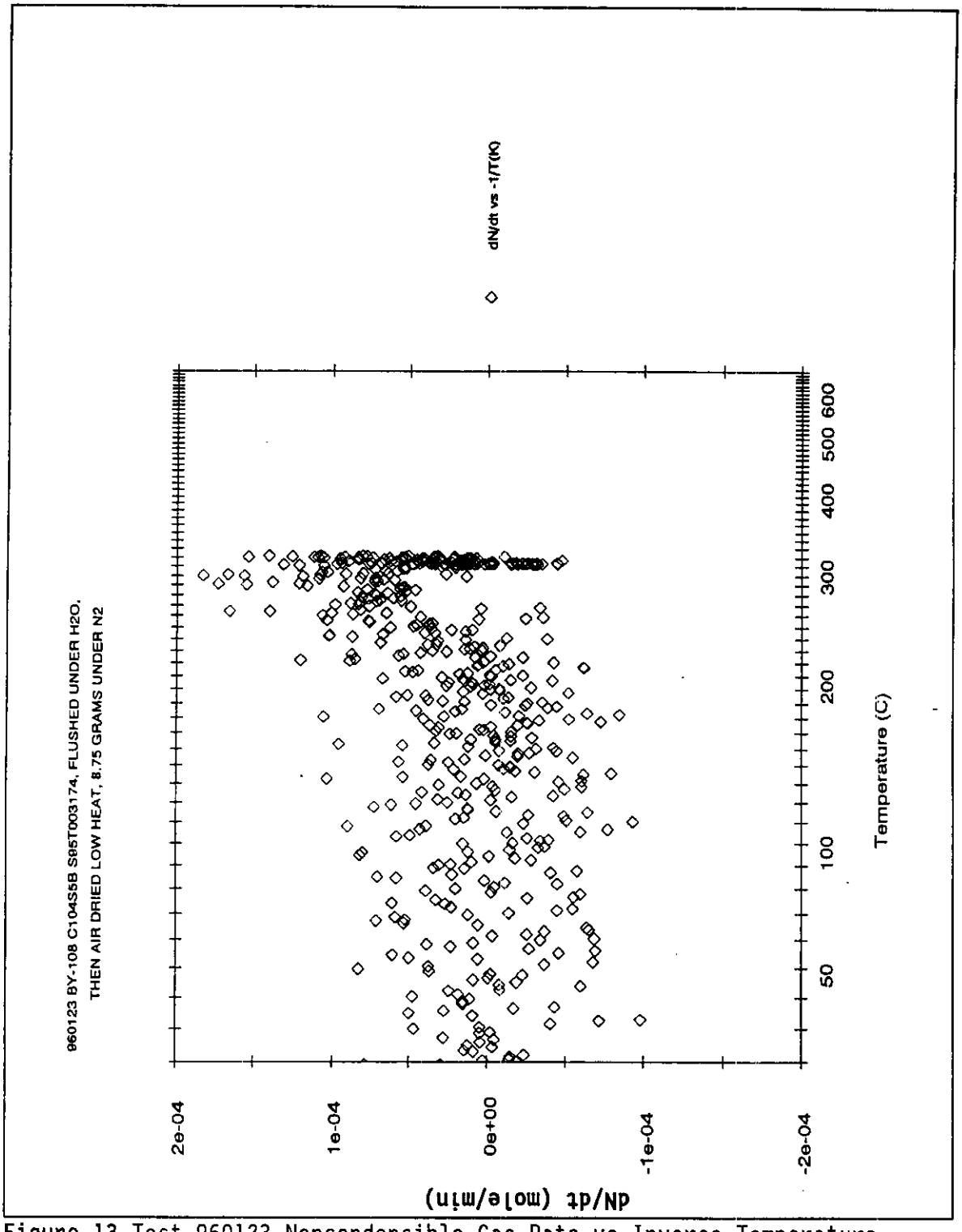

Figure 13.Test 960123 Noncondensible Gas Rate vs Inverse Temperature.

CALCULATIONS FOR TEST 951229 (BY-108 C98S4B SAMPLE S95T002639)

WEIGHT LOSSES

$$\%H_2O^{prep} = 100\frac{16.05-11.67}{16.05} = 27.29\%$$

$$\%H_2O^{dry} = 35.6\% \text{ (determined by separate analyses)}$$

$$\%\left(\frac{\Delta W_s}{W_s}\right)^{react} = 100\frac{9.52-11.52}{11.52} = -17.36\%$$

$$\%\ (\text{total volatiles})^{react} = 100 - \%\ \text{solids}^{react}$$

$$= 100 - \frac{1}{100}\left[100 - \%H_2O^{prep}\right]\left[100 + \%\left(\frac{\Delta W_s}{W_s}\right)^{react}\right]$$

$$= 100 - \frac{1}{100}[100 - 27.29][100 - 17.36]$$

$$= 39.91\%$$

TOTAL SPECIFIC NONCONDENSIBLE GAS PRODUCTION:

By Calculated Graph:

N_i = 0.1105 mole, N_e = 0.1339 mole, w_s^{prep} = 11.52 grams

$$\frac{\Delta N}{w_s^{prep}} = \frac{0.1339 - 0.1105}{11.52} = 2.03\times10^{-3}\ \frac{\text{mole}}{\text{gram prep}}$$

$$\frac{\Delta N}{w_s^{dry}} = \frac{\Delta N}{w_s^{prep}}\ \frac{100-\%H_2O^{prep}}{100-\%H_2O^{dry}} = 2.03\times10^{-3}\frac{100-27.29}{100-35.6}$$

$$= 2.29\times10^{-3}\frac{\text{mole}}{\text{gram dry}}$$

$$\frac{\left(\frac{dP}{dt}\right)^{max}_{uncorr}}{w_s^{prep}} = \frac{6.9}{11.52} = 0.60\ \frac{\text{bar}}{\text{min g}^{prep}} \text{ at } 537°C\ ,$$

or 300.9 - 281.5 = 19.4 min. from onset

By Auxiliary Data:

P_0 = 6.972 barg, T_0 = 18.26 °C, P_f = 8.42 barg, T_f = 18.6 °C

$V = 335 cm^3$, $R = 83.14\frac{\text{bara cm}^3}{\text{mole °K}}$

$$\frac{\Delta N}{w_s^{prep}} = \frac{1}{w_s^{prep}}\frac{V}{R}\left[\frac{P_f + 1.01325}{T_f + 273.15} - \frac{P_0 + 1.01325}{T_0 + 273.15}\right]$$

$$= \frac{1}{11.52}\ \frac{335}{83.14}\left[\frac{8.42 + 1.01325}{18.6 + 273.15} - \frac{6.972 + 1.01325}{18.26 + 273.15}\right]$$

$$= 1.72\times10^{-3}\frac{\text{mole}}{\text{gram prep}}$$

$$\frac{\Delta N}{w_s^{dry}} = 1.72\times10^{-3}\frac{100-27.29}{100-35.6} = 1.95\times10^{-3}\frac{\text{mole}}{\text{gram dry}}$$

AVERAGE MOLECULAR WEIGHT:

$$M_{avg.} = \frac{-\Delta w/w_s^{prep}}{\Delta N/w_s^{prep}}$$

$$= \frac{-(-0.1736)}{2.03\text{x}10^{-3}} = 85\frac{\text{gram}}{\text{mole}} \quad \text{by calculated graph}$$

$$= \frac{-(-0.1736)}{1.72\text{x}10^{-3}} = 101\frac{\text{gram}}{\text{mole}} \quad \text{by auxiliary data}$$

SELF-HEAT PARAMETERS

ΔT_{true}:

$$T_i \approx 225°C,\ t_i \approx 281.5\ \text{min},\ T_e \approx 600°C,\ t_e \approx 301.2\ \text{min}$$

$$B \approx 0.8122°C/\text{min},$$

$$\Delta T_{true} = \phi \Delta T_{corr} = \phi([T_e - T_i] - B[t_e - t_i])$$

$$= \phi([600 - 225] - 0.8122[301.2 - 281.5])$$

$$= \phi 359°C$$

$$\phi = \frac{(\overline{C}_{ps}^{react})(w_s^{react}) + C_{ph}W_h}{(\overline{C}_{ps}^{react})(w_s^{react})} = \left(1 + \frac{C_{ph}W_h}{(\overline{C}_{ps}^{react})\frac{w_s^{react}}{w_s^{prep}} w_s^{prep}}\right)$$

$$= 1 + \left(\frac{W_h C_{ph}}{(\overline{C}_{ps}^{react})\frac{100 + \left(\%\Delta \frac{w_s}{w_s}\right)^{react}}{100} w_s^{prep}}\right)$$

$$= 1 + \left(\frac{0.8368}{(\overline{C}_{ps}^{react})\frac{100 + (-17.36)}{100} 11.52}\right)$$

$$= 1 + \frac{0.0879}{(\overline{C}_{ps}^{react})} \quad \left((\overline{C}_{ps}^{react})\ \text{units} \frac{J}{g\,°K} \right)$$

$$\left(\frac{dT}{dt}\right)_{uncorr}^{max} = 1725\ \frac{°C}{min}\ \text{at}\ 495°C$$

or 300.9 - 281.5 = 19.4 min from onset

THERMAL KINETIC PARAMETERS:

For the initial stage of the runaway, dT/dt vs Z = -1000/(T+273.15) data for temperatures between 225°C and 310°C and for times less than 300.6 minutes are least-squares fit by the function

$$\frac{dT}{dt} = B + K_{250} e^{\frac{E_a}{R}(Z - Z_{250})},$$

$$\text{where } Z = -\frac{1000}{T + 273.15}, \quad Z_{250} = -\frac{1000}{250+273.15}$$

with parameters E_a (KJ/mole), K_{250} (°C/min); and constants B = 0.8122 °C/min and R = 8.3144 J/mole/°K.

SPECIFIC EXOTHERMIC ENERGY RELEASE:

Neglecting PV work,

$$Q \approx \Delta T_{true}(w_s^{react})(\overline{C}_{ps}^{react}) = \Delta T_{corr}\Phi(w_s^{react})(\overline{C}_{ps}^{react})$$

$$= \Delta T_{corr}\frac{\left[(w_s^{react})(\overline{C}_{ps}^{react}) + w_h C_{ph}\right]}{(w_s^{react})(\overline{C}_{ps}^{react})}(w_s^{react})(\overline{C}_{ps}^{react})$$

$$= \Delta T_{corr}\left[(w_s^{react})(\overline{C}_{ps}^{react}) + w_h C_{ph}\right]$$

$$\hat{Q}_{dry} \approx \Delta T_{corr}\left[\frac{w_s^{react}}{w_s^{dry}}(\overline{C}_{ps}^{react}) + \frac{w_h C_{ph}}{w_s^{dry}}\right]$$

$$= \Delta T_{corr}\left[\frac{\frac{w_s^{react}}{w_s^{prep}}}{\frac{w_s^{dry}}{w_s^{wet}}\frac{w_s^{wet}}{w_s^{prep}}}(\overline{C}_{ps}^{react}) + \frac{w_h C_{ph}}{\frac{w_s^{dry}}{w_s^{wet}}\frac{w_s^{wet}}{w_s^{prep}}w_s^{prep}}\right]$$

$$= \Delta T_{corr}\frac{\frac{w_s^{prep}}{w_s^{wet}}}{\frac{w_s^{dry}}{w_s^{wet}}}\left[\frac{w_s^{react}}{w_s^{prep}}(\overline{C}_{ps}^{react}) + \frac{w_h C_{ph}}{w_s^{prep}}\right]$$

$$\hat{Q}_{dry} \approx \Delta T_{corr}\frac{(100-\%H_2O^{prep})}{(100-\%H_2O^{dry})}\left[\frac{100+\left(\%\frac{\Delta w_s}{w_s}\right)^{react}}{100}(\overline{C}_{ps}^{react}) + \frac{w_h C_{ph}}{w_s^{prep}}\right]$$

$$= 359\frac{(100-27.29)}{(100-35.6)}\left[\frac{100+(-17.36)}{100}(\overline{C}_{ps}^{react}) + \frac{0.8368}{11.52}\right]$$

$$= 334.7(\overline{C}_{ps}^{react}) + 29.4 \quad \frac{J}{g^{dry}}$$

CALCULATIONS FOR TEST 960123 (BY-108 C104S5B SAMPLE S95T003174)

WEIGHT LOSSES

$$\%H_2O^{prep} = 100\frac{13.4-9.1}{13.4} = 32.09\%$$

$$\%H_2O^{dry} = 36.6\% \text{ (determined by separate analyses)}$$

$$\%\left(\frac{\Delta w_s}{w_s}\right)^{react} = 100\frac{7.67-8.75}{8.75} = -12.34\%$$

$$\%\ (\text{total volatiles})^{react} = 100 - \%\ \text{solids}^{react}$$

$$= 100 - \frac{1}{100}\left[100 - \%H_2O^{prep}\right]\left[100 + \%\left(\frac{\Delta w_s}{w_s}\right)^{react}\right]$$

$$= 100 - \frac{1}{100}[100 - 32.09][100 - 12.34]$$

$$= 40.47\%$$

TOTAL SPECIFIC NONCONDENSIBLE GAS PRODUCTION:

By Calculated Graph:

$$N_i = 0.1082 \text{ mole}, \quad N_e = 0.1192 \text{ mole}, \quad w_s^{prep} = 8.75 \text{ grams}$$

$$\frac{\Delta N}{w_s^{prep}} = \frac{0.1192 - 0.1082}{8.75} = 1.26\text{x}10^{-3} \frac{\text{mole}}{\text{gram prep}}$$

$$\frac{\Delta N}{w_s^{dry}} = \frac{\Delta N}{w_s^{prep}} \frac{100-\%H_2O^{prep}}{100-\%H_2O^{dry}} = 1.26\text{x}10^{-3} \frac{100-32.09}{100-36.6} = 1.35\text{x}10^{-3} \frac{\text{mole}}{\text{gram dr}}$$

$$\frac{\left(\frac{dN}{dt}\right)^{max}_{uncorr}}{w_s^{dry}} = \frac{8.48\text{x}10^{-4}}{8.75} \frac{100 - 32.09}{100 - 36.6} = 1.04\text{x}10^{-4} \frac{\text{mole}}{\text{min g}^{dry}} \text{ at } 240°C$$

By Auxiliary Data:

$$P_0 = 6.848 \text{ barg}, \quad T_0 = 19.28\ °C, \quad P_f = 7.569 \text{ barg}, \quad T_f = 17.6\ °C$$

$$V = 335 cm^3, \quad R = 83.14 \frac{\text{bara cm}^3}{\text{mole °K}}$$

$$\frac{\Delta N}{w_s^{prep}} = \frac{1}{w_s^{prep}} \frac{V}{R}\left[\frac{P_f + 1.01325}{T_f + 273.15} - \frac{P_0 + 1.01325}{T_0 + 273.15}\right]$$

$$= \frac{1}{8.75} \frac{335}{83.14}\left[\frac{7.569 + 1.01325}{17.6 + 273.15} - \frac{6.848 + 1.01325}{19.28 + 273.15}\right]$$

$$= 1.21\text{x}10^{-3} \frac{\text{mole}}{\text{gram prep}}$$

$$\frac{\Delta N}{w_s^{dry}} = 1.21\text{x}10^{-3} \frac{100-32.09}{100-36.6} = 1.30\text{x}10^{-3} \frac{\text{mole}}{\text{gram dry}}$$

AVERAGE MOLECULAR WEIGHT:

$$M_{avg.} = \frac{-\Delta w/w_s^{prep}}{\Delta N/w_s^{prep}}$$

$$= \frac{-(-0.1234)}{1.26\text{x}10^{-3}} = 98\frac{\text{gram}}{\text{mole}} \quad \text{by calculated graph}$$

$$= \frac{-(-0.1234)}{1.21\text{x}10^{-3}} = 102\frac{\text{gram}}{\text{mole}} \quad \text{by auxiliary data}$$

SAMPLE DATA SUMMARY

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 97
SEGMENT #: FB

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001365			TOC by Persulfate/Coulometry	ug/mL	92.33	16.60	< 40	<40	n/a	n/a	n/a	40.00	n/a
S95T001365			% Water by TGA using Mettler	%	101.4	n/a	100.0	100.0	100.0	0.00	n/a	n/a	n/a
S95T001365			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001365			DSC Exotherm using Mettler	Joules/g	98.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001365		D	Lithium-ICP-Acid Dil.	ug/mL	100.5	-2.00e+00	4.35e-02	4.15e-02	4.25e-02	4.71	99.87	2.00e-02	n/a
S95T001365			Sulfate by IC-Dionex4000i/4500	ug/mL	100.5	<6.78e-01	< 4.07e0	7.300	n/a	n/a	113.8	4.070	n/a
S95T001365			Phosphate-IC-Dionex 4000i/4500	ug/mL	103.4	<5.96e-01	13.40	13.20	13.30	1.50	112.3	3.580	n/a
S95T001365			Oxalate by IC - Dionex 4000i	ug/mL	102.8	<4.96e-01	< 2.98e0	<2.98	n/a	n/a	116.6	2.980	n/a
S95T001365			Nitrate-IC - Dionex 4000i/4500	ug/mL	100.3	<6.99e-01	217.0	214.0	215.5	1.39	158.3	4.190	n/a
S95T001365			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.1	<5.47e-01	147.0	143.0	145.0	2.76	144.0	3.280	n/a
S95T001365			Fluoride-IC-Dionex 4000i/4500	ug/mL	103.9	<6.20e-02	4.20e-01	4.41e-01	4.30e-01	4.88	37.70	3.72e-01	n/a
S95T001365			Chloride-IC-Dionex 4000i/4500	ug/mL	99.11	<8.30e-02	8.880	8.610	8.745	3.09	125.3	4.98e-01	n/a
S95T001365			Bromide by Ion Chromatograph	ug/mL	102.4	<6.32e-01	< 3.79e0	<3.79	n/a	n/a	106.1	3.790	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 1(DL)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001373			TOC by Persulfate/Coulometry	ug/mL	96.33	29.80	2.64e+03	2.74e+03	2.69e+03	3.72	n/a	40.00	n/a
S95T001373			% Water by TGA on Perkin Elmer	%	101.1	n/a	31.90	34.04	32.97	6.49	n/a	n/a	n/a
S95T001373			DSC Exotherm on Perkin Elmer	Joules/g	97.54	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001373			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001373		D	Lithium-ICP-Acid Dil.	ug/mL	101.8	5.000	< 4.0100	<4.0100	n/a	n/a	93.84	4.010	n/a
S95T001373			Sulfate by IC-Dionex4000i/4500	ug/mL	102.8	<6.78e-01	< 6.92e3	<6.92e3	n/a	n/a	103.5	6.92e+03	n/a
S95T001373			Phosphate-IC-Dionex 4000i/4500	ug/mL	104.5	<5.96e-01	< 6.08e3	<6.08e3	n/a	n/a	106.4	6.08e+03	n/a
S95T001373			Oxalate by IC - Dionex 4000i	ug/mL	101.2	<4.96e-01	< 5.06e3	<5.06e3	n/a	n/a	100.1	5.06e+03	n/a
S95T001373			Nitrate-IC - Dionex 4000i/4500	ug/mL	104.7	<6.99e-01	3.56e+05	3.60e+05	3.58e+05	1.12	-4.30e+01	7.13e+03	n/a
S95T001373			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.9	<5.47e-01	9.09e+04	9.15e+04	9.12e+04	0.66	61.50	5.58e+03	n/a
S95T001373			Fluoride-IC-Dionex 4000i/4500	ug/mL	102.7	<6.20e-02	< 6.32e2	<6.32e2	n/a	n/a	104.8	632.0	n/a
S95T001373			Chloride-IC-Dionex 4000i/4500	ug/mL	101.0	<8.30e-02	4.92e+03	5.02e+03	4.97e+03	2.01	106.1	847.0	n/a
S95T001373			Bromide by Ion Chromatograph	ug/mL	102.5	<6.32e-01	< 6.45e3	<6.45e3	n/a	n/a	101.7	6.45e+03	n/a

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Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 1(W)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001389			% Water by TGA using Mettler	%	101.1	n/a	37.72	36.28	37.00	3.89	n/a	n/a	n/a

W Whole Segment: W Whole Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001390			TOC by Persulfate/Coulometry	ug/g	n/a	n/a	2.33e+03	2.23e+03	2.28e+03	4.39	n/a	40.00	n/a
S95T001390			% Water by TGA on Perkin Elmer	%	96.42	n/a	21.85	19.76	20.80	10.0	n/a	n/a	n/a
S95T001390			DSC Exotherm on Perkin Elmer	Joules/g	100.1	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001390			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001390			Cyanide by Microdist. & Spec.	ug/g	95.39	5.400	350.0	364.0	357.0	3.92	116.0	2.100	n/a
S95T001391	F		Alpha of Digested Solid	uCi/g	108.2	1.340	2.22e-03	3.71e-03	2.97e-03	50.3	76.70	2.90e-03	90.8
S95T001483	A		Lithium -ICP-Acid Digest	ug/g	88.75	3.000	18.42	17.60	18.01	4.54	85.17	4.880	n/a
S95T001483	A		Nickel -ICP-Acid Digest	ug/g	92.00	1.590	253.6	244.8	249.2	3.53	84.64	9.770	n/a
S95T002289			Undecane (C11)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	n/a	427.0	n/a
S95T002289			Tridecane (C13)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	n/a	427.0	n/a
S95T002289			Tetradecane (C14)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	n/a	427.0	n/a
S95T002289			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	87.56	427.0	n/a
S95T002289			Pentadecane (C15)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	n/a	427.0	n/a
S95T002289			Nonane (C9)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	95.14	427.0	n/a
S95T002289			Dodecane (C12)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	n/a	427.0	n/a
S95T002289			Decane (C10)	ug/g	n/a	0.00e+00	U 427.00	444.00U	n/a	n/a	n/a	427.0	n/a
S95T002484	W		Bromide by Ion Chromatograph	ug/g	97.57	<1.26e-01	<6.229e+0	<6.41e2	n/a	n/a	93.22	622.9	n/a
S95T002484	W		Chloride-IC-Dionex 4000i/4500	ug/g	102.3	<1.70e-02	1.03e+03	1.32e+03	1.18e+03	24.7	99.15	84.05	n/a
S95T002484	W		Fluoride-IC-Dionex 4000i/4500	ug/g	102.0	<1.30e-02	4.10e+03	3.91e+03	4.01e+03	4.74	98.19	64.26	n/a
S95T002484	W		Nitrite-IC - Dionex 4000i/4500	ug/g	97.76	<1.07e-01	1.70e+04	2.17e+04	1.94e+04	24.3	98.96	528.9	n/a
S95T002484	W		Nitrate by IC-Dionex4000i/4500	ug/g	96.42	4.37e-01	1.55e+05	1.44e+05	1.50e+05	7.36	96.92	692.1	n/a
S95T002484	W		Oxalate by IC - Dionex 4000i	ug/g	101.4	<1.05e-01	5.41e+03	4.61e+03	5.01e+03	16.0	101.5	519.0	n/a
S95T002484	W		Phosphate-IC-Dionex 4000i/4500	ug/g	93.96	<2.96e-01	8.21e+03	1.00e+04	9.11e+03	19.7	93.88	1.46e+03	n/a
S95T002484	W		Sulfate by IC-Dionex4000i/4500	ug/g	103.2	<1.36e-01	6.66e+03	5.76e+03	6.21e+03	14.5	92.97	672.3	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 2(A)

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001404			TOC by Persulfate/Coulometry	ug/g	97.67	22.50	3.60e+03	3.62e+03	3.61e+03	0.55	n/a	80.00	n/a
S95T001404			% Water by TGA on Perkin Elmer	%	100.8	n/a	14.64	14.87	14.75	1.56	n/a	n/a	n/a
S95T001404			DSC Exotherm on Perkin Elmer	Joules/g	95.68	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001404			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001404			Cyanide by Microdist. & Spec.	ug/g	107.4	<3.60e-02	293.0	302.0	297.5	3.03	109.4	24.60	n/a
S95T001405		F	Alpha of Digested Solid	uCi/g	94.98	<2.26e-03	2.38e-03	1.86e-03	2.12e-03	24.5	81.30	3.75e-03	117.5
S95T001484		A	Lithium -ICP-Acid Digest	ug/g	88.75	3.000	< 4.8400	<4.8450	n/a	n/a	n/a	4.840	n/a
S95T001484		A	Nickel -ICP-Acid Digest	ug/g	92.00	1.590	337.9	359.4	348.7	6.15	n/a	9.680	n/a
S95T002290			Undecane (C11)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	n/a	243.0	n/a
S95T002290			Tridecane (C13)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	n/a	243.0	n/a
S95T002290			Tetradecane (C14)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	n/a	243.0	n/a
S95T002290			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	88.98	243.0	n/a
S95T002290			Pentadecane (C15)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	n/a	243.0	n/a
S95T002290			Nonane (C9)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	88.86	243.0	n/a
S95T002290			Dodecane (C12)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	n/a	243.0	n/a
S95T002290			Decane (C10)	ug/g	n/a	0.00e+00	U 243.00	179.00U	n/a	n/a	n/a	243.0	n/a
S95T002490		W	Bromide by Ion Chromatograph	ug/g	97.57	<1.26e-01	<6.776e+0	<6.70e2	n/a	n/a	n/a	677.6	n/a
S95T002490		W	Chloride-IC-Dionex 4000i/4500	ug/g	102.3	<1.70e-02	1.36e+03	1.32e+03	1.34e+03	2.99	n/a	91.39	n/a
S95T002490		W	Fluoride-IC-Dionex 4000i/4500	ug/g	102.0	<1.30e-02	6.94e+03	6.63e+03	6.78e+03	4.57	n/a	69.92	n/a
S95T002490		W	Nitrite-IC - Dionex 4000i/4500	ug/g	97.76	<1.07e-01	2.19e+04	2.12e+04	2.16e+04	3.25	n/a	575.4	n/a
S95T002490		W	Nitrate by IC-Dionex4000i/4500	ug/g	96.42	4.37e-01	2.20e+05	2.48e+05	2.34e+05	12.0	n/a	752.9	n/a
S95T002490		W	Oxalate by IC - Dionex 4000i	ug/g	101.4	<1.05e-01	8.03e+03	8.16e+03	8.09e+03	1.61	n/a	564.6	n/a
S95T002490		W	Phosphate-IC-Dionex 4000i/4500	ug/g	93.96	<2.96e-01	1.17e+04	4.47e+03	8.10e+03	89.4	n/a	1.59e+03	n/a
S95T002490		W	Sulfate by IC-Dionex4000i/4500	ug/g	103.2	<1.36e-01	1.16e+04	1.16e+04	1.16e+04	0.00	n/a	731.3	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 2(C)

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001399			TOC by Persulfate/Coulometry	ug/g	97.67	22.50	5.50e+03	6.03e+03	5.76e+03	9.19	n/a	80.00	n/a
S95T001399			% Water by TGA using Mettler	%	100.7	n/a	43.90	39.74	41.82	9.95	n/a	n/a	n/a
S95T001399			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	91.10	85.60	88.35	6.23	n/a	n/a	n/a
S95T001399			DSC Exotherm using Mettler	Joules/g	93.15	n/a	53.00	49.80	51.40	6.23	n/a	n/a	n/a
S95T001399			Cyanide by Microdist. & Spec.	ug/g	111.7	1.29e-01	201.0	195.0	198.0	3.03	97.10	106.0	n/a
S95T001400	F		Alpha of Digested Solid	uCi/g	94.98	<2.26e-03	< 2.63e-3	3.98e-03	n/a	n/a	82.80	3.92e-03	358.8
S95T001485	A		Lithium -ICP-Acid Digest	ug/g	88.75	3.000	< 4.9750	<4.8030	n/a	n/a	n/a	4.980	n/a
S95T001485	A		Nickel -ICP-Acid Digest	ug/g	92.00	1.590	447.4	469.1	458.3	4.73	n/a	9.950	n/a
S95T002291			Undecane (C11)	ug/g	n/a	n/a	J 11.800	9.980J	n/a	n/a	n/a	282.0	n/a
S95T002291			Tridecane (C13)	ug/g	n/a	n/a	J 55.900	47.600J	n/a	n/a	n/a	282.0	n/a
S95T002291			Tetradecane (C14)	ug/g	n/a	n/a	J 49.600	41.200J	n/a	n/a	n/a	282.0	n/a
S95T002291			Tri-n-butylphosphate	ug/g	n/a	n/a	U 282.00	307.00U	n/a	n/a	125.1	282.0	n/a
S95T002291			Pentadecane (C15)	ug/g	n/a	n/a	J 22.100	18.500J	n/a	n/a	n/a	282.0	n/a
S95T002291			Nonane (C9)	ug/g	n/a	n/a	U 282.00	307.00U	n/a	n/a	122.4	282.0	n/a
S95T002291			Dodecane (C12)	ug/g	n/a	n/a	J 39.400	30.100J	n/a	n/a	n/a	282.0	n/a
S95T002291			Decane (C10)	ug/g	n/a	n/a	U 282.00	307.00U	n/a	n/a	n/a	282.0	n/a
S95T002491	W		Bromide by Ion Chromatograph	ug/g	99.30	<1.26e-01	<1.031e+0	<9.91e2	n/a	n/a	97.74	1.03e+03	n/a
S95T002491	W		Chloride-IC-Dionex 4000i/4500	ug/g	109.1	<1.70e-02	1.78e+03	1.55e+03	1.67e+03	13.8	102.5	139.1	n/a
S95T002491	W		Fluoride-IC-Dionex 4000i/4500	ug/g	101.9	<1.30e-02	1.32e+04	8.81e+03	1.10e+04	39.9	71.32	106.4	n/a
S95T002491	W		Nitrite-IC - Dionex 4000i/4500	ug/g	91.31	<1.07e-01	2.35e+04	2.38e+04	2.36e+04	1.27	96.05	875.8	n/a
S95T002491	W		Nitrate by IC-Dionex4000i/4500	ug/g	97.23	<1.40e-01	1.12e+05	1.94e+05	1.53e+05	53.6	99.16	1.15e+03	n/a
S95T002491	W		Oxalate by IC - Dionex 4000i	ug/g	109.4	<1.05e-01	1.28e+04	1.51e+04	1.40e+04	16.5	112.2	859.4	n/a
S95T002491	W		Phosphate-IC-Dionex 4000i/4500	ug/g	100.2	<2.96e-01	1.45e+04	1.61e+04	1.53e+04	10.5	106.5	2.42e+03	n/a
S95T002491	W		Sulfate by IC-Dionex4000i/4500	ug/g	99.05	<1.36e-01	3.99e+04	2.20e+04	3.09e+04	57.8	98.10	1.11e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 2(D)

SEGMENT PORTION: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001393			% Water by TGA using Mettler	%	98.84	n/a	38.92	36.38	37.65	6.75	n/a	n/a	n/a
S95T001396			TOC by Persulfate/Coulometry	ug/g	97.67	22.50	9.06e+03	9.76e+03	9.41e+03	7.44	100.0	80.00	n/a
S95T001396			% Water by TGA on Perkin Elmer	%	100.8	n/a	8.560	9.360	8.960	8.93	n/a	n/a	n/a
S95T001396			% Water by TGA using Mettler	%	101.7	n/a	40.98	44.12	42.55	7.38	n/a	n/a	n/a
S95T001396			DSC Exotherm on Perkin Elmer	Joules/g	98.80	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001396			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001396			Cyanide by Microdist. & Spec.	ug/g	95.39	5.400	351.0	340.0	345.5	3.18	93.50	2.700	n/a
S95T001398	F		Alpha of Digested Solid	uCi/g	108.2	1.340	2.67e-02	2.82e-02	2.75e-02	5.46	87.40	6.96e-03	39.6
S95T001486		A	Lithium -ICP-Acid Digest	ug/g	88.75	3.000	< 4.8080	<4.6300	n/a	n/a	88.52	4.810	n/a
S95T001486		A	Nickel -ICP-Acid Digest	ug/g	92.00	1.590	1.55e+03	1.55e+03	1.55e+03	0.13	116.1	9.620	n/a
S95T002292			Undecane (C11)	ug/g	n/a	0.00e+00	J 46.600	44.400J	n/a	n/a	n/a	339.0	n/a
S95T002292			Tridecane (C13)	ug/g	n/a	0.00e+00	J 234.000	1.78e02J	n/a	n/a	n/a	339.0	n/a
S95T002292			Tetradecane (C14)	ug/g	n/a	0.00e+00	J 196.000	1.89e02J	n/a	n/a	n/a	339.0	n/a
S95T002292			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 339.00	344.00U	n/a	n/a	97.11	339.0	n/a
S95T002292			Pentadecane (C15)	ug/g	n/a	0.00e+00	J 76.700	71.500J	n/a	n/a	n/a	339.0	n/a
S95T002292			Nonane (C9)	ug/g	n/a	0.00e+00	U 339.00	344.00U	n/a	n/a	96.42	339.0	n/a
S95T002292			Dodecane (C12)	ug/g	n/a	0.00e+00	J 140.000	1.33e02J	n/a	n/a	n/a	339.0	n/a
S95T002292			Decane (C10)	ug/g	n/a	0.00e+00	J 10.200	9.310J	n/a	n/a	n/a	339.0	n/a
S95T002492		W	Bromide by Ion Chromatograph	ug/g	99.30	<1.26e-01	<1.245e+0	<1.18e3	n/a	n/a	n/a	1.24e+03	n/a
S95T002492		W	Chloride-IC-Dionex 4000i/4500	ug/g	109.1	<1.70e-02	2.18e+03	2.11e+03	2.14e+03	3.26	n/a	168.0	n/a
S95T002492		W	Fluoride-IC-Dionex 4000i/4500	ug/g	101.9	<1.30e-02	1.14e+04	1.74e+04	1.44e+04	41.7	n/a	128.5	n/a
S95T002492		W	Nitrite-IC - Dionex 4000i/4500	ug/g	91.31	<1.07e-01	3.26e+04	3.19e+04	3.22e+04	2.17	n/a	1.06e+03	n/a
S95T002492		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.23	<1.40e-01	2.29e+05	1.61e+05	1.95e+05	34.9	n/a	1.38e+03	n/a
S95T002492		W	Oxalate by IC - Dionex 4000i	ug/g	109.4	<1.05e-01	1.97e+04	1.91e+04	1.94e+04	3.09	n/a	1.04e+03	n/a
S95T002492		W	Phosphate-IC-Dionex 4000i/4500	ug/g	100.2	<2.96e-01	1.71e+04	5.69e+03	1.14e+04	100	n/a	2.93e+03	n/a
S95T002492		W	Sulfate by IC-Dionex4000i/4500	ug/g	99.05	<1.36e-01	3.07e+04	5.94e+04	4.50e+04	63.7	n/a	1.34e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 2(DL)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001427			TOC by Persulfate/Coulometry	ug/mL	n/a	n/a	2.71e+03	2.72e+03	2.72e+03	0.37	n/a	40.00	n/a
S95T001427			% Water by TGA on Perkin Elmer	%	101.1	n/a	27.11	25.03	26.07	7.98	n/a	n/a	n/a
S95T001427			DSC Exotherm on Perkin Elmer	Joules/g	98.45	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001427			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001427		D	Lithium-ICP-Acid Dil.	ug/mL	101.8	5.000	< 4.0100	<4.0100	n/a	n/a	94.88	4.010	n/a
S95T001427			Sulfate by IC-Dionex4000i/4500	ug/mL	102.8	<6.78e-01	< 6.92e3	<6.92e3	n/a	n/a	n/a	6.92e+03	n/a
S95T001427			Phosphate-IC-Dionex 4000i/4500	ug/mL	104.5	<5.96e-01	< 6.08e3	<6.08e3	n/a	n/a	n/a	6.08e+03	n/a
S95T001427			Oxalate by IC - Dionex 4000i	ug/mL	101.2	<4.96e-01	< 5.06e3	<5.06e3	n/a	n/a	n/a	5.06e+03	n/a
S95T001427			Nitrate-IC - Dionex 4000i/4500	ug/mL	104.7	<6.99e-01	2.71e+05	2.73e+05	2.72e+05	0.74	n/a	7.13e+03	n/a
S95T001427			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.9	<5.47e-01	7.09e+04	7.24e+04	7.16e+04	2.09	n/a	5.58e+03	n/a
S95T001427			Fluoride-IC-Dionex 4000i/4500	ug/mL	102.7	<6.20e-02	< 6.32e2	<6.32e2	n/a	n/a	n/a	632.0	n/a
S95T001427			Chloride-IC-Dionex 4000i/4500	ug/mL	101.0	<8.30e-02	3.74e+03	3.79e+03	3.76e+03	1.33	n/a	847.0	n/a
S95T001427			Bromide by Ion Chromatograph	ug/mL	102.5	<6.32e-01	< 6.45e3	<6.45e3	n/a	n/a	n/a	6.45e+03	n/a

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Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 3(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001380			% Water by TGA on Perkin Elmer	%	101.1	n/a	15.74	15.92	15.83	1.01	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001431			TOC by Persulfate/Coulometry	ug/g	91.33	28.40	3.98e+03	4.10e+03	4.04e+03	2.97	n/a	40.00	n/a
S95T001431			% Water by TGA using Mettler	%	101.3	n/a	41.31	38.53	39.92	1.59	n/a	n/a	n/a
S95T001431			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	323.2	323.0	323.1	0.06	n/a	n/a	n/a
S95T001431			DSC Exotherm using Mettler	Joules/g	106.5	n/a	180.6	180.5	180.6	0.06	n/a	n/a	n/a
S95T001431			Cyanide by Microdist. & Spec.	ug/g	105.7	1.48e-01	166.0	165.0	165.5	0.60	81.40	11.20	n/a
S95T001480	F		Alpha of Digested Solid	uCi/g	103.2	<2.74e-03	7.63e-03	3.93e-03	5.78e-03	64.0	n/a	6.85e-03	85.5
S95T001487	A		Lithium -ICP-Acid Digest	ug/g	102.9	3.000	< 9.9900	<9.9200	n/a	n/a	n/a	9.990	n/a
S95T001487	A		Nickel -ICP-Acid Digest	ug/g	104.6	-1.08e+00	1.28e+03	1.35e+03	1.31e+03	5.84	n/a	20.00	n/a
S95T002293			Undecane (C11)	ug/g	n/a	0.00e+00	U 211.00	224.00U	n/a	n/a	n/a	211.0	n/a
S95T002293			Tridecane (C13)	ug/g	n/a	0.00e+00	J 6.810	8.520J	n/a	n/a	n/a	211.0	n/a
S95T002293			Tetradecane (C14)	ug/g	n/a	0.00e+00	J 7.180	8.800J	n/a	n/a	n/a	211.0	n/a
S95T002293			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 211.00	224.00U	n/a	n/a	90.31	211.0	n/a
S95T002293			Pentadecane (C15)	ug/g	n/a	0.00e+00	U 211.00	224.00U	n/a	n/a	n/a	211.0	n/a
S95T002293			Nonane (C9)	ug/g	n/a	0.00e+00	U 211.00	224.00U	n/a	n/a	90.62	211.0	n/a
S95T002293			Dodecane (C12)	ug/g	n/a	0.00e+00	J 7.140	9.470J	n/a	n/a	n/a	211.0	n/a
S95T002293			Decane (C10)	ug/g	n/a	0.00e+00	U 211.00	224.00U	n/a	n/a	n/a	211.0	n/a
S95T002493	W		Bromide by Ion Chromatograph	ug/g	98.66	0.00e+00	< 1.08e3	<9.73e2	n/a	n/a	94.80	1.08e+03	n/a
S95T002493	W		Chloride-IC-Dionex 4000i/4500	ug/g	98.48	0.00e+00	1.50e+03	1.75e+03	1.62e+03	15.4	95.40	146.0	n/a
S95T002493	W		Fluoride-IC-Dionex 4000i/4500	ug/g	99.32	0.00e+00	9.73e+03	1.19e+04	1.08e+04	20.1	95.50	111.0	n/a
S95T002493	W		Nitrite-IC - Dionex 4000i/4500	ug/g	93.80	0.00e+00	2.52e+04	2.99e+04	2.76e+04	17.1	92.90	917.0	n/a
S95T002493	W		Nitrate by IC-Dionex4000i/4500	ug/g	98.86	3.69e-01	1.29e+05	1.52e+05	1.40e+05	16.4	97.70	1.20e+03	n/a
S95T002493	W		Oxalate by IC - Dionex 4000i	ug/g	106.3	0.00e+00	9.93e+03	1.06e+04	1.03e+04	6.53	104.9	900.0	n/a
S95T002493	W		Phosphate-IC-Dionex 4000i/4500	ug/g	95.16	0.00e+00	6.23e+03	1.09e+04	8.56e+03	54.5	93.40	2.45e+03	n/a
S95T002493	W		Sulfate by IC-Dionex4000i/4500	ug/g	97.31	0.00e+00	4.30e+04	5.07e+04	4.68e+04	16.4	94.80	1.17e+03	n/a

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Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 3(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001381			% Water by TGA on Perkin Elmer	%	101.1	n/a	15.18	16.82	16.00	0.10	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001432			TOC by Persulfate/Coulometry	ug/g	n/a	n/a	3.87e+03	3.72e+03	3.80e+03	3.95	n/a	40.00	n/a
S95T001432			% Water by TGA using Mettler	%	100.9	n/a	43.77	44.47	44.12	6.96	n/a	n/a	n/a
S95T001432			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	114.3	116.8	115.5	2.16	n/a	n/a	n/a
S95T001432			DSC Exotherm using Mettler	Joules/g	105.1	n/a	68.70	70.20	69.45	2.16	n/a	n/a	n/a
S95T001432			Cyanide by Microdist. & Spec.	ug/g	105.7	1.48e-01	92.80	111.0	101.9	17.9	99.00	11.60	n/a
S95T001481		F	Alpha of Digested Solid	uCi/g	103.2	<2.74e-03	< 4.66e-3	<5.93e-3	n/a	n/a	n/a	7.32e-03	500.0
S95T001488		A	Lithium -ICP-Acid Digest	ug/g	102.9	3.000	< 9.4100	<9.2700	n/a	n/a	n/a	9.410	n/a
S95T001488		A	Nickel -ICP-Acid Digest	ug/g	104.6	-1.08e+00	1.09e+03	927.3	1.01e+03	16.6	n/a	18.80	n/a
S95T002294			Undecane (C11)	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	n/a	299.0	n/a
S95T002294			Tridecane (C13)	ug/g	n/a	0.00e+00	J 2.870	2.960J	n/a	n/a	n/a	299.0	n/a
S95T002294			Tetradecane (C14)	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	n/a	299.0	n/a
S95T002294			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	124.6	299.0	n/a
S95T002294			Pentadecane (C15)	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	n/a	299.0	n/a
S95T002294			Nonane (C9)	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	121.7	299.0	n/a
S95T002294			Dodecane (C12)	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	n/a	299.0	n/a
S95T002294			Decane (C10)	ug/g	n/a	0.00e+00	U 299.00	255.00U	n/a	n/a	n/a	299.0	n/a
S95T002494		W	Bromide by Ion Chromatograph	ug/g	98.66	0.00e+00	< 4.61e2	<4.68e2	n/a	n/a	n/a	461.0	n/a
S95T002494		W	Chloride-IC-Dionex 4000i/4500	ug/g	98.48	0.00e+00	1.32e+03	1.87e+03	1.60e+03	34.5	n/a	62.20	n/a
S95T002494		W	Fluoride-IC-Dionex 4000i/4500	ug/g	99.32	0.00e+00	1.31e+04	1.28e+04	1.30e+04	2.32	n/a	47.50	n/a
S95T002494		W	Nitrite-IC - Dionex 4000i/4500	ug/g	93.80	0.00e+00	2.37e+04	3.47e+04	2.92e+04	37.7	n/a	391.0	n/a
S95T002494		W	Nitrate by IC-Dionex4000i/4500	ug/g	98.86	3.69e-01	1.02e+05	1.48e+05	1.25e+05	36.8	n/a	512.0	n/a
S95T002494		W	Oxalate by IC - Dionex 4000i	ug/g	106.3	0.00e+00	6.90e+03	7.70e+03	7.30e+03	11.0	n/a	384.0	n/a
S95T002494		W	Phosphate-IC-Dionex 4000i/4500	ug/g	95.16	0.00e+00	2.05e+04	9.74e+03	1.51e+04	71.2	n/a	1.08e+03	n/a
S95T002494		W	Sulfate by IC-Dionex4000i/4500	ug/g	97.31	0.00e+00	5.67e+04	6.27e+04	5.97e+04	10.1	n/a	497.0	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 3(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001382			% Water by TGA using Mettler	%	100.8	n/a	39.16	39.44	39.30	0.71	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001433			TOC by Persulfate/Coulometry	ug/g	n/a	n/a	3.04e+03	3.24e+03	3.14e+03	6.37	n/a	40.00	n/a
S95T001433			% Water by TGA using Mettler	%	101.8	n/a	34.52	38.56	36.54	11.1	n/a	n/a	n/a
S95T001433			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	235.7	226.1	230.9	4.16	n/a	n/a	n/a
S95T001433			DSC Exotherm using Mettler	Joules/g	106.9	n/a	149.6	143.5	146.6	4.16	n/a	n/a	n/a
S95T001433			Cyanide by Microdist. & Spec.	ug/g	99.23	1.18e-01	286.0	265.0	275.5	7.62	93.70	144.0	n/a
S95T001482	F		Alpha of Digested Solid	uCi/g	100.0	<2.24e-02	< 2.06e-2	<1.73e-2	n/a	n/a	96.90	2.50e-02	245.9
S95T001489	A		Lithium -ICP-Acid Digest	ug/g	102.9	3.000	< 9.7200	<9.6500	n/a	n/a	92.91	9.720	n/a
S95T001489	A		Nickel -ICP-Acid Digest	ug/g	104.6	-1.08e+00	744.9	832.1	788.5	11.1	113.0	19.40	n/a
S95T002495	W		Bromide by Ion Chromatograph	ug/g	99.67	0.00e+00	< 7.23e2	<6.95e2	n/a	n/a	95.70	723.0	n/a
S95T002495	W		Chloride-IC-Dionex 4000i/4500	ug/g	101.6	0.00e+00	1.76e+03	1.42e+03	1.59e+03	21.4	94.20	97.50	n/a
S95T002495	W		Fluoride-IC-Dionex 4000i/4500	ug/g	104.2	0.00e+00	2.96e+04	3.24e+04	3.10e+04	9.03	89.00	148.0	n/a
S95T002495	W		Nitrite-IC - Dionex 4000i/4500	ug/g	96.70	0.00e+00	3.13e+04	2.52e+04	2.82e+04	21.6	94.80	614.0	n/a
S95T002495	W		Nitrate by IC-Dionex4000i/4500	ug/g	101.1	4.09e-01	1.39e+05	1.01e+05	1.20e+05	31.7	100.4	803.0	n/a
S95T002495	W		Oxalate by IC - Dionex 4000i	ug/g	111.2	0.00e+00	3.02e+03	3.04e+03	3.03e+03	0.66	106.1	602.0	n/a
S95T002495	W		Phosphate-IC-Dionex 4000i/4500	ug/g	93.57	0.00e+00	3.44e+03	4.61e+04	2.48e+04	172	91.40	1.70e+03	n/a
S95T002495	W		Sulfate by IC-Dionex4000i/4500	ug/g	98.75	0.00e+00	1.30e+05	1.17e+05	1.24e+05	10.5	98.70	602.0	n/a

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Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 3(DL)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001430			TOC by Persulfate/Coulometry	ug/g	93.00	24.10	2.55e+03	2.51e+03	2.53e+03	1.58	n/a	40.00	n/a
S95T001430			% Water by TGA using Mettler	%	101.4	n/a	38.58	39.47	39.02	2.28	n/a	n/a	n/a
S95T001430			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	121.7	114.2	118.0	6.36	n/a	n/a	n/a
S95T001430			DSC Exotherm using Mettler	Joules/g	95.96	n/a	74.20	69.60	71.90	6.40	n/a	n/a	n/a
S95T001430		D	Lithium-ICP-Acid Dil.	ug/mL	101.8	5.000	< 4.0100	<4.0100	n/a	n/a	92.72	4.010	n/a
S95T001430			Sulfate by IC-Dionex4000i/4500	ug/mL	102.8	<6.78e-01	< 6.92e3	<6.92e3	n/a	n/a	n/a	6.92e+03	n/a
S95T001430			Phosphate-IC-Dionex 4000i/4500	ug/mL	104.5	<5.96e-01	< 6.08e3	<6.08e3	n/a	n/a	n/a	6.08e+03	n/a
S95T001430			Oxalate by IC - Dionex 4000i	ug/mL	101.2	<4.96e-01	< 5.06e3	<5.06e3	n/a	n/a	n/a	5.06e+03	n/a
S95T001430			Nitrate-IC - Dionex 4000i/4500	ug/mL	104.7	<6.99e-01	2.54e+05	2.51e+05	2.52e+05	1.19	n/a	7.13e+03	n/a
S95T001430			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.9	<5.47e-01	7.38e+04	7.20e+04	7.29e+04	2.47	n/a	5.58e+03	n/a
S95T001430			Fluoride-IC-Dionex 4000i/4500	ug/mL	102.7	<6.20e-02	< 6.32e2	<6.32e2	n/a	n/a	n/a	632.0	n/a
S95T001430			Chloride-IC-Dionex 4000i/4500	ug/mL	101.0	<8.30e-02	4.01e+03	4.03e+03	4.02e+03	0.50	n/a	847.0	n/a
S95T001430			Bromide by Ion Chromatograph	ug/mL	102.5	<6.32e-01	< 6.45e3	<6.45e3	n/a	n/a	n/a	6.45e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 4(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001407			% Water by TGA on Perkin Elmer	%	96.40	n/a	16.31	17.58	16.95	7.49	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001419			TOC by Persulfate/Coulometry	ug/g	99.67	21.50	1.04e+04	1.26e+04	1.15e+04	19.1	n/a	40.00	n/a
S95T001419			% Water by TGA using Mettler	%	97.31	n/a	28.88	36.23	32.55	22.6	n/a	n/a	n/a
S95T001419 1			% Water by TGA using Mettler	%	101.2	n/a	36.64	36.69	36.66	0.14	n/a	n/a	n/a
S95T001419			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	295.1	390.8	343.0	27.9	n/a	n/a	n/a
S95T001419 1			DSC Exotherm using Mettler	Joules/g	101.6	n/a	199.0	263.6	231.3	27.9	n/a	n/a	n/a
S95T001419			DSC Exotherm using Mettler	Joules/g	97.01	n/a	292.9	162.2	227.5	57.4	n/a	n/a	n/a
S95T001419			Cyanide by Microdist. & Spec.	ug/g	109.5	1.35e-01	1.74e+03	1.90e+03	1.82e+03	8.79	116.2	335.0	n/a
S95T001423	F		Alpha of Digested Solid	uCi/g	107.9	<5.29e-03	< 1.45e-2	<7.36e-3	n/a	n/a	91.20	1.30e-02	500.0
S95T001490	A		Lithium -ICP-Acid Digest	ug/g	97.77	-7.00e+00	< 9.5400	<9.5600	n/a	n/a	n/a	9.540	n/a
S95T001490	A		Nickel -ICP-Acid Digest	ug/g	101.4	-9.10e+00	1.49e+04	1.48e+04	1.48e+04	0.58	n/a	19.10	n/a
S95T002295			Undecane (C11)	ug/g	n/a	0.00e+00	J 94.200	88.000J	n/a	n/a	n/a	233.0	n/a
S95T002295			Tridecane (C13)	ug/g	n/a	0.00e+00	233.0	226.0	229.5	3.05	n/a	233.0	n/a
S95T002295			Tetradecane (C14)	ug/g	n/a	0.00e+00	J 163.000	1.5e+02J	n/a	n/a	n/a	233.0	n/a
S95T002295			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 233.00	157.00U	n/a	n/a	112.3	233.0	n/a
S95T002295			Pentadecane (C15)	ug/g	n/a	0.00e+00	J 69.300	61.300J	n/a	n/a	n/a	233.0	n/a
S95T002295			Nonane (C9)	ug/g	n/a	0.00e+00	U 233.00	157.00U	n/a	n/a	109.9	233.0	n/a
S95T002295			Dodecane (C12)	ug/g	n/a	0.00e+00	J 214.000	2.01e02J	n/a	n/a	n/a	233.0	n/a
S95T002295			Decane (C10)	ug/g	n/a	0.00e+00	U 233.00	157.00U	n/a	n/a	n/a	233.0	n/a
S95T002496	W		Bromide by Ion Chromatograph	ug/g	99.67	0.00e+00	< 8.50e2	<8.18e2	n/a	n/a	n/a	850.0	n/a
S95T002496	W		Chloride-IC-Dionex 4000i/4500	ug/g	101.6	0.00e+00	1.34e+03	1.26e+03	1.30e+03	6.15	n/a	115.0	n/a
S95T002496	W		Fluoride-IC-Dionex 4000i/4500	ug/g	104.2	0.00e+00	6.86e+03	1.08e+04	8.83e+03	44.6	n/a	87.70	n/a
S95T002496	W		Nitrite-IC - Dionex 4000i/4500	ug/g	96.70	0.00e+00	3.72e+04	3.08e+04	3.40e+04	18.8	n/a	722.0	n/a
S95T002496	W		Nitrate by IC-Dionex4000i/4500	ug/g	101.1	4.09e-01	6.94e+04	5.83e+04	6.38e+04	17.4	n/a	945.0	n/a
S95T002496	W		Oxalate by IC - Dionex 4000i	ug/g	111.2	0.00e+00	< 7.09e2	1.94e+03	n/a	n/a	n/a	709.0	n/a
S95T002496	W		Phosphate-IC-Dionex 4000i/4500	ug/g	93.57	0.00e+00	2.28e+04	6.43e+04	4.36e+04	95.3	n/a	2.00e+03	n/a
S95T002496	W		Sulfate by IC-Dionex4000i/4500	ug/g	98.75	0.00e+00	4.10e+04	2.97e+04	3.54e+04	32.0	n/a	918.0	n/a

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Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 4(B)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001408			% Water by TGA using Mettler	%	101.3	n/a	37.28	36.03	36.66	3.41	n/a	n/a	n/a

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001420			TOC by Persulfate/Coulometry	ug/g	99.67	21.50	2.09e+04	2.07e+04	2.08e+04	0.96	n/a	40.00	n/a
S95T001420			% Water by TGA using Mettler	%	97.31	n/a	35.41	35.81	35.61	1.12	n/a	n/a	n/a
S95T001420	1		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	481.3	409.5	445.4	16.1	n/a	n/a	n/a
S95T001420			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	509.1	438.1	473.6	15.0	n/a	n/a	n/a
S95T001420	1		DSC Exotherm using Mettler	Joules/g	101.6	n/a	309.9	263.7	286.8	16.1	n/a	n/a	n/a
S95T001420			DSC Exotherm using Mettler	Joules/g	97.01	n/a	327.8	282.1	305.0	15.0	n/a	n/a	n/a
S95T001420			Cyanide by Microdist. & Spec.	ug/g	109.5	1.35e-01	2.01e+03	1.72e+03	1.86e+03	16.5	108.8	182.0	n/a
S95T001424		F	Alpha of Digested Solid	uCi/g	107.9	<5.29e-03	< 7.47e-3	6.10e-02	n/a	n/a	92.20	1.06e-02	234.9
S95T001491		A	Lithium -ICP-Acid Digest	ug/g	97.77	-7.00e+00	< 9.6700	<9.6800	n/a	n/a	n/a	9.670	n/a
S95T001491		A	Nickel -ICP-Acid Digest	ug/g	101.4	-9.10e+00	9.92e+03	9.79e+03	9.85e+03	1.32	n/a	19.30	n/a
S95T002296			Undecane (C11)	ug/g	n/a	0.00e+00	J 164.000	1.24e02J	n/a	n/a	n/a	206.0	n/a
S95T002296			Tridecane (C13)	ug/g	n/a	0.00e+00	478.0	337.0	407.5	34.6	n/a	206.0	n/a
S95T002296			Tetradecane (C14)	ug/g	n/a	0.00e+00	372.0	214.0	293.0	53.9	n/a	206.0	n/a
S95T002296			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 206.00	198.00U	n/a	n/a	73.86	206.0	n/a
S95T002296			Pentadecane (C15)	ug/g	n/a	0.00e+00	J 108.000	80.700J	n/a	n/a	n/a	206.0	n/a
S95T002296			Nonane (C9)	ug/g	n/a	0.00e+00	U 206.00	198.00U	n/a	n/a	79.07	206.0	n/a
S95T002296			Dodecane (C12)	ug/g	n/a	0.00e+00	397.0	293.0	345.0	30.1	n/a	206.0	n/a
S95T002296			Decane (C10)	ug/g	n/a	0.00e+00	U 206.00	198.00U	n/a	n/a	n/a	206.0	n/a
S95T002497		W	Bromide by Ion Chromatograph	ug/g	96.85	0.00e+00	< 5.83e2	<5.53e2	n/a	n/a	96.70	583.0	n/a
S95T002497		W	Chloride-IC-Dionex 4000i/4500	ug/g	100.6	0.00e+00	910.0	1.30e+03	1.10e+03	35.3	98.60	78.70	n/a
S95T002497		W	Fluoride-IC-Dionex 4000i/4500	ug/g	101.5	0.00e+00	375.0	3.67e+03	2.02e+03	163	110.0	60.20	n/a
S95T002497		W	Nitrite-IC - Dionex 4000i/4500	ug/g	97.54	0.00e+00	2.61e+04	3.64e+04	3.12e+04	33.0	99.60	787.0	n/a
S95T002497		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.95	3.82e-01	3.77e+04	5.28e+04	4.52e+04	33.4	97.40	648.0	n/a
S95T002497		W	Oxalate by IC - Dionex 4000i	ug/g	107.0	0.00e+00	2.79e+04	3.61e+03	1.58e+04	154	105.2	486.0	n/a
S95T002497		W	Phosphate-IC-Dionex 4000i/4500	ug/g	91.69	0.00e+00	8.12e+03	3.96e+04	2.39e+04	132	90.90	1.37e+03	n/a
S95T002497		W	Sulfate by IC-Dionex4000i/4500	ug/g	96.61	0.00e+00	1.50e+05	1.24e+04	8.12e+04	169	85.50	630.0	n/a

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Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 4(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001409			% Water by TGA using Mettler	%	101.3	n/a	37.47	37.91	37.69	1.17	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001421			TOC by Persulfate/Coulometry	ug/g	96.33	21.20	5.67e+03	5.87e+03	5.77e+03	3.47	122.4	40.00	n/a
S95T001421			% Water by TGA using Mettler	%	101.5	n/a	38.31	39.82	39.06	3.87	n/a	n/a	n/a
S95T001421			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	221.9	226.4	224.2	2.01	n/a	n/a	n/a
S95T001421			DSC Exotherm using Mettler	Joules/g	102.3	n/a	135.4	138.2	136.8	2.05	n/a	n/a	n/a
S95T001421			Cyanide by Microdist. & Spec.	ug/g	107.4	<3.60e-02	1.85e+03	1.88e+03	1.86e+03	n/a	105.4	260.0	n/a
S95T001425	F		Alpha of Digested Solid	uCi/g	99.28	<4.22e-02	2.41e-01	3.13e-01	2.77e-01	26.0	111.2	9.66e-02	37.6
S95T001492	A		Lithium -ICP-Acid Digest	ug/g	97.77	-7.00e+00	< 9.4700	<9.4600	n/a	n/a	n/a	9.470	n/a
S95T001492	A		Nickel -ICP-Acid Digest	ug/g	101.4	-9.10e+00	5.65e+03	5.67e+03	5.66e+03	0.43	n/a	18.90	n/a
S95T002297			Undecane (C11)	ug/g	n/a	0.00e+00	J 102.000	1.11e02J	n/a	n/a	n/a	376.0	n/a
S95T002297			Tridecane (C13)	ug/g	n/a	0.00e+00	J 275.000	3.34e02J	n/a	n/a	n/a	376.0	n/a
S95T002297			Tetradecane (C14)	ug/g	n/a	0.00e+00	J 187.000	2.28e02J	n/a	n/a	n/a	376.0	n/a
S95T002297			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 376.00	269.00U	n/a	n/a	94.75	376.0	n/a
S95T002297			Pentadecane (C15)	ug/g	n/a	0.00e+00	J 57.300	1.05e02J	n/a	n/a	n/a	376.0	n/a
S95T002297			Nonane (C9)	ug/g	n/a	0.00e+00	J 12.200	11.600J	n/a	n/a	89.98	376.0	n/a
S95T002297			Dodecane (C12)	ug/g	n/a	0.00e+00	J 255.000	2.7e+02J	n/a	n/a	n/a	376.0	n/a
S95T002297			Decane (C10)	ug/g	n/a	0.00e+00	J 28.100	29.300J	n/a	n/a	n/a	376.0	n/a
S95T002498	W		Bromide by Ion Chromatograph	ug/g	96.85	0.00e+00	< 1.32e3	<1.28e3	n/a	n/a	n/a	1.32e+03	n/a
S95T002498	W		Chloride-IC-Dionex 4000i/4500	ug/g	100.6	0.00e+00	2.03e+03	1.69e+03	1.86e+03	18.3	n/a	178.0	n/a
S95T002498	W		Fluoride-IC-Dionex 4000i/4500	ug/g	101.5	0.00e+00	< 1.36e2	<1.32e2	n/a	n/a	n/a	136.0	n/a
S95T002498	W		Nitrite-IC - Dionex 4000i/4500	ug/g	97.54	0.00e+00	4.84e+04	4.86e+04	4.85e+04	0.41	n/a	1.78e+03	n/a
S95T002498	W		Nitrate by IC-Dionex4000i/4500	ug/g	97.95	3.82e-01	6.31e+04	6.25e+04	6.28e+04	0.96	n/a	1.47e+03	n/a
S95T002498	W		Oxalate by IC - Dionex 4000i	ug/g	107.0	0.00e+00	2.51e+03	2.52e+03	2.52e+03	0.40	n/a	1.10e+03	n/a
S95T002498	W		Phosphate-IC-Dionex 4000i/4500	ug/g	91.69	0.00e+00	3.66e+04	4.08e+04	3.87e+04	10.9	n/a	3.10e+03	n/a
S95T002498	W		Sulfate by IC-Dionex4000i/4500	ug/g	96.61	0.00e+00	6.38e+03	7.06e+03	6.72e+03	10.1	n/a	1.43e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 98
SEGMENT #: 4(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001410			% Water by TGA on Perkin Elmer	%	100.6	n/a	19.95	20.93	20.44	4.79	n/a	n/a	n/a
S95T001410			% Water by TGA using Mettler	%	101.7	n/a	35.32	39.45	37.39	11.0	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001422			TOC by Persulfate/Coulometry	ug/g	96.33	21.20	3.50e+03	3.37e+03	3.44e+03	3.78	n/a	40.00	n/a
S95T001422			% Water by TGA using Mettler	%	101.5	n/a	36.49	36.40	36.45	0.25	n/a	n/a	n/a
S95T001422			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	98.51	107.6	103.1	8.82	n/a	n/a	n/a
S95T001422			DSC Exotherm using Mettler	Joules/g	102.3	n/a	62.60	68.40	65.50	8.85	n/a	n/a	n/a
S95T001422			Cyanide by Microdist. & Spec.	ug/g	99.23	1.18e-01	2.89e+03	3.08e+03	2.98e+03	6.37	99.90	395.0	n/a
S95T001426	F		Alpha of Digested Solid	uCi/g	91.22	<9.64e-02	3.52e-01	3.68e-01	3.60e-01	4.44	97.80	2.44e-01	56.8
S95T001493	A		Lithium -ICP-Acid Digest	ug/g	97.77	-7.00e+00	< 10.7600	<10.7800	n/a	n/a	97.73	10.80	n/a
S95T001493	A		Nickel -ICP-Acid Digest	ug/g	101.4	-9.10e+00	3.60e+03	3.61e+03	3.60e+03	0.36	n/a	21.50	n/a
S95T002298			Undecane (C11)	ug/g	n/a	0.00e+00	U 257.00	212.00U	n/a	n/a	n/a	257.0	n/a
S95T002298			Tridecane (C13)	ug/g	n/a	0.00e+00	J 6.070	7.480J	n/a	n/a	n/a	257.0	n/a
S95T002298			Tetradecane (C14)	ug/g	n/a	0.00e+00	J 4.540	5.390J	n/a	n/a	n/a	257.0	n/a
S95T002298			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 257.00	212.00U	n/a	n/a	90.17	257.0	n/a
S95T002298			Pentadecane (C15)	ug/g	n/a	0.00e+00	U 257.00	212.00U	n/a	n/a	n/a	257.0	n/a
S95T002298			Nonane (C9)	ug/g	n/a	0.00e+00	U 257.00	212.00U	n/a	n/a	91.20	257.0	n/a
S95T002298			Dodecane (C12)	ug/g	n/a	0.00e+00	J 7.080	7.920J	n/a	n/a	n/a	257.0	n/a
S95T002298			Decane (C10)	ug/g	n/a	0.00e+00	U 257.00	212.00U	n/a	n/a	n/a	257.0	n/a
S95T003707	W		Bromide by Ion Chromatograph	ug/g	105.6	<1.26e-01	<5.212e+0	<5.51e2	n/a	n/a	102.6	521.0	n/a
S95T003707	W		Chloride-IC-Dionex 4000i/4500	ug/g	106.6	<1.70e-02	1.20e+03	1.27e+03	1.24e+03	5.67	105.1	70.30	n/a
S95T003707	W		Fluoride-IC-Dionex 4000i/4500	ug/g	105.6	<1.30e-02	456.4	452.0	454.2	0.88	104.2	53.76	n/a
S95T003707	W		Nitrite-IC - Dionex 4000i/4500	ug/g	104.9	<1.07e-01	4.29e+04	4.43e+04	4.36e+04	3.21	104.8	442.5	n/a
S95T003707	W		Nitrate by IC-Dionex4000i/4500	ug/g	102.6	<1.40e-01	5.05e+04	5.10e+04	5.07e+04	0.99	105.4	578.1	n/a
S95T003707	W		Oxalate by IC - Dionex 4000i	ug/g	101.9	<1.05e-01	983.1	562.0	772.5	54.5	102.3	434.2	n/a
S95T003707	W		Phosphate-IC-Dionex 4000i/4500	ug/g	113.2	<1.19e-01	5.85e+04	5.38e+04	5.62e+04	8.37	101.5	492.1	n/a
S95T003707	W		Sulfate by IC-Dionex4000i/4500	ug/g	101.7	<1.36e-01	4.48e+03	1.20e+04	8.24e+03	91.3	99.66	562.4	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 99
SEGMENT #: HHF BLANK

SEGMENT PORTION: Hydrostatic Head Fluid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001659		D	Lithium-ICP-Acid Dil.	ug/mL	100.5	-2.00e+00	1.68e+03	1.67e+03	1.68e+03	0.75	n/a	2.10e-01	n/a
S95T001659			Sulfate by IC-Dionex4000i/4500	ug/mL	100.5	<6.78e-01	< 7.53e2	<7.53e2	n/a	n/a	n/a	753.0	n/a
S95T001659			Phosphate-IC-Dionex 4000i/4500	ug/mL	103.4	<5.96e-01	< 6.62e2	<6.62e2	n/a	n/a	n/a	662.0	n/a
S95T001659			Oxalate by IC - Dionex 4000i	ug/mL	102.8	<4.96e-01	< 5.51e2	<5.51e2	n/a	n/a	n/a	551.0	n/a
S95T001659			Nitrate-IC - Dionex 4000i/4500	ug/mL	100.3	<6.99e-01	< 7.77e2	<7.76e2	n/a	n/a	n/a	777.0	n/a
S95T001659			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.1	<5.47e-01	< 6.08e2	<6.07e2	n/a	n/a	n/a	608.0	n/a
S95T001659			Fluoride-IC-Dionex 4000i/4500	ug/mL	103.9	<6.20e-02	< 6.89e1	<6.88e1	n/a	n/a	n/a	68.90	n/a
S95T001659			Chloride-IC-Dionex 4000i/4500	ug/mL	99.11	<8.30e-02	< 9.22e1	<9.22e1	n/a	n/a	n/a	92.20	n/a
S95T001659			Bromide by Ion Chromatograph	ug/mL	102.4	<6.32e-01	2.17e+04	2.17e+04	2.17e+04	0.00	n/a	702.0	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 1(W)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001586			% Water by TGA on Perkin Elmer	%	100.4	n/a	15.74	15.02	15.38	4.68	n/a	n/a	n/a

W Whole Segment: W Whole Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001925			TOC by Persulfate/Coulometry	ug/g	95.00	3.300	3.00e+03	2.50e+03	2.75e+03	18.2	75.70	40.00	n/a
S95T001925			% Water by TGA on Perkin Elmer	%	101.7	n/a	24.90	23.78	24.34	4.60	n/a	n/a	n/a
S95T001925			DSC Exotherm on Perkin Elmer	Joules/g	97.79	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001925			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001925			Cyanide by Microdist. & Spec.	ug/g	111.7	1.29e-01	60.20	57.40	58.80	4.76	75.40	47.30	n/a
S95T002001		F	Alpha of Digested Solid	uCi/g	110.3	<4.59e-04	<6.35E-04	<1.51E-3	n/a	n/a	4.78e-03	7.44e-04	1.96E+02
S95T002161		A	Silver -ICP-Acid Digest	ug/g	88.05	8.000	< 9.9800	<9.8200	n/a	n/a	96.60	9.980	n/a
S95T002161		A	Aluminium -ICP-Acid Digest	ug/g	99.77	2.340	2.31e+04	1.46e+04	1.89e+04	45.3	n/a	49.90	n/a
S95T002161		A	Arsenic -ICP-Acid Digest	ug/g	90.36	-2.60e+00	< 49.9000	<49.1000	n/a	n/a	100.0	49.90	n/a
S95T002161		A	Boron -ICP-Acid Digest	ug/g	120.4	2.340	< 49.9000	56.71	n/a	n/a	133.5	49.90	n/a
S95T002161		A	Barium -ICP-Acid Digest	ug/g	92.12	2.000	< 49.9000	<49.1000	n/a	n/a	94.15	49.90	n/a
S95T002161		A	Beryllium -ICP-Acid Digest	ug/g	97.11	-1.00e+00	< 4.9900	<4.9100	n/a	n/a	99.32	4.990	n/a
S95T002161		A	Bismuth -ICP-Acid Digest	ug/g	88.36	-1.76e+00	< 99.8000	<98.2000	n/a	n/a	97.88	99.80	n/a
S95T002161		A	Calcium -ICP-Acid Digest	ug/g	116.5	1.22e-01	292.4	249.5	271.0	15.8	110.2	99.80	n/a
S95T002161		A	Cadmium -ICP-Acid Digest	ug/g	87.33	1.000	< 9.9800	<9.8200	n/a	n/a	96.80	9.980	n/a
S95T002161		A	Cerium -ICP-Acid Digest	ug/g	95.64	7.800	< 99.8000	<98.2000	n/a	n/a	97.75	99.80	n/a
S95T002161		A	Cobalt -ICP-Acid Digest	ug/g	90.14	1.900	< 19.9600	<19.6400	n/a	n/a	99.16	20.00	n/a
S95T002161		A	Chromium -ICP-Acid Digest	ug/g	90.67	1.900	93.10	92.76	92.93	0.36	97.74	9.980	n/a
S95T002161		A	Copper -ICP-Acid Digest	ug/g	91.01	2.000	< 9.9800	<9.8200	n/a	n/a	96.61	9.980	n/a
S95T002161		A	Iron -ICP-Acid Digest	ug/g	90.38	2.550	1.00e+03	1.21e+03	1.11e+03	18.5	112.7	49.90	n/a
S95T002161		A	Potassium -ICP-Acid Digest	ug/g	93.24	1.96e-01	389.0	<294.600	n/a	n/a	95.06	299.0	n/a
S95T002161		A	Lanthanum -ICP-Acid Digest	ug/g	94.66	-4.00e+00	< 49.9000	<49.1000	n/a	n/a	97.61	49.90	n/a
S95T002161		A	Lithium -ICP-Acid Digest	ug/g	94.68	-2.50e+00	26.51	25.23	25.87	4.97	96.55	9.980	n/a
S95T002161		A	Magnesium -ICP-Acid Digest	ug/g	92.60	1.760	< 99.8000	<98.2000	n/a	n/a	116.7	99.80	n/a
S95T002161		A	Manganese -ICP-Acid Digest	ug/g	88.14	-2.00e+00	13.90	14.62	14.26	5.02	93.02	9.980	n/a
S95T002161		A	Molybdenum -ICP-Acid Digest	ug/g	92.86	-1.40e+00	< 49.9000	<49.1000	n/a	n/a	97.73	49.90	n/a
S95T002161		A	Sodium -ICP-Acid Digest	ug/g	164.6	8.150	2.19e+05	2.23e+05	2.21e+05	1.89	n/a	99.80	n/a
S95T002161		A	Neodymium -ICP-Acid Digest	ug/g	92.82	1.100	< 99.8000	<98.2000	n/a	n/a	95.42	99.80	n/a
S95T002161		A	Nickel -ICP-Acid Digest	ug/g	89.33	3.000	130.4	118.0	124.2	9.97	94.42	20.00	n/a
S95T002161		A	Phosphorus -ICP-Acid Digest	ug/g	94.26	3.350	3.30e+04	3.25e+04	3.28e+04	1.75	n/a	200.0	n/a
S95T002161		A	Lead -ICP-Acid Digest	ug/g	86.56	7.200	< 99.8000	<98.2000	n/a	n/a	114.2	99.80	n/a
S95T002161		A	Sulfur -ICP-Acid Digest	ug/g	86.56	3.980	1.19e+03	949.3	1.07e+03	22.5	96.57	49.90	n/a
S95T002161		A	Antimony -ICP-Acid Digest	ug/g	85.05	1.400	<199.6000	<196.400	n/a	n/a	94.05	200.0	n/a
S95T002161		A	Selenium -ICP-Acid Digest	ug/g	87.21	-1.19e+00	< 99.8000	<98.2000	n/a	n/a	93.90	99.80	n/a
S95T002161		A	Silicon -ICP-Acid Digest	ug/g	25.38	6.720	200.4	378.8	289.6	61.6	n/a	49.90	n/a
S95T002161		A	Samarium -ICP-Acid Digest	ug/g	92.66	-2.52e+00	< 99.8000	<98.2000	n/a	n/a	94.39	99.80	n/a
S95T002161		A	Strontium -ICP-Acid Digest	ug/g	92.56	-3.00e+00	32.90	36.42	34.66	10.2	95.39	9.980	n/a
S95T002161		A	Titanium-ICP-Acid Digest	ug/g	91.84	7.000	10.82	11.39	11.11	5.12	91.16	9.980	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002161		A	Thallium -ICP-Acid Digest	ug/g	86.15	5.200	<199.6000	<196.400	n/a	n/a	95.89	200.0	n/a
S95T002161		A	Uranium -ICP-Acid Digest	ug/g	90.75	-1.03e-01	<399.2000	<392.800	n/a	n/a	106.4	399.0	n/a
S95T002161		A	Vanadium -ICP-Acid Digest	ug/g	89.53	-5.30e+00	69.40	67.92	68.66	2.17	96.12	49.90	n/a
S95T002161		A	Zinc -ICP-Acid Digest	ug/g	85.56	1.560	37.93	44.46	41.19	15.9	98.14	9.980	n/a
S95T002161		A	Zirconium -ICP-Acid Digest	ug/g	92.57	-3.70e+00	< 9.9800	<9.8200	n/a	n/a	85.78	9.980	n/a
S95T002338			Undecane (C11)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	n/a	118.0	n/a
S95T002338			Tridecane (C13)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	n/a	118.0	n/a
S95T002338			Tetradecane (C14)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	n/a	118.0	n/a
S95T002338			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	106.2	118.0	n/a
S95T002338			Pentadecane (C15)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	n/a	118.0	n/a
S95T002338			Nonane (C9)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	104.8	118.0	n/a
S95T002338			Dodecane (C12)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	n/a	118.0	n/a
S95T002338			Decane (C10)	ug/g	n/a	0.00e+00	U 118.00	122.00U	n/a	n/a	n/a	118.0	n/a
S95T002536		W	Bromide by Ion Chromatograph	ug/g	96.35	<1.26e-01	< 1.55e3	<1.55e3	n/a	n/a	65.40	1.55e+03	n/a
S95T002536		W	Chloride-IC-Dionex 4000i/4500	ug/g	96.20	<1.70e-02	< 2.10e2	<2.10e2	n/a	n/a	73.20	210.0	n/a
S95T002536		W	Fluoride-IC-Dionex 4000i/4500	ug/g	96.61	<1.30e-02	5.75e+03	1.10e+04	8.38e+03	62.7	69.80	160.0	n/a
S95T002536		W	Nitrite-IC - Dionex 4000i/4500	ug/g	95.90	<1.07e-01	< 1.32e3	3.74e+03	n/a	n/a	70.90	1.32e+03	n/a
S95T002536		W	Nitrate by IC-Dionex4000i/4500	ug/g	93.65	<1.40e-01	5.65e+05	3.78e+05	4.72e+05	39.7	61.00	1.73e+03	n/a
S95T002536		W	Oxalate by IC - Dionex 4000i	ug/g	100.9	<1.50e-01	5.84e+03	8.18e+03	7.01e+03	33.4	73.70	1.29e+03	n/a
S95T002536		W	Phosphate-IC-Dionex 4000i/4500	ug/g	91.39	<2.96e-01	5.08e+04	9.88e+04	7.48e+04	64.2	70.20	3.65e+03	n/a
S95T002536		W	Sulfate by IC-Dionex4000i/4500	ug/g	93.98	<1.36e-01	< 1.68e3	5.84e+03	n/a	n/a	65.40	1.68e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 2(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001587			% Water by TGA on Perkin Elmer	%	100.4	n/a	10.41	12.77	11.59	20.4	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001966			TOC by Persulfate/Coulometry	ug/g	95.00	3.300	2.45e+03	2.38e+03	2.42e+03	2.90	n/a	40.00	n/a
S95T001966			% Water by TGA using Mettler	%	101.3	n/a	20.84	19.25	20.05	7.93	n/a	n/a	n/a
S95T001966			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001966			DSC Exotherm using Mettler	Joules/g	106.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001966			Cyanide by Microdist. & Spec.	ug/g	107.9	1.03e-01	69.80	62.90	66.35	10.4	104.7	24.20	n/a
S95T002002	F		Alpha of Digested Solid	uCi/g	110.3	<4.59e-04	3.66e-03	3.18e-03	3.42e-03	14.0	7.48e-02	6.88e-04	2.78E+01
S95T002162		A	Silver -ICP-Acid Digest	ug/g	86.40	4.000	< 13.5200	<13.5500	n/a	n/a	95.42	13.50	n/a
S95T002162		A	Aluminium -ICP-Acid Digest	ug/g	102.4	3.790	3.46e+04	5.58e+04	4.52e+04	47.0	n/a	67.60	n/a
S95T002162		A	Arsenic -ICP-Acid Digest	ug/g	89.81	-4.50e+00	< 67.6000	<67.7500	n/a	n/a	93.73	67.60	n/a
S95T002162		A	Boron -ICP-Acid Digest	ug/g	119.5	2.480	< 67.6000	<67.7500	n/a	n/a	100.0	67.60	n/a
S95T002162		A	Barium -ICP-Acid Digest	ug/g	94.04	5.000	257.1	409.7	333.4	45.8	108.3	67.60	n/a
S95T002162		A	Beryllium -ICP-Acid Digest	ug/g	99.19	1.000	< 6.7600	<6.7750	n/a	n/a	96.51	6.760	n/a
S95T002162		A	Bismuth -ICP-Acid Digest	ug/g	86.69	1.790	<135.2000	<135.500	n/a	n/a	102.1	135.0	n/a
S95T002162		A	Calcium -ICP-Acid Digest	ug/g	104.5	1.35e-01	2.64e+03	4.42e+03	3.53e+03	50.6	n/a	135.0	n/a
S95T002162		A	Cadmium -ICP-Acid Digest	ug/g	86.01	6.000	< 13.5200	<13.5500	n/a	n/a	94.60	13.50	n/a
S95T002162		A	Cerium -ICP-Acid Digest	ug/g	97.18	2.800	<135.2000	<135.500	n/a	n/a	97.10	135.0	n/a
S95T002162		A	Cobalt -ICP-Acid Digest	ug/g	89.09	4.000	< 27.0400	<27.1000	n/a	n/a	94.97	27.00	n/a
S95T002162		A	Chromium -ICP-Acid Digest	ug/g	90.27	3.300	114.5	165.6	140.1	36.5	98.72	13.50	n/a
S95T002162		A	Copper -ICP-Acid Digest	ug/g	92.94	1.700	< 13.5200	<13.5500	n/a	n/a	94.36	13.50	n/a
S95T002162		A	Iron -ICP-Acid Digest	ug/g	90.75	1.410	3.14e+03	5.11e+03	4.12e+03	48.0	n/a	67.60	n/a
S95T002162		A	Potassium -ICP-Acid Digest	ug/g	92.98	1.40e-01	570.5	847.6	709.0	39.1	90.03	406.0	n/a
S95T002162		A	Lanthanum -ICP-Acid Digest	ug/g	96.87	3.000	< 67.6000	<67.7500	n/a	n/a	96.52	67.60	n/a
S95T002162		A	Lithium -ICP-Acid Digest	ug/g	98.73	-1.80e+00	< 13.5200	<13.5500	n/a	n/a	96.26	13.50	n/a
S95T002162		A	Magnesium -ICP-Acid Digest	ug/g	93.90	1.430	665.9	1.11e+03	887.9	50.0	n/a	135.0	n/a
S95T002162		A	Manganese -ICP-Acid Digest	ug/g	87.77	-1.00e+00	70.61	113.9	92.26	47.0	94.11	13.50	n/a
S95T002162		A	Molybdenum -ICP-Acid Digest	ug/g	91.93	2.000	< 67.6000	<67.7500	n/a	n/a	95.45	67.60	n/a
S95T002162		A	Sodium -ICP-Acid Digest	ug/g	154.8	8.340	2.17e+05	1.87e+05	2.02e+05	14.7	n/a	135.0	n/a
S95T002162		A	Neodymium -ICP-Acid Digest	ug/g	98.08	-1.00e+00	<135.2000	<135.500	n/a	n/a	95.92	135.0	n/a
S95T002162		A	Nickel -ICP-Acid Digest	ug/g	88.39	-6.00e+00	287.1	390.0	338.6	30.4	105.1	27.00	n/a
S95T002162		A	Phosphorus -ICP-Acid Digest	ug/g	91.79	6.180	2.34e+03	4.14e+03	3.24e+03	55.5	n/a	270.0	n/a
S95T002162		A	Lead -ICP-Acid Digest	ug/g	84.25	1.480	<135.2000	165.0	n/a	n/a	118.3	135.0	n/a
S95T002162		A	Sulfur -ICP-Acid Digest	ug/g	85.28	4.540	3.52e+03	3.29e+03	3.41e+03	6.67	n/a	67.60	n/a
S95T002162		A	Antimony -ICP-Acid Digest	ug/g	82.59	5.600	<270.4000	<271.000	n/a	n/a	57.18	270.0	n/a
S95T002162		A	Selenium -ICP-Acid Digest	ug/g	91.13	3.630	<135.2000	<135.500	n/a	n/a	97.69	135.0	n/a
S95T002162		A	Silicon -ICP-Acid Digest	ug/g	82.55	1.41e-01	315.8	282.2	299.0	11.2	n/a	67.60	n/a
S95T002162		A	Samarium -ICP-Acid Digest	ug/g	98.56	-5.39e+00	<135.2000	<135.500	n/a	n/a	92.81	135.0	n/a
S95T002162		A	Strontium -ICP-Acid Digest	ug/g	95.54	-6.00e+00	101.9	163.5	132.7	46.4	100.9	13.50	n/a
S95T002162		A	Titanium-ICP-Acid Digest	ug/g	92.26	7.000	178.8	282.3	230.5	44.9	102.1	13.50	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002162		A	Thallium -ICP-Acid Digest	ug/g	88.12	2.950	<270.4000	<271.000	n/a	n/a	94.29	270.0	n/a
S95T002162		A	Uranium -ICP-Acid Digest	ug/g	98.38	-1.90e-01	<540.8000	<542.000	n/a	n/a	100.6	541.0	n/a
S95T002162		A	Vanadium -ICP-Acid Digest	ug/g	90.54	-1.10e+00	< 67.6000	<67.7500	n/a	n/a	92.74	67.60	n/a
S95T002162		A	Zinc -ICP-Acid Digest	ug/g	82.97	1.170	30.57	40.29	35.43	27.4	94.26	13.50	n/a
S95T002162		A	Zirconium -ICP-Acid Digest	ug/g	93.01	-8.10e+00	20.87	35.17	28.02	51.0	86.96	13.50	n/a
S95T002343			Undecane (C11)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	n/a	241.0	n/a
S95T002343			Tridecane (C13)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	n/a	241.0	n/a
S95T002343			Tetradecane (C14)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	n/a	241.0	n/a
S95T002343			Tri-n-butylphosphate	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	85.47	241.0	n/a
S95T002343			Pentadecane (C15)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	n/a	241.0	n/a
S95T002343			Nonane (C9)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	81.29	241.0	n/a
S95T002343			Dodecane (C12)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	n/a	241.0	n/a
S95T002343			Decane (C10)	ug/g	n/a	n/a	U 241.00	241.00U	n/a	n/a	n/a	241.0	n/a
S95T002558		W	Bromide by Ion Chromatograph	ug/g	98.94	<1.26e-01	< 3.33e3	<1.42e3	n/a	n/a	95.70	3.33e+03	n/a
S95T002558		W	Chloride-IC-Dionex 4000i/4500	ug/g	101.4	<1.70e-02	1.62e+03	474.0	1.05e+03	109	95.00	450.0	n/a
S95T002558		W	Fluoride-IC-Dionex 4000i/4500	ug/g	100.7	<1.30e-02	4.28e+03	3.17e+03	3.72e+03	29.8	95.50	344.0	n/a
S95T002558		W	Nitrite-IC - Dionex 4000i/4500	ug/g	99.29	<1.07e-01	1.20e+04	7.24e+03	9.62e+03	49.5	93.70	4.50e+03	n/a
S95T002558		W	Nitrate by IC-Dionex4000i/4500	ug/g	98.91	<1.40e-01	3.75e+05	5.15e+05	4.45e+05	31.5	101.1	3.70e+03	n/a
S95T002558		W	Oxalate by IC - Dionex 4000i	ug/g	107.4	<1.05e-01	1.03e+04	7.21e+03	8.76e+03	35.3	101.8	2.78e+03	n/a
S95T002558		W	Phosphate-IC-Dionex 4000i/4500	ug/g	97.62	<2.96e-01	< 7.83e3	<3.33e3	n/a	n/a	98.60	7.83e+03	n/a
S95T002558		W	Sulfate by IC-Dionex4000i/4500	ug/g	98.21	<1.36e-01	1.51e+04	1.01e+04	1.26e+04	39.7	91.80	3.60e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 2(B)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001588			% Water by TGA using Mettler	%	101.2	n/a	29.88	30.68	30.28	2.64	n/a	n/a	n/a

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001967			TOC by Persulfate/Coulometry	ug/g	90.00	9.800	4.24e+03	4.84e+03	4.54e+03	13.2	106.0	40.00	n/a
S95T001967			% Water by TGA using Mettler	%	101.2	n/a	33.54	29.90	31.72	11.5	n/a	n/a	n/a
S95T001967			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001967			DSC Exotherm using Mettler	Joules/g	106.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001967			Cyanide by Microdist. & Spec.	ug/g	107.9	1.03e-01	112.0	80.80	96.40	32.4	104.1	23.20	n/a
S95T002003		F	Alpha of Digested Solid	uCi/g	107.4	<2.79e-03	4.74e-03	5.12e-03	4.93e-03	7.71	93.30	3.80e-03	1.30E+02
S95T002163		A	Silver -ICP-Acid Digest	ug/g	86.40	4.000	< 13.5900	<15.0000	n/a	n/a	n/a	13.60	n/a
S95T002163		A	Aluminium -ICP-Acid Digest	ug/g	102.4	3.790	4.27e+04	4.17e+04	4.22e+04	2.48	n/a	67.10	n/a
S95T002163		A	Arsenic -ICP-Acid Digest	ug/g	89.81	-4.50e+00	< 67.9500	<75.0000	n/a	n/a	n/a	67.10	n/a
S95T002163		A	Boron -ICP-Acid Digest	ug/g	119.5	2.480	< 67.9500	<75.0000	n/a	n/a	n/a	67.10	n/a
S95T002163		A	Barium -ICP-Acid Digest	ug/g	94.04	5.000	340.3	329.5	334.9	3.20	n/a	67.10	n/a
S95T002163		A	Beryllium -ICP-Acid Digest	ug/g	99.19	1.000	< 6.7950	<7.5000	n/a	n/a	n/a	6.790	n/a
S95T002163		A	Bismuth -ICP-Acid Digest	ug/g	86.69	1.790	<135.9000	<150.000	n/a	n/a	n/a	136.0	n/a
S95T002163		A	Calcium -ICP-Acid Digest	ug/g	104.5	1.35e-01	2.83e+03	2.74e+03	2.78e+03	2.97	n/a	136.0	n/a
S95T002163		A	Cadmium -ICP-Acid Digest	ug/g	86.01	6.000	< 13.5900	<15.0000	n/a	n/a	n/a	13.60	n/a
S95T002163		A	Cerium -ICP-Acid Digest	ug/g	97.18	2.800	<135.9000	<150.000	n/a	n/a	n/a	136.0	n/a
S95T002163		A	Cobalt -ICP-Acid Digest	ug/g	89.09	4.000	< 27.1800	<30.0000	n/a	n/a	n/a	27.20	n/a
S95T002163		A	Chromium -ICP-Acid Digest	ug/g	90.27	3.300	129.6	123.2	126.4	5.02	n/a	13.60	n/a
S95T002163		A	Copper -ICP-Acid Digest	ug/g	92.94	1.700	< 13.5900	<15.0000	n/a	n/a	n/a	13.60	n/a
S95T002163		A	Iron -ICP-Acid Digest	ug/g	90.75	1.410	3.20e+03	3.15e+03	3.17e+03	1.63	n/a	67.10	n/a
S95T002163		A	Potassium -ICP-Acid Digest	ug/g	92.98	1.40e-01	1.26e+03	1.02e+03	1.14e+03	21.3	n/a	408.0	n/a
S95T002163		A	Lanthanum -ICP-Acid Digest	ug/g	96.87	3.000	< 67.9500	<75.0000	n/a	n/a	n/a	67.10	n/a
S95T002163		A	Lithium -ICP-Acid Digest	ug/g	98.73	-1.80e+00	< 13.5900	<15.0000	n/a	n/a	n/a	13.60	n/a
S95T002163		A	Magnesium -ICP-Acid Digest	ug/g	93.90	1.430	690.5	675.7	683.1	2.17	n/a	136.0	n/a
S95T002163		A	Manganese -ICP-Acid Digest	ug/g	87.77	-1.00e+00	66.50	65.56	66.03	1.42	n/a	13.60	n/a
S95T002163		A	Molybdenum -ICP-Acid Digest	ug/g	91.93	2.000	< 67.9500	<75.0000	n/a	n/a	n/a	67.10	n/a
S95T002163		A	Sodium -ICP-Acid Digest	ug/g	154.8	8.340	1.91e+05	1.94e+05	1.93e+05	1.68	n/a	136.0	n/a
S95T002163		A	Neodymium -ICP-Acid Digest	ug/g	98.08	-1.00e+00	<135.9000	<150.000	n/a	n/a	n/a	136.0	n/a
S95T002163		A	Nickel -ICP-Acid Digest	ug/g	88.39	-6.00e+00	275.0	267.8	271.4	2.66	n/a	27.20	n/a
S95T002163		A	Phosphorus -ICP-Acid Digest	ug/g	91.79	6.180	6.40e+03	4.65e+03	5.52e+03	31.8	n/a	272.0	n/a
S95T002163		A	Lead -ICP-Acid Digest	ug/g	84.25	1.480	151.6	153.1	152.4	0.94	n/a	136.0	n/a
S95T002163		A	Sulfur -ICP-Acid Digest	ug/g	85.28	4.540	5.85e+03	5.63e+03	5.74e+03	3.86	n/a	67.10	n/a
S95T002163		A	Antimony -ICP-Acid Digest	ug/g	82.59	5.600	<271.8000	<300.000	n/a	n/a	n/a	272.0	n/a
S95T002163		A	Selenium -ICP-Acid Digest	ug/g	91.13	3.630	<135.9000	<150.000	n/a	n/a	n/a	136.0	n/a
S95T002163		A	Silicon -ICP-Acid Digest	ug/g	82.55	1.41e-01	268.0	279.3	273.6	4.16	n/a	67.10	n/a
S95T002163		A	Samarium -ICP-Acid Digest	ug/g	98.56	-5.39e+00	<135.9000	<150.000	n/a	n/a	n/a	136.0	n/a
S95T002163		A	Strontium -ICP-Acid Digest	ug/g	95.54	-6.00e+00	104.1	102.1	103.1	1.94	n/a	13.60	n/a
S95T002163		A	Titanium-ICP-Acid Digest	ug/g	92.26	7.000	198.0	193.8	195.9	2.13	n/a	13.60	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002163		A	Thallium -ICP-Acid Digest	ug/g	88.12	2.950	<271.8000	<300.000	n/a	n/a	n/a	272.0	n/a
S95T002163		A	Uranium -ICP-Acid Digest	ug/g	98.38	-1.90e-01	<543.6000	<600.000	n/a	n/a	n/a	544.0	n/a
S95T002163		A	Vanadium -ICP-Acid Digest	ug/g	90.54	-1.10e+00	< 67.9500	<75.0000	n/a	n/a	n/a	67.10	n/a
S95T002163		A	Zinc -ICP-Acid Digest	ug/g	82.97	1.170	32.24	33.76	33.00	4.60	n/a	13.60	n/a
S95T002163		A	Zirconium -ICP-Acid Digest	ug/g	93.01	-8.10e+00	15.96	<15.0000	n/a	n/a	n/a	13.60	n/a
S95T002344			Undecane (C11)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	n/a	300.0	n/a
S95T002344			Tridecane (C13)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	n/a	300.0	n/a
S95T002344			Tetradecane (C14)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	n/a	300.0	n/a
S95T002344			Tri-n-butylphosphate	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	94.46	300.0	n/a
S95T002344			Pentadecane (C15)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	n/a	300.0	n/a
S95T002344			Nonane (C9)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	86.12	300.0	n/a
S95T002344			Dodecane (C12)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	n/a	300.0	n/a
S95T002344			Decane (C10)	ug/g	n/a	n/a	U 300.00	286.00U	n/a	n/a	n/a	300.0	n/a
S95T002559		W	Bromide by Ion Chromatograph	ug/g	98.94	<1.26e-01	< 2.44e3	<2.11e3	n/a	n/a	n/a	2.44e+03	n/a
S95T002559		W	Chloride-IC-Dionex 4000i/4500	ug/g	101.4	<1.70e-02	1.12e+03	1.40e+03	1.26e+03	22.2	n/a	329.0	n/a
S95T002559		W	Fluoride-IC-Dionex 4000i/4500	ug/g	100.7	<1.30e-02	7.29e+03	5.92e+03	6.60e+03	20.7	n/a	252.0	n/a
S95T002559		W	Nitrite-IC - Dionex 4000i/4500	ug/g	99.29	<1.07e-01	1.76e+04	1.77e+04	1.76e+04	0.10	n/a	329.0	n/a
S95T002559		W	Nitrate by IC-Dionex4000i/4500	ug/g	98.91	<1.40e-01	1.63e+05	1.75e+05	1.69e+05	6.90	n/a	2.71e+03	n/a
S95T002559		W	Oxalate by IC - Dionex 4000i	ug/g	107.4	<1.05e-01	1.52e+04	1.47e+04	1.50e+04	3.34	n/a	2.03e+03	n/a
S95T002559		W	Phosphate-IC-Dionex 4000i/4500	ug/g	97.62	<2.96e-01	2.31e+04	9.01e+03	1.61e+04	87.8	n/a	5.73e+03	n/a
S95T002559		W	Sulfate by IC-Dionex4000i/4500	ug/g	98.21	<1.36e-01	1.98e+04	1.98e+04	1.98e+04	0.00	n/a	2.63e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 2(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001589			% Water by TGA using Mettler	%	101.2	n/a	22.95	23.67	23.31	3.09	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001968			TOC by Persulfate/Coulometry	ug/g	90.00	9.800	2.81e+03	2.87e+03	2.84e+03	2.11	n/a	40.00	n/a
S95T001968			% Water by TGA on Perkin Elmer	%	101.3	n/a	15.40	9.880	12.64	43.7	n/a	n/a	n/a
S95T001968			DSC Exotherm on Perkin Elmer	Joules/g	99.26	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001968			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001968			Cyanide by Microdist. & Spec.	ug/g	110.2	1.20e-01	390.0	310.0	350.0	22.9	104.0	14.40	n/a
S95T002004	F		Alpha of Digested Solid	uCi/g	107.4	<2.79e-03	6.20e-03	6.17e-03	6.18e-03	0.49	91.74	3.83e-03	5.99E+01
S95T002164		A	Silver -ICP-Acid Digest	ug/g	86.40	4.000	< 10.5700	<10.2500	n/a	n/a	n/a	10.60	n/a
S95T002164		A	Aluminium -ICP-Acid Digest	ug/g	102.4	3.790	3.68e+04	3.24e+04	3.46e+04	12.7	n/a	52.90	n/a
S95T002164		A	Arsenic -ICP-Acid Digest	ug/g	89.81	-4.50e+00	< 52.8500	<51.2500	n/a	n/a	n/a	52.90	n/a
S95T002164		A	Boron -ICP-Acid Digest	ug/g	119.5	2.480	< 52.8500	<51.2500	n/a	n/a	n/a	52.90	n/a
S95T002164		A	Barium -ICP-Acid Digest	ug/g	94.04	5.000	143.9	130.8	137.3	9.55	n/a	52.90	n/a
S95T002164		A	Beryllium -ICP-Acid Digest	ug/g	99.19	1.000	< 5.2850	<5.1250	n/a	n/a	n/a	5.290	n/a
S95T002164		A	Bismuth -ICP-Acid Digest	ug/g	86.69	1.790	<105.7000	<102.500	n/a	n/a	n/a	106.0	n/a
S95T002164		A	Calcium -ICP-Acid Digest	ug/g	104.5	1.35e-01	1.70e+03	1.51e+03	1.61e+03	11.6	n/a	106.0	n/a
S95T002164		A	Cadmium -ICP-Acid Digest	ug/g	86.01	6.000	< 10.5700	<10.2500	n/a	n/a	n/a	10.60	n/a
S95T002164		A	Cerium -ICP-Acid Digest	ug/g	97.18	2.800	<105.7000	<102.500	n/a	n/a	n/a	106.0	n/a
S95T002164		A	Cobalt -ICP-Acid Digest	ug/g	89.09	4.000	< 21.1400	<20.5000	n/a	n/a	n/a	21.10	n/a
S95T002164		A	Chromium -ICP-Acid Digest	ug/g	90.27	3.300	138.4	117.0	127.7	16.7	n/a	10.60	n/a
S95T002164		A	Copper -ICP-Acid Digest	ug/g	92.94	1.700	< 10.5700	<10.2500	n/a	n/a	n/a	10.60	n/a
S95T002164		A	Iron -ICP-Acid Digest	ug/g	90.75	1.410	2.21e+03	2.00e+03	2.11e+03	9.98	n/a	52.90	n/a
S95T002164		A	Potassium -ICP-Acid Digest	ug/g	92.98	1.40e-01	1.27e+03	1.27e+03	1.27e+03	0.04	n/a	317.0	n/a
S95T002164		A	Lanthanum -ICP-Acid Digest	ug/g	96.87	3.000	< 52.8500	<51.2500	n/a	n/a	n/a	52.90	n/a
S95T002164		A	Lithium -ICP-Acid Digest	ug/g	98.73	-1.80e+00	< 10.5700	<10.2500	n/a	n/a	n/a	10.60	n/a
S95T002164		A	Magnesium -ICP-Acid Digest	ug/g	93.90	1.430	461.0	399.3	430.1	14.3	n/a	106.0	n/a
S95T002164		A	Manganese -ICP-Acid Digest	ug/g	87.77	-1.00e+00	40.70	34.71	37.70	15.9	n/a	10.60	n/a
S95T002164		A	Molybdenum -ICP-Acid Digest	ug/g	91.93	2.000	< 52.8500	<51.2500	n/a	n/a	n/a	52.90	n/a
S95T002164		A	Sodium -ICP-Acid Digest	ug/g	154.8	8.340	1.83e+05	1.88e+05	1.85e+05	3.02	n/a	106.0	n/a
S95T002164		A	Neodymium -ICP-Acid Digest	ug/g	98.08	-1.00e+00	<105.7000	<102.500	n/a	n/a	n/a	106.0	n/a
S95T002164		A	Nickel -ICP-Acid Digest	ug/g	88.39	-6.00e+00	432.5	385.6	409.0	11.5	n/a	21.10	n/a
S95T002164		A	Phosphorus -ICP-Acid Digest	ug/g	91.79	6.180	2.05e+03	3.45e+03	2.75e+03	50.9	n/a	211.0	n/a
S95T002164		A	Lead -ICP-Acid Digest	ug/g	84.25	1.480	125.9	<102.500	n/a	n/a	n/a	106.0	n/a
S95T002164		A	Sulfur -ICP-Acid Digest	ug/g	85.28	4.540	5.16e+03	4.82e+03	4.99e+03	6.74	n/a	52.90	n/a
S95T002164		A	Antimony -ICP-Acid Digest	ug/g	82.59	5.600	<211.4000	<205.000	n/a	n/a	n/a	211.0	n/a
S95T002164		A	Selenium -ICP-Acid Digest	ug/g	91.13	3.630	<105.7000	<102.500	n/a	n/a	n/a	106.0	n/a
S95T002164		A	Silicon -ICP-Acid Digest	ug/g	82.55	1.41e-01	220.9	245.2	233.1	10.4	n/a	52.90	n/a
S95T002164		A	Samarium -ICP-Acid Digest	ug/g	98.56	-5.39e+00	<105.7000	<102.500	n/a	n/a	n/a	106.0	n/a
S95T002164		A	Strontium -ICP-Acid Digest	ug/g	95.54	-6.00e+00	147.9	130.1	139.0	12.8	n/a	10.60	n/a
S95T002164		A	Titanium-ICP-Acid Digest	ug/g	92.26	7.000	121.0	109.2	115.1	10.2	n/a	10.60	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002164		A	Thallium -ICP-Acid Digest	ug/g	88.12	2.950	<211.4000	<205.000	n/a	n/a	n/a	211.0	n/a
S95T002164		A	Uranium -ICP-Acid Digest	ug/g	98.38	-1.90e-01	<422.8000	<410.000	n/a	n/a	n/a	423.0	n/a
S95T002164		A	Vanadium -ICP-Acid Digest	ug/g	90.54	-1.10e+00	< 52.8500	<51.2500	n/a	n/a	n/a	52.90	n/a
S95T002164		A	Zinc -ICP-Acid Digest	ug/g	82.97	1.170	31.29	30.30	30.79	3.22	n/a	10.60	n/a
S95T002164		A	Zirconium -ICP-Acid Digest	ug/g	93.01	-8.10e+00	< 10.5700	<10.2500	n/a	n/a	n/a	10.60	n/a
S95T002345			Undecane (C11)	ug/g	n/a	n/a	J 5.180	4.080J	n/a	n/a	n/a	225.0	n/a
S95T002345			Tridecane (C13)	ug/g	n/a	n/a	J 18.400	14.500J	n/a	n/a	n/a	225.0	n/a
S95T002345			Tetradecane (C14)	ug/g	n/a	n/a	J 14.400	13.200J	n/a	n/a	n/a	225.0	n/a
S95T002345			Tri-n-butylphosphate	ug/g	n/a	n/a	U 225.00	237.00U	n/a	n/a	102.9	225.0	n/a
S95T002345			Pentadecane (C15)	ug/g	n/a	n/a	J 7.640	6.110J	n/a	n/a	n/a	225.0	n/a
S95T002345			Nonane (C9)	ug/g	n/a	n/a	U 225.00	237.00U	n/a	n/a	96.95	225.0	n/a
S95T002345			Dodecane (C12)	ug/g	n/a	n/a	J 13.600	10.700J	n/a	n/a	n/a	225.0	n/a
S95T002345			Decane (C10)	ug/g	n/a	n/a	U 225.00	237.00U	n/a	n/a	n/a	225.0	n/a
S95T002560		W	Bromide by Ion Chromatograph	ug/g	99.22	<1.26e-01	< 1.76e3	<1.76e3	n/a	n/a	97.00	1.76e+03	n/a
S95T002560		W	Chloride-IC-Dionex 4000i/4500	ug/g	100.0	<1.70e-02	1.52e+03	1.40e3 1	n/a	n/a	97.90	238.0	n/a
S95T002560		W	Fluoride-IC-Dionex 4000i/4500	ug/g	100.8	<1.30e-02	6.70e+03	5.93e+03	6.32e+03	12.2	96.20	182.0	n/a
S95T002560		W	Nitrite-IC - Dionex 4000i/4500	ug/g	99.72	<1.07e-01	2.09e+04	1.95e+04	2.02e+04	6.93	96.00	1.50e+03	n/a
S95T002560		W	Nitrate by IC-Dionex4000i/4500	ug/g	100.3	<1.40e-01	1.85e+05	2.15e+05	2.00e+05	15.0	97.90	1.96e+03	n/a
S95T002560		W	Oxalate by IC - Dionex 4000i	ug/g	108.9	<1.05e-01	1.09e+04	1.06e+04	1.08e+04	2.79	108.8	1.47e+03	n/a
S95T002560		W	Phosphate-IC-Dionex 4000i/4500	ug/g	92.67	<2.96e-01	8.63e+03	5.65e+03	7.14e+03	41.7	93.10	4.14e+03	n/a
S95T002560		W	Sulfate by IC-Dionex4000i/4500	ug/g	98.35	<1.36e-01	1.80e+04	1.64e+04	1.72e+04	9.30	94.30	1.90e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 3(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001861			% Water by TGA using Mettler	%	101.4	n/a	41.30	41.77	41.53	1.13	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001969			TOC by Persulfate/Coulometry	ug/g	93.67	30.00	1.99e+03	2.13e+03	2.06e+03	6.79	n/a	40.00	n/a
S95T001969			% Water by TGA on Perkin Elmer	%	101.2	n/a	7.150	7.790	7.470	8.57	n/a	n/a	n/a
S95T001969			DSC Exotherm on Perkin Elmer	Joules/g	99.16	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001969			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001969			Cyanide by Microdist. & Spec.	ug/g	110.2	1.20e-01	163.0	161.0	162.0	1.23	110.0	16.10	n/a
S95T002005		F	Alpha of Digested Solid	uCi/g	92.09	<2.95e-03	<3.30E-03	1.83e-03	n/a	n/a	103.1	4.28e-03	1.87E+02
S95T002165		A	Silver -ICP-Acid Digest	ug/g	90.80	-3.00e+00	<1.08e+01	<1.07e1	n/a	n/a	102.0	10.80	n/a
S95T002165		A	Aluminium -ICP-Acid Digest	ug/g	103.8	3.280	2.97e+04	2.94e+04	2.96e+04	1.02	2.91e+03	53.10	n/a
S95T002165		A	Arsenic -ICP-Acid Digest	ug/g	94.60	4.700	<1.08e+02	<1.07e2	n/a	n/a	101.0	108.0	n/a
S95T002165		A	Boron -ICP-Acid Digest	ug/g	121.2	7.210	<5.31e+01	<5.34e1	n/a	n/a	104.0	53.10	n/a
S95T002165		A	Barium -ICP-Acid Digest	ug/g	97.40	6.000	75.10	80.40	77.75	6.82	103.0	53.10	n/a
S95T002165		A	Beryllium -ICP-Acid Digest	ug/g	102.2	-1.00e+00	<5.31e+00	<5.34e0	n/a	n/a	101.0	5.390	n/a
S95T002165		A	Bismuth -ICP-Acid Digest	ug/g	92.00	-8.30e+00	<1.08e+02	<1.07e2	n/a	n/a	102.0	108.0	n/a
S95T002165		A	Calcium -ICP-Acid Digest	ug/g	115.2	1.25e-01	1.04e+03	1.12e+03	1.08e+03	7.41	230.2	108.0	n/a
S95T002165		A	Cadmium -ICP-Acid Digest	ug/g	90.00	-1.30e+00	<5.31e+00	<5.34e0	n/a	n/a	101.0	5.390	n/a
S95T002165		A	Cerium -ICP-Acid Digest	ug/g	100.6	1.000	<1.08e+02	<1.07e2	n/a	n/a	101.0	108.0	n/a
S95T002165		A	Cobalt -ICP-Acid Digest	ug/g	93.20	4.000	<2.16e+01	<2.14e1	n/a	n/a	102.0	21.60	n/a
S95T002165		A	Chromium -ICP-Acid Digest	ug/g	93.80	-4.00e+00	146.0	138.0	142.0	5.63	112.5	10.80	n/a
S95T002165		A	Copper -ICP-Acid Digest	ug/g	96.00	1.800	<1.08e+01	<1.07e1	n/a	n/a	96.30	10.80	n/a
S95T002165		A	Iron -ICP-Acid Digest	ug/g	94.20	2.160	1.33e+03	1.44e+03	1.38e+03	7.94	212.8	53.10	n/a
S95T002165		A	Potassium -ICP-Acid Digest	ug/g	94.60	-5.24e+00	1.41e+03	1.43e+03	1.42e+03	1.41	229.1	531.0	n/a
S95T002165		A	Lanthanum -ICP-Acid Digest	ug/g	99.60	-6.00e+00	<5.31e+01	<5.34e1	n/a	n/a	99.30	53.10	n/a
S95T002165		A	Lithium -ICP-Acid Digest	ug/g	99.60	-2.60e+00	<1.08e+01	<1.07e1	n/a	n/a	95.00	10.80	n/a
S95T002165		A	Magnesium -ICP-Acid Digest	ug/g	98.00	-4.80e+00	246.0	257.0	251.5	4.37	128.2	108.0	n/a
S95T002165		A	Manganese -ICP-Acid Digest	ug/g	91.40	-1.00e+00	21.10	22.40	21.75	5.98	98.00	10.80	n/a
S95T002165		A	Molybdenum -ICP-Acid Digest	ug/g	96.40	8.000	<5.31e+01	<5.34e1	n/a	n/a	102.0	53.10	n/a
S95T002165		A	Sodium -ICP-Acid Digest	ug/g	157.4	1.53e-01	1.81e+05	1.83e+05	1.82e+05	1.10	1.74e+04	108.0	n/a
S95T002165		A	Neodymium -ICP-Acid Digest	ug/g	98.00	-3.90e+00	<1.08e+02	<1.07e2	n/a	n/a	96.70	108.0	n/a
S95T002165		A	Nickel -ICP-Acid Digest	ug/g	92.60	5.000	249.0	254.0	251.5	1.99	128.9	21.60	n/a
S95T002165		A	Phosphorus -ICP-Acid Digest	ug/g	97.20	4.390	5.21e+03	4.39e+03	4.80e+03	17.1	936.9	216.0	n/a
S95T002165		A	Lead -ICP-Acid Digest	ug/g	88.80	6.900	<1.08e+02	<1.07e2	n/a	n/a	116.0	108.0	n/a
S95T002165		A	Sulfur -ICP-Acid Digest	ug/g	89.20	2.180	3.19e+03	3.32e+03	3.26e+03	3.99	404.8	108.0	n/a
S95T002165		A	Antimony -ICP-Acid Digest	ug/g	87.80	-9.00e+00	<6.47e+01	<6.41e1	n/a	n/a	85.80	64.70	n/a
S95T002165		A	Selenium -ICP-Acid Digest	ug/g	93.40	3.810	<1.08e+02	<1.07e2	n/a	n/a	106.0	108.0	n/a
S95T002165		A	Silicon -ICP-Acid Digest	ug/g	29.00	2.07e-01	241.0	322.0	281.5	28.8	90.60	53.10	n/a
S95T002165		A	Samarium -ICP-Acid Digest	ug/g	97.60	-3.96e+00	<1.08e+02	<1.07e2	n/a	n/a	95.20	108.0	n/a
S95T002165		A	Strontium -ICP-Acid Digest	ug/g	97.60	-4.00e+00	30.00	34.20	32.10	13.1	100.2	10.80	n/a
S95T002165		A	Titanium-ICP-Acid Digest	ug/g	96.00	2.000	62.70	67.40	65.05	7.23	102.2	10.80	n/a

WHC-SD-WM-DP-145, REV. 1

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002165		A	Thallium -ICP-Acid Digest	ug/g	90.00	-2.88e+00	<2.16e+02	<2.14e2	n/a	n/a	94.70	216.0	n/a
S95T002165		A	Uranium -ICP-Acid Digest	ug/g	96.10	-1.32e-01	<5.31e+02	<5.34e2	n/a	n/a	100.0	531.0	n/a
S95T002165		A	Vanadium -ICP-Acid Digest	ug/g	93.60	-7.20e+00	<5.31e+01	<5.34e1	n/a	n/a	98.30	53.10	n/a
S95T002165		A	Zinc -ICP-Acid Digest	ug/g	87.20	1.050	33.90	25.90	29.90	26.8	103.9	10.80	n/a
S95T002165		A	Zirconium -ICP-Acid Digest	ug/g	96.40	-4.30e+00	<1.08e+01	<1.07e1	n/a	n/a	77.80	10.80	n/a
S95T002346			Undecane (C11)	ug/g	n/a	n/a	J 1.470	1.700J	n/a	n/a	n/a	290.0	n/a
S95T002346			Tridecane (C13)	ug/g	n/a	n/a	J 1.070	1.640J	n/a	n/a	n/a	290.0	n/a
S95T002346			Tetradecane (C14)	ug/g	n/a	n/a	U 290.00	272.00U	n/a	n/a	n/a	290.0	n/a
S95T002346			Tri-n-butylphosphate	ug/g	n/a	n/a	U 290.00	272.00U	n/a	n/a	100.5	290.0	n/a
S95T002346			Pentadecane (C15)	ug/g	n/a	n/a	U 290.00	272.00U	n/a	n/a	n/a	290.0	n/a
S95T002346			Nonane (C9)	ug/g	n/a	n/a	U 290.00	272.00U	n/a	n/a	93.74	290.0	n/a
S95T002346			Dodecane (C12)	ug/g	n/a	n/a	J 1.900	1.640J	n/a	n/a	n/a	290.0	n/a
S95T002346			Decane (C10)	ug/g	n/a	n/a	U 290.00	272.00U	n/a	n/a	n/a	290.0	n/a
S95T002561		W	Bromide by Ion Chromatograph	ug/g	99.22	<1.26e-01	< 1.47e3	<1.47e3	n/a	n/a	n/a	1.47e+03	n/a
S95T002561		W	Chloride-IC-Dionex 4000i/4500	ug/g	100.0	<1.70e-02	1.82e+03	1.67e+03	1.74e+03	8.60	n/a	198.0	n/a
S95T002561		W	Fluoride-IC-Dionex 4000i/4500	ug/g	100.8	<1.30e-02	5.17e+03	5.38e+03	5.28e+03	3.98	n/a	152.0	n/a
S95T002561		W	Nitrite-IC - Dionex 4000i/4500	ug/g	99.72	<1.07e-01	2.25e+04	2.27e+04	2.26e+04	0.88	n/a	1.25e+03	n/a
S95T002561		W	Nitrate by IC-Dionex4000i/4500	ug/g	100.3	<1.40e-01	2.24e+05	1.99e+05	2.12e+05	11.9	n/a	1.63e+03	n/a
S95T002561		W	Oxalate by IC - Dionex 4000i	ug/g	108.9	<1.05e-01	8.07e+03	8.41e+03	8.24e+03	4.13	n/a	1.22e+03	n/a
S95T002561		W	Phosphate-IC-Dionex 4000i/4500	ug/g	92.67	<2.96e-01	9.70e+03	9.97e+03	9.84e+03	2.70	n/a	3.45e+03	n/a
S95T002561		W	Sulfate by IC-Dionex4000i/4500	ug/g	98.35	<1.36e-01	1.13e+04	1.20e+04	1.16e+04	6.01	n/a	1.59e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 3(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001862			% Water by TGA using Mettler	%	101.4	n/a	26.93	25.93	26.43	3.78	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001970			TOC by Persulfate/Coulometry	ug/g	93.67	30.00	1.59e+03	1.48e+03	1.54e+03	7.17	80.40	40.00	n/a
S95T001970			% Water by TGA using Mettler	%	97.07	n/a	11.12	7.680	9.400	36.6	n/a	n/a	n/a
S95T001970			DSC Exotherm on Perkin Elmer	Joules/g	99.79	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001970			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001970			Cyanide by Microdist. & Spec.	ug/g	105.4	8.430	150.0	160.0	155.0	6.45	100.7	8.200	n/a
S95T002006		F	Alpha of Digested Solid	uCi/g	96.77	6.540	4.05e-03	<4.69E-3	n/a	n/a	91.74	9.66e-03	1.40E+02
S95T002166		A	Silver -ICP-Acid Digest	ug/g	90.80	-3.00e+00	<1.06e+01	<1.02e1	n/a	n/a	n/a	10.60	n/a
S95T002166		A	Aluminium -ICP-Acid Digest	ug/g	103.8	3.280	5.29e+04	5.42e+04	5.36e+04	2.43	n/a	53.10	n/a
S95T002166		A	Arsenic -ICP-Acid Digest	ug/g	94.60	4.700	<1.06e+02	<1.02e2	n/a	n/a	n/a	106.0	n/a
S95T002166		A	Boron -ICP-Acid Digest	ug/g	121.2	7.210	<5.31e+01	<5.08e1	n/a	n/a	n/a	53.10	n/a
S95T002166		A	Barium -ICP-Acid Digest	ug/g	97.40	6.000	258.0	265.0	261.5	2.68	n/a	53.10	n/a
S95T002166		A	Beryllium -ICP-Acid Digest	ug/g	102.2	-1.00e+00	<5.31e+00	<5.08e0	n/a	n/a	n/a	5.310	n/a
S95T002166		A	Bismuth -ICP-Acid Digest	ug/g	92.00	-8.30e+00	<1.06e+02	<1.02e2	n/a	n/a	n/a	106.0	n/a
S95T002166		A	Calcium -ICP-Acid Digest	ug/g	115.2	1.25e-01	3.00e+03	3.06e+03	3.03e+03	1.98	n/a	106.0	n/a
S95T002166		A	Cadmium -ICP-Acid Digest	ug/g	90.00	-1.30e+00	<5.31e+00	<5.08e0	n/a	n/a	n/a	5.310	n/a
S95T002166		A	Cerium -ICP-Acid Digest	ug/g	100.6	1.000	<1.06e+02	<1.02e2	n/a	n/a	n/a	106.0	n/a
S95T002166		A	Cobalt -ICP-Acid Digest	ug/g	93.20	4.000	<2.12e+01	<2.03e1	n/a	n/a	n/a	21.20	n/a
S95T002166		A	Chromium -ICP-Acid Digest	ug/g	93.80	-4.00e+00	162.0	163.0	162.5	0.62	n/a	10.60	n/a
S95T002166		A	Copper -ICP-Acid Digest	ug/g	96.00	1.800	<1.06e+01	<1.02e1	n/a	n/a	n/a	10.60	n/a
S95T002166		A	Iron -ICP-Acid Digest	ug/g	94.20	2.160	3.37e+03	3.50e+03	3.44e+03	3.78	n/a	53.10	n/a
S95T002166		A	Potassium -ICP-Acid Digest	ug/g	94.60	-5.24e+00	1.27e+03	1.17e+03	1.22e+03	8.20	n/a	531.0	n/a
S95T002166		A	Lanthanum -ICP-Acid Digest	ug/g	99.60	-6.00e+00	<5.31e+01	<5.08e1	n/a	n/a	n/a	53.10	n/a
S95T002166		A	Lithium -ICP-Acid Digest	ug/g	99.60	-2.60e+00	<1.06e+01	<1.02e1	n/a	n/a	n/a	10.60	n/a
S95T002166		A	Magnesium -ICP-Acid Digest	ug/g	98.00	-4.80e+00	754.0	788.0	771.0	4.41	n/a	106.0	n/a
S95T002166		A	Manganese -ICP-Acid Digest	ug/g	91.40	-1.00e+00	72.40	74.90	73.65	3.39	n/a	10.60	n/a
S95T002166		A	Molybdenum -ICP-Acid Digest	ug/g	96.40	8.000	<5.31e+01	<5.08e1	n/a	n/a	n/a	53.10	n/a
S95T002166		A	Sodium -ICP-Acid Digest	ug/g	157.4	1.53e-01	1.63e+05	1.58e+05	1.60e+05	3.12	n/a	106.0	n/a
S95T002166		A	Neodymium -ICP-Acid Digest	ug/g	98.00	-3.90e+00	<1.06e+02	<1.02e2	n/a	n/a	n/a	106.0	n/a
S95T002166		A	Nickel -ICP-Acid Digest	ug/g	92.60	5.000	291.0	297.0	294.0	2.04	n/a	21.20	n/a
S95T002166		A	Phosphorus -ICP-Acid Digest	ug/g	97.20	4.390	3.11e+03	2.37e+03	2.74e+03	27.0	n/a	212.0	n/a
S95T002166		A	Lead -ICP-Acid Digest	ug/g	88.80	6.900	164.0	153.0	158.5	6.94	n/a	106.0	n/a
S95T002166		A	Sulfur -ICP-Acid Digest	ug/g	89.20	2.180	2.68e+03	2.76e+03	2.72e+03	2.94	n/a	106.0	n/a
S95T002166		A	Antimony -ICP-Acid Digest	ug/g	87.80	-9.00e+00	<6.37e+01	<6.10e1	n/a	n/a	n/a	63.70	n/a
S95T002166		A	Selenium -ICP-Acid Digest	ug/g	93.40	3.810	<1.06e+02	<1.02e2	n/a	n/a	n/a	106.0	n/a
S95T002166		A	Silicon -ICP-Acid Digest	ug/g	29.00	2.07e-01	263.0	254.0	258.5	3.48	n/a	53.10	n/a
S95T002166		A	Samarium -ICP-Acid Digest	ug/g	97.60	-3.96e+00	<1.06e+02	<1.02e2	n/a	n/a	n/a	106.0	n/a
S95T002166		A	Strontium -ICP-Acid Digest	ug/g	97.60	-4.00e+00	117.0	120.0	118.5	2.53	n/a	10.60	n/a
S95T002166		A	Titanium-ICP-Acid Digest	ug/g	96.00	2.000	195.0	201.0	198.0	3.03	n/a	10.60	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002166		A	Thallium -ICP-Acid Digest	ug/g	90.00	-2.88e+00	<2.12e+02	<2.03e2	n/a	n/a	n/a	212.0	n/a
S95T002166		A	Uranium -ICP-Acid Digest	ug/g	96.10	-1.32e-01	<5.31e+02	<5.08e2	n/a	n/a	n/a	531.0	n/a
S95T002166		A	Vanadium -ICP-Acid Digest	ug/g	93.60	-7.20e+00	<5.31e+01	<5.08e1	n/a	n/a	n/a	53.10	n/a
S95T002166		A	Zinc -ICP-Acid Digest	ug/g	87.20	1.050	35.90	30.20	33.05	17.2	n/a	10.60	n/a
S95T002166		A	Zirconium -ICP-Acid Digest	ug/g	96.40	-4.30e+00	20.10	20.20	20.15	0.50	n/a	10.60	n/a
S95T002347			Undecane (C11)	ug/g	n/a	n/a	J 5.010	3.780J	n/a	n/a	n/a	342.0	n/a
S95T002347			Tridecane (C13)	ug/g	n/a	n/a	J 13.400	12.500J	n/a	n/a	n/a	342.0	n/a
S95T002347			Tetradecane (C14)	ug/g	n/a	n/a	J 15.300	12.100J	n/a	n/a	n/a	342.0	n/a
S95T002347			Tri-n-butylphosphate	ug/g	n/a	n/a	U 342.00	326.00U	n/a	n/a	82.37	342.0	n/a
S95T002347			Pentadecane (C15)	ug/g	n/a	n/a	J 6.320	4.440J	n/a	n/a	n/a	342.0	n/a
S95T002347			Nonane (C9)	ug/g	n/a	n/a	U 342.00	326.00U	n/a	n/a	81.44	342.0	n/a
S95T002347			Dodecane (C12)	ug/g	n/a	n/a	J 14.000	9.250J	n/a	n/a	n/a	342.0	n/a
S95T002347			Decane (C10)	ug/g	n/a	n/a	U 342.00	326.00U	n/a	n/a	n/a	342.0	n/a
S95T002562		W	Bromide by Ion Chromatograph	ug/g	99.60	<1.26e-01	< 9.43e2	<8.62e2	n/a	n/a	95.40	943.0	n/a
S95T002562		W	Chloride-IC-Dionex 4000i/4500	ug/g	99.49	<1.70e-02	1.48e+03	970.0	1.22e+03	41.6	94.50	95.00	n/a
S95T002562		W	Fluoride-IC-Dionex 4000i/4500	ug/g	101.4	<1.30e-02	3.38e+03	8.72e+03	6.05e+03	88.3	88.90	97.20	n/a
S95T002562		W	Nitrite-IC - Dionex 4000i/4500	ug/g	94.40	<1.07e-01	2.14e+04	1.48e+04	1.81e+04	36.5	91.40	800.0	n/a
S95T002562		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.62	<1.40e-01	1.50e+05	9.49e+04	1.22e+05	45.0	103.3	1.05e+03	n/a
S95T002562		W	Oxalate by IC - Dionex 4000i	ug/g	104.4	<1.05e-01	4.87e+03	3.31e+03	4.09e+03	38.1	104.4	785.0	n/a
S95T002562		W	Phosphate-IC-Dionex 4000i/4500	ug/g	95.62	<2.96e-01	8.11e+03	6.72e+04	3.77e+04	157	95.20	2.21e+03	n/a
S95T002562		W	Sulfate by IC-Dionex4000i/4500	ug/g	97.15	<1.36e-01	8.99e+03	5.88e+03	7.44e+03	41.8	93.60	1.02e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 3(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001863			% Water by TGA on Perkin Elmer	%	101.7	n/a	22.20	15.60	18.90	34.9	n/a	n/a	n/a
S95T001863			% Water by TGA using Mettler	%	n/a	n/a	32.06	n/a	n/a	n/a	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001971			TOC by Persulfate/Coulometry	ug/g	90.33	4.100	6.55e+03	6.24e+03	6.40e+03	4.85	94.70	40.00	n/a
S95T001971			% Water by TGA using Mettler	%	97.07	n/a	8.070	7.820	7.945	3.15	n/a	n/a	n/a
S95T001971			DSC Exotherm on Perkin Elmer	Joules/g	99.79	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001971			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001971			Cyanide by Microdist. & Spec.	ug/g	105.4	8.430	181.0	166.0	173.5	8.65	98.30	7.300	n/a
S95T002007	F		Alpha of Digested Solid	uCi/g	96.77	6.540	1.86e-02	1.82e-02	1.84e-02	2.17	90.18	1.01e-02	5.90E+01
S95T002167		A	Silver -ICP-Acid Digest	ug/g	90.80	-3.00e+00	<1.55e+01	<1.75e1	n/a	n/a	n/a	15.50	n/a
S95T002167		A	Aluminium -ICP-Acid Digest	ug/g	103.8	3.280	3.11e+04	2.79e+04	2.95e+04	10.8	n/a	77.30	n/a
S95T002167		A	Arsenic -ICP-Acid Digest	ug/g	94.60	4.700	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Boron -ICP-Acid Digest	ug/g	121.2	7.210	<7.73e+01	<8.76e1	n/a	n/a	n/a	77.30	n/a
S95T002167		A	Barium -ICP-Acid Digest	ug/g	97.40	6.000	110.0	<8.76e1	n/a	n/a	n/a	77.30	n/a
S95T002167		A	Beryllium -ICP-Acid Digest	ug/g	102.2	-1.00e+00	<7.73e+00	<8.76e0	n/a	n/a	n/a	7.730	n/a
S95T002167		A	Bismuth -ICP-Acid Digest	ug/g	92.00	-8.30e+00	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Calcium -ICP-Acid Digest	ug/g	115.2	1.25e-01	1.73e+03	1.47e+03	1.60e+03	16.2	n/a	155.0	n/a
S95T002167		A	Cadmium -ICP-Acid Digest	ug/g	90.00	-1.30e+00	<7.73e+00	<8.76e0	n/a	n/a	n/a	7.730	n/a
S95T002167		A	Cerium -ICP-Acid Digest	ug/g	100.6	1.000	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Cobalt -ICP-Acid Digest	ug/g	93.20	4.000	<3.09e+01	<3.50e1	n/a	n/a	n/a	30.90	n/a
S95T002167		A	Chromium -ICP-Acid Digest	ug/g	93.80	-4.00e+00	238.0	271.0	254.5	13.0	n/a	15.50	n/a
S95T002167		A	Copper -ICP-Acid Digest	ug/g	96.00	1.800	<1.55e+01	<1.75e1	n/a	n/a	n/a	15.50	n/a
S95T002167		A	Iron -ICP-Acid Digest	ug/g	94.20	2.160	2.63e+03	2.24e+03	2.44e+03	16.0	n/a	77.30	n/a
S95T002167		A	Potassium -ICP-Acid Digest	ug/g	94.60	-5.24e+00	1.03e+03	1.17e+03	1.10e+03	12.7	n/a	773.0	n/a
S95T002167		A	Lanthanum -ICP-Acid Digest	ug/g	99.60	-6.00e+00	<7.73e+01	<8.76e1	n/a	n/a	n/a	77.30	n/a
S95T002167		A	Lithium -ICP-Acid Digest	ug/g	99.60	-2.60e+00	<1.55e+01	<1.75e1	n/a	n/a	n/a	15.50	n/a
S95T002167		A	Magnesium -ICP-Acid Digest	ug/g	98.00	-4.80e+00	394.0	278.0	336.0	34.5	n/a	155.0	n/a
S95T002167		A	Manganese -ICP-Acid Digest	ug/g	91.40	-1.00e+00	40.70	34.10	37.40	17.6	n/a	15.50	n/a
S95T002167		A	Molybdenum -ICP-Acid Digest	ug/g	96.40	8.000	<7.73e+01	<8.76e1	n/a	n/a	n/a	77.30	n/a
S95T002167		A	Sodium -ICP-Acid Digest	ug/g	157.4	1.53e-01	1.89e+05	1.91e+05	1.90e+05	1.05	n/a	155.0	n/a
S95T002167		A	Neodymium -ICP-Acid Digest	ug/g	98.00	-3.90e+00	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Nickel -ICP-Acid Digest	ug/g	92.60	5.000	1.08e+03	1.12e+03	1.10e+03	3.64	n/a	30.90	n/a
S95T002167		A	Phosphorus -ICP-Acid Digest	ug/g	97.20	4.390	4.71e+03	3.51e+03	4.11e+03	29.2	n/a	309.0	n/a
S95T002167		A	Lead -ICP-Acid Digest	ug/g	88.80	6.900	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Sulfur -ICP-Acid Digest	ug/g	89.20	2.180	7.10e+03	8.86e+03	7.98e+03	22.1	n/a	155.0	n/a
S95T002167		A	Antimony -ICP-Acid Digest	ug/g	87.80	-9.00e+00	<9.29e+01	<1.05e2	n/a	n/a	n/a	92.80	n/a
S95T002167		A	Selenium -ICP-Acid Digest	ug/g	93.40	3.810	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Silicon -ICP-Acid Digest	ug/g	29.00	2.07e-01	431.0	527.0	479.0	20.0	n/a	77.30	n/a
S95T002167		A	Samarium -ICP-Acid Digest	ug/g	97.60	-3.96e+00	<1.55e+02	<1.75e2	n/a	n/a	n/a	155.0	n/a
S95T002167		A	Strontium -ICP-Acid Digest	ug/g	97.60	-4.00e+00	554.0	625.0	589.5	12.0	n/a	15.50	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002167		A	Titanium-ICP-Acid Digest	ug/g	96.00	2.000	78.80	56.90	67.85	32.3	n/a	15.50	n/a
S95T002167		A	Thallium -ICP-Acid Digest	ug/g	90.00	-2.88e+00	<3.09e+02	<3.50e2	n/a	n/a	n/a	309.0	n/a
S95T002167		A	Uranium -ICP-Acid Digest	ug/g	96.10	-1.32e-01	1.18e+03	1.34e+03	1.26e+03	12.7	n/a	773.0	n/a
S95T002167		A	Vanadium -ICP-Acid Digest	ug/g	93.60	-7.20e+00	<7.73e+01	<8.76e1	n/a	n/a	n/a	77.30	n/a
S95T002167		A	Zinc -ICP-Acid Digest	ug/g	87.20	1.050	32.30	32.10	32.20	0.62	n/a	15.50	n/a
S95T002167		A	Zirconium -ICP-Acid Digest	ug/g	96.40	-4.30e+00	<1.55e+01	<1.75e1	n/a	n/a	n/a	15.50	n/a
S95T002348			Undecane (C11)	ug/g	n/a	n/a	J 32.400	21.200J	n/a	n/a	n/a	438.0	n/a
S95T002348			Tridecane (C13)	ug/g	n/a	n/a	J 142.000	87.100J	n/a	n/a	n/a	438.0	n/a
S95T002348			Tetradecane (C14)	ug/g	n/a	n/a	J 135.000	95.000J	n/a	n/a	n/a	438.0	n/a
S95T002348			Tri-n-butylphosphate	ug/g	n/a	n/a	U 0.000	495.00U	n/a	n/a	79.91	438.0	n/a
S95T002348			Pentadecane (C15)	ug/g	n/a	n/a	J 60.000	31.100J	n/a	n/a	n/a	438.0	n/a
S95T002348			Nonane (C9)	ug/g	n/a	n/a	U 0.000	495.00U	n/a	n/a	76.24	438.0	n/a
S95T002348			Dodecane (C12)	ug/g	n/a	n/a	J 92.500	57.300J	n/a	n/a	n/a	438.0	n/a
S95T002348			Decane (C10)	ug/g	n/a	n/a	U 0.000	495.00U	n/a	n/a	n/a	438.0	n/a
S95T002563		W	Bromide by Ion Chromatograph	ug/g	99.60	<1.26e-01	< 1.12e3	<1.10e3	n/a	n/a	n/a	1.12e+03	n/a
S95T002563		W	Chloride-IC-Dionex 4000i/4500	ug/g	99.49	<1.70e-02	1.44e+03	1.52e+03	1.48e+03	5.41	n/a	113.0	n/a
S95T002563		W	Fluoride-IC-Dionex 4000i/4500	ug/g	101.4	<1.30e-02	8.20e+03	8.28e+03	8.24e+03	0.97	n/a	115.0	n/a
S95T002563		W	Nitrite-IC - Dionex 4000i/4500	ug/g	94.40	<1.07e-01	2.10e+04	2.23e+04	2.16e+04	6.00	n/a	949.0	n/a
S95T002563		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.62	<1.40e-01	2.41e+05	2.22e+05	2.32e+05	8.21	n/a	1.24e+03	n/a
S95T002563		W	Oxalate by IC - Dionex 4000i	ug/g	104.4	<1.05e-01	1.11e+04	1.11e+04	1.11e+04	0.00	n/a	932.0	n/a
S95T002563		W	Phosphate-IC-Dionex 4000i/4500	ug/g	95.62	<2.96e-01	1.02e+04	8.18e+03	9.19e+03	22.0	n/a	2.63e+03	n/a
S95T002563		W	Sulfate by IC-Dionex4000i/4500	ug/g	97.15	<1.36e-01	2.79e+04	2.90e+04	2.84e+04	3.87	n/a	1.21e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 4(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001904			% Water by TGA on Perkin Elmer	%	100.3	n/a	7.080	7.490	7.285	6.72	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001972			TOC by Persulfate/Coulometry	ug/g	90.33	4.100	4.76e+03	4.97e+03	4.86e+03	4.32	n/a	40.00	n/a
S95T001972			% Water by TGA using Mettler	%	100.7	n/a	31.01	33.09	32.05	6.49	n/a	n/a	n/a
S95T001972			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	60.93	0.00e+00	30.46	200	n/a	n/a	n/a
S95T001972			DSC Exotherm using Mettler	Joules/g	105.1	n/a	41.40	0.00e+00	20.70	200	n/a	n/a	n/a
S95T001972			Cyanide by Microdist. & Spec.	ug/g	102.1	1.08e-01	68.00	49.90	58.95	30.7	105.9	20.00	n/a
S95T002008	F		Alpha of Digested Solid	uCi/g	108.2	<1.91e-03	2.14e-03	<2.83E-3	n/a	n/a	78.57	3.85e-03	1.13E+02
S95T002168	A		Silver -ICP-Acid Digest	ug/g	94.10	-3.80e+00	<1.49e+01	<1.49e1	n/a	n/a	96.50	14.90	n/a
S95T002168	A		Aluminium -ICP-Acid Digest	ug/g	102.6	1.310	1.18e+04	1.13e+04	1.16e+04	4.33	145.1	74.70	n/a
S95T002168	A		Arsenic -ICP-Acid Digest	ug/g	96.00	-1.40e+00	<1.49e+02	<1.49e2	n/a	n/a	95.90	149.0	n/a
S95T002168	A		Boron -ICP-Acid Digest	ug/g	113.6	2.640	<7.47e+01	<7.47e1	n/a	n/a	136.0	74.70	n/a
S95T002168	A		Barium -ICP-Acid Digest	ug/g	97.00	6.300	<7.47e+01	<7.47e1	n/a	n/a	93.70	74.70	n/a
S95T002168	A		Beryllium -ICP-Acid Digest	ug/g	103.8	2.700	<7.47e+00	<7.47e0	n/a	n/a	99.60	7.470	n/a
S95T002168	A		Bismuth -ICP-Acid Digest	ug/g	93.20	-8.59e+00	<1.49e+02	<1.49e2	n/a	n/a	97.40	149.0	n/a
S95T002168	A		Calcium -ICP-Acid Digest	ug/g	97.80	1.14e-01	187.0	128.0	157.5	37.5	100.5	149.0	n/a
S95T002168	A		Cadmium -ICP-Acid Digest	ug/g	94.60	-6.30e+00	<7.47e+00	<7.47e0	n/a	n/a	98.10	7.470	n/a
S95T002168	A		Cerium -ICP-Acid Digest	ug/g	99.00	-6.86e+00	<1.49e+02	<1.49e2	n/a	n/a	97.40	149.0	n/a
S95T002168	A		Cobalt -ICP-Acid Digest	ug/g	97.40	-6.80e+00	<2.99e+01	<2.99e1	n/a	n/a	99.60	29.90	n/a
S95T002168	A		Chromium -ICP-Acid Digest	ug/g	97.00	1.200	106.0	104.0	105.0	1.90	100.9	14.90	n/a
S95T002168	A		Copper -ICP-Acid Digest	ug/g	96.40	1.390	<1.49e+01	<1.49e1	n/a	n/a	95.20	14.90	n/a
S95T002168	A		Iron -ICP-Acid Digest	ug/g	96.20	1.400	332.0	297.0	314.5	11.1	90.80	74.70	n/a
S95T002168	A		Potassium -ICP-Acid Digest	ug/g	99.20	1.02e-01	904.0	807.0	855.5	11.3	132.5	747.0	n/a
S95T002168	A		Lanthanum -ICP-Acid Digest	ug/g	98.40	-9.00e+00	<7.47e+01	<7.47e1	n/a	n/a	97.40	74.70	n/a
S95T002168	A		Lithium -ICP-Acid Digest	ug/g	97.80	-6.80e+00	<1.49e+01	<1.49e1	n/a	n/a	94.40	14.90	n/a
S95T002168	A		Magnesium -ICP-Acid Digest	ug/g	95.00	1.760	<1.49e+02	<1.49e2	n/a	n/a	97.40	149.0	n/a
S95T002168	A		Manganese -ICP-Acid Digest	ug/g	95.00	6.700	<1.49e+01	<1.49e1	n/a	n/a	94.40	14.90	n/a
S95T002168	A		Molybdenum -ICP-Acid Digest	ug/g	97.40	4.510	<7.47e+01	<7.47e1	n/a	n/a	98.80	74.70	n/a
S95T002168	A		Sodium -ICP-Acid Digest	ug/g	119.4	3.06e-01	2.24e+05	2.21e+05	2.22e+05	1.35	687.3	149.0	n/a
S95T002168	A		Neodymium -ICP-Acid Digest	ug/g	98.40	4.100	<1.49e+02	<1.49e2	n/a	n/a	97.40	149.0	n/a
S95T002168	A		Nickel -ICP-Acid Digest	ug/g	96.60	-8.89e+00	760.0	809.0	784.5	6.25	116.1	29.90	n/a
S95T002168	A		Phosphorus -ICP-Acid Digest	ug/g	97.80	3.810	2.60e+03	1.10e+04	6.80e+03	124	1.80e+03	299.0	n/a
S95T002168	A		Lead -ICP-Acid Digest	ug/g	94.60	5.720	<1.49e+02	<1.49e2	n/a	n/a	95.90	149.0	n/a
S95T002168	A		Sulfur -ICP-Acid Digest	ug/g	94.40	5.370	4.42e+03	3.89e+03	4.16e+03	12.8	111.1	149.0	n/a
S95T002168	A		Antimony -ICP-Acid Digest	ug/g	90.20	-1.12e+00	<8.96e+01	<8.96e1	n/a	n/a	93.00	89.60	n/a
S95T002168	A		Selenium -ICP-Acid Digest	ug/g	96.40	5.640	<1.49e+02	<1.49e2	n/a	n/a	107.0	149.0	n/a
S95T002168	A		Silicon -ICP-Acid Digest	ug/g	266.0	1.05e-01	201.0	302.0	251.5	40.2	356.5	74.70	n/a
S95T002168	A		Samarium -ICP-Acid Digest	ug/g	98.60	-6.16e+00	<1.49e+02	<1.49e2	n/a	n/a	98.10	149.0	n/a
S95T002168	A		Strontium -ICP-Acid Digest	ug/g	96.80	1.100	41.70	33.80	37.75	20.9	95.30	14.90	n/a
S95T002168	A		Titanium-ICP-Acid Digest	ug/g	95.00	2.610	<1.49e+01	<1.49e1	n/a	n/a	95.20	14.90	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002168		A	Thallium -ICP-Acid Digest	ug/g	94.20	-3.57e+00	<2.99e+02	<2.99e2	n/a	n/a	92.20	299.0	n/a
S95T002168		A	Uranium -ICP-Acid Digest	ug/g	98.70	-9.77e+00	<7.47e+02	<7.47e2	n/a	n/a	108.5	747.0	n/a
S95T002168		A	Vanadium -ICP-Acid Digest	ug/g	96.00	-1.60e+00	<7.47e+01	<7.47e1	n/a	n/a	98.80	74.70	n/a
S95T002168		A	Zinc -ICP-Acid Digest	ug/g	93.60	1.000	20.80	17.90	19.35	15.0	98.60	14.90	n/a
S95T002168		A	Zirconium -ICP-Acid Digest	ug/g	96.80	5.800	<1.49e+01	<1.49e1	n/a	n/a	97.40	14.90	n/a
S95T002349			Undecane (C11)	ug/g	n/a	n/a	J 9.670	6.240J	n/a	n/a	n/a	601.0	n/a
S95T002349			Tridecane (C13)	ug/g	n/a	n/a	J 42.300	25.500J	n/a	n/a	n/a	601.0	n/a
S95T002349			Tetradecane (C14)	ug/g	n/a	n/a	J 38.700	27.000J	n/a	n/a	n/a	601.0	n/a
S95T002349			Tri-n-butylphosphate	ug/g	n/a	n/a	U 601.00	370.00U	n/a	n/a	93.80	601.0	n/a
S95T002349			Pentadecane (C15)	ug/g	n/a	n/a	J 17.500	10.200J	n/a	n/a	n/a	601.0	n/a
S95T002349			Nonane (C9)	ug/g	n/a	n/a	U 601.00	370.00U	n/a	n/a	95.00	601.0	n/a
S95T002349			Dodecane (C12)	ug/g	n/a	n/a	J 25.000	18.300J	n/a	n/a	n/a	601.0	n/a
S95T002349			Decane (C10)	ug/g	n/a	n/a	U 601.00	370.00U	n/a	n/a	n/a	601.0	n/a
S95T002564		W	Bromide by Ion Chromatograph	ug/g	97.10	0.00e+00	< 3.37e03	<3.61e03	n/a	n/a	97.60	3.37e+03	n/a
S95T002564		W	Chloride-IC-Dionex 4000i/4500	ug/g	99.24	6.000	1.84e+03	2.06e+03	1.95e+03	11.0	98.30	455.0	n/a
S95T002564		W	Fluoride-IC-Dionex 4000i/4500	ug/g	96.10	0.00e+00	7.66e+03	8.65e+03	8.16e+03	12.2	97.40	348.0	n/a
S95T002564		W	Nitrite-IC - Dionex 4000i/4500	ug/g	96.10	0.00e+00	2.27e+04	2.64e+04	2.46e+04	14.9	92.00	2.86e+03	n/a
S95T002564		W	Nitrate by IC-Dionex4000i/4500	ug/g	96.11	4.29e-01	2.02e+05	2.40e+05	2.21e+05	17.0	102.5	3.75e+03	n/a
S95T002564		W	Oxalate by IC - Dionex 4000i	ug/g	102.2	0.00e+00	1.26e+04	1.26e+04	1.26e+04	0.20	100.1	2.81e+03	n/a
S95T002564		W	Phosphate-IC-Dionex 4000i/4500	ug/g	93.55	0.00e+00	3.11e+04	3.33e+04	3.22e+04	6.70	94.20	7.92e+03	n/a
S95T002564		W	Sulfate by IC-Dionex4000i/4500	ug/g	96.24	4.21e-01	2.57e+04	2.93e+04	2.75e+04	13.0	94.10	3.64e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 4(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001905			% Water by TGA using Mettler	%	100.8	n/a	43.26	45.28	44.27	4.56	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001973			TOC by Persulfate/Coulometry	ug/g	96.00	5.600	2.30e+03	2.81e+03	2.56e+03	20.0	104.0	80.00	n/a
S95T001973			% Water by TGA using Mettler	%	100.7	n/a	41.10	41.13	41.12	0.07	n/a	n/a	n/a
S95T001973			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	180.2	194.5	187.3	7.63	n/a	n/a	n/a
S95T001973			DSC Exotherm using Mettler	Joules/g	105.1	n/a	106.1	114.5	110.3	7.62	n/a	n/a	n/a
S95T001973			Cyanide by Microdist. & Spec.	ug/g	102.1	1.08e-01	79.80	75.40	77.60	5.67	88.20	17.40	n/a
S95T002009	F		Alpha of Digested Solid	uCi/g	108.2	<1.91e-03	<4.66E-03	<3.50E-3	n/a	n/a	100.0	7.55e-03	5.00E+02
S95T002169	A		Silver -ICP-Acid Digest	ug/g	94.10	-3.80e+00	<1.96e+01	<1.96e1	n/a	n/a	n/a	19.60	n/a
S95T002169	A		Aluminium -ICP-Acid Digest	ug/g	102.6	1.310	2.52e+04	2.58e+04	2.55e+04	2.35	n/a	97.80	n/a
S95T002169	A		Arsenic -ICP-Acid Digest	ug/g	96.00	-1.40e+00	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Boron -ICP-Acid Digest	ug/g	113.6	2.640	<9.79e+01	<9.79e1	n/a	n/a	n/a	97.80	n/a
S95T002169	A		Barium -ICP-Acid Digest	ug/g	97.00	6.300	<9.79e+01	<9.79e1	n/a	n/a	n/a	97.80	n/a
S95T002169	A		Beryllium -ICP-Acid Digest	ug/g	103.8	2.700	<9.78e+00	<9.78e0	n/a	n/a	n/a	9.790	n/a
S95T002169	A		Bismuth -ICP-Acid Digest	ug/g	93.20	-8.59e+00	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Calcium -ICP-Acid Digest	ug/g	97.80	1.14e-01	384.0	378.0	381.0	1.57	n/a	196.0	n/a
S95T002169	A		Cadmium -ICP-Acid Digest	ug/g	94.60	-6.30e+00	<9.78e+00	<9.78e0	n/a	n/a	n/a	9.790	n/a
S95T002169	A		Cerium -ICP-Acid Digest	ug/g	99.00	-6.86e+00	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Cobalt -ICP-Acid Digest	ug/g	97.40	-6.80e+00	<3.91e+01	<3.91e1	n/a	n/a	n/a	39.10	n/a
S95T002169	A		Chromium -ICP-Acid Digest	ug/g	97.00	1.200	216.0	222.0	219.0	2.74	n/a	19.60	n/a
S95T002169	A		Copper -ICP-Acid Digest	ug/g	96.40	1.390	<1.96e+01	<1.96e1	n/a	n/a	n/a	19.60	n/a
S95T002169	A		Iron -ICP-Acid Digest	ug/g	96.20	1.400	691.0	754.0	722.5	8.72	n/a	97.80	n/a
S95T002169	A		Potassium -ICP-Acid Digest	ug/g	99.20	1.02e-01	1.80e+03	2.01e+03	1.90e+03	11.0	n/a	978.0	n/a
S95T002169	A		Lanthanum -ICP-Acid Digest	ug/g	98.40	-9.00e+00	<9.79e+01	<9.79e1	n/a	n/a	n/a	97.80	n/a
S95T002169	A		Lithium -ICP-Acid Digest	ug/g	97.80	-6.80e+00	<1.96e+01	<1.96e1	n/a	n/a	n/a	19.60	n/a
S95T002169	A		Magnesium -ICP-Acid Digest	ug/g	95.00	1.760	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Manganese -ICP-Acid Digest	ug/g	95.00	6.700	<1.96e+01	<1.96e1	n/a	n/a	n/a	19.60	n/a
S95T002169	A		Molybdenum -ICP-Acid Digest	ug/g	97.40	4.510	<9.79e+01	<9.79e1	n/a	n/a	n/a	97.80	n/a
S95T002169	A		Sodium -ICP-Acid Digest	ug/g	119.4	3.06e-01	1.94e+05	1.85e+05	1.90e+05	4.75	n/a	196.0	n/a
S95T002169	A		Neodymium -ICP-Acid Digest	ug/g	98.40	4.100	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Nickel -ICP-Acid Digest	ug/g	96.60	-8.89e+00	1.35e+03	1.36e+03	1.36e+03	0.74	n/a	39.10	n/a
S95T002169	A		Phosphorus -ICP-Acid Digest	ug/g	97.80	3.810	6.32e+03	4.03e+03	5.18e+03	44.3	n/a	391.0	n/a
S95T002169	A		Lead -ICP-Acid Digest	ug/g	94.60	5.720	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Sulfur -ICP-Acid Digest	ug/g	94.40	5.370	1.65e+04	1.61e+04	1.63e+04	2.45	n/a	196.0	n/a
S95T002169	A		Antimony -ICP-Acid Digest	ug/g	90.20	-1.12e+00	<1.17e+02	<1.17e2	n/a	n/a	n/a	117.0	n/a
S95T002169	A		Selenium -ICP-Acid Digest	ug/g	96.40	5.640	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Silicon -ICP-Acid Digest	ug/g	266.0	1.05e-01	411.0	420.0	415.5	2.17	n/a	97.80	n/a
S95T002169	A		Samarium -ICP-Acid Digest	ug/g	98.60	-6.16e+00	<1.96e+02	<1.96e2	n/a	n/a	n/a	196.0	n/a
S95T002169	A		Strontium -ICP-Acid Digest	ug/g	96.80	1.100	130.0	134.0	132.0	3.03	n/a	19.60	n/a
S95T002169	A		Titanium-ICP-Acid Digest	ug/g	95.00	2.610	<1.96e+01	<1.96e1	n/a	n/a	n/a	19.60	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002169		A	Thallium -ICP-Acid Digest	ug/g	94.20	-3.57e+00	<3.91e+02	<3.91e2	n/a	n/a	n/a	391.0	n/a
S95T002169		A	Uranium -ICP-Acid Digest	ug/g	98.70	-9.77e+00	<9.78e+02	<9.78e2	n/a	n/a	n/a	978.0	n/a
S95T002169		A	Vanadium -ICP-Acid Digest	ug/g	96.00	-1.60e+00	<9.79e+01	<9.79e1	n/a	n/a	n/a	97.80	n/a
S95T002169		A	Zinc -ICP-Acid Digest	ug/g	93.60	1.000	30.90	26.30	28.60	16.1	n/a	19.60	n/a
S95T002169		A	Zirconium -ICP-Acid Digest	ug/g	96.80	5.800	<1.96e+01	<1.96e1	n/a	n/a	n/a	19.60	n/a
S95T002350			Undecane (C11)	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	n/a	475.0	n/a
S95T002350			Tridecane (C13)	ug/g	n/a	n/a	J 2.630	4.440J	n/a	n/a	n/a	475.0	n/a
S95T002350			Tetradecane (C14)	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	n/a	475.0	n/a
S95T002350			Tri-n-butylphosphate	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	93.74	475.0	n/a
S95T002350			Pentadecane (C15)	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	n/a	475.0	n/a
S95T002350			Nonane (C9)	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	93.44	475.0	n/a
S95T002350			Dodecane (C12)	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	n/a	475.0	n/a
S95T002350			Decane (C10)	ug/g	n/a	n/a	U 475.00	469.00U	n/a	n/a	n/a	475.0	n/a
S95T002565		W	Bromide by Ion Chromatograph	ug/g	97.10	0.00e+00	< 2.48e03	<2.38e03	n/a	n/a	n/a	2.48e+03	n/a
S95T002565		W	Chloride-IC-Dionex 4000i/4500	ug/g	99.24	6.000	2.35e+03	2.09e+03	2.22e+03	12.1	n/a	334.0	n/a
S95T002565		W	Fluoride-IC-Dionex 4000i/4500	ug/g	96.10	0.00e+00	1.26e+04	1.27e+04	1.26e+04	1.10	n/a	256.0	n/a
S95T002565		W	Nitrite-IC - Dionex 4000i/4500	ug/g	96.10	0.00e+00	3.10e+04	3.07e+04	3.08e+04	1.10	n/a	2.10e+03	n/a
S95T002565		W	Nitrate by IC-Dionex4000i/4500	ug/g	96.11	4.29e-01	1.52e+05	1.38e+05	1.45e+05	9.70	n/a	2.75e+03	n/a
S95T002565		W	Oxalate by IC - Dionex 4000i	ug/g	102.2	0.00e+00	7.24e+03	6.96e+03	7.10e+03	4.00	n/a	2.06e+03	n/a
S95T002565		W	Phosphate-IC-Dionex 4000i/4500	ug/g	93.55	0.00e+00	2.33e+04	2.29e+04	2.31e+04	1.70	n/a	5.82e+03	n/a
S95T002565		W	Sulfate by IC-Dionex4000i/4500	ug/g	96.24	4.21e-01	4.86e+04	4.85e+04	4.86e+04	0.20	n/a	2.67e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 4(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001906			% Water by TGA using Mettler	%	100.8	n/a	36.22	33.78	35.00	6.97	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001974			TOC by Persulfate/Coulometry	ug/g	96.00	5.600	2.67e+03	2.21e+03	2.44e+03	18.9	n/a	80.00	n/a
S95T001974			% Water by TGA on Perkin Elmer	%	101.1	n/a	9.770	8.800	9.285	10.4	n/a	n/a	n/a
S95T001974			DSC Exotherm on Perkin Elmer	Joules/g	99.86	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001974			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001974			Cyanide by Microdist. & Spec.	ug/g	99.46	4.620	39.80	38.87	39.33	2.36	99.50	8.660	n/a
S95T002010	F		Alpha of Digested Solid	uCi/g	101.5	5.500	7.44e-04	<9.72E-4	n/a	n/a	91.96	9.16e-04	1.10E+02
S95T002170	A		Silver -ICP-Acid Digest	ug/g	94.10	-3.80e+00	<9.41e+00	<9.41e0	n/a	n/a	n/a	9.410	n/a
S95T002170	A		Aluminium -ICP-Acid Digest	ug/g	102.6	1.310	2.74e+04	2.63e+04	2.68e+04	4.10	n/a	47.00	n/a
S95T002170	A		Arsenic -ICP-Acid Digest	ug/g	96.00	-1.40e+00	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Boron -ICP-Acid Digest	ug/g	113.6	2.640	<4.70e+01	<4.70e1	n/a	n/a	n/a	47.00	n/a
S95T002170	A		Barium -ICP-Acid Digest	ug/g	97.00	6.300	<4.70e+01	<4.70e1	n/a	n/a	n/a	47.00	n/a
S95T002170	A		Beryllium -ICP-Acid Digest	ug/g	103.8	2.700	<4.70e+00	<4.70e0	n/a	n/a	n/a	4.710	n/a
S95T002170	A		Bismuth -ICP-Acid Digest	ug/g	93.20	-8.59e+00	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Calcium -ICP-Acid Digest	ug/g	97.80	1.14e-01	99.60	97.10	98.35	2.54	n/a	94.10	n/a
S95T002170	A		Cadmium -ICP-Acid Digest	ug/g	94.60	-6.30e+00	<4.70e+00	<4.70e0	n/a	n/a	n/a	4.710	n/a
S95T002170	A		Cerium -ICP-Acid Digest	ug/g	99.00	-6.86e+00	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Cobalt -ICP-Acid Digest	ug/g	97.40	-6.80e+00	<1.88e+01	<1.88e1	n/a	n/a	n/a	18.80	n/a
S95T002170	A		Chromium -ICP-Acid Digest	ug/g	97.00	1.200	201.0	202.0	201.5	0.50	n/a	9.410	n/a
S95T002170	A		Copper -ICP-Acid Digest	ug/g	96.40	1.390	<9.41e+00	<9.41e0	n/a	n/a	n/a	9.410	n/a
S95T002170	A		Iron -ICP-Acid Digest	ug/g	96.20	1.400	311.0	305.0	308.0	1.95	n/a	47.00	n/a
S95T002170	A		Potassium -ICP-Acid Digest	ug/g	99.20	1.02e-01	2.12e+03	2.04e+03	2.08e+03	3.85	n/a	470.0	n/a
S95T002170	A		Lanthanum -ICP-Acid Digest	ug/g	98.40	-9.00e+00	<4.70e+01	<4.70e1	n/a	n/a	n/a	47.00	n/a
S95T002170	A		Lithium -ICP-Acid Digest	ug/g	97.80	-6.80e+00	<9.41e+00	<9.41e0	n/a	n/a	n/a	9.410	n/a
S95T002170	A		Magnesium -ICP-Acid Digest	ug/g	95.00	1.760	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Manganese -ICP-Acid Digest	ug/g	95.00	6.700	<9.41e+00	<9.41e0	n/a	n/a	n/a	9.410	n/a
S95T002170	A		Molybdenum -ICP-Acid Digest	ug/g	97.40	4.510	<4.70e+01	<4.70e1	n/a	n/a	n/a	47.00	n/a
S95T002170	A		Sodium -ICP-Acid Digest	ug/g	119.4	3.06e-01	1.79e+05	1.81e+05	1.80e+05	1.11	n/a	94.10	n/a
S95T002170	A		Neodymium -ICP-Acid Digest	ug/g	98.40	4.100	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Nickel -ICP-Acid Digest	ug/g	96.60	-8.89e+00	862.0	921.0	891.5	6.62	n/a	18.80	n/a
S95T002170	A		Phosphorus -ICP-Acid Digest	ug/g	97.80	3.810	1.29e+03	1.32e+03	1.30e+03	2.30	n/a	188.0	n/a
S95T002170	A		Lead -ICP-Acid Digest	ug/g	94.60	5.720	127.0	128.0	127.5	0.78	n/a	94.10	n/a
S95T002170	A		Sulfur -ICP-Acid Digest	ug/g	94.40	5.370	2.42e+04	2.64e+04	2.53e+04	8.70	n/a	94.10	n/a
S95T002170	A		Antimony -ICP-Acid Digest	ug/g	90.20	-1.12e+00	<5.65e+01	<5.65e1	n/a	n/a	n/a	56.50	n/a
S95T002170	A		Selenium -ICP-Acid Digest	ug/g	96.40	5.640	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Silicon -ICP-Acid Digest	ug/g	266.0	1.05e-01	372.0	476.0	424.0	24.5	n/a	47.00	n/a
S95T002170	A		Samarium -ICP-Acid Digest	ug/g	98.60	-6.16e+00	<9.41e+01	<9.41e1	n/a	n/a	n/a	94.10	n/a
S95T002170	A		Strontium -ICP-Acid Digest	ug/g	96.80	1.100	12.40	13.20	12.80	6.25	n/a	9.410	n/a
S95T002170	A		Titanium-ICP-Acid Digest	ug/g	95.00	2.610	<9.41e+00	<9.41e0	n/a	n/a	n/a	9.410	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002170		A	Thallium -ICP-Acid Digest	ug/g	94.20	-3.57e+00	<1.88e+02	<1.88e2	n/a	n/a	n/a	188.0	n/a
S95T002170		A	Uranium -ICP-Acid Digest	ug/g	98.70	-9.77e+00	<4.70e+02	<4.70e2	n/a	n/a	n/a	470.0	n/a
S95T002170		A	Vanadium -ICP-Acid Digest	ug/g	96.00	-1.60e+00	<4.70e+01	<4.70e1	n/a	n/a	n/a	47.00	n/a
S95T002170		A	Zinc -ICP-Acid Digest	ug/g	93.60	1.000	28.30	24.80	26.55	13.2	n/a	9.410	n/a
S95T002170		A	Zirconium -ICP-Acid Digest	ug/g	96.80	5.800	<9.41e+00	<9.41e0	n/a	n/a	n/a	9.410	n/a
S95T002351			Undecane (C11)	ug/g	n/a	n/a	J 4.990	3.340J	n/a	n/a	n/a	192.0	n/a
S95T002351			Tridecane (C13)	ug/g	n/a	n/a	J 13.500	9.460J	n/a	n/a	n/a	192.0	n/a
S95T002351			Tetradecane (C14)	ug/g	n/a	n/a	J 12.400	10.600J	n/a	n/a	n/a	192.0	n/a
S95T002351			Tri-n-butylphosphate	ug/g	n/a	n/a	U 192.00	221.00U	n/a	n/a	103.4	192.0	n/a
S95T002351			Pentadecane (C15)	ug/g	n/a	n/a	J 8.030	5.600J	n/a	n/a	n/a	192.0	n/a
S95T002351			Nonane (C9)	ug/g	n/a	n/a	U 192.00	221.00U	n/a	n/a	99.22	192.0	n/a
S95T002351			Dodecane (C12)	ug/g	n/a	n/a	J 11.300	9.490J	n/a	n/a	n/a	192.0	n/a
S95T002351			Decane (C10)	ug/g	n/a	n/a	U 192.00	221.00U	n/a	n/a	n/a	192.0	n/a
S95T002566		W	Bromide by Ion Chromatograph	ug/g	98.23	<1.26e-01	< 3.42e02	<3.42e02	n/a	n/a	93.20	342.0	n/a
S95T002566		W	Chloride-IC-Dionex 4000i/4500	ug/g	101.0	<1.70e-02	2.01e+03	2.09e+03	2.05e+03	3.90	98.10	46.10	n/a
S95T002566		W	Fluoride-IC-Dionex 4000i/4500	ug/g	101.9	<1.30e-02	1.93e+04	1.90e+04	1.92e+04	1.57	104.2	170.0	n/a
S95T002566		W	Nitrite-IC - Dionex 4000i/4500	ug/g	99.49	<1.07e-01	3.88e+04	4.00e+04	3.94e+04	3.05	104.4	290.0	n/a
S95T002566		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.36	<1.40e-01	1.30e+05	1.24e+05	1.27e+05	4.72	98.10	1.83e+03	n/a
S95T002566		W	Oxalate by IC - Dionex 4000i	ug/g	108.7	<1.05e-01	4.09e+03	3.53e+03	3.81e+03	14.7	102.7	285.0	n/a
S95T002566		W	Phosphate-IC-Dionex 4000i/4500	ug/g	96.90	4.96e-01	6.28e+03	3.54e+03	4.91e+03	55.8	98.60	803.0	n/a
S95T002566		W	Sulfate by IC-Dionex4000i/4500	ug/g	96.15	<1.36e-01	8.64e+04	8.80e+04	8.72e+04	1.83	95.50	1.77e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 5(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001915			% Water by TGA on Perkin Elmer	%	101.7	n/a	12.81	13.13	12.97	2.47	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001975			% Water by TGA on Perkin Elmer	%	101.1	n/a	9.370	8.980	9.175	4.25	n/a	n/a	n/a
S95T001975			DSC Exotherm on Perkin Elmer	Joules/g	99.86	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001975			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001975			Cyanide by Microdist. & Spec.	ug/g	99.46	4.620	36.50	39.40	37.95	7.64	101.0	7.950	n/a
S95T002011		F	Alpha of Digested Solid	uCi/g	101.5	5.500	1.77e-02	1.08e-02	1.43e-02	48.4	69.20	9.11e-04	1.22E+01
S95T002171		A	Silver -ICP-Acid Digest	ug/g	93.36	4.000	< 12.4146	<12.3047	n/a	n/a	99.66	12.40	n/a
S95T002171		A	Aluminium -ICP-Acid Digest	ug/g	104.7	1.490	2.36e+04	2.26e+04	2.31e+04	4.27	n/a	62.10	n/a
S95T002171		A	Arsenic -ICP-Acid Digest	ug/g	97.04	4.900	< 62.0732	<61.5233	n/a	n/a	98.69	62.10	n/a
S95T002171		A	Boron -ICP-Acid Digest	ug/g	124.4	1.01e-01	< 62.0732	<61.5233	n/a	n/a	109.7	62.10	n/a
S95T002171		A	Barium -ICP-Acid Digest	ug/g	95.89	1.600	< 62.0732	<61.5233	n/a	n/a	99.12	62.10	n/a
S95T002171		A	Beryllium -ICP-Acid Digest	ug/g	104.5	0.00e+00	< 6.2073	<6.1523	n/a	n/a	99.65	6.210	n/a
S95T002171		A	Bismuth -ICP-Acid Digest	ug/g	93.18	9.000	<124.1465	<123.046	n/a	n/a	105.1	124.0	n/a
S95T002171		A	Calcium -ICP-Acid Digest	ug/g	101.8	8.330	450.5	415.0	432.8	8.22	110.1	124.0	n/a
S95T002171		A	Cadmium -ICP-Acid Digest	ug/g	96.12	3.800	< 12.4146	<12.3047	n/a	n/a	97.03	12.40	n/a
S95T002171		A	Cerium -ICP-Acid Digest	ug/g	98.00	5.240	<124.1465	<123.046	n/a	n/a	103.5	124.0	n/a
S95T002171		A	Cobalt -ICP-Acid Digest	ug/g	97.65	6.700	29.44	31.53	30.48	6.87	97.21	24.80	n/a
S95T002171		A	Chromium -ICP-Acid Digest	ug/g	98.30	6.100	403.0	383.5	393.3	4.97	98.77	12.40	n/a
S95T002171		A	Copper -ICP-Acid Digest	ug/g	94.84	5.600	< 12.4146	<12.3047	n/a	n/a	92.16	12.40	n/a
S95T002171		A	Iron -ICP-Acid Digest	ug/g	99.76	2.380	2.08e+03	2.00e+03	2.04e+03	4.11	63.89	62.10	n/a
S95T002171		A	Potassium -ICP-Acid Digest	ug/g	96.14	-3.37e+00	1.53e+03	1.39e+03	1.46e+03	9.60	112.8	372.0	n/a
S95T002171		A	Lanthanum -ICP-Acid Digest	ug/g	98.49	4.000	< 62.0732	<61.5233	n/a	n/a	99.92	62.10	n/a
S95T002171		A	Lithium -ICP-Acid Digest	ug/g	94.44	1.800	< 12.4146	<12.3047	n/a	n/a	94.04	12.40	n/a
S95T002171		A	Magnesium -ICP-Acid Digest	ug/g	96.54	1.440	<124.1465	<123.046	n/a	n/a	103.8	124.0	n/a
S95T002171		A	Manganese -ICP-Acid Digest	ug/g	98.69	1.000	15.11	14.20	14.65	6.16	98.04	12.40	n/a
S95T002171		A	Molybdenum -ICP-Acid Digest	ug/g	96.59	2.300	< 62.0732	<61.5233	n/a	n/a	96.40	62.10	n/a
S95T002171		A	Sodium -ICP-Acid Digest	ug/g	114.3	3.37e-01	1.87e+05	1.82e+05	1.84e+05	2.76	n/a	124.0	n/a
S95T002171		A	Neodymium -ICP-Acid Digest	ug/g	101.5	1.720	<124.1465	<123.046	n/a	n/a	104.7	124.0	n/a
S95T002171		A	Nickel -ICP-Acid Digest	ug/g	98.12	5.000	1.22e+03	1.17e+03	1.20e+03	4.52	115.5	24.80	n/a
S95T002171		A	Phosphorus -ICP-Acid Digest	ug/g	96.03	5.460	5.43e+03	5.14e+03	5.29e+03	5.43	n/a	248.0	n/a
S95T002171		A	Lead -ICP-Acid Digest	ug/g	95.98	1.810	191.8	210.2	201.0	9.14	99.79	124.0	n/a
S95T002171		A	Sulfur -ICP-Acid Digest	ug/g	92.49	4.270	2.92e+04	2.77e+04	2.84e+04	5.14	n/a	62.10	n/a
S95T002171		A	Antimony -ICP-Acid Digest	ug/g	90.46	5.260	<248.2930	<246.093	n/a	n/a	105.5	248.0	n/a
S95T002171		A	Selenium -ICP-Acid Digest	ug/g	99.64	1.320	<124.1465	<123.046	n/a	n/a	103.9	124.0	n/a
S95T002171		A	Silicon -ICP-Acid Digest	ug/g	351.3	6.550	2.01e+03	1.95e+03	1.98e+03	3.29	n/a	62.10	n/a
S95T002171		A	Samarium -ICP-Acid Digest	ug/g	94.89	-2.12e+00	<124.1465	<123.046	n/a	n/a	96.23	124.0	n/a
S95T002171		A	Strontium -ICP-Acid Digest	ug/g	96.56	6.000	634.4	611.0	622.7	3.77	108.1	12.40	n/a
S95T002171		A	Titanium-ICP-Acid Digest	ug/g	92.87	0.00e+00	< 12.4146	<12.3047	n/a	n/a	94.58	12.40	n/a
S95T002171		A	Thallium -ICP-Acid Digest	ug/g	91.43	8.000	<248.2930	<246.093	n/a	n/a	101.8	248.0	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002171		A	Uranium -ICP-Acid Digest	ug/g	94.98	-9.72e+00	1.60e+03	1.54e+03	1.57e+03	3.52	107.8	497.0	n/a
S95T002171		A	Vanadium -ICP-Acid Digest	ug/g	96.19	1.800	< 62.0732	<61.5233	n/a	n/a	95.38	62.10	n/a
S95T002171		A	Zinc -ICP-Acid Digest	ug/g	95.37	9.400	26.43	23.91	25.17	10.0	96.35	12.40	n/a
S95T002171		A	Zirconium -ICP-Acid Digest	ug/g	95.62	-4.00e+00	< 12.4146	<12.3047	n/a	n/a	97.06	12.40	n/a
S95T002352			Undecane (C11)	ug/g	n/a	n/a	J 55.900	50.300J	n/a	n/a	n/a	387.0	n/a
S95T002352			Tridecane (C13)	ug/g	n/a	n/a	J 161.000	1.42e02J	n/a	n/a	n/a	387.0	n/a
S95T002352			Tetradecane (C14)	ug/g	n/a	n/a	J 146.000	1.4e+02J	n/a	n/a	n/a	387.0	n/a
S95T002352			Tri-n-butylphosphate	ug/g	n/a	n/a	J 5.970	459.00U	n/a	n/a	103.8	387.0	n/a
S95T002352			Pentadecane (C15)	ug/g	n/a	n/a	J 106.000	1.05e02J	n/a	n/a	n/a	387.0	n/a
S95T002352			Nonane (C9)	ug/g	n/a	n/a	J 6.540	5.560J	n/a	n/a	100.2	387.0	n/a
S95T002352			Dodecane (C12)	ug/g	n/a	n/a	J 129.000	1.25e02J	n/a	n/a	n/a	387.0	n/a
S95T002352			Decane (C10)	ug/g	n/a	n/a	J 13.900	13.600J	n/a	n/a	n/a	387.0	n/a
S95T002568		W	Bromide by Ion Chromatograph	ug/g	98.23	<1.26e-01	< 4.16e02	<4.16e02	n/a	n/a	n/a	416.0	n/a
S95T002568		W	Chloride-IC-Dionex 4000i/4500	ug/g	101.0	<1.70e-02	2.39e+03	1.76e+03	2.08e+03	30.4	n/a	56.10	n/a
S95T002568		W	Fluoride-IC-Dionex 4000i/4500	ug/g	101.9	<1.30e-02	2.64e+04	2.34e+04	2.49e+04	12.0	n/a	206.0	n/a
S95T002568		W	Nitrite-IC - Dionex 4000i/4500	ug/g	99.49	<1.07e-01	3.34e+04	3.60e+04	3.47e+04	7.49	n/a	353.0	n/a
S95T002568		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.36	<1.40e-01	1.19e+05	1.26e+05	1.22e+05	5.71	n/a	2.22e+03	n/a
S95T002568		W	Oxalate by IC - Dionex 4000i	ug/g	108.7	<1.05e-01	2.81e+03	2.65e+03	2.73e+03	5.86	n/a	346.0	n/a
S95T002568		W	Phosphate-IC-Dionex 4000i/4500	ug/g	96.90	4.96e-01	1.03e+04	1.16e+04	1.10e+04	11.9	n/a	976.0	n/a
S95T002568		W	Sulfate by IC-Dionex4000i/4500	ug/g	96.15	<1.36e-01	1.16e+05	1.03e+05	1.10e+05	11.9	n/a	2.16e+03	n/a
S95T003173			TOC by Persulfate/Coulometry	ug/g	96.83	8.800	4.06e+03	4.21e+03	4.14e+03	3.63	n/a	80.00	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 5(B)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001916	1		% Water by TGA using Mettler	%	n/a	n/a	36.23	n/a	n/a	n/a	n/a	n/a	n/a
S95T001916			% Water by TGA using Mettler	%	100.7	n/a	35.23	37.56	36.39	15.3	n/a	n/a	n/a

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001976			TOC by Persulfate/Coulometry	ug/g	90.67	25.80	1.72e+04	1.34e+04	1.53e+04	24.8	86.80	40.00	n/a
S95T001976			% Water by TGA using Mettler	%	101.1	n/a	37.69	35.62	36.66	5.65	n/a	n/a	n/a
S95T001976			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	593.5	552.6	573.0	7.14	n/a	n/a	n/a
S95T001976			DSC Exotherm using Mettler	Joules/g	93.50	n/a	375.9	350.0	362.9	7.14	n/a	n/a	n/a
S95T001976			Cyanide by Microdist. & Spec.	ug/g	107.3	1.29e-01	99.90	94.70	97.30	5.34	116.9	5.420	n/a
S95T002012		F	Alpha of Digested Solid	uCi/g	95.95	<7.63e-02	1.79e-01	1.81e-01	1.80e-01	1.11	100.0	1.03e-01	5.18E+01
S95T002172		A	Silver -ICP-Acid Digest	ug/g	93.36	4.000	< 10.2669	<9.6339	n/a	n/a	n/a	10.30	n/a
S95T002172		A	Aluminium -ICP-Acid Digest	ug/g	104.7	1.490	2.49e+04	2.46e+04	2.47e+04	1.01	n/a	51.30	n/a
S95T002172		A	Arsenic -ICP-Acid Digest	ug/g	97.04	4.900	< 51.3347	<48.1696	n/a	n/a	n/a	51.30	n/a
S95T002172		A	Boron -ICP-Acid Digest	ug/g	124.4	1.01e-01	163.3	163.4	163.3	0.11	n/a	51.30	n/a
S95T002172		A	Barium -ICP-Acid Digest	ug/g	95.89	1.600	406.2	404.9	405.5	0.33	n/a	51.30	n/a
S95T002172		A	Beryllium -ICP-Acid Digest	ug/g	104.5	0.00e+00	< 5.1335	<4.8170	n/a	n/a	n/a	5.130	n/a
S95T002172		A	Bismuth -ICP-Acid Digest	ug/g	93.18	9.000	765.6	764.7	765.2	0.12	n/a	103.0	n/a
S95T002172		A	Calcium -ICP-Acid Digest	ug/g	101.8	8.330	5.74e+03	5.81e+03	5.77e+03	1.16	n/a	103.0	n/a
S95T002172		A	Cadmium -ICP-Acid Digest	ug/g	96.12	3.800	< 10.2669	<9.6339	n/a	n/a	n/a	10.30	n/a
S95T002172		A	Cerium -ICP-Acid Digest	ug/g	98.00	5.240	445.5	446.3	445.9	0.19	n/a	103.0	n/a
S95T002172		A	Cobalt -ICP-Acid Digest	ug/g	97.65	6.700	27.44	<19.2678	n/a	n/a	n/a	20.50	n/a
S95T002172		A	Chromium -ICP-Acid Digest	ug/g	98.30	6.100	2.08e+03	2.06e+03	2.07e+03	1.10	n/a	10.30	n/a
S95T002172		A	Copper -ICP-Acid Digest	ug/g	94.84	5.600	21.57	22.93	22.25	6.10	n/a	10.30	n/a
S95T002172		A	Iron -ICP-Acid Digest	ug/g	99.76	2.380	1.78e+04	1.77e+04	1.77e+04	0.61	n/a	51.30	n/a
S95T002172		A	Potassium -ICP-Acid Digest	ug/g	96.14	-3.37e+00	1.55e+03	1.46e+03	1.51e+03	5.78	n/a	308.0	n/a
S95T002172		A	Lanthanum -ICP-Acid Digest	ug/g	98.49	4.000	< 51.3347	<48.1696	n/a	n/a	n/a	51.30	n/a
S95T002172		A	Lithium -ICP-Acid Digest	ug/g	94.44	1.800	< 10.2669	<9.6339	n/a	n/a	n/a	10.30	n/a
S95T002172		A	Magnesium -ICP-Acid Digest	ug/g	96.54	1.440	1.07e+03	1.01e+03	1.04e+03	6.39	n/a	103.0	n/a
S95T002172		A	Manganese -ICP-Acid Digest	ug/g	98.69	1.000	281.6	280.5	281.0	0.38	n/a	10.30	n/a
S95T002172		A	Molybdenum -ICP-Acid Digest	ug/g	96.59	2.300	< 51.3347	<48.1696	n/a	n/a	n/a	51.30	n/a
S95T002172		A	Sodium -ICP-Acid Digest	ug/g	114.3	3.37e-01	1.32e+05	1.30e+05	1.31e+05	1.29	n/a	103.0	n/a
S95T002172		A	Neodymium -ICP-Acid Digest	ug/g	101.5	1.720	<102.6694	<96.3391	n/a	n/a	n/a	103.0	n/a
S95T002172		A	Nickel -ICP-Acid Digest	ug/g	98.12	5.000	1.22e+04	1.21e+04	1.22e+04	1.02	n/a	20.50	n/a
S95T002172		A	Phosphorus -ICP-Acid Digest	ug/g	96.03	5.460	1.42e+04	1.37e+04	1.39e+04	2.98	n/a	205.0	n/a
S95T002172		A	Lead -ICP-Acid Digest	ug/g	95.98	1.810	1.31e+03	1.32e+03	1.32e+03	0.69	n/a	103.0	n/a
S95T002172		A	Sulfur -ICP-Acid Digest	ug/g	92.49	4.270	5.17e+03	5.06e+03	5.11e+03	2.11	n/a	51.30	n/a
S95T002172		A	Antimony -ICP-Acid Digest	ug/g	90.46	5.260	<205.3388	210.7	n/a	n/a	n/a	205.0	n/a
S95T002172		A	Selenium -ICP-Acid Digest	ug/g	99.64	1.320	<102.6694	<96.3391	n/a	n/a	n/a	103.0	n/a
S95T002172		A	Silicon -ICP-Acid Digest	ug/g	351.3	6.550	3.46e+03	3.34e+03	3.40e+03	3.40	n/a	51.30	n/a
S95T002172		A	Samarium -ICP-Acid Digest	ug/g	94.89	-2.12e+00	<102.6694	<96.3391	n/a	n/a	n/a	103.0	n/a
S95T002172		A	Strontium -ICP-Acid Digest	ug/g	96.56	6.000	2.56e+04	2.55e+04	2.56e+04	0.45	n/a	10.30	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002172		A	Titanium-ICP-Acid Digest	ug/g	92.87	0.00e+00	35.36	32.94	34.15	7.08	n/a	10.30	n/a
S95T002172		A	Thallium -ICP-Acid Digest	ug/g	91.43	8.000	<205.3388	<192.678	n/a	n/a	n/a	205.0	n/a
S95T002172		A	Uranium -ICP-Acid Digest	ug/g	94.98	-9.72e+00	1.54e+04	1.54e+04	1.54e+04	0.09	n/a	411.0	n/a
S95T002172		A	Vanadium -ICP-Acid Digest	ug/g	96.19	1.800	< 51.3347	<48.1696	n/a	n/a	n/a	51.30	n/a
S95T002172		A	Zinc -ICP-Acid Digest	ug/g	95.37	9.400	250.8	247.2	249.0	1.44	n/a	10.30	n/a
S95T002172		A	Zirconium -ICP-Acid Digest	ug/g	95.62	-4.00e+00	< 10.2669	<9.6339	n/a	n/a	n/a	10.30	n/a
S95T002353			Undecane (C11)	ug/g	n/a	0.00e+00	J 100.000	1.71e02J	n/a	n/a	n/a	314.0	n/a
S95T002353			Tridecane (C13)	ug/g	n/a	0.00e+00	J 270.000	452.0	n/a	n/a	n/a	314.0	n/a
S95T002353			Tetradecane (C14)	ug/g	n/a	0.00e+00	J 186.000	2.98e02J	n/a	n/a	n/a	314.0	n/a
S95T002353			Tri-n-butylphosphate	ug/g	n/a	0.00e+00	U 314.00	369.00U	n/a	n/a	85.47	314.0	n/a
S95T002353			Pentadecane (C15)	ug/g	n/a	0.00e+00	J 83.600	131.000J	n/a	n/a	n/a	314.0	n/a
S95T002353			Nonane (C9)	ug/g	n/a	0.00e+00	U 314.00	369.00U	n/a	n/a	82.07	314.0	n/a
S95T002353			Dodecane (C12)	ug/g	n/a	0.00e+00	J 241.000	405.0	n/a	n/a	n/a	314.0	n/a
S95T002353			Decane (C10)	ug/g	n/a	0.00e+00	J 25.500	42.800J	n/a	n/a	n/a	314.0	n/a
S95T002569		W	Bromide by Ion Chromatograph	ug/g	96.35	<1.26e-01	<6.687e+0	<7.82e3	n/a	n/a	99.13	6.69e+03	n/a
S95T002569		W	Chloride-IC-Dionex 4000i/4500	ug/g	97.34	5.500	2.57e+03	2.75e+03	2.66e+03	6.77	100.7	902.2	n/a
S95T002569		W	Fluoride-IC-Dionex 4000i/4500	ug/g	94.58	<1.30e-02	5.54e+03	3.77e+03	4.65e+03	38.0	96.38	689.9	n/a
S95T002569		W	Nitrite-IC - Dionex 4000i/4500	ug/g	92.61	<1.07e-01	4.67e+04	5.07e+04	4.87e+04	8.21	94.84	5.68e+03	n/a
S95T002569		W	Nitrate by IC-Dionex4000i/4500	ug/g	98.05	<1.40e-01	1.16e+05	1.15e+05	1.16e+05	0.87	93.34	7.43e+03	n/a
S95T002569		W	Oxalate by IC - Dionex 4000i	ug/g	98.69	1.010	2.47e+04	<6.52e3	n/a	n/a	98.86	5.57e+03	n/a
S95T002569		W	Phosphate-IC-Dionex 4000i/4500	ug/g	89.93	1.110	<1.571e+0	<1.84e4	n/a	n/a	93.22	1.57e+04	n/a
S95T002569		W	Sulfate by IC-Dionex4000i/4500	ug/g	95.56	2.93e-01	3.42e+04	2.89e+04	3.16e+04	16.8	94.12	7.22e+03	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER:
SEGMENT #:

SEGMENT PORTION:

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					101.6	n/a	0.00e+00	32.40	16.20	8.23	n/a		n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 5(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001917			% Water by TGA using Mettler	%	100.7	n/a	33.04	26.36	29.70	22.5	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001977			TOC by Persulfate/Coulometry	ug/g	90.67	25.80	1.36e+04	1.32e+04	1.34e+04	2.99	n/a	40.00	n/a
S95T001977			% Water by TGA using Mettler	%	101.1	n/a	35.50	35.50	35.50	0.00	n/a	n/a	n/a
S95T001977			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	548.7	507.9	528.3	7.72	n/a	n/a	n/a
S95T001977			DSC Exotherm using Mettler	Joules/g	93.50	n/a	353.9	327.6	340.8	7.72	n/a	n/a	n/a
S95T001977			Cyanide by Microdist. & Spec.	ug/g	109.2	1.08e-01	125.0	117.0	121.0	6.61	81.50	3.010	n/a
S95T002013	F		Alpha of Digested Solid	uCi/g	95.95	<7.63e-02	2.66e-01	3.06e-01	2.86e-01	14.0	96.88	9.82e-02	3.55E+01
S95T002174	A		Silver -ICP-Acid Digest	ug/g	95.56	2.100	< 23.7400	<25.9300	n/a	n/a	97.82	23.70	n/a
S95T002174	A		Aluminium -ICP-Acid Digest	ug/g	100.1	1.510	2.42e+04	2.43e+04	2.43e+04	0.18	n/a	119.0	n/a
S95T002174	A		Arsenic -ICP-Acid Digest	ug/g	97.54	6.300	<118.7000	<129.650	n/a	n/a	101.9	119.0	n/a
S95T002174	A		Boron -ICP-Acid Digest	ug/g	114.7	2.720	<118.7000	<129.650	n/a	n/a	99.43	119.0	n/a
S95T002174	A		Barium -ICP-Acid Digest	ug/g	97.99	8.000	599.5	598.1	598.8	0.23	97.09	119.0	n/a
S95T002174	A		Beryllium -ICP-Acid Digest	ug/g	105.4	1.000	< 11.8700	<12.9650	n/a	n/a	99.68	11.90	n/a
S95T002174	A		Bismuth -ICP-Acid Digest	ug/g	95.57	7.200	2.17e+03	1.80e+03	1.98e+03	18.6	77.17	237.0	n/a
S95T002174	A		Calcium -ICP-Acid Digest	ug/g	101.1	1.13e-01	6.36e+03	6.05e+03	6.20e+03	4.90	111.9	237.0	n/a
S95T002174	A		Cadmium -ICP-Acid Digest	ug/g	95.55	1.300	< 23.7400	<25.9300	n/a	n/a	95.97	23.70	n/a
S95T002174	A		Cerium -ICP-Acid Digest	ug/g	100.8	1.150	<237.4000	<259.300	n/a	n/a	98.02	237.0	n/a
S95T002174	A		Cobalt -ICP-Acid Digest	ug/g	98.12	3.400	< 47.4800	<51.8600	n/a	n/a	97.14	47.50	n/a
S95T002174	A		Chromium -ICP-Acid Digest	ug/g	97.85	1.800	1.20e+03	1.10e+03	1.15e+03	8.71	92.04	23.70	n/a
S95T002174	A		Copper -ICP-Acid Digest	ug/g	97.19	2.600	< 23.7400	<25.9300	n/a	n/a	90.46	23.70	n/a
S95T002174	A		Iron -ICP-Acid Digest	ug/g	96.91	1.690	3.07e+04	2.65e+04	2.86e+04	14.7	n/a	119.0	n/a
S95T002174	A		Potassium -ICP-Acid Digest	ug/g	98.67	4.02e-01	1.94e+03	2.13e+03	2.04e+03	9.48	105.4	712.0	n/a
S95T002174	A		Lanthanum -ICP-Acid Digest	ug/g	99.20	2.100	<118.7000	<129.650	n/a	n/a	100.7	119.0	n/a
S95T002174	A		Lithium -ICP-Acid Digest	ug/g	97.57	-9.00e+00	< 23.7400	<25.9300	n/a	n/a	99.92	23.70	n/a
S95T002174	A		Magnesium -ICP-Acid Digest	ug/g	94.42	2.200	1.30e+03	1.24e+03	1.27e+03	4.30	95.08	237.0	n/a
S95T002174	A		Manganese -ICP-Acid Digest	ug/g	95.51	3.000	409.2	353.2	381.2	14.7	89.26	23.70	n/a
S95T002174	A		Molybdenum -ICP-Acid Digest	ug/g	98.64	5.300	<118.7000	<129.650	n/a	n/a	97.88	119.0	n/a
S95T002174	A		Sodium -ICP-Acid Digest	ug/g	118.7	2.92e-01	1.25e+05	1.31e+05	1.28e+05	5.17	n/a	237.0	n/a
S95T002174	A		Neodymium -ICP-Acid Digest	ug/g	96.96	5.700	<237.4000	<259.300	n/a	n/a	106.2	237.0	n/a
S95T002174	A		Nickel -ICP-Acid Digest	ug/g	97.10	-4.00e+00	1.27e+04	1.29e+04	1.28e+04	1.51	96.99	47.50	n/a
S95T002174	A		Phosphorus -ICP-Acid Digest	ug/g	98.91	-1.37e+00	1.29e+04	1.58e+04	1.44e+04	20.0	118.4	475.0	n/a
S95T002174	A		Lead -ICP-Acid Digest	ug/g	95.74	2.440	1.86e+03	1.73e+03	1.79e+03	6.93	92.25	237.0	n/a
S95T002174	A		Sulfur -ICP-Acid Digest	ug/g	92.87	4.820	1.70e+03	2.09e+03	1.90e+03	20.4	90.23	119.0	n/a
S95T002174	A		Antimony -ICP-Acid Digest	ug/g	91.30	2.000	<474.8000	<518.600	n/a	n/a	92.42	475.0	n/a
S95T002174	A		Selenium -ICP-Acid Digest	ug/g	95.48	2.600	<237.4000	<259.300	n/a	n/a	95.58	237.0	n/a
S95T002174	A		Silicon -ICP-Acid Digest	ug/g	261.5	1.04e-01	2.52e+03	2.55e+03	2.54e+03	0.87	112.4	119.0	n/a
S95T002174	A		Samarium -ICP-Acid Digest	ug/g	96.36	-1.12e+00	<237.4000	<259.300	n/a	n/a	95.81	237.0	n/a
S95T002174	A		Strontium -ICP-Acid Digest	ug/g	97.31	0.00e+00	3.94e+04	4.00e+04	3.97e+04	1.39	n/a	23.70	n/a
S95T002174	A		Titanium-ICP-Acid Digest	ug/g	95.93	3.900	48.26	44.23	46.24	8.71	95.37	23.70	n/a

Sample# R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002174	A	Thallium -ICP-Acid Digest	ug/g	93.66	2.800	<474.8000	<518.600	n/a	n/a	94.40	475.0	n/a
S95T002174	A	Uranium -ICP-Acid Digest	ug/g	94.84	-3.94e+00	4.74e+04	4.98e+04	4.86e+04	4.96	n/a	950.0	n/a
S95T002174	A	Vanadium -ICP-Acid Digest	ug/g	95.99	-2.00e+00	<118.7000	<129.650	n/a	n/a	96.16	119.0	n/a
S95T002174	A	Zinc -ICP-Acid Digest	ug/g	93.84	7.200	245.9	225.6	235.7	8.61	94.60	23.70	n/a
S95T002174	A	Zirconium -ICP-Acid Digest	ug/g	96.74	-6.00e+00	31.16	<25.9300	n/a	n/a	95.62	23.70	n/a
S95T002354		Undecane (C11)	ug/g	n/a	n/a	J 107.000	1.86e02J	n/a	n/a	n/a	372.0	n/a
S95T002354		Tridecane (C13)	ug/g	n/a	n/a	J 325.000	4.81e02J	n/a	n/a	n/a	372.0	n/a
S95T002354		Tetradecane (C14)	ug/g	n/a	n/a	J 241.000	3.6e+02J	n/a	n/a	n/a	372.0	n/a
S95T002354		Tri-n-butylphosphate	ug/g	n/a	n/a	U 372.00	273.00U	n/a	n/a	74.12	372.0	n/a
S95T002354		Pentadecane (C15)	ug/g	n/a	n/a	J 93.400	1.29e02J	n/a	n/a	n/a	372.0	n/a
S95T002354		Nonane (C9)	ug/g	n/a	n/a	J 11.900	25.000J	n/a	n/a	68.18	372.0	n/a
S95T002354		Dodecane (C12)	ug/g	n/a	n/a	J 285.000	4.25e02J	n/a	n/a	n/a	372.0	n/a
S95T002354		Decane (C10)	ug/g	n/a	n/a	J 26.800	46.000J	n/a	n/a	n/a	372.0	n/a
S95T002570	W	Bromide by Ion Chromatograph	ug/g	96.35	<1.26e-01	<9.364e+0	<8.83e3	n/a	n/a	n/a	9.36e+03	n/a
S95T002570	W	Chloride-IC-Dionex 4000i/4500	ug/g	97.34	5.500	3.59e+03	2.87e+03	3.23e+03	22.3	n/a	1.26e+03	n/a
S95T002570	W	Fluoride-IC-Dionex 4000i/4500	ug/g	94.58	<1.30e-02	<9.662e+0	<9.11e2	n/a	n/a	n/a	966.2	n/a
S95T002570	W	Nitrite-IC - Dionex 4000i/4500	ug/g	92.61	<1.07e-01	5.54e+04	5.35e+04	5.44e+04	3.49	n/a	7.95e+03	n/a
S95T002570	W	Nitrate by IC-Dionex4000i/4500	ug/g	98.05	<1.40e-01	1.11e+05	1.09e+05	1.10e+05	1.82	n/a	1.04e+04	n/a
S95T002570	W	Oxalate by IC - Dionex 4000i	ug/g	98.69	1.010	<7.805e+0	<7.36e3	n/a	n/a	n/a	7.80e+03	n/a
S95T002570	W	Phosphate-IC-Dionex 4000i/4500	ug/g	89.93	1.110	<2.200e+0	<2.07e4	n/a	n/a	n/a	2.20e+04	n/a
S95T002570	W	Sulfate by IC-Dionex4000i/4500	ug/g	95.56	2.93e-01	2.53e+04	2.44e+04	2.48e+04	3.62	n/a	1.01e+04	n/a

Final Report for BY-108
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 5(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001918			% Water by TGA using Mettler	%	100.4	n/a	29.31	35.21	32.26	18.3	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001978			TOC by Persulfate/Coulometry	ug/g	90.33	4.100	7.72e+03	7.58e+03	7.65e+03	1.83	n/a	40.00	n/a
S95T001978			% Water by TGA on Perkin Elmer	%	100.3	n/a	32.34	34.59	33.47	5.63	n/a	n/a	n/a
S95T001978			DSC Exotherm on Perkin Elmer	Joules/g	100.7	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001978			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001978			Cyanide by Microdist. & Spec.	ug/g	85.39	4.200	98.40	98.30	98.35	0.10	98.30	112.0	n/a
S95T002014		F	Alpha of Digested Solid	uCi/g	109.3	<9.89e-02	3.90e-01	3.74e-01	3.82e-01	4.19	138.8	1.82e-01	4.41E+01
S95T002175		A	Silver -ICP-Acid Digest	ug/g	95.56	2.100	< 14.9000	<14.8400	n/a	n/a	n/a	14.90	n/a
S95T002175		A	Aluminium -ICP-Acid Digest	ug/g	100.1	1.510	2.10e+04	2.23e+04	2.16e+04	6.12	n/a	74.50	n/a
S95T002175		A	Arsenic -ICP-Acid Digest	ug/g	97.54	6.300	< 74.5000	<74.2000	n/a	n/a	n/a	74.50	n/a
S95T002175		A	Boron -ICP-Acid Digest	ug/g	114.7	2.720	< 74.5000	<74.2000	n/a	n/a	n/a	74.50	n/a
S95T002175		A	Barium -ICP-Acid Digest	ug/g	97.99	8.000	249.0	263.3	256.1	5.58	n/a	74.50	n/a
S95T002175		A	Beryllium -ICP-Acid Digest	ug/g	105.4	1.000	< 7.4500	<7.4200	n/a	n/a	n/a	7.450	n/a
S95T002175		A	Bismuth -ICP-Acid Digest	ug/g	95.57	7.200	1.72e+03	1.77e+03	1.74e+03	3.18	n/a	149.0	n/a
S95T002175		A	Calcium -ICP-Acid Digest	ug/g	101.1	1.13e-01	1.64e+04	1.74e+04	1.69e+04	5.89	n/a	149.0	n/a
S95T002175		A	Cadmium -ICP-Acid Digest	ug/g	95.55	1.300	< 14.9000	<14.8400	n/a	n/a	n/a	14.90	n/a
S95T002175		A	Cerium -ICP-Acid Digest	ug/g	100.8	1.150	<149.0000	<148.400	n/a	n/a	n/a	149.0	n/a
S95T002175		A	Cobalt -ICP-Acid Digest	ug/g	98.12	3.400	< 29.8000	<29.6800	n/a	n/a	n/a	29.80	n/a
S95T002175		A	Chromium -ICP-Acid Digest	ug/g	97.85	1.800	217.3	233.3	225.3	7.12	n/a	14.90	n/a
S95T002175		A	Copper -ICP-Acid Digest	ug/g	97.19	2.600	18.35	20.30	19.32	10.1	n/a	14.90	n/a
S95T002175		A	Iron -ICP-Acid Digest	ug/g	96.91	1.690	3.76e+04	4.00e+04	3.88e+04	6.12	n/a	74.50	n/a
S95T002175		A	Potassium -ICP-Acid Digest	ug/g	98.67	4.02e-01	1.89e+03	2.11e+03	2.00e+03	11.0	n/a	447.0	n/a
S95T002175		A	Lanthanum -ICP-Acid Digest	ug/g	99.20	2.100	< 74.5000	<74.2000	n/a	n/a	n/a	74.50	n/a
S95T002175		A	Lithium -ICP-Acid Digest	ug/g	97.57	-9.00e+00	< 14.9000	<14.8400	n/a	n/a	n/a	14.90	n/a
S95T002175		A	Magnesium -ICP-Acid Digest	ug/g	94.42	2.200	1.14e+03	1.19e+03	1.16e+03	4.03	n/a	149.0	n/a
S95T002175		A	Manganese -ICP-Acid Digest	ug/g	95.51	3.000	374.9	400.5	387.7	6.61	n/a	14.90	n/a
S95T002175		A	Molybdenum -ICP-Acid Digest	ug/g	98.64	5.300	< 74.5000	<74.2000	n/a	n/a	n/a	74.50	n/a
S95T002175		A	Sodium -ICP-Acid Digest	ug/g	118.7	2.92e-01	1.39e+05	1.47e+05	1.43e+05	5.98	n/a	149.0	n/a
S95T002175		A	Neodymium -ICP-Acid Digest	ug/g	96.96	5.700	<149.0000	<148.400	n/a	n/a	n/a	149.0	n/a
S95T002175		A	Nickel -ICP-Acid Digest	ug/g	97.10	-4.00e+00	7.81e+03	8.34e+03	8.08e+03	6.56	n/a	29.80	n/a
S95T002175		A	Phosphorus -ICP-Acid Digest	ug/g	98.91	-1.37e+00	1.95e+04	2.07e+04	2.01e+04	6.10	n/a	298.0	n/a
S95T002175		A	Lead -ICP-Acid Digest	ug/g	95.74	2.440	2.75e+03	2.90e+03	2.83e+03	5.31	n/a	149.0	n/a
S95T002175		A	Sulfur -ICP-Acid Digest	ug/g	92.87	4.820	907.2	946.9	927.0	4.29	n/a	74.50	n/a
S95T002175		A	Antimony -ICP-Acid Digest	ug/g	91.30	2.000	<298.0000	<296.800	n/a	n/a	n/a	298.0	n/a
S95T002175		A	Selenium -ICP-Acid Digest	ug/g	95.48	2.600	<149.0000	<148.400	n/a	n/a	n/a	149.0	n/a
S95T002175		A	Silicon -ICP-Acid Digest	ug/g	261.5	1.04e-01	1.86e+03	1.97e+03	1.91e+03	5.64	n/a	74.50	n/a
S95T002175		A	Samarium -ICP-Acid Digest	ug/g	96.36	-1.12e+00	<149.0000	<148.400	n/a	n/a	n/a	149.0	n/a
S95T002175		A	Strontium -ICP-Acid Digest	ug/g	97.31	0.00e+00	9.54e+03	1.01e+04	9.82e+03	5.68	n/a	14.90	n/a
S95T002175		A	Titanium-ICP-Acid Digest	ug/g	95.93	3.900	46.14	48.60	47.37	5.21	n/a	14.90	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T002175		A	Thallium -ICP-Acid Digest	ug/g	93.66	2.800	<298.0000	<296.800	n/a	n/a	n/a	298.0	n/a
S95T002175		A	Uranium -ICP-Acid Digest	ug/g	94.84	-3.94e+00	5.03e+04	5.33e+04	5.18e+04	5.71	n/a	596.0	n/a
S95T002175		A	Vanadium -ICP-Acid Digest	ug/g	95.99	-2.00e+00	< 74.5000	<74.2000	n/a	n/a	n/a	74.50	n/a
S95T002175		A	Zinc -ICP-Acid Digest	ug/g	93.84	7.200	225.3	234.6	230.0	4.01	n/a	14.90	n/a
S95T002175		A	Zirconium -ICP-Acid Digest	ug/g	96.74	-6.00e+00	< 14.9000	<14.8400	n/a	n/a	n/a	14.90	n/a
S95T002355			Undecane (C11)	ug/g	n/a	n/a	J 8.770	22.100J	n/a	n/a	n/a	374.0	n/a
S95T002355			Tridecane (C13)	ug/g	n/a	n/a	J 20.300	55.300J	n/a	n/a	n/a	374.0	n/a
S95T002355			Tetradecane (C14)	ug/g	n/a	n/a	J 12.900	39.900J	n/a	n/a	n/a	374.0	n/a
S95T002355			Tri-n-butylphosphate	ug/g	n/a	n/a	U 374.00	264.00U	n/a	n/a	77.14	374.0	n/a
S95T002355			Pentadecane (C15)	ug/g	n/a	n/a	U 374.00	13.000J	n/a	n/a	n/a	374.0	n/a
S95T002355			Nonane (C9)	ug/g	n/a	n/a	U 374.00	264.00U	n/a	n/a	73.96	374.0	n/a
S95T002355			Dodecane (C12)	ug/g	n/a	n/a	J 20.000	53.100J	n/a	n/a	n/a	374.0	n/a
S95T002355			Decane (C10)	ug/g	n/a	n/a	U 374.00	264.00U	n/a	n/a	n/a	374.0	n/a
S95T002571		W	Bromide by Ion Chromatograph	ug/g	109.3	0.00e+00	< 2.31e2	<2.31e2	n/a	n/a	96.70	231.0	n/a
S95T002571		W	Chloride-IC-Dionex 4000i/4500	ug/g	109.5	5.600	1.71e+03	1.72e+03	1.72e+03	0.20	138.0	31.10	n/a
S95T002571		W	Fluoride-IC-Dionex 4000i/4500	ug/g	108.2	0.00e+00	< 8.66e1	96.40	n/a	n/a	109.3	23.80	n/a
S95T002571		W	Nitrite-IC - Dionex 4000i/4500	ug/g	108.1	0.00e+00	4.65e+04	4.65e+04	4.65e+04	0.00	59.00	196.0	n/a
S95T002571		W	Nitrate by IC-Dionex4000i/4500	ug/g	107.7	3.87e-01	9.12e+04	1.11e+05	1.01e+05	19.6	47.10	256.0	n/a
S95T002571		W	Oxalate by IC - Dionex 4000i	ug/g	115.8	0.00e+00	1.17e+03	1.91e+03	1.54e+03	48.1	107.9	192.0	n/a
S95T002571		W	Phosphate-IC-Dionex 4000i/4500	ug/g	107.0	9.38e-01	2.83e+04	2.79e+04	2.81e+04	1.42	90.10	542.0	n/a
S95T002571		W	Sulfate by IC-Dionex4000i/4500	ug/g	107.6	3.05e-01	2.96e+03	2.60e+03	2.78e+03	13.6	97.60	249.0	n/a

DISTRIBUTION SHEET

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