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ENGINEERING CHANGE NOTICE

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FINAL REPORT FOR TANK 241-BY-106, CORES 64, 65, and 121

Kevin E. Bell

Westinghouse Hanford Company, Richland, WA 99352
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Hanford Company**

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-103, REV. 1

ANALYTICAL SERVICES

**FINAL REPORT FOR TANK 241-BY-106,
CORES 64, 65, AND 121**

Project Coordinator: KEVIN E. BELL

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

by

**Westinghouse Hanford Company
Box 1970
Richland, Washington**

WHC-SD-WM-DP-103, REV. 1

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PART I consists of pages 1 through 3035, plus pages 24.1, 134.1 - 134.3, 582.1, 733.1 - 733.12, 875.1 - 875.23, 1991.1. Pages ii, 2, 136, 179, 222, 264, 287, 335, 376, 417, 418 and 1536 were intentionally left blank.

PART II consists of pages 2-1 through 2-182, plus pages 2-73.1, 2-73.2, 2-73.3 and 2-73.4 and pages 2-1.1, 2-4, 2-19, and 2-34, 2-100, 2-101, 2-102 and 2-103 were intentionally left blank.

PART III consists of pages 3-1 through 3-6, plus page 3-1.1 and 3-3 were intentionally left blank.

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NARRATIVE

WHC-SD-WM-DP-103, REV. 1

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FINAL REPORT FOR TANK 241-BY-106, ROTARY-MODE CORE SAMPLES 64, 65, AND 121.

1.0 INTRODUCTION AND SUMMARY

This is the final report for the 1995 tank 241-BY-106 (BY-106) rotary-mode characterization effort. It transmits additional extrusion information and analytical data not provided in the 45-, 60-, and 90-day reports (Bell 1996a, Bell 1995a, Bell 1995b) and includes a summary of all analytical results and all raw analytical data not reported in those references. Also included in this data package for each segment extruded are copies of the chain of custody forms, extrusion reports, photographs, and LABCORE sample numbers.

Core samples 64, 65, and 121 from tank BY-106 were received by the 222-S Laboratories. Cores 64 and 65 consisted of 13 segments while core 121 was incomplete and consisted of 10 segments. Core 64 was extruded, subsampled, and analyzed in accordance with the BY-106 tank characterization plan (TCP) (Schreiber 1994). Core 65 was extruded, subsampled, and analyzed in accordance with revision 1 of the BY-106 TCP (Schreiber 1995). Core 121 was extruded, subsampled, and analyzed in accordance with the BY-106 sampling and analysis plan (Bell 1996b). Drainable liquids and the field blanks were analyzed directly at the segment level. Solids were analyzed directly or following fusion, acid, or water digestion depending on the analysis. Selected analytical results from core 121 were evaluated against the Historical DQO (Simpson and McCain 1995) and indicate that the saltcake in tank BY-106 is of the waste type "BY Saltcake" (Agnew 1995).

2.0 SAMPLE RECEIPT AND EXTRUSION

Tank BY-106 was sampled using the rotary- and push-mode core sampling method. Portions of cores 64 and 65 were sampled in rotary mode. Core 121 and the majority of cores 64 and 65 were sampled in push mode using a rotary-mode core sampling truck. Cores 64 and 65, consisting of 13 segments each, were removed from the same location beneath riser 10B of tank BY-106 and transported to the 222-S Laboratory between November 17, 1994 and January 24, 1995. In addition, a field blank was created and also delivered to the 222-S Laboratory. Core 121, consisting of 10 segments plus segments 10A and 10B, was removed from riser 5 and delivered to the 222-S Laboratory between December 15, 1995 and January 2, 1996. A field blank was also created for core 121. Segments 11, 12, and 13 were not recovered from core 121 due to hard waste, through which the drill string could not be pushed. Copies of the chain of custody forms associated with each of the core samples are provided as Attachment 1.

Extrusion details for cores 64, 65, and 121 are respectively provided in Tables 1, 2, and 3. Additional information is available in extrusion reports generated for each extrusion. Copies of these reports are included as Attachment 2. A narrative describing the results of each extrusion is available in Bell (1995a) and Bell (1996a).

Video recordings and/or color photographs were taken of each segment immediately following extrusion. Black and white photocopies of the video prints or photographs are included as Attachment 3, however the originals are kept on file at the 222-S Laboratory.

Table 1. Sample Receipt and Extrusion Information for BY-106, Core 64.

Seg.	Date Sampled	Date Received	Date Extruded	Liner Liquid (g)	Drain. Liq. Recovered (g)	Solids Recovered (g)	Sample Description
1	11/17/94	11/21/94	11/30/94	0.0	0.0	15.95 (upper half)	Extruded was a light-yellow, creamy slurry followed by off-white saltcake with a slushy texture. Both were collected in a single jar.
2	11/21/94	11/21/94	11/30/94	0.0	0.0	125.06 (upper half)	Extruded was a greenish-gray slurry, then 3 in. of off-white, chunky saltcake coated with the colored slurry. Both materials were collected in a single jar.
3	11/21/94	11/28/94	12/1/94	0.0	144.32	37.59 (slurry)	Collected pale olive-colored drainable liquid followed by an even paler colored slurry. The slurry was grainy from the presence of solids.
4	11/23/94	11/28/94	12/2/94	0.0	0.0	128.01 (lower half) 189.31 (upper half)	Collected from the upper and lower halves of the segment a grayish-brown, wet saltcake with a slushy, grainy texture. Mixed with the upper half saltcake was a darker colored slurry. The sample was partitioned into upper and lower halves.
5	12/2/94	12/5/94	12/6/94	0.0	0.0	2.43 (upper half)	The solids were wet, slush-like, and pale yellow in color. They only appeared at the very end of the extrusion.
6	12/2/94	12/5/94	12/7/94	0.0	17.23	2.83 (upper half)	Olive-green colored drainable liquid was obtained first, followed by no sample until the very end of the extrusion when a small amount of wet, slushy, pale yellow solids were observed.
7	12/5/94	12/6/94	12/8/94	0.0	0.0	0.0	The sampler piston was found lodged in the valve housing, which did not allow sample collection or valve closure.
8	12/5/94	12/6/94	12/8/94	0.0	0.0	114.83 (lower half) 110.82 (upper half) 162.52 (slurry)	The sample was a mixture of wet saltcake and slurry. The grey, slushy saltcake was partitioned into upper and lower halves. The darker colored slurry, containing some lumps of saltcake, was placed into a separate container.
9	12/5/94	12/9/94	12/9/94	0.0	0.0	73.11 (upper half)	Collected from the upper half of the sampler was pale yellow, grainy, saltcake mixed with some slurry. All material was placed in one jar.
10	12/20/94	12/21/94	12/21/94	0.0	244	146 (lower half) 28 (upper half)	Pale green, drainable liquid was recovered first followed by light yellow, wet saltcake from the upper and lower halves of the sampler.
11	12/21/94	12/22/94	12/27/94	0.0	0.0	37.5 (upper half)	Collected from the upper half of the sampler were dry, hard, crystalline solids ranging in color from light gray to white. The entire sample was homogenized with a mortar and pestle.
12	12/21/94	12/22/94	12/27/94	5.0	0.0	96.0 (upper half)	Wet saltcake was collected from the upper and lower halves. It was moist and slush-like, appearing light gray to white in color. All of the sample was homogenized with a mortar and pestle.
13	12/21/94	12/22/94	12/27/94	0.0	0.0	12.8 (upper half)	The off-white solids were dry, crystalline, and hard similar to those in segment 11. All sample was homogenized with a mortar and pestle.
FB	12/21/94	12/21/94	12/27/94	0.0	287	0.0	Collected clear, colorless, drainable liquid in two sample jars.

Table 2. Sample Receipt and Extrusion Information for BY-106, Core 65.

Seg.	Date Sampled	Date Received	Date Extruded	Liner Liquid (g)	Drain. Liq. Recovered (g)	Solids Recovered (g)	Sample Description
1	1/18/95	1/20/95	1/27/95	0.0	438.46	11.70 (upper half)	Collected light yellow drainable liquid, which was less turbid than the liquid from segments 4, 5, 6, 7, and 8. Last to extrude from the sampler was slushy, light yellow saltcake.
2	1/19/95	1/20/95	1/27/95	0.0	428.10	22.40 (upper half)	Collected turbid, light yellow-green drainable liquid followed by slushy, light yellow saltcake from the upper half of the sampler.
3	1/19/95	1/20/95	1/30/95	0.0	429.70	21.43 (upper half)	Collected turbid, light yellow-green drainable liquid followed by slushy, light yellow saltcake from the upper half of the sampler.
4	1/20/95	1/20/95	1/25/95	0.0	411.74	42.01 (upper half)	Opaque, yellow drainable liquid was recovered from the sampler before slushy, light yellow saltcake was collected from the upper half of the sampler.
5	1/20/95	1/20/95	1/26/95	0.0	409.48	34.58 (upper half)	Turbid, yellow-green drainable liquid was recovered first. Slushy, light yellow saltcake was recovered next from the upper half.
5A	1/20/95	1/20/95	1/30/95	0.0	0.0	0.30 (upper half)	No material was extruded from the sampler. A small amount of white, crusty solids were recovered from the sampler piston.
6	1/20/95	1/23/95	1/26/95	0.0	423.08	29.38 (upper half)	The last material to extrude from the sampler was slushy, light yellow saltcake. Collected first was light yellow, drainable liquid.
7	1/20/95	1/23/95	1/27/95	0.0	422.54	26.74 (upper half)	The last material to extrude from the sampler was slushy, light yellow saltcake. Collected first was light yellow, drainable liquid.
8	1/20/95	1/23/95	1/26/95	0.0	394.25	44.15 (upper half)	The last material to extrude from the sampler was slushy, light yellow saltcake. Collected first was light yellow, drainable liquid.
9	1/23/95	1/25/95	2/7/95	0.0	0.0	9.56 (upper half)	Recovered from the upper half of the segment was light yellow-green saltcake and no drainable liquid.
10	1/24/95	1/25/95	2/6/95	0.0	363.65	90.32 (upper half)	Collected first was turbid, yellow-green drainable liquid. Solids were observed towards the end of the extrusion. The first solids to appear were hard, crystalline chunks that ranged in color from white to gray. Remaining solids were wet, yellow-green saltcake.
11	1/24/95	1/25/95	2/6/95	0.0	82.73	4.91 (upper half)	Recovered solids were crystalline and light yellow in color. The drainable liquid was yellow-green in color and turbid.
12	1/24/95	1/25/95	2/3/95	0.0	44.25	0.0	The light brown, turbid liquid was different in appearance than the light yellow-green liquid obtained from the previous segments.
13	1/24/95	1/25/95	2/3/95	0.0	<5 ml. (not collected)	57.15 (sludge) 74.49 (saltcake)	Collected approx. 5 inches of solids from the upper half of the sampler. The first two inches was a dark brown sludge and the final three inches were composed white salt cake material coated with sludge. The two types of material separated clearly and were collected in separate jars.

Table 3. Sample Receipt and Extrusion Information for BY-106, Core 121.

Seg.	Date Sampled	Date Received	Date Extruded	Liner Liquid (g)	Drain. Liq. Recovered (g)	Solids Recovered (g)	Sample Description
1	12/15/95	12/18/95	12/20/95	0.0	0.0	10.6 (upper half)	Extruded approx. 2.5 cm of dry, crumbly salicake, which was off white in color.
2	12/15/95	12/18/95	12/20/95	0.0	0.0	101.1 (upper half)	All sample was collected in the last 11-12 cm of the extrusion as damp salicake with a fine texture. It was unlike most other salicake observed. The color was off white except for the upper 2.5 cm, which was grey.
3	12/15/95	12/18/95	12/20/95	0.0	0.0	209.8 (upper half) 88.9 (lower half)	No sample extruded the first 17-18 cm. The remainder of the sampler was full of damp, crumbly salicake that retained its shape. It was medium grey with 3 bands of white material 1-2 cm wide and 6-8 cm apart. The texture was roughly that of fine sand. The last 23 cm to extrude was taken as the upper half portion and the remainder was taken as the lower half portion.
4	12/15/95	12/18/95	12/20/95	0.0	0.0	220.2 (upper half) 135.4 (lower half)	No sample extruded in the first 13 cm. The rest of the sampler was full of damp, crumbly salicake with the texture of fine sand. The first 11-12 cm and the last 2.5 cm was medium grey in color. The remainder of the sample was striated with alternating rings of grey and white salicake. The last 23 cm to extrude was taken as the upper half portion and the balance was taken as the lower half portion.
5	12/16/95	12/18/95	12/20/95	0.0	0.0	234.3 (upper half)	Extruded from the upper 23 cm of the sampler was damp salicake that retained its shape. It was light to medium grey in color with the texture of fine sand. The upper 5-6 cm of sample was slightly darker than the remaining sample.
6	12/16/95	12/18/95	12/20/95	0.0	0.0	286.1 (upper half)	No sample was found in the first 20 cm of the extrusion. The remainder of the sampler was full of grey, damp, salicake that retained its shape in the tray. The sample had the texture of fine sand.
7	12/16/95	12/18/95	12/21/95	0.0	0.0	234.9 (upper half)	The upper 23 cm of the sampler was full of damp, grey, salicake that retained its shape. The texture was slightly grainier than that from the previous segments. A 1 cm plug of sample found in the volume in front of the valve was discarded.
8	12/18/95	12/18/95	12/21/95	0.0	0.0	261.8 (upper half) 88.4 (lower half)	Extruded first was 5 cm of very wet, off-white salicake followed by a 2.3 cm gap then 8-9 cm of medium grey, drier salicake. After another gap of 1-8 cm there was 27 cm of salicake similar to that extruded immediately before it, but the texture was grainier and appeared less homogenous than material in the preceding segments.
9	12/18/95	12/18/95	12/21/95	0.0	0.0	29.5 (upper half)	No sample was observed until the very end of the extrusion when approximately 2.5 cm of damp, dark grey, granular salicake extruded.
10	12/18/95	12/22/95	1/5/96	0.0	0.0	158.6 (upper half)	The upper 18 cm of the sampler were filled with damp, medium grey salicake that retained its shape. The upper 2-3 cm of sample was dark grey. The entire sample had the texture of fine sand.
10A	12/18/95	12/22/95	1/5/96	0.0	0.0	4.1 (upper half)	There was about 1 cm of sample bound to the sampler piston. It was damp, dark grey, and appeared to be salicake, although it could have been sludge.
10B	12/29/95	1/3/96	1/27/96	5.0	0.0	96.0 (upper half)	Wet salicake was collected from the upper and lower halves. It was moist and slush-like, appearing light grey to white in color. All of the sample was homogenized with a mortar and pestle.
FB	1/2/96	1/3/96	1/27/96	0.0	287	0.0	Collected clear, colorless, drainable liquid in two sample jars.

3.0 SUBSAMPLING

As indicated above, material from each extruded segment was subsampled into sample jars as directed in Schreiber (1994) and Schreiber (1995). Aliquots for analysis were removed from these jars and placed into sample vials as documented in a laboratory notebook (WHC 1994). The identity of the sample jars, aliquot vials, and subsample and aliquot weights associated with each sample are summarized in Tables 1, 2, and 3.

4.0 ANALYTICAL RESULTS

Analytical results required by the BY-106 TCP have been performed and reported in Bell (1996a, 1995a, 1995b, and 1995c). The raw data not previously reported is provided in this data package and additional analyses performed but not previously reported are reported here. The analyses reported here on each matrix of each core are specified in Table 4. Analytes whose concentrations were determined on an opportunistic basis are noted. These additional analytes required relatively little additional effort to obtain. For example, Cs-137 was required on several samples and is determined by gamma energy analysis (GEA). The additional analytes of Eu-154, Eu-155, and Co-60, obtained concomitantly with analysis for Cs-137, were also obtained with relatively little additional effort.

Analytical results were tracked and reported using the laboratory information management system known as LABCORE. Each aliquot taken for analysis has a unique sample number and sample identification. A listing of each LABCORE sample number and affiliated test associated with this sampling and analysis project is provided as Attachment 4. A description of the test acronyms is also provided.

All analytical results, whether previously reported or not, are presented in Tables 7-10. These tables include the LABCORE sample numbers. Column 2 of the tables indicate the sample preparation used, if any. Analyses on fused samples are marked with a "Z" if the fusion was carried out in a zirconium crucible and with a "F" if the fusion was carried out in a nickel crucible. Analyses of acid-digested samples are marked with an "A", analyses of water digested samples are marked with a "W" except for samples analyzed by ICP or GEA, which are marked with "I", and "R" respectively. Samples marked with "D" indicate an acid dilution was performed on the sample before analysis.

4.1 FUSION DIGESTIONS

Selected sludge and saltcake samples from cores 64, 65, and 121 were prepared by potassium hydroxide fusion digestion according to procedure LA-549-141, Rev. C-2 (cores 64 and 65) or Rev. E-0 (core 121). Duplicate fusion digestions were performed on aliquots of each sample.

Table 4. Tank BY-106 Analyses Not Previously Reported.

CORE	MATRIX	METHOD	ANALYTE(S)
64	Drainable Liquid	ICP	Ca ¹ , P ¹
		IC ²	Br, Cl, F, NO ₂ , NO ₃ , oxalate ¹ , PO ₄ , SO ₄
		Titrimetry	hydroxide
	Saltcake and Slurry	Coulometry	TIC ¹
		Beta counting	Sr-90 ³
		GEA	Cs-137 ³
	Field Blank	Coulometry	TOC, TIC
		ICP	Al, Ca, Fe, Na, P
		TGA	percent moisture
		Gravimetry	specific gravity
		Electrode	pH
		Titrimetry	hydroxide
		DSC	energetics
		Beta counting	Sr-90
		Alpha counting	Pu-239/240, Am-241
		GEA	Cs-137
		IC	Br, Cl, F, NO ₂ , NO ₃ , PO ₄ , SO ₄
65	Saltcake ⁴	ICP	Al ¹ , Ca ¹ , Cr ¹ , Fe ¹ , Mn ¹ , Na ¹ , P ¹ , Zn ¹ , Zr ¹ , U
	Sludge ⁴	ICP	Al ¹ , Ca ¹ , Cr ¹ , Fe ¹ , Na ¹ , P ¹ , Zn ¹ , Zr ¹
		Coulometry	TIC ¹
121	Drainable Liquid	distillation	CN
		EDTA addition	CN
		Coulometry	TOC, TIC ¹
		Gravimetry	specific gravity
		IC	Br, Cl ¹ , F ¹ , formate, NO ₂ ¹ , NO ₃ ¹ , oxalate, PO ₄ ¹ , SO ₄ ¹

CORE	MATRIX	METHOD	ANALYTE(S)
121	Drainable Liquid	ICP	Ag ¹ , Al ¹ , As ¹ , B ¹ , Ba ¹ , Be ¹ , Bi ¹ , Ca ¹ , Cd ¹ , Ce ¹ , Co ¹ , Cr ¹ , Cu ¹ , Fe ¹ , K ¹ , La ¹ , Li, Mg ¹ , Mn ¹ , Mo ¹ , Na ¹ , Nd ¹ , Ni, P ¹ , Pb ¹ , S ¹ , Sb ¹ , Si ¹ , Se ¹ , Sm ¹ , Sr ¹ , Ti ¹ , Th ¹ , U ¹ , V ¹ , Zn ¹ , Zr ¹
	Saltcake	Coulometry	TOC, TIC ¹
		IC	acetate, Br, Cl ¹ , F ¹ , formate, NO ₂ ¹ , NO ₃ , oxalate, PO ₄ ¹ , SO ₄
		ICP-fusion	Al, B ¹ , Bi, Ba ¹ , Ca ¹ , Cr ¹ , Fe ¹ , Li, Na, Ni, Mn ¹ , P ¹ , Si ¹ , U, Zn ¹ , Zr ¹
		ICP-acid	Ag ¹ , Al, As ¹ , B ¹ , Ba ¹ , Be ¹ , Bi ¹ , Ca ¹ , Cd ¹ , Ce ¹ , Co ¹ , Cr ¹ , Cu ¹ , Fe ¹ , K ¹ , La ¹ , Li, Mg ¹ , Mn ¹ , Mo ¹ , Na, Nd ¹ , Ni, P ¹ , Pb ¹ , S ¹ , Sb ¹ , Si, Se ¹ , Sm ¹ , Sr ¹ , Ti ¹ , Th ¹ , U ¹ , V ¹ , Zn ¹ , Zr ¹
		beta counting	Sr-90
		EDTA addition	CN
		Phosphorescence	U
		GEA	Cs-137, Am-241 ¹ , Co-60 ¹ , Eu-154 ¹ , Eu-155 ¹ , Np-237 ¹
	Core Composite	Gravimetry	bulk density
		TGA	percent moisture
		alpha counting	total alpha
		beta counting	total beta, Sr-90
		Phosphorescence	U
		IC	Br, Cl ¹ , F ¹ , NO ₂ ¹ , NO ₃ , oxalate ¹ , PO ₄ ¹ , SO ₄
		ICP-fusion	Al, B ¹ , Ba ¹ , Ca ¹ , Fe ¹ , Mn ¹ , Ni, Si, Zn ¹ , Zr ¹
		ICP-acid	Ag ¹ , Al, As ¹ , B ¹ , Ba ¹ , Be ¹ , Bi ¹ , Ca ¹ , Cd ¹ , Ce ¹ , Co ¹ , Cr ¹ , Cu ¹ , Fe ¹ , K ¹ , La ¹ , Li ¹ , Mg ¹ , Mn ¹ , Mo ¹ , Na, Nd ¹ , Ni ¹ , P ¹ , Pb ¹ , S ¹ , Sb ¹ , Si, Se ¹ , Sm ¹ , Sr ¹ , Ti ¹ , Th ¹ , U ¹ , V ¹ , Zn ¹ , Zr ¹
		ICP-water	Ag ¹ , Al, As ¹ , B ¹ , Ba ¹ , Be ¹ , Bi ¹ , Ca ¹ , Cd ¹ , Ce ¹ , Co ¹ , Cr ¹ , Cu ¹ , Fe ¹ , K ¹ , La ¹ , Li ¹ , Mg ¹ , Mn ¹ , Mo ¹ , Na, Nd ¹ , Ni ¹ , P ¹ , Pb ¹ , S ¹ , Sb ¹ , Si, Se ¹ , Sm ¹ , Sr ¹ , Ti ¹ , Th ¹ , U ¹ , V ¹ , Zn ¹ , Zr ¹

CORE	MATRIX	METHOD	ANALYTE(S)
121	Core Composite	GEA	Cs-137, Co-60 ¹ , Eu-154 ¹ , Np-237 ¹
	Field Blank	Coulometry	TOC
		TGA	percent moisture
		IC	Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄
		ICP	Al, Ca, Cr, Fe, K, Mg, Mn, Na, Ni, Zr

¹ Analyte concentrations determined on an opportunistic basis

² Determined on segment 3 only.

³ Analyte activity measured to ascertain radiological hazard of sample shipment.

⁴ Only segments 11, 12, and 13 were analyzed per Bratzel (1995).

4.2 ACID DIGESTIONS

Selected saltcake samples from core 121 were prepared by acid digestion according to procedure LA-505-159, Rev. D-0. There was insufficient sample for acid digestions on samples from segments 1 and 10A. Duplicate acid digestions were performed on aliquots of each sample.

4.3 WATER DIGESTIONS

Selected saltcake samples from cores 64, 65, and 121 were prepared by water digestion according to procedure LA-504-101, Rev. C-2 (cores 64 and 65) or Rev. E-0 (core 121). Duplicate water digestions were performed on aliquots of each sample.

4.4 TGA (MOISTURE CONTENT)

The TGA results on subsegment aliquots from cores 64, 65, and 121 were respectively reported in Bell (1995a), Bell (1995b), and Bell (1996a). All results are presented in Table 7. Analysis of the core 121 composite was performed according to procedure LA-560-112, Rev. A-2. The core 121 composite averaged 17.09% moisture.

4.5 TOTAL ORGANIC CARBON

Analyses for TOC were performed by direct persulfate oxidation on all saltcake samples from cores 64 and 65, on the sludge sample from core 65, and on the drainable liquid sample from core 121 per procedure LA-342-100, Rev. A-0 (cores 64 and 65) or Rev. C-0 (core 121). The

furnace oxidation method using procedure LA-344-105, Rev. B-3 was used on the drainable liquid and field blank samples from core 64. The TOC results on the core 64 drainable liquids were reported in Bell (1995c) and the remaining results on cores 64 and 65 were reported and discussed in Bell (1995a). Analyses for TOC in core 121 were carried out to satisfy the organic DQO (Hunt 1995). The TOC results from all cores are shown in Table 7.

Segment 1 of core 121 had the lowest level of TOC at 782 ug/g. The highest concentration was 5920 ug/g found in segment 9. These values are far below the programmatic action limit of 30,000 ug/g. There were significant differences in measured TOC levels in some adjacent subsamples. For example, the TOC in segment 2 was measured at 4505 ug/g, which is nearly a six fold increase from segment 1. There was a slightly smaller difference between segment 10 (1120 ug/g) and segment 10A (5020 ug/g). The drainable liquid from segment 10B had a TOC content of 2460 ug/mL indicating that a significant fraction of the TOC is soluble. This is consistent with the oxalate, formate, and acetate concentration results discussed in Section 4.15. Results on the core 121 field blank were below the detection limit of 40 ug/g.

The quality control (QC) data indicate that the fluctuation of TOC results from subsegment to subsegment were most likely due to heterogeneity in the saltcake rather than from any analytical problems. Spike recovery and RPD data were within the limits (20% or less for RPD and $\pm 20\%$ spike recovery) specified in Bell (1996) with the exception of two samples. Sample S95T004169 from the upper half of segment 3 had an RPD of 23.1% and sample S95T004172 from the lower half of segment 4 had an RPD of 40.3% and a spike recovery of 127.8%. No re-runs were initiated because the results were far below the action limit of 30,000 ug/g. Sample S95T004168 from segment 2 was re-run due to a high RPD value (91.6%) and spike recovery (151.4%). The re-run results were satisfactory.

4.6 TOTAL INORGANIC CARBON

Analyses for TIC were performed directly on saltcake and drainable liquid samples from cores 64, 65, and 121, and on sludge samples from core 65 using procedure LA-342-100, Rev. A-0 (cores 64 and 65) or Rev. C-0 (core 121). Analysis for TIC was only required on the drainable liquid from core 64. The results from those analyses were reported in Bell (1995c). The remaining analyses were not required, however the inorganic carbon must be sparged from the sample during TOC determination, therefore little additional effort is required to collect TIC data. There were no programmatic QC requirements with respect to these data, thus QC for these data fell under the jurisdiction of the Characterization Project in general and the 222-S laboratory in particular, respectively specified in Sparks (1995) and DOE (1995).

Most of the TIC levels from core 64 saltcake were consistent. Results ranged from a high of 12,300 ug/g from the upper half of segment 4 to 338.0 ug/g in segment 13. Most of the results were between 600 and 2600 ug/g. Only segment 13 of core 65 was measured for TIC. The sludge from this segment averaged 5580 ug/g. No sludge was recovered from cores 64 or 121, therefore no comparison of this result with the other core samples is possible. For core 121, there was a much greater variation in the results compared to core 64. Generally, there was not

much correlation between the results on saltcake from segments 64 and 121. Results from core 121 were higher; they ranged from a high of $3.46\text{E}+06$ on segment 1 to 1,130 on the lower half of segment 10B. This result was similar to the result of 1,170 and 1,700 from the upper and lower halves of segment 10 from core 64.

4.7 CYANIDE ANALYSES

Analyses for cyanide were performed directly by EDTA addition on all saltcake samples from cores 64 and 121, and on the sludge sample from segment 13 of core 65 per procedure LA-695-102, Rev. C-0 (cores 64 and 65) or procedure LA-695-103, Rev. A-0 (core 121). Results are presented in Table 7. Analysis on the drainable liquid from segment 10B of core 121 was performed directly following distillation according to procedure LA-695-102, Rev. E-0. Results from cores 64 and 65 were reported and discussed in Bell (1995a). Analysis for cyanide on core 121 was required by the ferrocyanide DQO document (Meacham 1995) since tank BY-106 is known to have received ferrocyanide sludge.

The level of cyanide in the waste recovered from core 121 is low. The drainable liquid in segment 10B had the highest concentration of cyanide at 43.45 ug/mL . Of the saltcake samples, segment 1 had the highest concentration at 17.75 ug/g . The lowest concentration was found in segment 7 where the level was measured at 6.040 ug/g .

The RPD on duplicate results for the cyanide analyses were higher than the 10% limit on samples from segments 3 (10.9%), 4 (17.7%), 7 (18.9%), and 10B (23.3%). Spike recoveries were outside the 90-110% recovery limit on samples from segments 2 (89.6%) and 4 (88.4%). Because the highest concentration of cyanide measured was 900 times below the $39,000\text{ ug/g}$ notification limit, no re-runs were requested.

4.8 HYDROXIDE

The hydroxide ion concentration was determined by titration per procedure LA-211-102, Rev. B-1 on the drainable liquids from core 64. All results were reported in Bell (1995c) except those from a second aliquot (sample S95T000228) from the segment 3 drainable liquid that was re-run for the IC analytes (see Section 4.15). The hydroxide result on this sample was only slightly lower than the initial result from segment 3 at $30,900\text{ ug/mL}$ compared to $32,400\text{ ug/mL}$ on sample S95T000004.

4.9 INDUCTIVELY COUPLED PLASMA

Concentrations of selected metals were determined by inductively coupled plasma/atomic emission spectroscopy (ICP) using procedure LA-505-151, Rev. A-1 (cores 64 and 65) or Rev. D-3 (core 121) (Analytical Research Laboratory instrument); or procedure LA-505-161, Rev. A-1 (Thermo Jarrell Ash instrument). Schreiber (1994), Schreiber (1995), and Bell (1996b) only specify procedure LA-505-151, however procedure LA-505-161 is analytically equivalent and

is used interchangeably with the specified procedure. All ICP results are presented in Table 8. Analyses were performed directly following acid dilution on liquid samples. For saltcake and sludge samples, analyses were performed on fusion, acid, or water digestions depending on the requirements of the characterization documentation (Bell 1996b, Schreiber 1994, Schreiber 1995).

Only the analytes of Li and Ni were required to be reported on cores 64 and 65, and Li was only required where the chain of custody form indicated that hydrostatic head fluid or wash water containing lithium bromide (LiBr) was used. The Li and Ni results on cores 64 and 65 were reported and discussed in Bell (1995a). For core 121, the ICP analytes of Al and Na were required for historical waste modeling per the historical data quality objective document (Simpson and McCain 1995), Li was required to evaluate contamination by wash water used to clear the drill string, and Ni was required per the ferrocyanide DQO (Meacham 1995). Additional ICP data from cores 64, 65, and 121 were collected on an opportunistic basis and are reported here. Because these data were not identified in any DQO document, there were no programmatic QC requirements with respect to these data. Therefore, QC for these data fell under the jurisdiction of the Characterization Project in general and the 222-S laboratory in particular, respectively specified in Sparks (1995) and DOE (1995). Caution should be used when evaluating the Zr data on samples prepared by fusion digest in a zirconium crucible, or when evaluating the Ni data on samples prepared by fusion digest in a Ni crucible. Results for the metal of which the crucible is made were most likely biased high.

4.9.1 Al Analysis

Analyses for Al were performed on the drainable liquid from core 64, on fusion digests of subsamples from segments 11 and 13 of core 65, on fusion digests of all recovered subsamples of core 121, and on acid digests of all recovered subsamples of core 121 except the upper halves of segments 1 and 10B due to insufficient sample. Because the Al concentration was not determined on any saltcake from core 64; segments 11, 12, and 13 were not recovered in core 121; and no drainable liquid was recovered from segments 3 and 6 of core 121, the only cross-core Al comparison possible is with drainable liquid from segment 10 of core 64 and segment 10B of core 121. The liquid from segment 10B of core 121 averaged 61,400 ug/mL compared to 36,600 ug/mL from segment 10 of core 64. Results from the other drainable liquids in core 64 are comparable at 32,200 ug/mL from segment 3 and 36,800 ug/mL from segment 6.

Results on the fusion- and acid-digested subsamples from core 121 were comparable. The acid results were generally 83-90% of the fusion results. This is not unusual as the fusion digestion is normally more comprehensive with respect to effecting sample dissolution. Some of the core 121 Al results appeared to be unusually high relative to results on the other subsamples. Most results were in the 8,000 - 25,000 ug/g range, however fusion results from the upper halves of segments 1, 2, and 9 measured 44,800, 117,000, and 69,000 ug/g respectively. The core composite result was in line with most of the other subsegments at 14,800 ug/g.

Although no sludge material was recovered from cores 64 and 121, a small amount of sludge was recovered from segment 13 of core 65 along with saltcake. Both waste types were fused and analyzed for Al with results shown in Table 8. Sample numbers S95T000100 and S95T000322 represent the saltcake while sample S95T000101 represents the sludge. The sludge is more concentrated in Al by a factor of nearly 3, with a result of 30,800 ug/g. Sample S95T000322 is a second saltcake aliquot removed and analyzed by ICP because duplicate determinations were not performed on sample S95T000100.

There are several QC issues that should be discussed on the Al determinations. Samples S95T004181 and S95T004187 had high RPD values of 152 and 66.1% respectively. Aliquots of the respective subsamples were removed, re-digested, and analyzed under the sample numbers S96T001415 and S96T001378. The results from sample S96T001415 had an RPD of 1.71%, however the results from sample S96T001378 worsened, with an RPD of 148%. In addition, the Al result jumped from 9,920 ug/g on the initial run to 56,900 ug/g on the re-run. The initial result is more in line with the results of the adjacent subsamples and the acid digest. Spike recoveries on samples S95T004191, S95T004196, S96T000108, S95T000228, and S96T000258 are out of the 90-110% range specified in Bell (1996b). The first three samples are acid digests and the last two samples are water digests. A spiked sample can only reasonably be evaluated for recovery when the spiked concentration is at least 25% of the sample value. Because of the high Al concentrations and the relatively low dilution factors associated with acid- and water-digested samples compared to fusion digested samples, the spike does not meet the 25% criterion and, thus, should not be evaluated. Spike recoveries on the fused samples were acceptable.

4.9.2 Ni Analyses

Analyses for Ni were performed on fusion digests of all recovered subsamples of core 121, and on acid digests of all recovered subsamples of core 121 except the upper halves of segments 1 and 10B due to insufficient sample. Results on the fusion-digested subsamples from core 121 were all below the detection limit except the aliquot from segment 10A. This sample yielded an average result of 571.0 ug/g, which is roughly ten times higher than concentrations found in the acid digest of the same sample. The results were re-checked by the chemist and verified to be correct. Acid-digested samples ranged from 16.85 to 75.75 ug/g. Typical detection limits on the fusion digestate were in the 270 to 479 ug/g range. No Ni was detected in the drainable liquid from segment 10B of core 121 where the detection limit was 28.0 ug/mL. Results from the core composite were consistent with the results on the individual subsegments. The fusion digest measured <386 ug/g, the acid digest measured 37.55 ug/g, and the water digest was found to contain Ni at 19.70 ug/g.

Six samples had RPD values that exceeded the TCP limit of 10%: sample S95T004193 at 20.1%, sample S95T004196 at 14.1%, sample S95T004197 at 12.7%, sample S95T004198 at 11.6%, sample S95T004201 at 10.2%, and S96T000381 at 47.7%. The action limit for Ni analysis is 8,000 ug/g. Because the sample concentrations were far below that limit and the RPD values were not excessive, no re-runs were initiated.

4.9.3 Na Analyses

Analyses for Na were performed on the drainable liquid from core 64, on fusion digests of subsamples from segments 11 and 13 of core 65, on fusion digests of all recovered subsamples of core 121, and on acid digests of all recovered subsamples of core 121 except the upper halves of segments 1 and 10B due to insufficient sample. Because the Na concentration was not determined on any saltcake from core 64; segments 11, 12, and 13 were not recovered in core 121; and no drainable liquid was recovered from segments 3 and 6 of core 121, the only cross-core comparison possible is with drainable liquid from segment 10 of core 64 and segment 10B of core 121. The liquid from segment 10B of core 121 averaged 256,000 ug/mL compared to 150,600 ug/mL from segment 10 of core 64. Results from the other drainable liquids in core 64 are comparable at 136,200 ug/mL from segment 3 and 147,000 ug/mL from segment 6.

With two exceptions, results on the fusion-digested subsamples from core 121 were slightly higher than those on acid-digested samples. The acid results were typically 85-95% of the fusion results. As with Al, higher results on the fusion digestion are not unusual since a fusion digest is normally expected to bring about a more complete dissolution of the sample. There was little variance in the Na results from core 121. Results on the fusion digests ranged from 173,000 ug/g in the upper half of segment 2 to 250,000 ug/g found in the lower half saltcake from segment 4. The highest result of 257,000 ug/g on a fusion digest was found in the core composite as was the highest result of all samples, found in the water digest and measuring 282,000 ug/g. Acid-digested samples ranged from a low of 146,000 ug/g in segment 2 to a high of 226,000 ug/g found in the lower half of segment 4.

Although no sludge material was recovered from cores 64 and 121, a small amount of sludge was recovered from segment 13 of core 65 along with saltcake. Both waste types were fused and analyzed for Na with results shown in Table 8. Sample numbers S95T000100 and S95T000322 represent the saltcake while sample S95T000101 represents the sludge. Two aliquots from the saltcake subsample were fused and analyzed, albeit with quite different results. Sample S95T000100 had a value of 211,000 ug/g while sample S95T000322, which was run because sample S95T000100 was not run in duplicate, had a value of only 71,800 ug/g. The reason for the discrepancy is not known. Results from the sludge average 130,000 ug/g.

The QC issues surrounding the Na analyses center around the poor spike recoveries and standard recoveries greater than 110% on the acid-digested samples. Most of the spike recoveries were out of the 90-110% range specified in Bell (1996b). As with the Al analyses, a spiked sample can only reasonably be evaluated for recovery when the spiked concentration is at least 25% of the sample value. Because of the very high Na concentrations, the spike does not meet the 25% criterion and, thus, should not be evaluated. All Na determinations on acid digests from core 121 were performed in three batches. The standard recoveries for two of the batches was greater than 110% at 110.6% and 112.2%. Because Na is a ubiquitous contaminant, these standard recoveries were not unusual and no re-runs were initiated. Three samples had RPD values greater than the required 10%. Sample S95T004187 had an RPD of 16.9%. A second aliquot from the same subsample was removed, digested, and analyzed under sample number S96T001378. The RPD worsened to 51.7%. The average results of both samples were very

close, measuring 200,000 ug/g and 196,000 ug/g respectively. Sample S96T000253 from the lower half of segment 10 of core 121 had an RPD of 40.2% and sample S96T000381 on the core composite had a RPD of 16.7%. These samples were not re-run since the 10% criterion was not grossly exceeded in any case and because the sample clearly had enough Na to allow classification as "BY saltcake" per Simpson and McCain (1995). (See Section 5.0.)

4.9.4 Li Analyses

Analyses for Li were performed on the on fusion digests of all recovered subsamples of core 121 and on acid digests of all recovered subsegments of core 121 except the upper halves of segments 1 and 10B due to insufficient sample. All results from core 121 were below the detection limit. The detection limit for Li on fusion digests was generally between 150 and 250 ug/g. The Li detection limit on acid digests was much lower; around 4-6 ug/g. These results indicate that there was no significant intrusion or contamination by any water added to facilitate the core sampling process provided that water contained LiBr added as a tracer.

4.10 GAMMA ENERGY ANALYSIS

Activities of the gamma-emitting radionuclides were determined by GEA using procedure LA-548-121, Rev. D-1 (core 64 and 65) or Rev. E-0 (core 121). All GEA results are presented in Table 9. Analyses were performed directly following acid dilution on liquid samples. For saltcake and sludge samples, analyses were performed on fusion, acid, or water digestions depending on the requirements of the characterization documentation (Bell 1996b, Schreiber 1994, Schreiber 1995).

4.10.1 Cs-137

While the GEA procedure will detect numerous gamma-emitting radionuclides, only the analyte Cs-137 was required to be reported. However, additional GEA data from cores 65 and 121 were collected on an opportunistic basis; the core 121 results are reported here. The results for Cs-137 and opportunistic analytes on the core 65 sludge were reported and discussed in Bell (1995b). The Cs-137 results on core 64 drainable liquid were reported in Bell (1995c). Because the opportunistic data were not identified in any DQO document, there were no programmatic QC requirements with respect to these data. Therefore, QC for these data fell under the jurisdiction of the Characterization Project in general and the 222-S laboratory in particular, respectively specified in Sparks (1995) and DOE (1995).

The activity of Cs-137 was determined on fusion-digested samples from core 121. The results were similar from segment to segment and ranged from 47.80 uCi/g in segment 10 to 132.6 uCi/g in the upper half of segment 10B. The Cs-137 activity in the core 121 composite measured 69.10 uCi/g.

One sample (S95T004187) had an RPD value in excess of the <20% criterion. A second aliquot from the same subsegment was digested and analyzed (S96T001378). The rerun results were acceptable (RPD of 5.70%).

4.11 Sr-90

The activity of Sr-90 was determined by chemical separation of fusion digests followed by beta counting according to procedure LA-220-101, Rev. D-1. Saltcake and drainable liquid were analyzed from segment 64. Only the sludge from core 65 was analyzed, while only the saltcake was analyzed from segment 121. The results were reported in Bell (1995b) and Bell (1995c). The saltcake in core 121 was analyzed to satisfy the requirements of the historical DQO document (Simpson and McCain 1995). However, this DQO does not include Sr-90 with respect to historical evaluation of the BY Saltcake waste type; it is requested for historical evaluation of the ferrocyanide sludge waste type, which was not recovered from core 121. The core 64 saltcake was analyzed to evaluate the radiological hazard in support of a sample shipment to Pacific Northwest National Laboratory. Since there were no programmatic QC requirements with respect to these data, QC for these data fell under the jurisdiction of the Characterization Project in general and the 222-S laboratory in particular, respectively specified in Sparks (1995) and DOE (1995).

Activities of Sr-90 were low, more so in core 64 than core 121. The lowest activity in core 64 saltcake was 0.185 uCi/g in segment 13 and the highest activity was 7.06 uCi/g found in the upper half of segment 4. Except for segment 1 and the upper half of segment 4, the corresponding Sr-90 activity was higher in core 121. In that core, Sr-90 activities ranged from 0.670 uCi/g in the upper half of segment 10B to 12.65 uCi/g in segment 10A. The core composite had an activity of 6.290 uCi/g, which is close to the average of the activity in all the subsegments from core 121.

Only the QC issues associated with Sr-90 analyses on core 121 samples are discussed here, since all other results were either not required or have been reported elsewhere. The QC for Sr-90 analysis does not include spikes, rather a Sr carrier is used with every analysis and the results are corrected for recovery. Bell (1996b) requires that RPD between sample and duplicate results be 10% or less. The highest RPD values were found on samples from the upper half of segments 2 and 7, measuring 39.1 and 132% respectively. An additional sample aliquot from both of these subsamples was removed, re-digested, and re-run. Results from the segment 2 aliquot were within the 10% limit, however the re-run from segment 7 was still outside the limit at 11.4%. No further re-runs were performed. Three other samples that were outside the 10% limit came from the lower half of segment 4 (14.5%), the upper half of segment 6 (13.6%), and the upper half of segment 10 (15.2%). No re-runs were initiated since the RPD values were not excessive and because Sr-90 activity is not listed in Simpson and McCain (1995) as an analyte to be used for historical evaluation of the waste type BY Saltcake.

4.12 URANIUM

The concentration of uranium was determined by laser phosphorescence on fusion digests of all solid subsegments from core 121 according to procedure LA-925-009, Rev. A-1. Fusion- and acid-digested samples were also analyzed for uranium by ICP. The results are presented in Table 9. Uranium was not detected by ICP in any of the fusion-digested samples, and in only two of the acid-digested samples. Those results were slightly lower than the results from the phosphorescence method. There was significant variation from sample to sample, even between adjacent subsegments in the core. For example, the upper half of segment 4 measured 168.5 ug/g while the lower half measured 309.5 ug/g. The lowest concentration was found in segment 1 (12.30 ug/g) and the highest concentration was found in lower half of segment 8 (333.5 ug/g). The core composite contained uranium at 175 ug/g, which is very close to the mean of all samples (164 ug/g).

Two sample/duplicate pairs from core 121 had RPD values that exceeded the SAP specification of <20%. A second aliquot from segment 7 was removed, re-digested, and re-analyzed with satisfactory results (RPD of 10.6%). The second sample (S95T004185) from segment 5 had an RPD value of 22.3%. It was not re-analyzed because the limit was only slightly exceeded and because the uncertainty associated with the high RPD value is small relative to the variation in uranium concentration within the core.

4.13 TOTAL BETA

Total beta activity was measured on a fusion digest of the core 121 composite according to procedure LA-508-101, Rev. D-2 in support of the historical model evaluation DQO. The result is shown in Table 9. Total beta activity was 80.2 uCi/g compared to the 6.29 uCi/g Sr-90 activity in the core composite. The Y-90 contribution to the total beta activity is equal to the Sr-90 contribution; thus the majority of the beta activity is coming from radionuclides other than Sr-90 and Y-90.

4.14 ION CHROMATOGRAPHY

Concentrations of selected anions were determined by ion chromatography (IC) using procedure LA-533-105, Rev. C-2 (cores 64 and 65) or Rev. D-1 (core 121). All IC results are presented in Table 10. Analyses were performed directly following water dilution on liquid samples. For saltcake and sludge samples, analyses were performed on water digestions.

Results on the drainable liquids from core 64 were reported in Bell (1995c) except for re-run results from the drainable liquid of segment 3. A second aliquot from this sample was analyzed under sample number S95T000228 since no matrix spikes were performed on the initial runs. The re-run results were very similar to the original results on sample S95T000004. No IC results were required on core 65. The analytes of nitrate, sulfate, bromide, oxalate, formate, and acetate were required on saltcake from core 121 at the half segment level. Only nitrate and

sulfate were required on the core composite. There was insufficient sample to perform a water digest on segment 10A saltcake, therefore there are no IC results for that segment. Analysis for nitrate and sulfate on core 121 was performed to evaluate tank waste modeling as described in the historical modeling DQO document. Bromide was measured to evaluate intrusion and contamination of the sample by hydrostatic head fluid or wash water containing LiBr. Oxalate, formate, and acetate were measured on core 121 to satisfy the requirements of the Organic Tank Safety Program test plan (Meacham 1995). Only bromide, formate, and oxalate were required on the drainable liquid from core 121. Additional IC data from core 121 was collected on an opportunistic basis and reported here. Because these data were not identified in any DQO document, there were no programmatic QC requirements with respect to these data. Therefore, QC for these data fell under the jurisdiction of the Characterization Project in general and the 222-S laboratory 222-S in particular, respectively specified in Sparks (1995) and DOE (1995).

The field blanks for cores 64 and 121 were both analyzed by IC. Sample S94T000389 from core 64 was not analyzed in duplicate. A second aliquot of the field blank was run in duplicate under sample number S95T000116. This sample showed a measurable amount of phosphate (1.43 ug/mL), nitrate (167 ug/mL), nitrite (46.75 ug/mL), fluoride (0.291 ug/mL), and chloride (3.03 ug/mL). These concentrations are roughly 1000 times lower than that found in the core 64 drainable liquid. The core 121 field blank had measurable amounts of sulfate (0.80 ug/mL), nitrate (0.633 ug/mL), nitrite (0.395 ug/mL), and chloride (0.223 ug/mL). These concentrations are at least 4000 times below concentrations in the core 121 saltcake and indicate there was insignificant contamination of anions from the sampling and extrusion activities.

4.14.1 Nitrate Results

Nitrate is the most prevalent constituent of the saltcake from core 121 of tank BY-106 with the possible exception of segment 2. Concentrations ranged from 50,300 ug/g in segment 2 to a high of 553,000 ug/g in the lower half of segment 4. The result from segment 2 appeared low and would be questionable if the concentration of the other analytes in the same sample were not consistent with results from the other segments. The one drainable liquid sample from core 121 (segment 10B) was less concentrated in nitrate (165,000 ug/mL) than all of the saltcake samples except the one from segment 2. Nitrate in the core composite measured 425,000 ug/g; very close to the average concentration of the individual subsegments.

Six samples had RPD values that were above the 15% limit specified in Bell (1996b). The highest RPD value was 61.2% found on sample S95T004207 from the lower half of segment 4. Three samples has spike recoveries that were outside the 85-115% range. Furthest from these limits was sample S96T000109 from segment 10 with a 61.1% spike recovery. The other two samples also had a low spike recovery, however a spiked sample can only reasonably be evaluated for recovery when the spiked concentration is at least 25% of the sample value. Because of the high nitrate concentrations in these samples, the spike does not meet the 25% criterion and, thus, should not be evaluated. Re-runs were not requested due to the high RPD values because these sample clearly had enough nitrate to allow classification as "BY saltcake" per Simpson and McCain (1995). (See Section 5.0.)

4.14.2 Sulfate Results

There was less variation in the concentration of sulfate in core 121 saltcake compared to nitrate, although the results ranged from 3,770 ug/g in the upper half of segment 10B to 20,900 ug/g found in the lower half of segment 8. Sulfate in the core composite was slightly higher (13,100 ug/g) than the average of all saltcake subsegment values (11,300 ug/g). As with the other IC analytes, the segment 10B drainable liquid contained a lower concentration of sulfate than the saltcake.

Seven samples had RPD values that were above the 15% limit specified in Bell (1996b). The highest RPD value was 63.6% found on sample S95T004207 from the lower half of segment 4. One spike recovery was outside the 85-115% range; sample S95T004211 from the upper half of segment 8 with a recovery of 121.4%. Re-runs were not requested due to the high RPD values because the sample clearly had enough sulfate to allow classification as "BY saltcake" per Simpson and McCain (1995). (See Section 5.0.)

4.14.3 Bromide

All bromide results were below the detection limit. A detection limit is calculated on each sample and will therefore vary to some degree. The lowest detection limit on a saltcake sample was 492 ug/g on the upper half of segment 8, while the highest was 1590 ug/g found in segment 6. The drainable liquid from segment 10B had a detection limit of 522 ug/mL. The fact that no bromide was detected is consistent with the lack of Li detection and further supports the argument that intrusion of wash water into sample material was minimal.

4.14.4 Oxalate

Concentrations of oxalate varied considerably from segment to segment. The lowest concentration in the saltcake was found in segment 1 (1,360 ug/g), but segment 2 was measured at 12,500 ug/g. The lower half of segment 8 had 17,500 ug/g. Oxalate in the drainable liquid from segment 10B was below the 435 ug/g detection limit. The core composite at 12,100 ug/g was more concentrated in oxalate than the average of all the subsegments (9,600 ug/g).

Five samples had RPD values that were above the 15% limit specified in Bell (1996b). The highest RPD value was 73.3% found on sample S95T004207 from the lower half of segment 4. Two spike recoveries were outside the 85-115% range; sample S95T004211 from the upper half of segment 8 with a recovery of 126.3% and sample S96T000258 from the drainable liquid of segment 10B (116.2%). Re-runs were not requested due to the high RPD or spike recovery values because the uncertainty or bias implied by the QC failures was small compared to the variability among the samples.

4.14.5 Formate

There was relatively little variation in the formate concentration in core 121 saltcake. The highest saltcake concentration (909.5 ug/g) was found in the upper half of segment 10B and the lowest concentration (364.1 ug/g) was found in segment 1. The core 121, segment 10B drainable liquid was much more concentrated in formate at 2,100 ug/mL than any of the other subsegments.

4.14.6 Acetate

Unlike the formate results, acetate concentrations in core 121 saltcake were varied, ranging from less than 220 ug/g in the lower half of segment 3 to 1230 ug/g in the upper half of segment 10B. While acetate was not detected in segments 7 and 9 (detection limits of 239 and 210 ug/g respectively), segment 8 was relatively concentrated in acetate. The upper half measured 1,060 ug/g and the lower half measured 1,220 ug/g.

5.0 HISTORICAL MODELING EVALUATION

The historical model DQO document (Simpson and McCain 1995) demonstrates that the waste in tank BY-106 may most likely be categorized into two waste types, the composition of which are defined in Angew (1995). For each tank considered in the historical DQO document, a list of "fingerprint" analytes and corresponding concentrations or concentration ranges that define each waste type are provided. If the analytes for a given tank waste are present in greater than 10% of the listed concentration, then the waste composition is considered to be consistent with that defined waste type.

Tank BY-106 is not listed as a priority tank in Simpson and McCain (1995), but is an acceptable alternate tank for tanks 241-BY-104, 241-BY-105, and 241-BY-110. The two waste types expected to be present in BY-106 are BY Salt Cake (for the saltcake waste) and FeCN (for the sludge waste). Although the historical DQO preceded cores 64 and 65, some data are present on saltcake and sludge from those core samples that make a partial evaluation possible. No sludge was recovered from core 121. The expected and actual concentrations of the fingerprint analyses are provided in Tables 5 and 6.

Data in Tables 5 and 6 show that the saltcake in tank BY-106 is consistent with the waste type BY Salt Cake per the historical modeling DQO. As expected, the saltcake is not consistent with the FeCN waste type because it does not contain adequate amounts of Bi, Ni, or Sr-90. Sludge was only recovered from the lower half of segment 13 from core 65, however the fingerprint analyses are consistent with the FeCN waste type.

Table 5. Tank BY-106 Historical Model Evaluation for BY Salt Cake.

Fingerprint Analyte	Expected Concentration (ppm)	Core Composite Concentration ¹ (ppm)	Were All Analyzed Saltcake Samples > 10% of Expected Concentration?
Na	165,000	257,000 (fusion) 218,000 (acid)	yes
Al	18,600	14,800 (fusion) 12,600 (acid)	yes
Moisture	35.9%	17.09%	yes
Nitrate	266,000	425,000	yes
Sulfate	33,732	13,100	yes

¹ A core composite was only created for core 121.

Table 6. Tank BY-106 Historical Model Evaluation for FeCN.

Waste Type	Fingerprint Analyte	Expected Concentration or Range (ppm)	Core 121 Composite Concentration (ppm)	Were All Analyzed Samples >10% of Expected Concentration? ¹
Saltcake	Na	60,000 - 150,000	257,000 (fusion) 218,000 (acid)	yes
	Bi	> 25,000	< 1,930 (fusion) < 47.70 (acid)	no
	Ni	> 4,000	< 386.0 (fusion) 37.55 (acid)	no
	Moisture	28 - 81%	17.09%	yes
	Cs-137	> 8 $\mu\text{Ci/g}$	69.10 $\mu\text{Ci/g}$	yes
	Sr-90	> 4 $\mu\text{Ci/g}$	6.29 $\mu\text{Ci/g}$	no
Sludge	Na	60,000 - 150,000	130,000 (fusion) ²	yes
	Bi	> 25,000	not available	---
	Ni	> 4,000	29,500 (fusion) ²	yes
	Moisture	28 - 81%	37.31% ²	yes
	Cs-137	> 8 $\mu\text{Ci/g}$	507.5 $\mu\text{Ci/g}^2$	yes
	Sr-90	> 4 $\mu\text{Ci/g}$	763.0 $\mu\text{Ci/g}^2$	yes

¹ Sludge was only recovered from the lower half of segment 13 from core 65.² Results from sludge collected from segment 13 of core 65.

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WHC-SD-WM-DP-103, REV. 1

SAMPLE DATA SUMMARY

WHC-SD-WM-DP-103, REV. 1

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CORE NUMBER: 64
SEGMENT #: 1

Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S94T000305		% Water by IGA using Mettler	%	98.77	n/a	47.17	4.624e1	4.670e1	1.99	n/a	n/a	n/a	n/a
S94T000305		DSC Exotherm using Mettler	Joules/g	97.72	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a	n/a
S94T000305		Cyanide EDTA Addition	ug/g	98.07	4.60e-01	30.50	2.990e1	3.020e1	1.99	92.20	1.980	n/a	n/a
S94T000305		TiC by Persulfate/Coulometry	ug/g	95.67	37.60	2.57e+03	2.410e3	2.490e3	6.43	n/a	80.00	n/a	n/a
S94T000305		TiC by Acid/Coulometry	ug/g	98.00	5.300	4.91e+03	3.720e3	4.320e3	27.6	n/a	5.000	n/a	n/a

WHC-SD-WM-DP-103, REV. 1

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	RJA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	ppb % Spk Rec %	Det Limit	Count	Err%
S94T000308		% Water by TGA using Mettler	%	98.77	n/a	46.65	4.72e1	4.695e1	1.30	n/a	n/a	n/a
S94T000308		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	4.47e+02	2.19e2	3.330e2	68.5	n/a	1,000e+1	n/a
S94T000308		DSC Exotherm using Mettler	Joules/g	97.72	n/a	2.37e+02	1.75e2	2.063e2	29.7	n/a	n/a	n/a
S94T000308		Cyanide EDTA Addition	ug/g	98.07	4.60e-01	34.50	3.680e1	3.565e1	6.45	n/a	2,398	n/a
S94T000308		TOC by Persulfate/Coulometry	ug/g	89.33	19.80	2.85e+03	2.270e3	2.560e3	22.7	n/a	80,000	n/a
S94T000308		TIC by Acid/Coulometry	ug/g	97.00	4.600	5.41e+03	5.540e3	5.480e3	2.37	n/a	5,000	n/a

WHC-SD-WM-DP-103, REV. 1

Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000309		Cyanide EDTA Addition	ug/g	96.35	3.00e-01	44.50	45.10	44.80	1.34	92.20	1.440	n/a
S94T000309		DSC Exotherm using Mettler	Joules/g	102.3	n/a	1.23e+02	108.4	115.9	12.9	n/a	n/a	n/a
S94T000309		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	1.91e+02	167.0	179.0	13.4	n/a	1.00e-01	n/a
S94T000309		% Water by TGA using Mettler	%	99.07	n/a	38.31	32.20	35.26	17.3	n/a	n/a	n/a
S94T000309		TIC by Acid/Coulometry	ug/g	97.00	4.400	2.71e+03	2.48e+03	2.60e+03	8.86	n/a	5.000	n/a
S94T000309		TOC by Persulfate/Coulometry	ug/g	89.33	19.80	2.31e+03	2.25e+03	2.28e+03	2.63	n/a	80.00	n/a
Drainable Liquid: Drainable Liquid												
Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000004		DSC Exotherm using Mettler	Joules/g	102.3	n/a	31.00	30.90	30.95	0.32	n/a	n/a	n/a
S95T000004		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	98.00	97.00	97.50	1.03	n/a	1.00e-01	n/a
S95T000004		OH- by Pot. Titration	ug/mL	95.95	n/a	3.35e+04	3.13e+04	3.24e+04	6.79	n/a	5.00e+03	n/a
S95T000004		pH Direct	pH	n/a	n/a	13.30	13.76	13.53	3.40	n/a	1.00e-02	n/a
S95T000004		Specific Gravity	Sp.G.	96.48	n/a	1.240	1.250	1.245	0.80	n/a	1.00e-02	n/a
S95T000004		% Water by TGA using Mettler	%	97.79	n/a	68.57	67.93	68.25	0.94	n/a	n/a	n/a
S95T000004		Tot. Inorg. Carbon by Coul.	ug/mL	97.00	5.700	1.51e+03	1.44e+03	1.48e+03	4.75	n/a	5.000	n/a
S95T000004		Tot. Organic Carbon by Coul.	ug/mL	96.67	<5,000	2.30e+03	2.32e+03	2.31e+03	0.87	89.80	55.00	n/a
S95T000228		OH- by Pot. Titration	ug/mL	97.23	<42.00	3.12e+04	3.06e+04	3.09e+04	1.94	n/a	5.00e+03	n/a
S95T000228		Tot. Organic Carbon by Coul.	ug/mL	92.67	<5,000	1.86e+03	1.96e+03	1.91e+03	5.24	95.30	55.00	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000310		Cyanide EDTA Addition	ug/g	96.35	3.00e-01	55.20	53.30	54.25	3.50	n/a	2.700	n/a
S94T000310		DSC Exotherm using Mettler	Joules/g	102.3	n/a	21.10	14.20	17.65	39.1	n/a	n/a	n/a
S94T000310		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	28.00	19.00	23.50	38.3	n/a	1.00e-01	n/a
S94T000310		% Water by TGA using Mettler	%	99.07	n/a	21.07	25.62	23.34	19.5	n/a	n/a	n/a
S94T000310		TIC by Acid/Coulometry	ug/g	99.83	2.800	1.39e+04	1.07e+04	1.23e+04	26.0	n/a	5.000	n/a
S94T000310		TOC by Persulfate/Coulometry	ug/g	101.0	25.10	4.18e+03	4.41e+03	4.30e+03	5.36	n/a	80.00	n/a

L Lower Half of Segment; L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000311		Cyanide EDTA Addition	ug/g	93.45	2.30e-01	23.20	24.30	23.75	4.63	106.0	1.490	n/a
S94T000311		DSC Exotherm using Mettler	Joules/g	98.42	n/a	3.59e+02	123.4	241.1	97.6	n/a	n/a	n/a
S94T000311		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	3.97e+02	137.0	267.0	97.4	n/a	1.00e-01	n/a
S94T000311		% Water by TGA using Mettler	%	99.11	n/a	9.700	9.780	9.740	0.82	n/a	n/a	n/a
S94T000311		TIC by Acid/Coulometry	ug/g	99.83	2.800	1.41e+03	1.43e+03	1.42e+03	1.41	n/a	5.000	n/a
S94T000311		TOC by Persulfate/Coulometry	ug/g	101.0	25.10	1.31e+03	1.23e+03	1.27e+03	6.30	n/a	80.00	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
B1-106

CORE NUMBER: 64
SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S94T000326		% Water by IGA using Mettler	%	98.99	n/a	14.37	1.424e1	1.430e1	0.91	n/a	n/a	n/a	n/a
S94T000326		DSC Exotherm using Mettler	Joules/g	95.25	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a	n/a
S94T000326		Cyanide EDTA Addition	ug/g	95.27	1.900	30.70	3.120e1	3.095e1	1.62	95.20	2.290	n/a	n/a
S94T000326		TOC by Persulfate/Coulometry	ug/g	95.67	37.60	7.33e+02	9.940e2	8.635e2	50.2	n/a	80.00	n/a	n/a
S94T000326		TIC by Acid/Coulometry	ug/g	99.00	3.700	1.15e+03	2.140e3	1.840e3	60.2	n/a	5.000	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R / A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000342		Cyanide EDTA Addition	ug/g	95.27	1.900	22.10	18.70	20.40	16.7	n/a	1.730	n/a
S94T000342		DSC Exotherm using Mettler	Joules/g	101.9	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S94T000342		% Water by TGA using Mettler	%	98.60	n/a	18.01	15.64	16.83	14.1	n/a	n/a	n/a
S94T000342		TIC by Acid/Coulometry	ug/g	99.67	4.800	9.39e+02	1.09e+03	1.01e+03	14.9	n/a	5.000	n/a
S94T000342		TOC by Persulfate/Coulometry	ug/g	95.33	32.40	9.48e+02	898.0	923.0	5.42	n/a	80.00	n/a

Drainable Liquid: Drainable Liquid

Sample#	R / A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000355		DSC Exotherm using Mettler	Joules/g	97.72	n/a	35.40	68.80	52.10	64.1	n/a	n/a	n/a
S94T000355		DSC Exotherm DRY Calculated	Joules/g DRY	n/a	n/a	78.00	193.0	135.5	84.9	n/a	1.00e-01	n/a
S94T000355		OH- by Pot. Titration	ug/mL	95.95	n/a	4.16e+04	4.05e+04	4.10e+04	2.68	n/a	5.00e+03	n/a
S94T000355		pH Direct	pH	n/a	n/a	13.17	13.82	13.50	4.82	n/a	1.00e-02	n/a
S94T000355		% Water by TGA using Mettler	%	98.99	n/a	54.57	55.22	54.89	1.18	n/a	n/a	n/a
S94T000355		Tot. Inorg. Carbon by Coul.	ug/mL	97.00	5.700	9.80e+02	1.00e+03	990.0	2.02	111.0	5.000	n/a
S94T000355		Tot. Organic Carbon by Coul.	ug/mL	96.67	<5.000	4.16e+03	4.06e+03	4.11e+03	2.43	n/a	55.00	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000343		% Water by TGA using Mettler	%	98.60	n/a	8.260	1.157e1	9.915e0	33.4	n/a	n/a	n/a
S94T000343		DSC Exotherm using Mettler	Joules/g	101.9	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a
S94T000343		Cyanide EDTA Addition	ug/g	93.45	2.30e-01	11.70	1.060e1	1.119e1	9.87	n/a	1.690	n/a
S94T000343		TOC by Persulfate/Coulometry	ug/g	98.00	25.30	1.05e+03	1.050e3	1.050e3	0.00	n/a	80.00	n/a
S94T000343		TIC by Acid/Coulometry	ug/g	100.8	6.600	1.11e+03	9.620e2	1.040e3	14.3	n/a	5.000	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000344		% Water by TGA using Mettler	%	99.43	n/a	17.65	2.047e1	1.906e1	14.8	n/a	n/a	n/a
S94T000344		DSC Exotherm using Mettler	Joules/g	95.25	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a
S94T000344		Cyanide EDTA Addition	ug/g	102.5	9.50e-01	9.020	9.490e0	9.255e0	5.08	104.7	1.000	n/a
S94T000344		TOC by Persulfate/Coulometry	ug/g	98.00	25.30	9.40e+02	8.230e2	8.815e2	13.3	n/a	80.00	n/a
S94T000344		TIC by Acid/Coulometry	ug/g	100.8	6.600	6.37e+02	6.390e2	6.380e2	0.31	n/a	5.000	n/a
S94T000345		% Water by TGA using Mettler	%	99.43	n/a	43.17	4.345e1	4.331e1	0.65	n/a	n/a	n/a
S94T000345		DSC Exotherm DRY Calculated	Joules/g DTY	n/a	n/a	96.00	9.200e1	9.400e1	4.26	n/a	1.000e-1	n/a
S94T000345		DSC Exotherm using Mettler	Joules/g	95.25	n/a	54.30	5.240e1	5.339e1	3.56	n/a	n/a	n/a
S94T000345		Cyanide EDTA Addition	ug/g	102.5	9.50e-01	21.60	2.500e1	2.330e1	14.6	n/a	1.000	n/a
S94T000345		TOC by Persulfate/Coulometry	ug/g	95.33	32.40	2.86e+03	3.020e3	2.940e3	5.44	n/a	80.00	n/a
S94T000345		TIC by Acid/Coulometry	ug/g	99.67	4.800	1.87e+03	2.010e3	1.940e3	7.22	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
8Y-106

CORE NUMBER: 64
SEGMENT #: 9

SEGMENT PORTION: U Upper Half of Segment

Sample#	g AM	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	ppp % Spk Rec %	Det Limit	Count Err %
S94T000346		% Water by TGA using Mettler	%	99.92	n/a	18.38	1.494e1	1.666e1	n/a	n/a	n/a
S94T000346		DSC Exotherm using Mettler	Joules/g	99.25	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a
S94T000346		Cyanide EDTA Addition	ug/g	99.06	4.30e-01	28.10	2.970e1	2.890e1	n/a	n/a	n/a
S94T000346		TOC by Persulfate/Coulometry	ug/g	98.00	25.30	4.03e+02	4.640e2	4.335e2	85.50	1,950	n/a
S94T000346		TIC by Acid/Coulometry	ug/g	100.8	6,600	6.47e+02	8.150e2	7.310e2	n/a	80.00	n/a
									n/a	5,000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000372		Cyanide EDTA Addition	ug/g	92.48	<9.00e-01	13.80	13.00	13.40	5.97	85.20	1.000	n/a
S94T000372		DSC Exotherm using Mettler	Joules/g	99.82	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S94T000372		% Water by TGA using Mettler	%	99.00	n/a	25.39	14.24	19.82	56.3	n/a	n/a	n/a
S94T000372		TIC by Acid/Coulometry	ug/g	97.33	5.800	1.56e+03	775.0	1.17e+03	67.2	n/a	5.000	n/a
S94T000372		TOC by Persulfate/Coulometry	ug/g	93.33	17.90	1.70e+03	1.20e+03	1.45e+03	34.5	n/a	80.00	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000373		Cyanide EDTA Addition	ug/g	95.06	4.30e-01	24.20	24.00	24.10	0.83	n/a	1.720	n/a
S94T000373		DSC Exotherm using Mettler	Joules/g	99.82	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S94T000373		% Water by TGA using Mettler	%	99.00	n/a	20.10	17.41	18.76	14.3	n/a	n/a	n/a
S94T000373		TIC by Acid/Coulometry	ug/g	97.33	5.800	1.89e+03	1.50e+03	1.70e+03	23.0	n/a	5.000	n/a
S94T000373		TOC by Persulfate/Coulometry	ug/g	93.33	17.90	1.34e+03	674.0	1.01e+03	66.1	n/a	80.00	n/a

Drainable Liquid: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000371		DSC Exotherm using Mettler	Joules/g	102.3	n/a	44.50	44.00	44.25	1.13	n/a	n/a	n/a
S94T000371		DSC Exotherm DRY Calculated	Joules/g DRY	n/a	n/a	1.23e+02	122.0	122.5	0.82	n/a	1.00e-01	n/a
S94T000371		OH- by Pot. Titration	ug/mL	95.95	n/a	3.84e+04	3.89e+04	3.86e+04	1.29	n/a	5.00e+03	n/a
S94T000371		pH Direct	pH	96.48	n/a	13.32	14.02	13.67	5.12	n/a	1.00e-02	n/a
S94T000371		Specific Gravity	Sp.G.	96.48	n/a	1.280	1.280	1.280	0.00	n/a	1.00e-02	n/a
S94T000371		% Water by TGA using Mettler	%	97.79	n/a	63.85	64.07	63.96	0.34	n/a	n/a	n/a
S94T000371		Tot. Inorg. Carbon by Coul.	ug/mL	97.00	5.700	9.47e+02	952.0	949.5	0.53	n/a	5.000	n/a
S94T000371		Tot. Organic Carbon by Coul.	ug/mL	96.67	<5.000	2.29e+03	2.42e+03	2.36e+03	5.52	n/a	55.00	n/a

Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 11

SEGMENT PORTION: U Upper Half of Segment

Sample#	g/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S941000381		% Water by TGA using Mettler	%	99.31	n/a	3.510	4.050e0	3.780e0	14.3	n/a	n/a	n/a	n/a
S941000381		DSC Exotherm using Mettler	Joules/g	96.66	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a	n/a
S941000381		Cyanide EDTA Addition	ug/g	92.48	<9.000e-1	3.000	3.700e0	3.350e0	20.9	n/a	1.000	n/a	n/a
S941000381		TOC by Persulfate/Coulometry	ug/g	95.33	32.40	5.96e+02	4.000e2	4.980e2	39.4	n/a	80.00	n/a	n/a
S941000381		ITIC by Acid/Coulometry	ug/g	99.67	4.800	1.07e+03	8.660e2	9.680e2	21.1	n/a	5.000	n/a	n/a

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CORE NUMBER: 64
SEGMENT #: 12

Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
SP41000390		% Water by IGA using Mettler	%	99.31	n/a	28.83	2.778e1	2.730e1	3.41	n/a	n/a	n/a
SP41000390		DSC Exotherm using Mettler	Joules/g	96.66	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a
SP41000390		Cyanide EDTA Addition	ug/g	93.34	3.72e-01	21.40	2.190e1	2.165e1	2.31	93.90	1.000	n/a
SP41000390		TOC by Persulfate/Coulometry	ug/g	93.33	29.80	1.86e+03	1.220e3	1.340e3	41.6	n/a	80.00	n/a
SP41000390		TIC by Acid/Coulometry	ug/g	98.17	5.800	1.36e+03	1.820e3	1.690e3	15.4	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 13

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000391		% Water by IGA using Mettler	%	100.2	N/A	12.26	1.015e1	1.121e1	18.8	N/A	N/A	N/A
S941000391		DSC Exotherm using Mettler	Joules/g	101.6	N/A	0.00e+00	0.000e0	0.000e0	N/A	N/A	N/A	N/A
S941000391		Cyanide EDTA Addition	ug/g	93.34	3.72e-01	2.270	2.420e0	2.345e0	6.40	N/A	1.000	N/A
S941000391		TOC by Persulfate/Coulometry	ug/g	93.33	29.80	1.11e+02	1.230e2	1.170e2	10.3	N/A	80.00	N/A
S941000391		TTC by Acid/Coulometry	ug/g	98.17	5.800	3.18e+02	3.580e2	3.380e2	11.8	N/A	5.000	N/A

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64

SEGMENT #: field blank

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
SW100389		Tot. Organic Carbon by Coul.	ug/mL	96.00	4.900	35.20	<2.20E+1	n/a	n/a	n/a	20.00	n/a
SW100389		Tot. Inorg. Carbon by Coul.	ug/mL	97.00	5.700	35.50	1.600e1	1.575e1	3.17	n/a	5.000	n/a
SW100389		% Water by TGA using Mettler	%	99.38	n/a	1.01e+02	1.004e2	1.005e2	0.20	n/a	n/a	n/a
SW100389		Specific Gravity	Sp.G.	96.48	n/a	9.74e+01	9.500e-1	9.620e-1	2.49	n/a	1.000e-2	n/a
SW100389		pH Direct	pH	n/a	n/a	9.940	9.960e0	9.950e0	0.20	n/a	1.000e-2	n/a
SW100389		OH- by Pot. Titration	ug/mL	95.95	n/a	<250	n/a	n/a	n/a	n/a	250.0	n/a
SW100389		DSC Exotherm using Mettler	Joules/g	101.6	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
B1-106

CORE NUMBER: 65
SEGMENT #: 11

SEGMENT PORTION: U Upper Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count Err%
S95T000084		% Water by TGA using Mettler	%	98.82	n/a	23.28	2.03e1	2.25e1	20.3	n/a	n/a
S95T000084		DSC Exotherm using Mettler	Joules/g	101.2	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a
Drainable Liquid: Drainable Liquid											
Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count Err%
S95T000229		DSC Exotherm using Mettler	Joules/g	101.2	n/a	19.90	2.010e1	2.000e1	1.00	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 65
SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPO %	Spk Rec %	Det Limit	Count	Err%
S95T000109		DSC Exotherm using Mettler	Joules/g	94.90	n/a	54.10	5.940e1	5.675e1	9.34	n/a	n/a	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
B1-106

CORE NUMBER: 65
SEGMENT #: 13

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000098		% Water by TGA using Mettler	%	99.26	n/a	27.38	2.895e1	2.810e1	5.51	n/a	n/a	n/a
S95T000098		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a
S95T000098		DSC Exotherm using Mettler	Joules/g	100.2	n/a	0.00e+00	0.000e0	0.000e0	n/a	n/a	n/a	n/a
S95T000099		% Water by TGA using Mettler	%	99.26	n/a	35.01	3.682e1	3.731e1	3.73	n/a	n/a	n/a
S95T000099		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	6.67e+02	1.560e3	1.030e3	68.2	n/a	n/a	n/a
S95T000099		DSC Exotherm using Mettler	Joules/g	100.2	n/a	4.18e+02	8.340e2	6.320e2	68.7	n/a	n/a	n/a
S95T000099		Cyanide EDTA Addition	ug/g	95.97	1.040	95.90	8.890e1	9.390e1	10.4	93.00	17.90	n/a
S95T000099		TIC by Persulfate/Coulometry	ug/g	92.67	31.80	2.08e+04	2.170e4	2.120e4	4.24	n/a	80.00	n/a
S95T000099		TIC by Acid/Coulometry	ug/g	98.00	4.200	4.77e+03	3.280e3	3.020e3	10.4	n/a	5.000	n/a
S95T000734		TIC by Persulfate/Coulometry	ug/g	92.00	25.10	1.99e+04	3.920e4	1.980e4	3.58	55.50	80.00	n/a
S95T000734		TIC by Acid/Coulometry	ug/g	96.33	2.900	6.56e+03	5.720e3	6.140e3	13.7	86.90	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
B1-106

CORE NUMBER: 121
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S951004167		% Water by TGA using Mettler	%	100.2	n/a	17.45	1.506e1	1.625e1	14.7	n/a	n/a	n/a	n/a
S951004167		DSC Exotherm using Mettler	Joules/g	101.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a	n/a
S951004167		Cyanide EDTA Addition	ug/g	97.49	<3.800e-2	17.00	1.850e1	1.775e1	8.45	97.20	3.400	n/a	n/a
S951004167		TIC by Persulfate/Coulometry	ug/g	100.7	4.500	8.12e+02	7.520e2	7.820e2	7.67	n/a	40.00	n/a	n/a
S951004167		TIC by Acid/Coulometry	ug/g	94.68	3.900	3.26e+04	3.650e4	3.460e4	11.3	n/a	5.000	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
8Y-106

CORE NUMBER: 121
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	g A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004145		Bulk Density of Sample	g/mL	n/a	n/a	1.800	n/a	n/a	n/a	n/a	5.000e-1	n/a
S951004168		% Water by IGA using Mettler	%	100.2	n/a	30.84	3.050e1	3.047e1	n/a	n/a	n/a	n/a
S951004168		DSC Exotherm using Mettler	Joules/g	106.5	n/a	0.00e+00	1.200e1	6.000e0	200	n/a	n/a	n/a
S951004168		Cyanide EDTA Addition	ug/g	97.49	<3.800e-2	18.00	1.730e1	1.765e1	3.97	89.60	3.090	n/a
S951004168		TOC by Persulfate/Coulometry	ug/g	100.4	10.10	4.24e+03	4.770e3	4.500e3	11.8	99.00	40.00	n/a
S951004168		TIC by Acid/Coulometry	ug/g	100.3	2.200	2.30e+04	2.470e4	2.380e4	7.13	100.0	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004146		Bulk Density of Sample	g/ml	n/a	n/a	1.870	n/a	n/a	n/a	n/a	5.000e-1	n/a
S95T004169		% Water by TGA using Mettler	%	101.8	n/a	21.57	1.791e1	1.974e1	18.5	n/a	n/a	n/a
S95T004169		DSC Exotherm on Perkin Elmer	Joules/g	97.89	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004169		Cyanide EDTA Addition	ug/g	108.5	<3.800e-2	15.60	1.670e1	1.615e1	6.81	104.5	2.520	n/a
S95T004169		TOC by Persulfate/Coulometry	ug/g	93.67	4.800	2.45e+03	3.090e3	2.770e3	23.1	114.0	40.00	n/a
S95T004169		TIC by Acid/Coulometry	ug/g	102.8	1.400	7.40e+03	1.210e4	9.750e3	48.2	48.00	5.000	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004147		Bulk Density of Sample	g/ml	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S95T004170		% Water by TGA using Mettler	%	101.8	n/a	27.47	1.902e1	2.324e1	36.4	n/a	n/a	n/a
S95T004170		DSC Exotherm on Perkin Elmer	Joules/g	97.89	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004170		Cyanide EDTA Addition	ug/g	108.5	<3.800e-2	27.70	3.090e1	2.930e1	10.9	105.5	2.440	n/a
S95T004170		TOC by Persulfate/Coulometry	ug/g	100.7	4.500	3.89e+03	3.390e3	3.640e3	13.7	n/a	40.00	n/a
S95T004170		TIC by Acid/Coulometry	ug/g	94.68	3.900	2.01e+04	1.860e4	1.940e4	7.75	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
8Y-106

CORE NUMBER: 121
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S951004148		Bulk Density of Sample	g/mL	n/a	n/a	1.790	n/a	n/a	n/a	n/a	5.000e-1	n/a	n/a
S951004171		% Water by TGA using Mettler	%	101.7	n/a	12.70	1.205e1	1.238e1	5.25	n/a	n/a	n/a	n/a
S951004171		DSC Exotherm on Perkin Elmer	Joules/g	97.75	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	3.080	n/a	n/a
S951004171		Cyanide EDTA Addition	ug/g	101.7	<3.800e-2	10.90	1.200e1	1.145e1	9.61	102.4	40.00	n/a	n/a
S951004171		TIC by Persulfate/Coulometry	ug/g	100.7	4.300	2.02e+03	2.020e3	2.020e3	0.00	n/a	5.000	n/a	n/a
S951004171		TIC by Acid/Coulometry	ug/g	94.68	3.900	4.33e+03	4.160e3	4.240e3	4.00	n/a	5.000	n/a	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S951004148		Bulk Density of Sample	g/mL	n/a	n/a	1.760	n/a	n/a	n/a	n/a	5.000e-1	n/a	n/a
S951004172		% Water by TGA using Mettler	%	101.6	n/a	15.58	1.274e1	1.416e1	20.1	n/a	n/a	n/a	n/a
S951004172		DSC Exotherm on Perkin Elmer	Joules/g	97.75	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	2.080	n/a	n/a
S951004172		Cyanide EDTA Addition	ug/g	101.7	<3.800e-2	20.30	1.700e1	1.865e1	17.7	88.40	40.00	n/a	n/a
S951004172		TIC by Persulfate/Coulometry	ug/g	92.70	4.400	2.72e+03	4.170e3	3.470e3	40.3	127.8	5.000	n/a	n/a
S951004172		TIC by Acid/Coulometry	ug/g	93.34	4.300	7.06e+03	6.350e3	6.700e3	10.6	98.00	5.000	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
B1-106

Core Number: 121
Segment #: 5

Segment PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004130		Bulk Density of Sample	g/mL	n/a	n/a	1.640	n/a	2.002e-1	n/a	n/a	5.000e-1	n/a
S951004173		% Water by TGA using Mettler	%	101.6	n/a	19.45	2.058e1	6.000e0	5.45	n/a	n/a	n/a
S951004173	1	DSC Exotherm on Perkin Elmer	Joules/g	98.59	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S951004173		DSC Exotherm on Perkin Elmer	Joules/g	96.34	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S951004173		Cyanide EDTA Addition	ug/g	97.92	<3.800e-2	12.90	1.380e1	1.35e1	5.28	102.1	2.940	n/a
S951004173		TOC by Persulfate/Coulometry	ug/g	92.70	4.400	4.95e+03	5.00e03	4.980e3	1.01	n/a	40.00	n/a
S951004173		TIC by Acid/Coulometry	ug/g	93.34	4.300	1.19e+04	9.970e3	1.090e4	17.6	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004174	1	Bulk Density of Sample	g/mL	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.000e-1	n/a
S95T004174	1	% Water by TGA using Mettler	%	101.6	n/a	14.91	1.460e1	1.475e1	2.10	n/a	n/a	n/a
S95T004174		DSC Exotherm on Perkin Elmer	Joules/g	99.34	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004174		DSC Exotherm on Perkin Elmer	Joules/g	96.34	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004174		Cyanide EDTA Addition	ug/g	97.92	3.800e-2	6.130	6.280e0	6.205e0	2.42	104.2	2.840	n/a
S95T004174		TOC by Persulfate/Coulometry	ug/g	92.70	4.400	3.38e+03	3.660e3	3.520e3	7.95	n/a	40.000	n/a
S95T004174		TIC by Acid/Coulometry	ug/g	93.34	4.300	7.16e+03	8.090e3	7.620e3	12.2	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec. %	Det Limit	Count Err%
S95T004.152		Bulk Density of Sample	g/mL	n/a	n/a	1.810	n/a	n/a	n/a	n/a	5.000e-1	n/a
S95T004.175		% Water by TGA using Mettler	%	10.3	n/a	17.37	1.608e1	1.675e1	7.71	n/a	n/a	n/a
S95T004.175		DSC Exotherm on Perkin Elmer	Joules/g	98.03	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004.175		Cyanide EDTA Addition	ug/g	109.6	<3.800e-2	5.470	6.610e0	6.040e0	18.9	107.3	3.120	n/a
S95T004.175		TOC by Persulfate/Coulometry	ug/g	100.17	4.500	4.19e+03	4.170e3	4.180e3	0.48	n/a	40.00	n/a
S95T004.175		TIC by Acid/Coulometry	ug/g	94.68	3.900	1.23e+04	1.240e4	1.240e4	0.81	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
B1-106

CORE NUMBER: 121
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004153		Bulk Density of Sample	g/mL	n/a	n/a	1.470	n/a	n/a	n/a	n/a	5.000e-1	n/a
S95T004176		% Water by TGA using Mettler	%	101.9	n/a	26.58	3.018e-1	2.836e1	12.7	n/a	n/a	n/a
S95T004176		DSC Exotherm on Perkin Elmer	Joules/g	98.03	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004176		Cyanide EDTA Addition	ug/g	109.8	<3.800e-2	13.20	1.380e1	1.350e1	4.44	105.2	2.700	n/a
S95T004176		TOC by Persulfate/Coulometry	ug/g	93.67	4.800	5.40e+03	5.230e3	5.410e3	0.37	n/a	40.00	n/a
S95T004176		TIC by Acid/Coulometry	ug/g	102.8	1.400	1.44e+04	1.820e4	1.650e4	23.3	n/a	5.000	n/a

L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004154		Bulk Density of Sample	g/mL	n/a	n/a	1.450	n/a	n/a	n/a	n/a	5.000e-1	n/a
S95T004177		% Water by TGA on Perkin Elmer	%	102.2	n/a	36.64	3.395e1	3.625e1	13.2	n/a	n/a	n/a
S95T004177		% Water by TGA using Mettler	%	101.7	n/a	36.63	3.700e1	3.681e1	1.01	n/a	n/a	n/a
S95T004177		DSC Exotherm on Perkin Elmer	Joules/g	97.05	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004177		Cyanide EDTA Addition	ug/g	100.7	<3.800e-2	16.70	2.860e1	1.945e1	9.67	101.2	2.040	n/a
S95T004177		TOC by Persulfate/Coulometry	ug/g	93.67	7.100	5.84e+03	5.890e3	5.840e3	0.85	n/a	40.00	n/a
S95T004177		TIC by Acid/Coulometry	ug/g	100.4	1.200	1.78e+04	6.800e3	1.230e4	89.4	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 9

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004178		% Water by TGA on Perkin Elmer	%	102.2	n/a	30.42	2.45e1	2.748e1	21.4	n/a	n/a	n/a
S95T004178		% Water by TGA using Mettler	%	101.7	n/a	29.53	2.102e1	2.527e1	33.7	n/a	n/a	n/a
S95T004178		DSC Exotherm on Perkin Elmer	Joules/g	97.05	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S95T004178		DSC Exotherm using Mettler	Joules/g	109.7	n/a	75.40	6.830e1	7.185e1	4.94	n/a	n/a	n/a
S95T004178		Cyanide EDTA Addition	ug/g	100.7	<3.800e-2	15.60	1.440e1	1.500e1	8.00	102.7	2.730	n/a
S95T004178		TOC by Persulfate/Coulometry	ug/g	93.67	7.100	5.92e+03	5.930e3	5.920e3	0.17	97.50	40.00	n/a
S95T004178		TIC by Acid/Coulometry	ug/g	100.4	1.200	2.90e+04	3.150e4	3.020e4	8.26	107.0	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
Bx-106

CORE NUMBER: 121
SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S967000101		Bulk Density of Sample	g/mL	n/a	n/a	1.560	1.560	1.560	n/a	n/a	5.000e-1	n/a
S967000104		% Water by TGA using Mettler	%	101.5	n/a	104.9	6.310e3	8.400e0	49.8	n/a	n/a	n/a
S967000104		DSC Exotherm on Perkin Elmer	Joules/g	96.80	n/a	0.006e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S967000104		Cyanide EDTA Addition	ug/g	108.5	3.80e-02	10.80	1.190e1	1.130e1	8.85	101.2	6.040	n/a
S967000104		TOC by Persulfate/Coulometry	ug/g	95.03	2.000	1.03e+03	1.210e3	1.120e3	16.1	92.80	40.00	n/a
S967000104		TIC by Acid/Coulometry	ug/g	98.85	1.300	1.88e+03	3.190e3	2.440e3	62.0	115.0	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 10A

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000105		% Water by TGA using Mettler	%	101.5	n/a	18.47	1.835e1	1.847e1	0.65	n/a	n/a	n/a
S961000105		DSC Exotherm on Perkin Elmer	Joules/g	96.80	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S961000105		Cyanide EDTA Addition	ug/g	108.3	3.80e-02	19.90	2.120e1	2.055e1	6.33	107.9	8.250	n/a
S961000105		TIC by Persulfate/Coulometry	ug/g	93.03	2.000	4.20e+03	5.130e3	5.020e3	4.59	n/a	40.00	n/a
S961000105		TIC by Acid/Coulometry	ug/g	98.83	1.300	3.85e+03	4.330e3	4.090e3	11.7	n/a	5.000	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 108

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000248	1	% Water by IGA on Perkin Elmer	%	102.2	n/a	48.82	4.886e1	4.884e1	0.08	n/a	n/a	n/a
S961000248		% Water by IGA on Perkin Elmer	%	101.9	n/a	45.28	3.681e1	4.105e1	20.6	n/a	n/a	n/a
S961000248		% Water by IGA on Perkin Elmer	%	95.04	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	1.800	n/a
S961000248		DSC Exotherm on Perkin Elmer	Joules/g	107.2	<3.800e-2	30.70	2.430e1	2.750e1	23.3	106.7	40.00	n/a
S961000248		Cyanide EDTA Addition	ug/g	90.67	14.70	1.19e+03	1.440e3	1.320e3	19.0	n/a	5.000	n/a
S961000248		TIC by Persulfate/Coulometry	ug/g	98.34	2.900	6.84e+03	5.690e3	6.260e3	18.4	n/a	5.000	n/a
S961000248		TIC by Acid/Coulometry	ug/g									

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000245		% Bulk Density of Sample	g/mL	n/a	n/a	1.890	n/a	n/a	n/a	n/a	5.000e-1	n/a
S961000249		% Water by IGA on Perkin Elmer	%	101.6	n/a	48.24	4.893e1	4.859e1	1.42	n/a	n/a	n/a
S961000249		DSC Exotherm on Perkin Elmer	Joules/g	95.04	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S961000249		Cyanide EDTA Addition	ug/g	107.2	<3.800e-2	15.70	1.470e1	1.520e1	6.58	103.0	2.640	n/a
S961000249		TIC by Persulfate/Coulometry	ug/g	90.67	14.70	1.06e+03	1.120e3	1.090e3	5.50	103.0	40.00	n/a
S961000249		TIC by Acid/Coulometry	ug/g	98.34	2.900	9.35e+02	1.120e3	1.030e3	18.0	116.0	5.000	n/a

Drainable Liquid: Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000258		% Water by IGA using Mettler	%	100.7	n/a	49.56	5.138e1	5.047e1	3.61	n/a	n/a	n/a
S961000258		Specific Gravity	Sp.G.	98.88	n/a	1.420	1.404e0	1.414e0	1.13	n/a	1.000e-2	n/a
S961000258		DSC Exotherm using Mettler	Joules/g	103.0	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S961000258		Cyanide Water Distillation	ug/mL	100.7	<1.100e-2	42.50	4.440e1	3.65e1	4.37	96.10	2.200	n/a
S961000258		TIC by Persulfate/Coulometry	ug/mL	91.36	2.800	2.62e+03	2.310e3	2.460e3	12.6	n/a	40.00	n/a
S961000258		TIC by Acid/Coulometry	ug/mL	95.01	1.00e-01	1.89e+03	1.840e3	1.860e3	2.68	n/a	5.000	n/a

Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 1-108

SEGMENT PORTION: Core Composite

Sample#	R/L#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count	Err%
S96T000376		Bulk Density of Sample	g/mL	n/a	n/a	1.610	n/a	n/a	n/a	5.000e-1	n/a	n/a
S96T000378		% Water By TGA using Mettler	%	100.1	n/a	17.02	1.710e1	1.709e1	0.82	n/a	n/a	n/a

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Table 7. Inorganic Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: n/a

SEGMENT PORTION: Field Blank

Sample#	R	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	ppb % Spk Rec %	Det Limit	Count Err%
S96T000279		TOC by Persulfate/Coulometry	ug/mL	98.03	3.200	<40	<40	n/a	n/a	40.00	n/a
S96T000279		% Water by TGA on Perkin Elmer	%	101.2	n/a	99.88	9.904e1	9.946e1	0.84	n/a	n/a

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 64
SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S951000004	D	Aluminum-ICP-Acid Dil.	ug/ml	102.6	1.00e-03	3.30e+04	3.37e+04	3.34e+04	2.10	n/a	20.00		n/a
S951000004	D	Calcium-ICP-Acid Dil.	ug/ml	106.0	-2.00e-3	<	<40	n/a	1.48	n/a	40.00		n/a
S951000004	D	Iron-ICP-Acid Dil.	ug/ml	104.4	0.00e+00	20.10	20.40	20.56	0.71	n/a	20.00		n/a
S951000004	D	Sodium-ICP-Acid Dil.	ug/ml	102.2	-0.00e+00	1.47e+05	1.42e+05	1.42e+05	0.70	n/a	40.00		n/a
S951000004	D	Phosphorus-ICP-Acid Dil.	ug/ml	103.2	-1.00e-2	2.80e+02	280.0	280.0	0.00	n/a	80.00		n/a
S951000228	D	Aluminum-ICP-Acid Dil.	ug/ml	100.6	-2.00e-3	3.11e+04	3.09e+04	3.10e+04	0.62	121.6	16.10		n/a
S951000228	D	Iron-ICP-Acid Dil.	ug/ml	104.2	2.00e-03	18.40	18.30	18.35	0.54	100.8	16.10		n/a
S951000228	D	Sodium-ICP-Acid Dil.	ug/ml	99.20	1.10e-02	1.30e+05	1.29e+05	1.30e+05	0.77	n/a	32.10		n/a

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000355	D		Aluminum-ICP-Acid Dil.	ug/mL	99.40	6.00e-03	3.50e+04	3.85e+04	3.68e+04	9.52	N/A	20.00	N/A
S94T000355	D		Calcium-ICP-Acid Dil.	ug/mL	105.2	1.60e-02	<	<40	N/A	N/A	N/A	40.00	N/A
S94T000355	D		Iron-ICP-Acid Dil.	ug/mL	103.0	4.00e-03	<	<20	N/A	N/A	N/A	20.00	N/A
S94T000355	D		Sodium-ICP-Acid Dil.	ug/mL	99.40	1.50e-02	1.40e+05	1.54e+05	1.47e+05	9.52	N/A	40.00	N/A
S94T000355	D		Phosphorus-ICP-Acid Dil.	ug/mL	106.8	5.40e-02	2.87e+02	318.0	302.5	10.2	N/A	80.00	N/A

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S94T000371		Aluminum-ICP-Acid Dil.	ug/mL	99.40	6.00e-03	3.65e-04	3.66e-04	3.66e-04	0.27	n/a	20.00		n/a
S94T000371		Calcium-ICP-Acid Dil.	ug/mL	105.2	1.60e-02	<	<40	n/a	n/a	n/a	40.00		n/a
S94T000371		Iron-ICP-Acid Dil.	ug/mL	103.0	4.00e-03	<	<20	n/a	n/a	n/a	20.00		n/a
S94T000371		Sodium-ICP-Acid Dil.	ug/mL	99.40	1.50e-02	1.49e-02	1.50e-02	1.50e-02	0.67	n/a	40.00		n/a
S94T000371		Phosphorus-ICP-Acid Dil.	ug/mL	106.8	5.40e-02	3.11e-02	318.0	314.5	2.23	n/a	80.00		n/a

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 65
SEGMENT #: 11

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000085	2	Aluminum - ICP-Fusion	ug/g	102.6	2.00e-02	2.00e+02	1.85e+04	1.92e+04	7.79	97.10	540.0	n/a
S951000085	2	Iron - ICP-Fusion	ug/g	105.2	1.05e-01	3.40e+02	540.0	n/a	1.6	95.30	540.0	n/a
S951000085	2	Sodium - ICP-Fusion	ug/g	101.6	3.210	2.15e+05	2.18e+05	2.16e+05	1.39	n/a	1.08e+03	n/a
S951000085	2	Nickel - ICP-Fusion	ug/g	104.8	4.50e-02	2.15e+02	<216	n/a	n/a	92.20	215.0	n/a
S951000085	2	Chromium - ICP-Fusion	ug/g	106.2	7.00e-03	2.36e+02	235.0	235.0	0.42	95.90	108.0	n/a
S951000085	2	Calcium - ICP-Fusion	ug/g	107.4	2.62e-03	<1.08e+03	<208	n/a	n/a	97.10	1.08e+03	n/a
S951000085	2	Zinc - ICP-Fusion	ug/g	107.0	1.60e-02	4.00e+02	<208	n/a	n/a	96.70	108.0	n/a
S951000085	2	Zirconium - ICP-Fusion	ug/g	104.0	5.190	4.00e+03	4.30e+03	4.15e+03	7.23	95.40	108.0	n/a

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CORE NUMBER: 65
SEGMENT #: 13

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S95T000100	2	Aluminum - ICP-Fusion	ug/g	99.70	2.10e-02	8.59e+03	n/a	n/a	n/a	n/a	255.0	n/a	n/a
S95T000100	2	Sodium - ICP-Fusion	ug/g	103.1	1.00e-03	2.11e+05	n/a	n/a	n/a	n/a	509.0	n/a	n/a
S95T000100	2	Nickel - ICP-Fusion	ug/g	98.02	1.00e-02	6.51e+03	n/a	n/a	n/a	n/a	102.0	n/a	n/a
S95T000100	2	Calcium - ICP-Fusion	ug/g	103.3	6.00e-03	5.09e+02	n/a	n/a	n/a	n/a	509.0	n/a	n/a
S95T000100	2	Zinc - ICP-Fusion	ug/g	98.68	6.00e-03	< 50.91	n/a	n/a	n/a	n/a	50.90	n/a	n/a
S95T000100	2	Zirconium - ICP-Fusion	ug/g	97.94	1.00e-02	1.21e+02	n/a	n/a	n/a	n/a	50.90	n/a	n/a
S95T000100	2	Lithium - ICP-Fusion	ug/g	104.3	7.00e-03	< 51.9	n/a	n/a	n/a	n/a	50.90	n/a	n/a
S95T000101	2	Phosphorus - ICP-Fusion	ug/g	95.67	1.05e-01	1.93e+04	2.16e+04	2.04e+04	11.9	n/a	1.01e+03	n/a	n/a
S95T000101	2	Aluminum - ICP-Fusion	ug/g	99.70	1.211	3.15e+04	3.01e+04	3.08e+04	4.82	n/a	263.0	n/a	n/a
S95T000101	2	Iron - ICP-Fusion	ug/g	99.08	8.51e-01	3.34e+04	3.26e+04	3.30e+04	5.62	n/a	525.0	n/a	n/a
S95T000101	2	Nickel - ICP-Fusion	ug/g	103.1	4.827	1.27e+05	1.32e+05	1.30e+05	11.5	n/a	105.0	n/a	n/a
S95T000101	2	Sodium - ICP-Fusion	ug/g	98.02	10.08	3.12e+04	2.78e+04	2.95e+04	5.54	n/a	52.50	n/a	n/a
S95T000101	2	Chromium - ICP-Fusion	ug/g	98.12	3.70e-02	1.15e+03	1.09e+03	1.12e+03	10.7	n/a	525.0	n/a	n/a
S95T000101	2	Zinc - ICP-Fusion	ug/g	103.3	2.40e-01	8.59e+03	7.72e+03	8.15e+03	11.0	n/a	52.50	n/a	n/a
S95T000101	2	Zirconium - ICP-Fusion	ug/g	98.68	5.40e-02	183.8	183.8	183.8	11.0	n/a	52.50	n/a	n/a
S95T000101	2	Aluminum - ICP-Fusion	ug/g	97.94	1.01e-01	5.93e+02	585.6	589.2	2.46	91.80	2.20e+03	n/a	n/a
S95T000322	F	Aluminum - ICP-Fusion	ug/g	100.1	1.43e-01	1.22e+04	1.19e+04	1.20e+04	2.46	93.00	4.39e+03	n/a	n/a
S95T000322	F	Calcium - ICP-Fusion	ug/g	98.48	2.34e-01	6.34e+03	6.22e+03	6.28e+03	2.01	97.60	2.20e+03	n/a	n/a
S95T000322	F	Iron - ICP-Fusion	ug/g	104.2	1.28e-01	1.99e+04	1.95e+04	1.97e+04	0.83	97.60	2.20e+03	n/a	n/a
S95T000322	F	Lithium - ICP-Fusion	ug/g	98.22	2.00e-03	< 43.9e+02	43.9e+02	43.9e+02	n/a	85.82	439.0	n/a	n/a
S95T000322	F	Manganese - ICP-Fusion	ug/g	103.6	4.80e-02	< 4.39e+02	4.39e+02	4.39e+02	n/a	94.45	439.0	n/a	n/a
S95T000322	F	Sodium - ICP-Fusion	ug/g	98.92	3.210	7.18e+04	7.18e+04	7.18e+04	0.04	96.00	4.39e+03	n/a	n/a
S95T000322	F	Phosphorus - ICP-Fusion	ug/g	105.3	1.02e-01	1.50e+04	1.48e+04	1.49e+04	1.12	102.0	8.78e+03	n/a	n/a

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64

SEGMENT #: field blank

SEGMENT PORTION: Drainable Liquid

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000116	D	Aluminum-ICP-Acid Dil.	ug/mL	102.6	1.00e-03	21.50	21.50	21.70	1.84	n/a	5.00e-02	n/a
S95T000116	D	Calcium-ICP-Acid Dil.	ug/mL	106.0	-2.00e-3	1.24e-01	1.29e-01	1.27e-01	3.95	n/a	5.00e-02	n/a
S95T000116	D	Iron-ICP-Acid Dil.	ug/mL	104.4	0.00e+00	<5.00e-02	<0.05	n/a	n/a	n/a	5.00e-02	n/a
S95T000116	D	Sodium-ICP-Acid Dil.	ug/mL	102.2	-0.000e0	1.48e+02	151.0	149.5	2.01	n/a	5.00e-02	n/a
S95T000116	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	-1.00e-2	5.69e-01	5.81e-01	5.75e-01	2.09	n/a	5.00e-02	n/a

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
81-106

Core Number: 121
Segment #: 1

Segment Portion: U Upper Half of Segment

Sample#	R	#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004179	2		Aluminum - ICP-Fusion	ug/g	99.60	<5.00e-02	4.42e+04	4.53e+04	4.48e+04	2.46	104.7	1.04e+03	n/a
S95T004179	2		Boron - ICP-Fusion	ug/g	99.10	<5.00e-02	<1.04e+03	<1.05e3	n/a	n/a	97.80	1.04e+03	n/a
S95T004179	2		Barium - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.04e+03	<1.05e3	n/a	n/a	96.90	1.04e+03	n/a
S95T004179	2		Bismuth - ICP-Fusion	ug/g	101.4	<1.00e-01	<2.08e+03	<2.11e3	n/a	n/a	99.80	2.08e+03	n/a
S95T004179	2		Calcium - ICP-Fusion	ug/g	99.40	<1.00e-01	<2.08e+03	<2.11e3	n/a	n/a	98.10	2.08e+03	n/a
S95T004179	2		Chromium - ICP-Fusion	ug/g	102.2	<1.00e-02	<2.08e+02	212.0	n/a	n/a	101.7	208.0	n/a
S95T004179	2		Iron - ICP-Fusion	ug/g	101.4	<5.00e-02	<1.04e+03	<1.05e3	n/a	n/a	100.5	1.04e+03	n/a
S95T004179	2		Lithium - ICP-Fusion	ug/g	98.80	<1.00e-02	<2.08e+02	<2.11e2	n/a	n/a	93.00	208.0	n/a
S95T004179	2		Manganese - ICP-Fusion	ug/g	101.6	<1.00e-02	<2.08e+02	<2.11e2	n/a	n/a	100.3	208.0	n/a
S95T004179	2		Sodium - ICP-Fusion	ug/g	98.20	1.16e-01	2.24e+05	2.27e+05	2.26e+05	1.33	118.6	2.08e+03	n/a
S95T004179	2		Nickel - ICP-Fusion	ug/g	101.8	<2.00e-02	<4.16e+02	<4.21e2	n/a	n/a	100.0	416.0	n/a
S95T004179	2		Phosphorus - ICP-Fusion	ug/g	97.40	<5.00e-02	<1.04e+03	<1.05e3	n/a	n/a	99.80	1.04e+03	n/a
S95T004179	2		Silicon - ICP-Fusion	ug/g	103.4	<1.00e-02	<2.08e+02	<2.11e2	n/a	n/a	101.5	208.0	n/a
S95T004179	2		Zinc - ICP-Fusion	ug/g	99.20	5.17e-01	6.16e+03	6.17e+03	6.16e+03	0.16	101.7	208.0	n/a
S95T004179	2		Zirconium - ICP-Fusion	ug/g	99.20	5.17e-01	6.16e+03	6.17e+03	6.16e+03	0.16	101.7	208.0	n/a

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ORE NUMBER: 121
SEGMENT #: 2

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BX-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count	Err%
S951004180	Z	Aluminum - ICP-Fusion	ug/g	99.60	<5.00e-02	9.86e-04	1.33e-04	5.56e-04	101.4	924.0		
S951004180	Z	Boron - ICP-Fusion	ug/g	101.0	<5.00e-02	9.20e-02	1.01e-3	D/A	98.10	924.0		
S951004180	Z	Barium - ICP-Fusion	ug/g	99.00	<5.00e-02	9.26e-02	1.01e-3	D/A	97.40	924.0		
S951004180	Z	Bismuth - ICP-Fusion	ug/g	101.4	<1.00e-01	1.85e-03	2.04e-3	D/A	98.10	1.85e+03		
S951004180	Z	Calcium - ICP-Fusion	ug/g	99.40	<1.00e-01	1.85e-03	2.04e-3	D/A	100.3	1.85e+03		
S951004180	Z	Chromium - ICP-Fusion	ug/g	102.2	<1.00e-02	9.26e-02	1.40e-3	1.59e+03	18.9	924.0		
S951004180	Z	Iron - ICP-Fusion	ug/g	101.4	<1.00e-02	9.26e-02	1.40e-3	D/A	102.5	924.0		
S951004180	Z	Lithium - ICP-Fusion	ug/g	98.60	<1.00e-02	1.85e-02	5.04e-2	D/A	93.90	185.0		
S951004180	Z	Manganese - ICP-Fusion	ug/g	101.6	<1.00e-02	1.85e-02	5.04e-2	D/A	97.80	185.0		
S951004180	Z	Sodium - ICP-Fusion	ug/g	101.8	<1.00e-02	1.85e-02	2.20e-2	2.06e+05	48.5	1.85e+03		
S951004180	Z	Nickel - ICP-Fusion	ug/g	101.8	<2.00e-02	3.61e-02	4.12e-02	D/A	120.8	3.61e+03		
S951004180	Z	Phosphorus - ICP-Fusion	ug/g	99.40	<2.00e-02	9.26e-02	1.01e-3	D/A	97.10	924.0		
S951004180	Z	Silicon - ICP-Fusion	ug/g	103.4	<1.00e-02	1.85e-02	2.04e-2	D/A	97.80	185.0		
S951004180	Z	Zinc - ICP-Fusion	ug/g	99.20	<1.00e-02	4.44e-02	3.00e-02	3.74e+03	37.0	104.9		
S951004180	Z	Zirconium - ICP-Fusion	ug/g	99.20	<1.00e-02	1.10e-02	10.40	8.69e-02	8.29	88.20	3.690	
S951004191	A	Aluminum - ICP-Acid Digest	ug/g	99.60	6.20e-02	8.01e-02	8.69e-02	8.35e-04	8.14	1.04e+03	18.50	
S951004191	A	Arsenic - ICP-Acid Digest	ug/g	95.80	<1.00e-01	35.90	3.82e-1	D/A	133	86.60	36.90	
S951004191	A	Boron - ICP-Acid Digest	ug/g	104.8	2.24e-01	4.10e-02	1.92e-1	2.66e-2	173	50.12	18.50	
S951004191	A	Barium - ICP-Acid Digest	ug/g	93.20	<5.00e-02	18.50	1.92e-1	D/A	97.40	18.50		
S951004191	A	Beryllium - ICP-Acid Digest	ug/g	102.8	<5.00e-02	1.85e-02	1.85e-1	D/A	89.20	1.850		
S951004191	A	Bismuth - ICP-Acid Digest	ug/g	99.40	<1.00e-01	35.90	3.82e-1	D/A	89.20	36.90		
S951004191	A	Calcium - ICP-Acid Digest	ug/g	97.60	2.70e-01	2.35e-01	273.0	1.31e+03	158	36.90		
S951004191	A	Cadmium - ICP-Acid Digest	ug/g	95.20	<5.00e-01	35.90	3.82e-1	13.15	0.76	86.58	1.850	
S951004191	A	Cerium - ICP-Acid Digest	ug/g	95.00	<1.00e-02	35.90	3.82e-1	D/A	89.00	36.90		
S951004191	A	Cobalt - ICP-Acid Digest	ug/g	95.60	<2.00e-02	2.74e-02	27.64e-02	D/A	86.60	7.380		
S951004191	A	Chromium - ICP-Acid Digest	ug/g	93.00	<1.00e-02	1.28e-02	1.33e-03	1.30e+03	3.83	104.8	3.690	
S951004191	A	Copper - ICP-Acid Digest	ug/g	93.40	<1.00e-02	9.90e-02	492.0	8.61e-1	35.4	110.7	18.50	
S951004191	A	Iron - ICP-Acid Digest	ug/g	97.40	<5.00e-01	1.79e-02	1.79e+03	1.78e+03	0.56	82.70	185.0	
S951004191	A	Potassium - ICP-Acid Digest	ug/g	94.40	<5.00e-02	18.50	1.92e-1	D/A	89.20	18.50		
S951004191	A	Lanthanum - ICP-Acid Digest	ug/g	94.20	<1.00e-02	35.90	3.82e-1	D/A	89.20	3.690		
S951004191	A	Lithium - ICP-Acid Digest	ug/g	92.00	<1.00e-02	50.80	3.82e-1	D/A	84.10	36.90		
S951004191	A	Magnesium - ICP-Acid Digest	ug/g	91.00	<1.00e-02	11.20	12.65	22.9	85.18	3.690		
S951004191	A	Manganese - ICP-Acid Digest	ug/g	94.00	<5.00e-02	18.50	1.92e-1	1.46e+05	7.54	88.20	18.50	
S951004191	A	Molybdenum - ICP-Acid Digest	ug/g	101.8	<1.00e-01	1.53e-02	1.41e-05	1.46e+05	7.54	36.90		
S951004191	A	Neodymium - ICP-Acid Digest	ug/g	94.00	<5.00e-02	35.90	3.82e-1	D/A	89.40	36.90		
S951004191	A	Nickel - ICP-Acid Digest	ug/g	92.40	<2.00e-02	88.10	70.55	6.95	88.42	7.380		
S951004191	A	Phosphorus - ICP-Acid Digest	ug/g	89.00	<2.00e-01	3.58e-03	3.61e+03	3.58e+03	1.39	89.78	73.80	
S951004191	A	Lead - ICP-Acid Digest	ug/g	90.20	<1.00e-01	78.80	180.2	129.2	78.2	87.26	36.90	
S951004191	A	Sulfur - ICP-Acid Digest	ug/g	94.00	<1.00e-01	4.70e-03	4.4e+03	4.56e+03	6.32	56.78	36.90	
S951004191	A	Antimony - ICP-Acid Digest	ug/g	83.80	<6.00e-02	22.10	42.30e-1	D/A	81.20	22.10		
S951004191	A	Selenium - ICP-Acid Digest	ug/g	94.00	<1.00e-01	35.90	43.83e-1	D/A	92.20	56.90		

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004191	A	Silicon - ICP-Acid Digest	ug/g	26.6	3.23e-01	1.12e+03	136.0	628.0	157	n/a	18.50	n/a
S951004191	A	Samarium - ICP-Acid Digest	ug/g	94.40	<1.00e-02	<36.90	<3.83e1	n/a	n/a	88.20	36.90	n/a
S951004191	A	Strontium - ICP-Acid Digest	ug/g	93.60	<1.00e-02	9.270	47.30	49.80	10.0	82.60	3.690	n/a
S951004191	A	Titanium - ICP-Acid Digest	ug/g	86.20	<1.00e-02	<9.270	<3.83e0	n/a	n/a	82.60	3.690	n/a
S951004191	A	Thallium - ICP-Acid Digest	ug/g	89.80	<2.00e-01	<74.80	<7.66e1	n/a	n/a	85.80	74.80	n/a
S951004191	A	Vanadium - ICP-Acid Digest	ug/g	90.20	<5.00e-02	<18.50	<1.92e1	n/a	n/a	85.80	18.50	n/a
S951004191	A	Zinc - ICP-Acid Digest	ug/g	87.60	2.20e-02	25.30	24.30	24.80	4.03	86.26	3.690	n/a
S951004191	A	Zirconium - ICP-Acid Digest	ug/g	89.00	<1.00e-02	8.050	3.350	6.590	40.7	86.26	3.690	n/a
S96100415	Z	Aluminum - ICP-Fusion	ug/g	97.60	<5.00e-02	<7.35e-02	<7.22e2	1.17e+03	1.71	90.30	735.0	n/a
S96100415	Z	Boron - ICP-Fusion	ug/g	99.60	<5.00e-02	<7.35e-02	<7.22e2	n/a	n/a	99.20	735.0	n/a
S96100415	Z	Barium - ICP-Fusion	ug/g	101.4	<5.00e-02	<1.44e+03	<1.44e3	n/a	n/a	102.3	735.0	n/a
S96100415	Z	Bismuth - ICP-Fusion	ug/g	102.6	<1.00e-01	<1.47e+03	<1.44e3	n/a	n/a	105.8	1.47e+03	n/a
S96100415	Z	Calcium - ICP-Fusion	ug/g	104.2	<1.00e-01	<1.47e+03	<1.44e3	n/a	n/a	108.1	1.47e+03	n/a
S96100415	Z	Chromium - ICP-Fusion	ug/g	102.8	<1.00e-02	2.07e+03	1.95e+03	2.00e+03	7.00	103.9	147.0	n/a
S96100415	Z	Iron - ICP-Fusion	ug/g	102.6	<5.00e-02	1.26e+03	833.0	1.05e+03	40.8	103.7	735.0	n/a
S96100415	Z	Lithium - ICP-Fusion	ug/g	100.6	<1.00e-02	<1.47e+02	<1.44e2	n/a	n/a	99.20	147.0	n/a
S96100415	Z	Manganese - ICP-Fusion	ug/g	99.40	<1.00e-02	<1.47e+02	<1.44e2	n/a	n/a	98.50	147.0	n/a
S96100415	Z	Sodium - ICP-Fusion	ug/g	99.80	1.65e-01	1.74e+05	1.72e+05	1.73e+05	1.16	84.60	1.47e+03	n/a
S96100415	Z	Nickel - ICP-Fusion	ug/g	100.8	<2.00e-02	<2.93e+02	<2.89e2	n/a	n/a	101.9	293.0	n/a
S96100415	Z	Phosphorus - ICP-Fusion	ug/g	101.4	<2.00e-01	5.17e+03	5.27e+03	5.22e+03	1.92	98.60	2.93e+03	n/a
S96100415	Z	Silicon - ICP-Fusion	ug/g	95.20	<5.00e-02	9.48e+02	1.02e+03	986.0	7.32	97.00	735.0	n/a
S96100415	Z	Zinc - ICP-Fusion	ug/g	100.6	<1.00e-02	<1.47e+02	<1.44e2	n/a	n/a	101.5	147.0	n/a
S96100415	Z	Zirconium - ICP-Fusion	ug/g	99.40	1.95e-01	6.47e+03	5.84e+03	6.16e+03	10.2	100.4	147.0	n/a

WHC-SD-WM-DP-103, REV. 1

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BT-106

7. jun-1996 12:57:13
-0002-3

CORE NUMBER: 121
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk	Rec %	Det Limit	Count	Err%
S95T004181	Z	Aluminum - ICP-Fusion	ug/g	99.60	<5.00e-02	1.38e+04	1.38e+04	1.38e+04	0.72	102.6	983.0	n/a	n/a
S95T004181	Z	Boron - ICP-Fusion	ug/g	101.0	<9.88e-02	<9.77e2	<9.77e2	n/a	n/a	97.80	983.0	n/a	n/a
S95T004181	Z	Barium - ICP-Fusion	ug/g	99.00	<5.00e-02	<9.88e+02	<9.77e2	n/a	n/a	96.90	983.0	n/a	n/a
S95T004181	Z	Bismuth - ICP-Fusion	ug/g	101.4	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	99.40	1.97e+03	n/a	n/a
S95T004181	Z	Calcium - ICP-Fusion	ug/g	99.40	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	98.10	1.97e+03	n/a	n/a
S95T004181	Z	Chromium - ICP-Fusion	ug/g	102.2	<1.00e-02	1.09e+03	1.20e+03	1.14e+03	9.51	103.3	197.0	n/a	n/a
S95T004181	Z	Iron - ICP-Fusion	ug/g	101.4	<5.00e-02	<9.88e+02	<9.77e2	n/a	n/a	101.3	983.0	n/a	n/a
S95T004181	Z	Lithium - ICP-Fusion	ug/g	98.80	<1.00e-02	<1.97e+02	<1.95e2	n/a	n/a	92.30	197.0	n/a	n/a
S95T004181	Z	Manganese - ICP-Fusion	ug/g	101.6	<1.00e-02	<1.97e+02	<1.95e2	n/a	n/a	100.8	197.0	n/a	n/a
S95T004181	Z	Sodium - ICP-Fusion	ug/g	98.20	1.16e-01	2.33e+05	2.33e+05	2.35e+05	1.70	124.4	1.97e+03	n/a	n/a
S95T004181	Z	Nickel - ICP-Fusion	ug/g	101.6	<2.00e-02	<3.99e+02	<3.91e2	n/a	n/a	100.8	593.0	n/a	n/a
S95T004181	Z	Phosphorus - ICP-Fusion	ug/g	105.8	<2.00e-01	<3.99e+02	<3.91e2	n/a	n/a	100.8	3.99e+03	n/a	n/a
S95T004181	Z	Silicon - ICP-Fusion	ug/g	97.40	<5.00e-02	<9.88e+02	<9.77e2	n/a	n/a	98.30	983.0	n/a	n/a
S95T004181	Z	Zinc - ICP-Fusion	ug/g	103.4	<1.00e-02	<1.97e+02	<1.95e2	n/a	n/a	103.5	197.0	n/a	n/a
S95T004181	Z	Zirconium - ICP-Fusion	ug/g	99.20	5.17e-01	5.61e+03	5.59e+03	5.60e+03	9.36	106.1	197.0	n/a	n/a
S95T004192	A	Silver - ICP-Acid Digest	ug/g	91.60	<1.00e-02	15.00	15.60	15.30	3.62	n/a	4.620	n/a	n/a
S95T004192	A	Aluminum - ICP-Acid Digest	ug/g	99.60	6.20e-02	1.15e+04	1.15e+04	1.15e+04	0.00	n/a	35.10	n/a	n/a
S95T004192	A	Arsenic - ICP-Acid Digest	ug/g	93.80	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a
S95T004192	A	Boron - ICP-Acid Digest	ug/g	104.8	2.24e-01	1.03e+02	134.0	118.5	26.2	n/a	35.10	n/a	n/a
S95T004192	A	Barium - ICP-Acid Digest	ug/g	93.20	<5.00e-02	<23.10	<2.37e1	n/a	n/a	n/a	23.10	n/a	n/a
S95T004192	A	Beryllium - ICP-Acid Digest	ug/g	102.6	<5.00e-03	<2.310	<2.37e0	n/a	n/a	n/a	2.310	n/a	n/a
S95T004192	A	Bismuth - ICP-Acid Digest	ug/g	90.40	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a
S95T004192	A	Calcium - ICP-Acid Digest	ug/g	97.60	2.90e-01	1.51e+02	175.0	183.0	1.1	n/a	46.20	n/a	n/a
S95T004192	A	Cadmium - ICP-Acid Digest	ug/g	90.20	<5.00e-03	<7.610	7.650	7.650	0.52	n/a	2.310	n/a	n/a
S95T004192	A	Cerium - ICP-Acid Digest	ug/g	95.00	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a
S95T004192	A	Cobalt - ICP-Acid Digest	ug/g	90.60	<1.00e-02	<9.240	<9.49e0	n/a	n/a	n/a	9.240	n/a	n/a
S95T004192	A	Chromium - ICP-Acid Digest	ug/g	93.00	<1.00e-02	<4.620	<4.75e0	n/a	n/a	n/a	4.620	n/a	n/a
S95T004192	A	Copper - ICP-Acid Digest	ug/g	93.00	<1.00e-02	1.53e+03	1.24e+03	1.25e+03	1.60	n/a	4.620	n/a	n/a
S95T004192	A	Iron - ICP-Acid Digest	ug/g	93.40	7.20e-02	1.53e+03	1.49e3	1.51e3	2.63	n/a	23.10	n/a	n/a
S95T004192	A	Potassium - ICP-Acid Digest	ug/g	97.20	<5.00e-01	1.75e+03	1.77e+03	1.76e+03	1.14	n/a	23.10	n/a	n/a
S95T004192	A	Lanthanum - ICP-Acid Digest	ug/g	94.40	<1.00e-02	<23.10	<2.37e1	n/a	n/a	n/a	23.10	n/a	n/a
S95T004192	A	Lithium - ICP-Acid Digest	ug/g	92.00	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a
S95T004192	A	Magnesium - ICP-Acid Digest	ug/g	91.00	<1.00e-02	<4.960	<4.75e0	n/a	n/a	n/a	4.620	n/a	n/a
S95T004192	A	Manganese - ICP-Acid Digest	ug/g	91.00	<5.00e-02	<23.10	<2.37e1	n/a	n/a	n/a	23.10	n/a	n/a
S95T004192	A	Molybdenum - ICP-Acid Digest	ug/g	110.6	5.11e-01	2.12e+05	2.20e+05	2.16e+05	3.70	n/a	46.20	n/a	n/a
S95T004192	A	Sodium - ICP-Acid Digest	ug/g	94.80	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a
S95T004192	A	Neodymium - ICP-Acid Digest	ug/g	89.40	<2.00e-02	38.10	38.90	38.50	2.08	n/a	9.240	n/a	n/a
S95T004192	A	Nickel - ICP-Acid Digest	ug/g	92.00	<2.00e-01	1.08e+03	1.06e+03	1.07e+03	53.1	n/a	92.40	n/a	n/a
S95T004192	A	Phosphorus - ICP-Acid Digest	ug/g	90.20	<1.00e-01	55.40	52.70	54.05	3.00	n/a	46.20	n/a	n/a
S95T004192	A	Lead - ICP-Acid Digest	ug/g	90.00	<1.00e-01	3.75e+03	3.78e+03	3.76e+03	0.80	n/a	46.20	n/a	n/a
S95T004192	A	Sulfur - ICP-Acid Digest	ug/g	83.80	<1.00e-02	<27.70	<2.85e1	n/a	n/a	n/a	27.70	n/a	n/a
S95T004192	A	Antimony - ICP-Acid Digest	ug/g	94.00	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a
S95T004192	A	Selenium - ICP-Acid Digest	ug/g	93.00	<1.00e-01	<46.20	<44.75e1	n/a	n/a	n/a	46.20	n/a	n/a

WHC-SD-WM-DP-103, REV. 1

2-jun-1996 13:01:00
-0002-3

Sample#	R	#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004192	A	Silicon	-ICP-Acid Digest	ug/g	236.0	3.23e-02	1.46e+02	42.80	94.40	109	n/a	23.10	n/a
S95T004192	A	Samarium	-ICP-Acid Digest	ug/g	94.40	<1.00e-01	46.20	<4.75e1	n/a	n/a	n/a	46.20	n/a
S95T004192	A	Strontium	-ICP-Acid Digest	ug/g	93.60	<1.00e-02	35.00	32.10	32.35	n/a	n/a	4.60	n/a
S95T004192	A	Titanium	-ICP-Acid Digest	ug/g	86.20	<1.00e-02	4.620	<4.75e0	n/a	n/a	n/a	9.60	n/a
S95T004192	A	Thallium	-ICP-Acid Digest	ug/g	89.80	<2.00e-01	92.40	<9.49e1	n/a	n/a	n/a	22.10	n/a
S95T004192	A	Vanadium	-ICP-Acid Digest	ug/g	90.20	<5.00e-02	23.10	<2.37e1	n/a	n/a	n/a	22.10	n/a
S95T004192	A	Zinc	-ICP-Acid Digest	ug/g	87.60	2.20e-02	22.30	22.40	22.35	0.43	n/a	4.60	n/a
S95T004192	A	Zirconium	-ICP-Acid Digest	ug/g	89.00	<1.00e-02	4.620	<4.75e0	n/a	n/a	n/a	4.620	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	R	#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004182	Z	Aluminum	-ICP-Fusion	ug/g	99.60	<5.00e-02	1.59e+04	1.36e+04	1.53e+04	1.90	99	1.07e+03	n/a
S95T004182	Z	Boron	-ICP-Fusion	ug/g	101.0	<5.00e-02	<1.07e+03	<1.06e3	n/a	n/a	98.70	1.07e+03	n/a
S95T004182	Z	Barium	-ICP-Fusion	ug/g	99.00	<1.00e-01	<2.07e+03	<1.06e3	n/a	n/a	98.70	1.07e+03	n/a
S95T004182	Z	Bismuth	-ICP-Fusion	ug/g	101.4	<1.00e-02	<2.14e+03	<2.13e3	n/a	n/a	98.80	2.14e+03	n/a
S95T004182	Z	Calcium	-ICP-Fusion	ug/g	99.40	<1.00e-01	<2.14e+03	<2.13e3	n/a	n/a	101.9	2.14e+03	n/a
S95T004182	Z	Chromium	-ICP-Fusion	ug/g	102.2	<1.00e-02	1.04e+03	1.11e+03	1.08e+03	6.31	100.3	1.07e+03	n/a
S95T004182	Z	Iron	-ICP-Fusion	ug/g	98.80	<5.00e-02	<2.07e+03	<1.06e3	n/a	n/a	98.00	214.0	n/a
S95T004182	Z	Lithium	-ICP-Fusion	ug/g	98.80	<1.00e-02	<2.14e+03	<2.13e3	n/a	n/a	100.0	214.0	n/a
S95T004182	Z	Manganese	-ICP-Fusion	ug/g	98.20	1.10e-01	2.14e+02	2.33e+02	2.40e+02	3.76	100.3	2.14e+03	n/a
S95T004182	Z	Nickel	-ICP-Fusion	ug/g	101.6	<2.00e-02	<2.29e+02	<4.23e2	n/a	n/a	114.2	4.28e+03	n/a
S95T004182	Z	Phosphorus	-ICP-Fusion	ug/g	99.60	<2.00e-01	<1.07e+03	<4.23e2	n/a	n/a	98.10	1.07e+03	n/a
S95T004182	Z	Silicon	-ICP-Fusion	ug/g	102.40	<5.00e-02	<2.14e+03	<2.13e3	n/a	n/a	101.5	1.07e+03	n/a
S95T004182	Z	Zinc	-ICP-Fusion	ug/g	99.20	5.17e-01	5.38e+02	5.29e+02	5.34e+02	1.69	98.80	214.0	n/a
S95T004182	Z	Zirconium	-ICP-Fusion	ug/g	97.60	<1.00e-02	15.40	16.10	15.85	3.35	n/a	4.070	n/a
S95T004193	A	Silver	-ICP-Acid Digest	ug/g	99.60	6.20e-02	1.38e+04	1.30e+04	1.38e+04	0.72	n/a	20.30	n/a
S95T004193	A	Aluminum	-ICP-Acid Digest	ug/g	93.80	<1.00e-01	<4.07e+02	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Arsenic	-ICP-Acid Digest	ug/g	106.8	2.24e-01	1.29e+02	36.70	82.85	111	n/a	20.30	n/a
S95T004193	A	Barium	-ICP-Acid Digest	ug/g	93.20	<5.00e-02	<2.03e+02	<1.88e1	n/a	n/a	n/a	2.030	n/a
S95T004193	A	Beryllium	-ICP-Acid Digest	ug/g	102.6	<5.00e-03	<4.07e+02	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Bismuth	-ICP-Acid Digest	ug/g	90.40	<1.00e-01	<4.07e+02	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Calcium	-ICP-Acid Digest	ug/g	97.40	2.90e-01	1.61e+02	196.0	178.5	19.6	n/a	40.60	n/a
S95T004193	A	Cadmium	-ICP-Acid Digest	ug/g	90.20	<5.00e-03	<4.07e+02	<3.76e1	n/a	n/a	n/a	2.030	n/a
S95T004193	A	Cerium	-ICP-Acid Digest	ug/g	95.00	<1.00e-01	<4.07e+02	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Cobalt	-ICP-Acid Digest	ug/g	90.60	<2.00e-02	8.130	<7.53e0	n/a	n/a	n/a	8.130	n/a
S95T004193	A	Chromium	-ICP-Acid Digest	ug/g	93.00	<1.00e-02	9.03e+02	908.0	905.5	0.55	n/a	4.070	n/a
S95T004193	A	Copper	-ICP-Acid Digest	ug/g	91.40	<1.00e-02	<4.07e+02	<3.76e1	n/a	n/a	n/a	4.070	n/a
S95T004193	A	Corium	-ICP-Acid Digest	ug/g	93.40	7.20e-02	1.13e+02	112.0	112.5	0.89	n/a	20.30	n/a
S95T004193	A	Potassium	-ICP-Acid Digest	ug/g	97.20	<5.00e-01	2.20e+03	2.23e+03	2.22e+03	1.35	n/a	20.30	n/a
S95T004193	A	Silicon	-ICP-Acid Digest	ug/g	94.40	<5.00e-02	<2.03e+02	<1.88e1	n/a	n/a	n/a	2.030	n/a
S95T004193	A	Lithium	-ICP-Acid Digest	ug/g	94.20	<1.00e-01	<4.07e+02	<3.76e1	n/a	n/a	n/a	4.070	n/a
S95T004193	A	Magnesium	-ICP-Acid Digest	ug/g	92.00	<1.00e-01	<4.07e+02	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Manganese	-ICP-Acid Digest	ug/g	91.00	<1.00e-02	5.440	5.660	5.550	3.96	n/a	4.070	n/a
S95T004193	A	Moisture	-ICP-Acid Digest	ug/g	90.40	<5.00e-02	21.50	20.70	21.10	3.79	n/a	20.30	n/a
S95T004193	A	Sodium	-ICP-Acid Digest	ug/g	110.6	5.11e-01	2.16e+05	2.17e+05	2.17e+05	0.92	n/a	40.60	n/a
S95T004193	A	Nickel	-ICP-Acid Digest	ug/g	94.80	<1.00e-01	<4.07e+02	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Nickel	-ICP-Acid Digest	ug/g	92.40	<2.00e-02	19.70	16.10	17.90	20.1	n/a	8.130	n/a

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WHC-SD-WM-DP-103, REV. 1

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004193	A	Phosphorus -ICP-Acid Digest	ug/g	85.00	<2.00e-01	2.41e+03	1.43e+03	1.92e+03	51.0	n/a	81.30	n/a
S95T004193	A	Lead -ICP-Acid Digest	ug/g	85.20	<1.00e-01	<40.70	39.20	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Sulfur -ICP-Acid Digest	ug/g	20.20	<1.00e-01	3.80e+03	3.82e+03	3.81e+03	0.52	n/a	40.60	n/a
S95T004193	A	Antimony -ICP-Acid Digest	ug/g	83.80	<6.00e-02	<60.40	<2.76e1	n/a	n/a	n/a	24.40	n/a
S95T004193	A	Selenium -ICP-Acid Digest	ug/g	94.00	<1.00e-01	<60.70	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Silicon -ICP-Acid Digest	ug/g	236.01	3.23e-01	2.35e+02	203.0	218.0	13.8	n/a	20.30	n/a
S95T004193	A	Samarium -ICP-Acid Digest	ug/g	94.40	<1.00e-01	<60.70	<3.76e1	n/a	n/a	n/a	40.60	n/a
S95T004193	A	Strontium -ICP-Acid Digest	ug/g	93.60	<1.00e-02	25.40	25.50	25.45	0.39	n/a	4.070	n/a
S95T004193	A	Titanium -ICP-Acid Digest	ug/g	86.20	<1.00e-02	<4.070	<3.72e0	n/a	n/a	n/a	4.070	n/a
S95T004193	A	Thallium -ICP-Acid Digest	ug/g	89.80	<2.00e-01	<81.30	<7.59e1	n/a	n/a	n/a	81.30	n/a
S95T004193	A	Vanadium -ICP-Acid Digest	ug/g	90.20	<5.00e-02	<20.30	<1.88e1	n/a	n/a	n/a	20.30	n/a
S95T004193	A	Zinc -ICP-Acid Digest	ug/g	87.60	2.20e-02	20.30	18.40	19.45	10.8	n/a	4.070	n/a
S95T004193	A	Zirconium -ICP-Acid Digest	ug/g	89.00	<1.00e-02	<4.070	<3.76e0	n/a	n/a	n/a	4.070	n/a

WHC-SD-WM-DP-103, REV. 1

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: U Upper Half of Segment													
Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk	Rec %	Det Limit	Count	Err%
S95T004.83	Z	Aluminum - ICP-Fusion	ug/g	97.40	<5.00e-02	1.37e+04	1.45e+04	1.41e+04	5.67	98.70	935.0	N/A	N/A
S95T004.83	Z	Boron - ICP-Fusion	ug/g	100.6	<5.00e-02	<9.35e+02	<9.85e2	N/A	N/A	98.80	935.0	N/A	N/A
S95T004.83	Z	Barium - ICP-Fusion	ug/g	98.80	<1.00e-01	<9.35e+02	<9.85e2	N/A	N/A	98.10	935.0	N/A	N/A
S95T004.83	Z	Bismuth - ICP-Fusion	ug/g	98.80	<1.00e-01	<1.87e+03	<1.97e3	N/A	N/A	97.60	1.87e+03	N/A	N/A
S95T004.83	Z	Calcium - ICP-Fusion	ug/g	100.6	<1.00e-01	<1.87e+03	<1.97e3	N/A	N/A	100.8	1.87e+03	N/A	N/A
S95T004.83	Z	Chromium - ICP-Fusion	ug/g	100.6	<1.00e-02	1.07e+03	1.18e+03	1.12e+03	9.78	101.1	187.0	N/A	N/A
S95T004.83	Z	Iron - ICP-Fusion	ug/g	101.4	<1.00e-02	<9.35e+02	<9.85e2	N/A	N/A	102.7	935.0	N/A	N/A
S95T004.83	Z	Lithium - ICP-Fusion	ug/g	99.60	<1.00e-02	<1.87e+02	<1.97e2	N/A	N/A	95.40	187.0	N/A	N/A
S95T004.83	Z	Manganese - ICP-Fusion	ug/g	99.60	<1.00e-02	<1.87e+02	<1.97e2	N/A	N/A	100.0	187.0	N/A	N/A
S95T004.83	Z	Sodium - ICP-Fusion	ug/g	98.60	1.03e-01	2.44e+05	2.54e+05	2.49e+05	4.02	121.7	1.87e+03	N/A	N/A
S95T004.83	Z	Nickel - ICP-Fusion	ug/g	99.60	<2.00e-02	<3.74e+02	<3.94e2	N/A	N/A	100.0	374.0	N/A	N/A
S95T004.83	Z	Phosphorus - ICP-Fusion	ug/g	104.4	<2.00e-01	<3.74e+03	<3.94e3	N/A	N/A	115.1	3.74e+03	N/A	N/A
S95T004.83	Z	Silicon - ICP-Fusion	ug/g	96.40	<5.00e-02	<9.35e+02	<9.85e2	N/A	N/A	98.80	935.0	N/A	N/A
S95T004.83	Z	Zinc - ICP-Fusion	ug/g	100.8	<1.00e-02	<1.87e+02	<1.97e2	N/A	N/A	100.5	187.0	N/A	N/A
S95T004.83	Z	Zirconium - ICP-Fusion	ug/g	97.40	<1.00e-02	15.10	15.50	15.30	2.69	98.80	187.0	N/A	N/A
S95T004.83	Z	Aluminum - ICP-Acid Digest	ug/g	99.60	6.20e-02	8.98e+03	9.05e+03	9.02e+03	0.78	N/A	4.440	N/A	N/A
S95T004.83	Z	Arsenic - ICP-Acid Digest	ug/g	93.80	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	22.20	N/A	N/A
S95T004.83	Z	Boron - ICP-Acid Digest	ug/g	104.8	2.24e-01	1.06e+02	141.0	123.5	28.3	N/A	22.20	N/A	N/A
S95T004.83	Z	Barium - ICP-Acid Digest	ug/g	93.20	<5.00e-02	<2.20	<2.60e1	N/A	N/A	N/A	22.20	N/A	N/A
S95T004.83	Z	Beryllium - ICP-Acid Digest	ug/g	102.6	<5.00e-03	<2.20	<2.60e1	N/A	N/A	N/A	22.20	N/A	N/A
S95T004.83	Z	Bismuth - ICP-Acid Digest	ug/g	90.40	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	44.40	N/A	N/A
S95T004.83	Z	Calcium - ICP-Acid Digest	ug/g	97.60	2.90e-01	1.42e+02	878.0	510.0	14.4	N/A	44.40	N/A	N/A
S95T004.83	Z	Cadmium - ICP-Acid Digest	ug/g	90.20	<5.00e-03	9.670	9.460	9.365	2.20	N/A	2.20	N/A	N/A
S95T004.83	Z	Cerium - ICP-Acid Digest	ug/g	95.00	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	44.40	N/A	N/A
S95T004.83	Z	Cobalt - ICP-Acid Digest	ug/g	90.60	<2.00e-02	<8.890	<1.03e1	N/A	N/A	N/A	8.890	N/A	N/A
S95T004.83	Z	Copper - ICP-Acid Digest	ug/g	93.00	<1.00e-02	6.44e+02	807.0	625.5	5.92	N/A	4.440	N/A	N/A
S95T004.83	Z	Chromium - ICP-Acid Digest	ug/g	91.40	<1.00e-02	<4.40	<5.17e0	N/A	N/A	N/A	4.440	N/A	N/A
S95T004.83	Z	Iron - ICP-Acid Digest	ug/g	93.40	7.20e-02	1.03e+02	136.0	119.3	27.0	N/A	22.20	N/A	N/A
S95T004.83	Z	Potassium - ICP-Acid Digest	ug/g	97.20	<5.00e-01	1.55e+03	1.64e+03	1.60e+03	5.64	N/A	22.20	N/A	N/A
S95T004.83	Z	Lanthanum - ICP-Acid Digest	ug/g	94.40	<5.00e-02	<2.20	<2.60e1	N/A	N/A	N/A	22.20	N/A	N/A
S95T004.83	Z	Lithium - ICP-Acid Digest	ug/g	94.20	<1.00e-02	<4.40	<5.17e0	N/A	N/A	N/A	4.440	N/A	N/A
S95T004.83	Z	Magnesium - ICP-Acid Digest	ug/g	92.00	<1.00e-02	4.890	5.550	5.220	12.6	N/A	4.440	N/A	N/A
S95T004.83	Z	Manganese - ICP-Acid Digest	ug/g	91.00	<5.00e-02	<2.20	<2.60e1	N/A	N/A	N/A	22.20	N/A	N/A
S95T004.83	Z	Molybdenum - ICP-Acid Digest	ug/g	110.6	5.11e-01	2.11e+05	2.17e+05	2.14e+05	2.80	N/A	44.40	N/A	N/A
S95T004.83	Z	Sodium - ICP-Acid Digest	ug/g	94.80	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	44.40	N/A	N/A
S95T004.83	Z	Neodymium - ICP-Acid Digest	ug/g	92.40	<2.00e-02	25.30	27.50	26.40	8.33	N/A	8.890	N/A	N/A
S95T004.83	Z	Nickel - ICP-Acid Digest	ug/g	89.00	<2.00e-01	1.72e+03	297.0	1.01e+03	141	N/A	98.90	N/A	N/A
S95T004.83	Z	Phosphorus - ICP-Acid Digest	ug/g	90.20	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	44.40	N/A	N/A
S95T004.83	Z	Lead - ICP-Acid Digest	ug/g	90.00	<1.00e-01	<1.46e+03	<1.46e+03	1.47e+03	1.36	N/A	44.40	N/A	N/A
S95T004.83	Z	Sulfur - ICP-Acid Digest	ug/g	83.80	<6.00e-02	<2.60	<3.10e1	N/A	N/A	N/A	26.70	N/A	N/A
S95T004.83	Z	Antimony - ICP-Acid Digest	ug/g	94.00	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	44.40	N/A	N/A
S95T004.83	Z	Selenium - ICP-Acid Digest	ug/g	94.00	<1.00e-01	<4.40	<5.17e1	N/A	N/A	N/A	44.40	N/A	N/A

Sample#	R#W Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004.194	A Silicon - ICP-Acid Digest	ug/g	255.0	3.23e-01	36.40	412.0	224.2	168	N/A	22.20	N/A
S951004.194	A Samarium - ICP-Acid Digest	ug/g	94.60	<1.00e-01	< 44.40	<5.17e0	N/A	N/A	N/A	44.40	N/A
S951004.194	A Strontium - ICP-Acid Digest	ug/g	93.60	<1.00e-02	17.20	18.50	17.85	7.28	N/A	4.440	N/A
S951004.194	A Titanium - ICP-Acid Digest	ug/g	86.20	<1.00e-02	< 4.440	<5.17e0	N/A	N/A	N/A	4.440	N/A
S951004.194	A Thallium - ICP-Acid Digest	ug/g	89.80	<2.00e-01	< 88.90	<1.03e2	N/A	N/A	N/A	88.90	N/A
S951004.194	A Vanadium - ICP-Acid Digest	ug/g	90.20	<2.00e-02	< 22.20	<2.60e1	N/A	N/A	N/A	22.20	N/A
S951004.194	A Zinc - ICP-Acid Digest	ug/g	87.60	2.20e-02	16.20	17.00	16.60	4.82	N/A	4.440	N/A
S951004.194	A Zirconium - ICP-Acid Digest	ug/g	89.00	<1.00e-02	< 4.440	<5.17e0	N/A	N/A	N/A	4.440	N/A

L Lower Half of Segment: L Lower Half of Segment

Sample#	R#W Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004.194	Z Aluminum - ICP-Fusion	ug/g	97.40	<5.00e-02	1.02e+04	1.22e+04	1.12e+04	17.9	96.00	975.0	N/A
S951004.194	Z Boron - ICP-Fusion	ug/g	100.6	<5.00e-02	< 75e+02	<9.40e2	N/A	N/A	99.10	975.0	N/A
S951004.194	Z Barium - ICP-Fusion	ug/g	98.00	<5.00e-01	<1.95e+03	<1.88e3	N/A	N/A	99.60	975.0	N/A
S951004.194	Z Calcium - ICP-Fusion	ug/g	98.80	<1.00e-01	<1.95e+03	<1.88e3	N/A	N/A	99.60	1.95e+03	N/A
S951004.194	Z Chromium - ICP-Fusion	ug/g	100.6	<5.00e-02	1.10e+03	1.28e+03	1.19e+03	15.1	99.50	195.0	N/A
S951004.194	Z Iron - ICP-Fusion	ug/g	101.4	<5.00e-02	<9.75e+02	<9.40e2	N/A	N/A	102.7	975.0	N/A
S951004.194	Z Lithium - ICP-Fusion	ug/g	99.60	<1.00e-02	<1.95e+02	<1.88e2	N/A	N/A	99.10	195.0	N/A
S951004.194	Z Manganese - ICP-Fusion	ug/g	98.60	1.03e-01	2.39e+05	2.50e+05	2.44e+05	4.50	99.70	1.95e+03	N/A
S951004.194	Z Sodium - ICP-Fusion	ug/g	99.60	<2.00e-02	<3.90e+02	<3.76e2	N/A	N/A	98.60	390.0	N/A
S951004.194	Z Nickel - ICP-Fusion	ug/g	104.4	<2.00e-01	<3.90e+03	<3.76e3	N/A	N/A	N/A	3.90e+03	N/A
S951004.194	Z Phosphorus - ICP-Fusion	ug/g	96.40	<5.00e-02	<9.75e+02	<9.40e2	N/A	N/A	98.10	975.0	N/A
S951004.194	Z Silicon - ICP-Fusion	ug/g	100.8	<1.00e-02	<1.95e+02	<1.88e2	N/A	N/A	97.60	195.0	N/A
S951004.194	Z Zinc - ICP-Fusion	ug/g	97.40	4.28e-01	2.49e+03	4.99e+03	3.74e+03	66.8	98.70	195.0	N/A
S951004.195	Z Silicon - ICP-Fusion	ug/g	91.60	<1.00e-02	15.70	16.90	16.30	7.36	N/A	5.060	N/A
S951004.195	A Silver - ICP-Acid Digest	ug/g	99.60	6.20e-02	1.08e+04	1.08e+04	1.08e+04	0.00	N/A	25.30	N/A
S951004.195	A Aluminum - ICP-Acid Digest	ug/g	93.80	<1.00e-01	< 50.60	<4.42e1	121.0	6.61	N/A	50.60	N/A
S951004.195	A Arsenic - ICP-Acid Digest	ug/g	104.8	2.24e-01	1.25e+02	<2.21e1	N/A	N/A	N/A	25.30	N/A
S951004.195	A Boron - ICP-Acid Digest	ug/g	93.20	<5.00e-03	< 2.530	<2.21e0	N/A	N/A	N/A	2.530	N/A
S951004.195	A Bismuth - ICP-Acid Digest	ug/g	102.6	<5.00e-02	< 50.60	<4.42e1	N/A	N/A	N/A	50.60	N/A
S951004.195	A Calcium - ICP-Acid Digest	ug/g	97.60	2.90e-01	2.64e+02	2.25e1	244.5	16.0	N/A	50.60	N/A
S951004.195	A Cadmium - ICP-Acid Digest	ug/g	90.20	<5.00e-03	17.20	16.60	16.90	3.55	N/A	2.530	N/A
S951004.195	A Cerium - ICP-Acid Digest	ug/g	95.00	<1.00e-01	< 50.60	<4.42e1	N/A	N/A	N/A	50.60	N/A
S951004.195	A Cobalt - ICP-Acid Digest	ug/g	90.60	<1.00e-02	< 10.10	<8.85e0	90.0	N/A	N/A	10.10	N/A
S951004.195	A Chromium - ICP-Acid Digest	ug/g	93.00	<1.00e-02	9.97e+02	90.0	950.5	9.78	N/A	5.060	N/A
S951004.195	A Copper - ICP-Acid Digest	ug/g	91.40	<1.00e-02	< 5.060	<4.42e0	N/A	N/A	N/A	5.060	N/A
S951004.195	A Potassium - ICP-Acid Digest	ug/g	93.40	7.20e-02	2.98e+02	285.0	291.5	4.46	N/A	25.30	N/A
S951004.195	A Lanthanum - ICP-Acid Digest	ug/g	97.20	<5.00e-02	1.75e+03	1.77e+03	1.76e+03	1.14	N/A	253.0	N/A
S951004.195	A Lithium - ICP-Acid Digest	ug/g	94.40	<5.00e-02	< 25.30	<2.21e1	N/A	N/A	N/A	25.30	N/A
S951004.195	A Magnesium - ICP-Acid Digest	ug/g	92.00	<1.00e-01	< 50.60	<4.42e0	N/A	N/A	N/A	5.060	N/A
S951004.195	A Manganese - ICP-Acid Digest	ug/g	91.00	<1.00e-02	14.80	13.70	14.25	7.72	N/A	5.060	N/A
S951004.195	A Molybdenum - ICP-Acid Digest	ug/g	90.40	<5.00e-02	27.90	26.90	27.40	3.65	N/A	25.30	N/A
S951004.195	A Sodium - ICP-Acid Digest	ug/g	110.6	5.11e-01	2.27e+05	2.25e+05	2.26e+05	0.88	N/A	50.60	N/A
S951004.195	A Vanadium - ICP-Acid Digest	ug/g	94.80	<1.00e-01	< 50.60	<4.42e1	N/A	N/A	N/A	50.60	N/A
S951004.195	A Nickel - ICP-Acid Digest	ug/g	92.40	<2.00e-02	67.20	69.20	68.20	2.93	N/A	10.10	N/A

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004195	A	Phosphorus -ICP-Acid Digest	ug/g	89.00	<2.00e-01	4.68e+02	489.0	478.5	4.39	n/a	101.0	n/a
S951004195	A	Lead -ICP-Acid Digest	ug/g	90.20	<1.00e-01	< 50.60	46.90	n/a	n/a	n/a	50.60	n/a
S951004195	A	Sulfur -ICP-Acid Digest	ug/g	90.00	<1.00e-01	3.72e+03	3.55e+03	3.64e+03	4.68	n/a	50.60	n/a
S951004195	A	Antimony -ICP-Acid Digest	ug/g	83.80	<6.00e-02	< 30.40	<2.65e1	n/a	n/a	n/a	30.40	n/a
S951004195	A	Selenium -ICP-Acid Digest	ug/g	94.00	<1.00e-01	< 50.60	<4.42e1	n/a	n/a	n/a	50.60	n/a
S951004195	A	Silicon -ICP-Acid Digest	ug/g	256.0	3.23e-01	1.66e+02	468.0	317.0	95.3	n/a	25.30	n/a
S951004195	A	Samarium -ICP-Acid Digest	ug/g	94.40	<1.00e-01	< 50.60	<4.42e1	n/a	n/a	n/a	50.60	n/a
S951004195	A	Strontium -ICP-Acid Digest	ug/g	93.60	<1.00e-02	1.03e+02	97.50	100.2	5.49	n/a	5.060	n/a
S951004195	A	Titanium -ICP-Acid Digest	ug/g	86.20	<1.00e-02	< 5.060	<4.42e0	n/a	n/a	n/a	5.060	n/a
S951004195	A	Thallium -ICP-Acid Digest	ug/g	89.80	<2.00e-01	<1.01e+02	<8.85e1	n/a	n/a	n/a	101.0	n/a
S951004195	A	Vanadium -ICP-Acid Digest	ug/g	90.20	<5.00e-02	< 25.30	<2.21e1	n/a	n/a	n/a	25.30	n/a
S951004195	A	Zinc -ICP-Acid Digest	ug/g	87.60	2.20e-02	17.70	17.60	17.65	0.57	n/a	5.060	n/a
S951004195	A	Zirconium -ICP-Acid Digest	ug/g	89.00	<1.00e-02	8.780	7.950	8.365	9.92	n/a	5.060	n/a

WHC-SD-WM-DP-103, REV. 1

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BT-106

SEGMENT PORTION: U Upper Half of Segment										Standard %		Blank		Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%		
Sample#	R #	Analyte	Unit																				
S95T004185	Z	Aluminum - ICP-Fusion	ug/g	97.40	<5.00e-02	1.63e+04	1.68e+04	5.95	101.3	882.0	N/A	N/A											
S95T004185	Z	Boron - ICP-Fusion	ug/g	100.6	<5.00e-02	<8.82e+02	<9.29e2	N/A	99.30	882.0	N/A	N/A											
S95T004185	Z	Barium - ICP-Fusion	ug/g	98.00	<5.00e-02	<8.82e+02	<9.29e2	N/A	101.0	882.0	N/A	N/A											
S95T004185	Z	Bismuth - ICP-Fusion	ug/g	98.80	<1.00e-01	<1.76e+03	<1.86e3	N/A	100.0	1.76e+03	N/A	N/A											
S95T004185	Z	Calcium - ICP-Fusion	ug/g	98.80	<1.00e-01	<1.76e+03	<1.86e3	N/A	100.0	1.76e+03	N/A	N/A											
S95T004185	Z	Chromium - ICP-Fusion	ug/g	100.6	<5.00e-02	1.44e+03	1.49e+03	3.41	103.5	882.0	N/A	N/A											
S95T004185	Z	Iron - ICP-Fusion	ug/g	101.4	<5.00e-02	<8.82e+02	<9.29e2	N/A	99.50	882.0	N/A	N/A											
S95T004185	Z	Lithium - ICP-Fusion	ug/g	99.40	<1.00e-02	<1.76e+02	<1.86e2	N/A	95.60	176.0	N/A	N/A											
S95T004185	Z	Manganese - ICP-Fusion	ug/g	99.80	<1.00e-02	<1.76e+02	<1.86e2	N/A	99.80	176.0	N/A	N/A											
S95T004185	Z	Sodium - ICP-Fusion	ug/g	98.60	1.03e-01	2.20e+05	2.37e+05	7.44	139.3	1.76e+03	N/A	N/A											
S95T004185	Z	Nickel - ICP-Fusion	ug/g	97.60	<2.00e-02	<3.53e+02	<3.72e2	N/A	100.3	353.0	N/A	N/A											
S95T004185	Z	Phosphorus - ICP-Fusion	ug/g	97.60	<2.00e-01	<3.53e+03	<3.72e3	N/A	100.3	353.0	N/A	N/A											
S95T004185	Z	Silicon - ICP-Fusion	ug/g	96.40	<5.00e-02	<8.82e+02	<9.29e2	N/A	99.80	882.0	N/A	N/A											
S95T004185	Z	Zinc - ICP-Fusion	ug/g	100.8	<1.00e-02	<1.76e+02	<1.86e2	N/A	99.10	176.0	N/A	N/A											
S95T004185	Z	Zirconium - ICP-Fusion	ug/g	97.40	<5.00e-02	1.49e+04	1.52e+04	4.71	326.3	26.40	N/A	N/A											
S95T004185	A	Aluminum - ICP-Acid Digest	ug/g	91.40	<1.00e-01	<3.80	<4.69e1	N/A	87.20	52.80	N/A	N/A											
S95T004196	A	Arsenic - ICP-Acid Digest	ug/g	110.2	<5.00e-02	1.67e+02	1.52e0	N/A	85.40	26.40	N/A	N/A											
S95T004196	A	Barium - ICP-Acid Digest	ug/g	91.00	<5.00e-02	<2.64	<2.34e1	N/A	88.80	26.40	N/A	N/A											
S95T004196	A	Beryllium - ICP-Acid Digest	ug/g	88.80	<1.00e-01	<3.80	<4.69e1	N/A	88.80	52.80	N/A	N/A											
S95T004196	A	Bismuth - ICP-Acid Digest	ug/g	93.20	<4.12e-01	2.19e+02	2.05e0	N/A	29.6	95.26	52.80	N/A											
S95T004196	A	Calcium - ICP-Acid Digest	ug/g	88.60	<5.00e-03	20.80	17.90	19.35	15.0	86.22	2.640	N/A											
S95T004196	A	Cadmium - ICP-Acid Digest	ug/g	94.20	<1.00e-01	<3.80	<4.69e1	N/A	89.40	52.80	N/A	N/A											
S95T004196	A	Cobalt - ICP-Acid Digest	ug/g	89.80	<2.00e-02	<10.60	<9.36e0	N/A	86.80	10.50	5.280	N/A											
S95T004196	A	Chromium - ICP-Acid Digest	ug/g	91.20	<1.00e-02	1.35e+03	1.26e+02	2.41e0	22.4	83.84	5.280	N/A											
S95T004196	A	Copper - ICP-Acid Digest	ug/g	89.80	<1.00e-02	<5.280	<4.69e0	N/A	85.16	26.40	N/A	N/A											
S95T004196	A	Iron - ICP-Acid Digest	ug/g	90.60	<5.00e-01	2.68e+02	2.14e+02	2.06e+03	7.77	128.5	264.0	N/A											
S95T004196	A	Potassium - ICP-Acid Digest	ug/g	91.40	<5.00e-01	<1.98e+03	<1.98e+03	2.06e+03	24.1	86.00	52.80	N/A											
S95T004196	A	Lanthanum - ICP-Acid Digest	ug/g	92.80	<1.00e-02	<5.280	<4.69e0	N/A	87.00	5.280	N/A	N/A											
S95T004196	A	Lithium - ICP-Acid Digest	ug/g	88.40	<1.00e-01	<5.280	<4.69e0	N/A	87.40	52.80	N/A	N/A											
S95T004196	A	Magnesium - ICP-Acid Digest	ug/g	89.00	<1.00e-02	14.10	10.70	12.40	27.4	83.86	5.280	N/A											
S95T004196	A	Manganese - ICP-Acid Digest	ug/g	89.80	<1.00e-02	33.40	31.10	32.25	7.13	85.64	26.40	N/A											
S95T004196	A	Molybdenum - ICP-Acid Digest	ug/g	112.2	<1.00e-01	2.32e+03	2.21e+05	2.26e+05	4.86	2.86e+03	52.80	N/A											
S95T004196	A	Sodium - ICP-Acid Digest	ug/g	91.20	<1.00e-01	<52.80	<4.69e1	N/A	86.00	52.80	N/A	N/A											
S95T004196	A	Neodymium - ICP-Acid Digest	ug/g	91.20	<2.00e-02	63.20	54.90	59.05	14.1	110.5	106.0	N/A											
S95T004196	A	Nickel - ICP-Acid Digest	ug/g	88.80	<2.00e-01	<2.02e+03	<2.05e+03	2.04e+03	9.45	91.80	52.80	N/A											
S95T004196	A	Lead - ICP-Acid Digest	ug/g	86.40	<1.00e-01	<52.80	<4.69e1	N/A	104.8	32.80	N/A	N/A											
S95T004196	A	Sulfur - ICP-Acid Digest	ug/g	83.60	<6.00e-02	<4.21e+03	<3.83e+03	4.02e+03	9.45	82.80	31.70	N/A											
S95T004196	A	Antimony - ICP-Acid Digest	ug/g	89.20	<1.00e-02	<31.70	<4.69e1	N/A	86.40	52.80	N/A	N/A											
S95T004196	A	Selenium - ICP-Acid Digest	ug/g	89.20	<1.00e-01	<52.80	<4.69e1	N/A	86.40	52.80	N/A	N/A											

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004196	A	Silicon - ICP-Acid Digest	ug/g	274.0	5.40e-02	1.97e+02	53.20	125.1	115	371.3	26.40	N/A
S95T004196	A	Samarium - ICP-Acid Digest	ug/g	90.00	<1.00e-01	< 52.80	<4.69e1	n/a	n/a	85.00	52.80	N/A
S95T004196	A	Serium - ICP-Acid Digest	ug/g	91.20	<1.00e-02	77.70	64.60	71.15	18.4	85.64	5.280	N/A
S95T004196	A	Titanium - ICP-Acid Digest	ug/g	87.80	<1.00e-02	< 5.280	<4.69e0	n/a	n/a	82.80	5.280	N/A
S95T004196	A	Thallium - ICP-Acid Digest	ug/g	86.60	<2.00e-01	<1.06e+02	<9.38e1	n/a	n/a	84.60	106.0	N/A
S95T004196	A	Vanadium - ICP-Acid Digest	ug/g	88.20	<5.00e-02	< 26.40	<2.34e1	n/a	n/a	84.00	26.40	N/A
S95T004196	A	Zinc - ICP-Acid Digest	ug/g	86.40	1.50e-02	18.30	17.70	18.00	3.33	85.26	5.280	N/A
S95T004196	A	Zirconium - ICP-Acid Digest	ug/g	88.40	<1.00e-02	11.20	8.250	9.725	30.3	84.36	5.280	N/A

WHC-SD-WM-DP-103, REV. 1

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
81-106

SEGMENT PORTION: U Upper Half of Segment																			
Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk	Rec %	Det Limit	Count	Err%					
S95T004186	Z	Aluminum - ICP-Fusion	ug/g	97.40	<5.00e-02	1.16e-04	1.17e-04	1.16e-04	0.86	99.10	98.50	1.03e+03		N/A					
S95T004186	Z	Boron - ICP-Fusion	ug/g	100.5	<5.00e-02	<1.03e-03	<1.03e-03	N/A	N/A	N/A	N/A	1.03e+03		N/A					
S95T004186	Z	Barium - ICP-Fusion	ug/g	98.00	<5.00e-02	<1.03e-03	<1.03e-03	N/A	N/A	98.60	98.80	1.03e+03		N/A					
S95T004186	Z	Bismuth - ICP-Fusion	ug/g	98.80	<1.00e-01	<2.05e-03	<2.10e-03	N/A	N/A	99.10	99.10	2.05e+03		N/A					
S95T004186	Z	Calcium - ICP-Fusion	ug/g	100.5	<1.00e-02	<1.03e-03	<1.03e-03	746.5	10.5	101.5	103.0	1.03e+03		N/A					
S95T004186	Z	Chromium - ICP-Fusion	ug/g	100.5	<1.00e-02	<1.03e-03	<1.03e-03	N/A	N/A	93.90	93.90	205.0		N/A					
S95T004186	Z	Iron - ICP-Fusion	ug/g	99.60	<1.00e-02	<2.05e-02	<2.10e-02	N/A	N/A	100.0	100.0	205.0		N/A					
S95T004186	Z	Lithium - ICP-Fusion	ug/g	99.60	<1.00e-02	<2.05e-02	<2.10e-02	2.30e+05	4.77	112.6	104.5	4.11e+03		N/A					
S95T004186	Z	Manganese - ICP-Fusion	ug/g	98.60	<1.03e-01	<4.11e-03	<4.11e-03	N/A	N/A	100.5	100.5	1.03e+03		N/A					
S95T004186	Z	Sodium - ICP-Fusion	ug/g	104.4	<2.00e-01	<4.11e-03	<4.11e-03	N/A	N/A	99.30	99.30	1.03e+03		N/A					
S95T004186	Z	Nickel - ICP-Fusion	ug/g	96.40	<1.00e-02	<1.03e-03	<1.03e-03	N/A	N/A	100.5	100.5	205.0		N/A					
S95T004186	Z	Phosphorus - ICP-Fusion	ug/g	100.8	<1.00e-02	<2.05e-02	<2.10e-02	N/A	N/A	99.40	99.40	205.0		N/A					
S95T004186	Z	Silicon - ICP-Fusion	ug/g	97.40	<2.28e-01	<4.84e+03	6.01e+03	5.43e+03	21.6	N/A	N/A	5.010		N/A					
S95T004186	Z	Zinc - ICP-Fusion	ug/g	97.40	<1.00e-02	16.40	1.17e-04	15.90	5.29	N/A	N/A	5.010		N/A					
S95T004197	A	Silver - ICP-Acid Digest	ug/g	97.40	<5.00e-02	1.09e-04	1.01e-04	1.03e-04	3.88	N/A	N/A	25.00		N/A					
S95T004197	A	Aluminum - ICP-Acid Digest	ug/g	97.40	<1.00e-01	<30.10	<3.59e1	N/A	N/A	31.7	N/A	25.00		N/A					
S95T004197	A	Arsenic - ICP-Acid Digest	ug/g	110.2	<5.00e-02	1.09e-02	1.10e-02	129.5	31.7	N/A	N/A	25.00		N/A					
S95T004197	A	Boron - ICP-Acid Digest	ug/g	91.00	<5.00e-02	<2.10	<2.59e1	N/A	N/A	N/A	N/A	25.00		N/A					
S95T004197	A	Barium - ICP-Acid Digest	ug/g	98.60	<5.00e-03	<2.510	<2.59e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Bismuth - ICP-Acid Digest	ug/g	88.80	<1.00e-01	<30.10	<5.70e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Calcium - ICP-Acid Digest	ug/g	93.20	<4.12e-01	4.39e-02	2.15e-02	340.0	55.9	N/A	N/A	25.00		N/A					
S95T004197	A	Cadmium - ICP-Acid Digest	ug/g	88.60	<5.00e-03	5.70e-02	2.580	5.155	22.3	N/A	N/A	50.10		N/A					
S95T004197	A	Cerium - ICP-Acid Digest	ug/g	94.20	<1.00e-01	<30.10	<5.19e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Cobalt - ICP-Acid Digest	ug/g	89.80	<2.00e-02	5.94e-02	507.0	550.5	15.8	N/A	N/A	5.010		N/A					
S95T004197	A	Chromium - ICP-Acid Digest	ug/g	91.20	<1.00e-02	5.94e-02	<5.19e1	N/A	N/A	N/A	N/A	5.010		N/A					
S95T004197	A	Copper - ICP-Acid Digest	ug/g	89.80	<1.00e-02	5.94e-02	<5.19e1	184.0	18.5	N/A	N/A	25.00		N/A					
S95T004197	A	Potassium - ICP-Acid Digest	ug/g	90.60	<5.00e-02	2.01e-02	1.43e+03	1.68e+03	6.53	N/A	N/A	25.00		N/A					
S95T004197	A	Lanthanum - ICP-Acid Digest	ug/g	91.40	<5.00e-01	<2.510	<2.59e1	N/A	N/A	N/A	N/A	25.00		N/A					
S95T004197	A	Lithium - ICP-Acid Digest	ug/g	92.80	<1.00e-02	<2.510	<2.59e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Magnesium - ICP-Acid Digest	ug/g	88.40	<1.00e-01	<30.10	<5.19e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Manganese - ICP-Acid Digest	ug/g	89.80	<1.00e-02	7.09e-02	2.28e+05	2.28e+05	4.06	N/A	N/A	25.00		N/A					
S95T004197	A	Molybdenum - ICP-Acid Digest	ug/g	89.80	<1.00e-02	<2.510	<2.59e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Sodium - ICP-Acid Digest	ug/g	112.2	<1.00e-01	2.28e+02	<3.59e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Niobium - ICP-Acid Digest	ug/g	91.20	<1.00e-02	<30.10	<5.19e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Nickel - ICP-Acid Digest	ug/g	91.20	<2.00e-02	5.94e-02	38.80	52.10	12.7	N/A	N/A	100.0		N/A					
S95T004197	A	Phosphorus - ICP-Acid Digest	ug/g	88.80	<2.00e-01	3.84e+02	<38.80	361.0	12.7	N/A	N/A	50.10		N/A					
S95T004197	A	Lead - ICP-Acid Digest	ug/g	88.80	<1.00e-01	2.28e+02	<38.80	N/A	N/A	N/A	N/A	30.10		N/A					
S95T004197	A	Sulfur - ICP-Acid Digest	ug/g	86.40	<1.00e-01	5.08e+03	2.88e+03	2.98e+03	6.71	N/A	N/A	50.10		N/A					
S95T004197	A	Antimony - ICP-Acid Digest	ug/g	83.60	<6.00e-02	<30.10	<3.11e1	N/A	N/A	N/A	N/A	50.10		N/A					
S95T004197	A	Selenium - ICP-Acid Digest	ug/g	89.20	<1.00e-01	<30.10	<3.11e1	N/A	N/A	N/A	N/A	50.10		N/A					

WHC-SD-WM-DP-103, REV. 1

Sample#	RAP	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004197	A	Silicon -ICP-Acid Digest	ug/g	274.0	5.40e-02	1.20e+02	89.20	104.6	29.4	n/a	25.00	n/a
S95T004197	A	Samarium -ICP-Acid Digest	ug/g	90.00	<1.00e-01	< 5.0.10	<5.19e1	n/a	n/a	n/a	50.10	n/a
S95T004197	A	Strontium -ICP-Acid Digest	ug/g	91.20	<1.00e-02	58.50	51.90	55.20	12.0	n/a	5.010	n/a
S95T004197	A	Titanium-ICP-Acid Digest	ug/g	87.80	<1.00e-02	< 5.010	<5.19e0	n/a	n/a	n/a	5.010	n/a
S95T004197	A	Thallium -ICP-Acid Digest	ug/g	86.60	<2.00e-01	<1.00e+02	<1.04e2	n/a	n/a	n/a	100.0	n/a
S95T004197	A	Vanadium -ICP-Acid Digest	ug/g	88.20	<5.00e-02	< 25.10	<2.59e1	n/a	n/a	n/a	25.00	n/a
S95T004197	A	Zinc -ICP-Acid Digest	ug/g	86.40	1.50e-02	16.60	15.80	16.20	4.94	n/a	5.010	n/a
S95T004197	A	Zirconium -ICP-Acid Digest	ug/g	88.40	<1.00e-02	< 5.010	<5.19e0	n/a	n/a	n/a	5.010	n/a

WHC-SD-WM-DP-103, REV. 1

Table B. ICP Analytical Summary - Cores 64, 65, & 121.
BX-106CORE NUMBER: 121
SEGMENT #: 7

SEGMENT PORTION: U Upper: Half of Segment

Sample #	g	# Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err %
S95T004187	2	Aluminum - ICP-Fusion	ug/g	98.20	< 5.00e-02	6.67e+03	1.32e+04	9.97e+03	66.1	96.70	967.0	N/A
S95T004187	2	Boron - ICP-Fusion	ug/g	101.4	< 5.00e-02	< 9.67e+02	< 9.69e2	< 9.69e2	N/A	96.90	967.0	N/A
S95T004187	2	Barium - ICP-Fusion	ug/g	99.30	< 5.00e-02	< 9.67e+02	< 9.69e2	< 9.69e2	N/A	96.90	967.0	N/A
S95T004187	2	Bismuth - ICP-Fusion	ug/g	98.80	< 5.00e-02	< 1.93e+03	< 1.94e3	< 1.94e3	N/A	95.90	1.93e+03	N/A
S95T004187	2	Calcium - ICP-Fusion	ug/g	100.6	< 5.00e-02	< 1.93e+03	< 1.94e3	< 1.94e3	N/A	95.80	1.93e+03	N/A
S95T004187	2	Chromium - ICP-Fusion	ug/g	101.0	< 5.00e-02	6.53e+02	886.0	770.0	30.1	99.80	193.0	N/A
S95T004187	2	Iron - ICP-Fusion	ug/g	101.0	< 5.00e-02	< 9.67e+02	< 9.69e2	< 9.69e2	N/A	99.10	967.0	N/A
S95T004187	2	Lithium - ICP-Fusion	ug/g	101.0	< 5.00e-02	< 1.93e+02	< 1.94e2	< 1.94e2	N/A	92.50	193.0	N/A
S95T004187	2	Manganese - ICP-Fusion	ug/g	100.8	< 5.00e-02	< 1.93e+02	< 1.94e2	< 1.94e2	N/A	99.10	193.0	N/A
S95T004187	2	Sodium - ICP-Fusion	ug/g	99.30	< 5.00e-02	2.01e+05	2.38e+05	2.20e+05	16.9	73.80	1.93e+03	N/A
S95T004187	2	Nickel - ICP-Fusion	ug/g	100.0	< 5.00e-02	< 3.87e+02	< 3.88e2	< 3.88e2	N/A	98.60	367.0	N/A
S95T004187	2	Phosphorus - ICP-Fusion	ug/g	107.4	< 5.00e-02	< 3.87e+02	< 3.88e2	< 3.88e2	N/A	105.2	3.87e+02	N/A
S95T004187	2	Silicon - ICP-Fusion	ug/g	97.40	< 5.00e-02	< 9.67e+02	< 9.69e2	< 9.69e2	N/A	96.10	967.0	N/A
S95T004187	2	Zinc - ICP-Fusion	ug/g	101.2	< 5.00e-02	< 1.93e+02	< 1.94e2	< 1.94e2	N/A	98.60	193.0	N/A
S95T004187	2	Zirconium - ICP-Fusion	ug/g	98.5	< 5.00e-02	4.40e+03	6.13e+03	5.34e+03	28.5	96.70	193.0	N/A
S95T004198	A	Silver - ICP-Acid Digest	ug/g	97.40	< 5.00e-02	15.80	16.00	15.90	1.26	N/A	4.760	N/A
S95T004198	A	Aluminum - ICP-Acid Digest	ug/g	97.40	< 5.00e-02	1.31e+04	1.17e+04	1.24e+04	11.3	N/A	23.80	N/A
S95T004198	A	Arsenic - ICP-Acid Digest	ug/g	97.40	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	47.60	N/A
S95T004198	A	Barium - ICP-Acid Digest	ug/g	110.2	< 5.00e-02	98.40	123.0	110.2	22.2	N/A	23.80	N/A
S95T004198	A	Beryllium - ICP-Acid Digest	ug/g	91.6	< 5.00e-02	< 23.80	< 2.7e1	< 2.7e1	N/A	N/A	23.80	N/A
S95T004198	A	Bismuth - ICP-Acid Digest	ug/g	98.40	< 5.00e-02	< 2.380	< 2.7e1	< 2.7e1	N/A	N/A	2.380	N/A
S95T004198	A	Calcium - ICP-Acid Digest	ug/g	88.80	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	47.60	N/A
S95T004198	A	Cadmium - ICP-Acid Digest	ug/g	93.20	< 5.00e-02	1.90e+02	184.0	187.0	3.21	N/A	47.60	N/A
S95T004198	A	Cerium - ICP-Acid Digest	ug/g	82.0	< 5.00e-02	5.03e0	6.640	4.830	7.87	N/A	2.380	N/A
S95T004198	A	Cobalt - ICP-Acid Digest	ug/g	95.20	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	47.60	N/A
S95T004198	A	Chromium - ICP-Acid Digest	ug/g	97.20	< 5.00e-02	7.71e+02	681.0	726.0	12.4	N/A	9.520	N/A
S95T004198	A	Copper - ICP-Acid Digest	ug/g	89.80	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	4.760	N/A
S95T004198	A	Iron - ICP-Acid Digest	ug/g	97.40	< 5.00e-02	1.49e+02	159.0	164.0	6.10	N/A	23.80	N/A
S95T004198	A	Potassium - ICP-Acid Digest	ug/g	92.80	< 5.00e-02	2.19e+03	1.94e+03	2.06e+03	12.1	N/A	238.0	N/A
S95T004198	A	Lanthanum - ICP-Acid Digest	ug/g	92.80	< 5.00e-02	< 23.80	< 2.7e1	< 2.7e1	N/A	N/A	23.80	N/A
S95T004198	A	Lithium - ICP-Acid Digest	ug/g	82.40	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	4.760	N/A
S95T004198	A	Magnesium - ICP-Acid Digest	ug/g	88.40	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	47.60	N/A
S95T004198	A	Molybdenum - ICP-Acid Digest	ug/g	89.80	< 5.00e-02	7.260	6.680	6.960	8.05	N/A	4.760	N/A
S95T004198	A	Sodium - ICP-Acid Digest	ug/g	97.40	< 5.00e-02	2.19e+03	2.15e+03	2.20e+03	4.10	N/A	23.80	N/A
S95T004198	A	Neodymium - ICP-Acid Digest	ug/g	91.20	< 5.00e-02	< 4.760	< 4.76e1	< 4.76e1	N/A	N/A	47.60	N/A
S95T004198	A	Nickel - ICP-Acid Digest	ug/g	88.80	< 5.00e-02	52.40	46.25	49.25	11.6	N/A	9.520	N/A
S95T004198	A	Phosphorus - ICP-Acid Digest	ug/g	88.40	< 5.00e-02	3.76e+02	301.0	319.0	11.3	N/A	47.60	N/A
S95T004198	A	Lead - ICP-Acid Digest	ug/g	86.40	< 5.00e-02	4.58e+01	4.75e01	4.66e01	N/A	N/A	47.60	N/A
S95T004198	A	Sulfur - ICP-Acid Digest	ug/g	83.60	< 5.00e-02	26.30	27.9e1	4.32e+03	8.33	N/A	47.60	N/A
S95T004198	A	Antimony - ICP-Acid Digest	ug/g	89.20	< 5.00e-02	< 47.60	< 4.76e1	< 4.76e1	N/A	N/A	28.60	N/A
S95T004198	A	Selenium - ICP-Acid Digest	ug/g	89.20	< 5.00e-02	< 47.60	< 4.76e1	< 4.76e1	N/A	N/A	47.60	N/A

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004198	A	Silicon -ICP-Acid Digest	ug/g	274.0	5.40e-02	32.30	122.0	77.15	116	n/a	23.80	n/a
S951004198	A	Samarium -ICP-Acid Digest	ug/g	90.00	<1.00e-01	< 47.60	<4.56e1	n/a	n/a	n/a	47.60	n/a
S951004198	A	Strontium -ICP-Acid Digest	ug/g	91.20	<1.00e-02	49.40	47.30	48.35	4.34	n/a	4.760	n/a
S951004198	A	Titanium -ICP-Acid Digest	ug/g	87.80	<1.00e-02	< 4.760	<4.56e0	n/a	n/a	n/a	4.760	n/a
S951004198	A	Thallium -ICP-Acid Digest	ug/g	86.60	<2.00e-01	< 95.20	<9.09e1	n/a	n/a	n/a	95.20	n/a
S951004198	A	Vanadium -ICP-Acid Digest	ug/g	88.20	<5.00e-02	< 23.80	<2.27e1	n/a	n/a	n/a	23.80	n/a
S951004198	A	Zinc -ICP-Acid Digest	ug/g	86.40	<1.50e-02	17.40	17.10	17.25	1.74	n/a	4.760	n/a
S961001378	Z	Aluminum -ICP-Acid Digest	ug/g	88.40	<1.00e-02	5.320	5.140	5.230	3.44	n/a	4.760	n/a
S961001378	Z	Boron -ICP-Fusion	ug/g	97.80	<5.00e-02	1.48e04	9.90e04	5.69e04	148	96.40	675.0	n/a
S961001378	Z	Barium -ICP-Fusion	ug/g	101.4	<5.00e-02	<6.17e2	<6.17e2	n/a	n/a	99.20	675.0	n/a
S961001378	Z	Bismuth -ICP-Fusion	ug/g	102.6	<1.00e-01	<1.35e03	<1.23e3	n/a	n/a	101.5	675.0	n/a
S961001378	Z	Calcium -ICP-Fusion	ug/g	104.2	<1.00e-01	<1.35e03	<1.23e3	n/a	n/a	103.1	1.35e+03	n/a
S961001378	Z	Chromium -ICP-Fusion	ug/g	102.8	<1.00e-02	8.47e02	1.58e03	1.21e+03	61.0	106.1	1.35e+03	n/a
S961001378	Z	Cobalt -ICP-Fusion	ug/g	102.6	<5.00e-02	<6.75e02	679.0	n/a	n/a	103.4	135.0	n/a
S961001378	Z	Lithium -ICP-Fusion	ug/g	100.6	<1.00e-02	<1.35e02	<1.23e2	n/a	n/a	104.6	675.0	n/a
S961001378	Z	Manganese -ICP-Fusion	ug/g	99.40	<1.00e-02	<1.23e2	<1.23e2	n/a	n/a	100.4	135.0	n/a
S961001378	Z	Sodium -ICP-Fusion	ug/g	99.80	1.63e-01	2.46e05	1.45e05	1.96e+05	51.7	98.10	1.35e+03	n/a
S961001378	Z	Nickel -ICP-Fusion	ug/g	100.8	<2.00e-02	<2.70e02	<2.47e2	n/a	n/a	101.1	270.0	n/a
S961001378	Z	Phosphorus -ICP-Fusion	ug/g	101.4	<2.00e-01	<2.70e03	4.08e03	n/a	n/a	103.1	2.70e+03	n/a
S961001378	Z	Silicon -ICP-Fusion	ug/g	95.20	<5.00e-02	<6.75e02	800.0	n/a	n/a	99.60	675.0	n/a
S961001378	Z	Zinc -ICP-Fusion	ug/g	100.6	<1.00e-02	<1.35e02	<1.23e2	n/a	n/a	101.5	135.0	n/a
S961001378	Z	Zirconium -ICP-Fusion	ug/g	99.40	1.95e-01	5.37e03	4.86e03	5.12e+03	9.97	99.90	135.0	n/a

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
8Y-106

SEGMENT PORTION: U Upper Half of Segment													
Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	BPD %	Spk Rec %	Det Limit	Count	Err%
S95T004.188	Z	Aluminum - ICP-Fusion	ug/g	98.20	<5.00e-02	2.13e+04	2.34e+04	2.24e+04	9.40	99.10	871.0	n/a	n/a
S95T004.188	Z	Boron - ICP-Fusion	ug/g	101.4	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.188	Z	Barium - ICP-Fusion	ug/g	99.20	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.188	Z	Bismuth - ICP-Fusion	ug/g	98.80	<1.00e-01	<1.74e+03	<1.81e3	n/a	n/a	99.30	1.74e+03	n/a	n/a
S95T004.188	Z	Calcium - ICP-Fusion	ug/g	100.6	<1.00e-01	<1.74e+03	<1.81e3	n/a	n/a	99.30	1.74e+03	n/a	n/a
S95T004.188	Z	Chromium - ICP-Fusion	ug/g	101.0	<1.00e-02	1.32e+03	1.44e+03	1.38e+03	8.70	100.0	871.0	n/a	n/a
S95T004.188	Z	Iron - ICP-Fusion	ug/g	101.6	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.90	174.0	n/a	n/a
S95T004.188	Z	Lithium - ICP-Fusion	ug/g	100.8	<1.00e-02	<1.81e2	<1.81e2	n/a	n/a	98.30	174.0	n/a	n/a
S95T004.188	Z	Manganese - ICP-Fusion	ug/g	99.20	<1.00e-01	<1.74e+03	<1.81e3	n/a	n/a	113.3	1.74e+03	n/a	n/a
S95T004.188	Z	Sodium - ICP-Fusion	ug/g	100.0	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	98.10	348.0	n/a	n/a
S95T004.188	Z	Nickel - ICP-Fusion	ug/g	100.2	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	107.6	348.0	n/a	n/a
S95T004.188	Z	Phosphorus - ICP-Fusion	ug/g	97.40	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	95.40	871.0	n/a	n/a
S95T004.188	Z	Silicon - ICP-Fusion	ug/g	101.2	<1.00e-01	<1.74e+03	<1.81e3	n/a	n/a	97.40	871.0	n/a	n/a
S95T004.188	Z	Zinc - ICP-Fusion	ug/g	98.00	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	96.10	174.0	n/a	n/a
S95T004.188	Z	Zirconium - ICP-Fusion	ug/g	91.60	<1.00e-02	2.17e+04	2.08e+04	2.12e+04	4.34	n/a	4.830	n/a	n/a
S95T004.199	A	Silver - ICP-Acid Digest	ug/g	97.40	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Aluminum - ICP-Acid Digest	ug/g	91.40	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Arsenic - ICP-Acid Digest	ug/g	110.2	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Barium - ICP-Acid Digest	ug/g	91.00	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Beryllium - ICP-Acid Digest	ug/g	98.60	<5.00e-03	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Bismuth - ICP-Acid Digest	ug/g	88.80	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Calcium - ICP-Acid Digest	ug/g	93.20	<4.12e-01	2.87e+02	6.15e+02	24.10	21.6	n/a	48.30	n/a	n/a
S95T004.199	A	Cadmium - ICP-Acid Digest	ug/g	88.60	<5.00e-03	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Cerium - ICP-Acid Digest	ug/g	94.20	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Cobalt - ICP-Acid Digest	ug/g	89.80	<2.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Chromium - ICP-Acid Digest	ug/g	91.20	<1.00e-02	1.20e+03	1.11e+03	1.16e+03	7.79	n/a	4.830	n/a	n/a
S95T004.199	A	Copper - ICP-Acid Digest	ug/g	89.80	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Iron - ICP-Acid Digest	ug/g	90.60	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Potassium - ICP-Acid Digest	ug/g	92.80	<5.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Lanthanum - ICP-Acid Digest	ug/g	82.80	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Lithium - ICP-Acid Digest	ug/g	82.80	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Magnesium - ICP-Acid Digest	ug/g	89.80	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Manganese - ICP-Acid Digest	ug/g	89.80	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Molybdenum - ICP-Acid Digest	ug/g	89.80	<1.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Sodium - ICP-Acid Digest	ug/g	112.2	<1.00e-01	1.99e+05	2.00e+05	2.00e+05	1.00	n/a	48.30	n/a	n/a
S95T004.199	A	Neodymium - ICP-Acid Digest	ug/g	91.20	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Nickel - ICP-Acid Digest	ug/g	91.20	<2.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Phosphorus - ICP-Acid Digest	ug/g	88.80	<2.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Lead - ICP-Acid Digest	ug/g	88.80	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Sulfur - ICP-Acid Digest	ug/g	86.40	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Antimony - ICP-Acid Digest	ug/g	83.60	<5.00e-02	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a
S95T004.199	A	Selenium - ICP-Acid Digest	ug/g	89.20	<1.00e-01	<4.71e+02	<9.48e2	n/a	n/a	94.60	871.0	n/a	n/a

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Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD, % Spk Rec %	Det Limit	Count Err%
L Lower Half of Segment: L Lower Half of Segment											
S951004199	A	Silicon - ICP-Acid Digest	ug/g	274.0	< 5.00e-02	1.08e+02	153.0	170.5	20.5	n/a	24.10
S951004199	A	Aluminum - ICP-Acid Digest	ug/g	90.00	< 1.00e-01	< 48.30	< 4.66e1	64.80	1.85	n/a	48.30
S951004199	A	Boron - ICP-Acid Digest	ug/g	91.20	< 1.00e-02	64.20	63.40	64.80	n/a	n/a	4.830
S951004199	A	Strontium - ICP-Acid Digest	ug/g	87.80	< 1.00e-02	< 4.830	< 4.66e1	n/a	n/a	n/a	4.830
S951004199	A	Barium - ICP-Acid Digest	ug/g	86.60	< 2.00e-01	< 96.60	< 9.31e1	n/a	n/a	n/a	96.60
S951004199	A	Thallium - ICP-Acid Digest	ug/g	88.20	< 5.00e-02	< 24.10	< 24.35e1	17.65	6.23	n/a	24.10
S951004199	A	Vanadium - ICP-Acid Digest	ug/g	86.40	< 1.50e-02	18.20	17.10	17.65	6.23	n/a	4.830
S951004199	A	Zinc - ICP-Acid Digest	ug/g	88.40	< 1.00e-02	6.280	6.840	6.560	8.54	n/a	4.830
S951004199	A	Zirconium - ICP-Acid Digest	ug/g								
L Lower Half of Segment: L Lower Half of Segment											
Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD, % Spk Rec %	Det Limit	Count Err%
S951004189	Z	Aluminum - ICP-Fusion	ug/g	98.20	< 5.00e-02	2.29e+04	2.25e+04	2.27e+04	1.76	98.40	1.05e+03
S951004189	Z	Boron - ICP-Fusion	ug/g	101.4	< 1.00e-02	< 1.13e3	< 1.13e3	n/a	n/a	96.60	1.05e+03
S951004189	Z	Strontium - ICP-Fusion	ug/g	99.20	< 5.00e-01	< 1.09e+03	< 1.13e3	n/a	n/a	96.10	1.05e+03
S951004189	Z	Barium - ICP-Fusion	ug/g	99.80	< 1.00e-01	< 2.25e3	< 2.25e3	n/a	n/a	93.90	2.10e+03
S951004189	Z	Calcium - ICP-Fusion	ug/g	100.6	< 1.00e-01	< 2.10e+03	< 2.25e3	n/a	n/a	98.80	2.10e+03
S951004189	Z	Chromium - ICP-Fusion	ug/g	101.1	< 1.00e-02	1.80e+03	1.65e+03	1.72e+03	9.91	98.40	1.05e+03
S951004189	Z	Thallium - ICP-Fusion	ug/g	100.6	< 5.00e-02	< 1.09e+03	< 1.13e3	n/a	n/a	99.80	210.0
S951004189	Z	Lithium - ICP-Fusion	ug/g	101.6	< 1.00e-02	< 2.25e2	< 2.25e2	n/a	n/a	98.10	210.0
S951004189	Z	Manganese - ICP-Fusion	ug/g	100.8	< 1.00e-02	< 2.10e+03	< 2.25e3	n/a	n/a	98.10	210.0
S951004189	Z	Sodium - ICP-Fusion	ug/g	99.20	< 1.00e-01	< 2.25e+03	< 2.25e3	2.22e+03	0.90	113.6	2.10e+03
S951004189	Z	Nickel - ICP-Fusion	ug/g	100.4	< 2.00e-02	< 4.20e+03	< 4.51e3	n/a	n/a	97.10	420.0
S951004189	Z	Phosphorus - ICP-Fusion	ug/g	107.4	< 2.00e-01	< 4.20e+03	< 4.51e3	n/a	n/a	107.6	4.20e+03
S951004189	Z	Silicon - ICP-Fusion	ug/g	97.40	< 5.00e-02	< 1.09e+03	< 1.13e3	n/a	n/a	96.40	1.05e+03
S951004189	Z	Zinc - ICP-Fusion	ug/g	101.2	< 1.00e-02	< 2.25e2	< 2.25e2	n/a	n/a	97.10	210.0
S951004189	Z	Zirconium - ICP-Fusion	ug/g	98.00	< 5.49e-01	5.30e+03	6.37e+03	6.14e+03	7.66	95.40	210.0
S951004200	A	Silver - ICP-Acid Digest	ug/g	91.60	< 5.00e-02	15.30	14.60	14.95	4.68	n/a	4.240
S951004200	A	Aluminum - ICP-Acid Digest	ug/g	97.40	< 5.00e-02	2.03e+04	1.77e+04	1.90e+04	13.7	n/a	21.20
S951004200	A	Boron - ICP-Acid Digest	ug/g	91.40	< 1.00e-01	< 42.40	< 4.08e1	104.4	31.8	n/a	42.40
S951004200	A	Strontium - ICP-Acid Digest	ug/g	91.20	< 5.00e-02	< 1.21e+02	< 87.80	n/a	n/a	n/a	21.20
S951004200	A	Barium - ICP-Acid Digest	ug/g	91.00	< 5.00e-02	< 2.20	< 2.04e1	n/a	n/a	n/a	2.120
S951004200	A	Beryllium - ICP-Acid Digest	ug/g	98.60	< 4.00e-01	< 4.20	< 4.08e1	n/a	n/a	n/a	42.40
S951004200	A	Calcium - ICP-Acid Digest	ug/g	93.20	< 1.12e-01	2.27e+02	173.0	200.0	27.0	n/a	42.40
S951004200	A	Cadmium - ICP-Acid Digest	ug/g	88.60	< 5.00e-03	8.790	9.030	8.910	2.69	n/a	2.120
S951004200	A	Cerium - ICP-Acid Digest	ug/g	94.20	< 1.00e-01	< 42.40	< 4.08e1	n/a	n/a	n/a	42.40
S951004200	A	Cobalt - ICP-Acid Digest	ug/g	89.60	< 1.00e-02	< 8.490	< 8.15e0	n/a	n/a	n/a	8.480
S951004200	A	Copper - ICP-Acid Digest	ug/g	91.20	< 1.00e-02	2.90e+02	287.0	288.5	1.04	n/a	4.240
S951004200	A	Chromium - ICP-Acid Digest	ug/g	91.60	< 5.00e-02	< 2.20e+03	< 2.20e3	1.30e+03	6.90	n/a	4.240
S951004200	A	Iron - ICP-Acid Digest	ug/g	91.60	< 5.00e-02	3.20e+03	2.94e+03	3.07e+03	8.47	n/a	21.20
S951004200	A	Potassium - ICP-Acid Digest	ug/g	92.80	< 5.00e-02	< 21.20	< 2.04e1	n/a	n/a	n/a	21.20
S951004200	A	Lanthanum - ICP-Acid Digest	ug/g	92.80	< 1.00e-01	< 4.240	< 4.08e1	n/a	n/a	n/a	4.240
S951004200	A	Lithium - ICP-Acid Digest	ug/g	88.60	< 1.00e-01	< 42.40	< 4.08e1	n/a	n/a	n/a	42.40
S951004200	A	Magnesium - ICP-Acid Digest	ug/g	89.00	< 1.00e-02	15.00	14.50	14.75	3.39	n/a	4.240
S951004200	A	Molybdenum - ICP-Acid Digest	ug/g	89.60	< 5.00e-02	31.10	27.40	29.25	12.6	n/a	21.20
S951004200	A	Sodium - ICP-Acid Digest	ug/g	112.2	< 1.00e-01	2.10e+03	1.92e+03	2.01e+03	8.96	n/a	42.40
S951004200	A	Neodymium - ICP-Acid Digest	ug/g	91.20	< 1.00e-01	< 42.40	< 4.08e1	n/a	n/a	n/a	42.40
S951004200	A	Nickel - ICP-Acid Digest	ug/g	91.20	< 2.00e-02	68.20	72.20	70.20	5.70	n/a	8.480

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004200	A	Phosphorus -ICP-Acid Digest	ug/g	88.80	<2.00e-01	4.75e-02	774.0	624.0	48.1	n/a	84.90	n/a
S95T004200	A	Lead -ICP-Acid Digest	ug/g	88.80	<1.00e-01	6.58e-03	60.80	59.55	4.20	n/a	42.40	n/a
S95T004200	A	Sulfur -ICP-Acid Digest	ug/g	86.40	<1.00e-01	6.05e-03	5.49e+03	5.77e+03	9.71	n/a	42.40	n/a
S95T004200	A	Antimony -ICP-Acid Digest	ug/g	83.40	<6.00e-02	<2.5e-01	<2.45e1	n/a	n/a	n/a	25.50	n/a
S95T004200	A	Selenium -ICP-Acid Digest	ug/g	89.20	<1.00e-01	<2.4e-02	<4.08e1	n/a	n/a	n/a	42.40	n/a
S95T004200	A	Silicon -ICP-Acid Digest	ug/g	274.0	5.40e-02	1.88e-02	205.0	196.5	8.65	n/a	21.20	n/a
S95T004200	A	Strontium -ICP-Acid Digest	ug/g	91.20	<1.00e-01	<4.2e-01	<4.08e1	n/a	n/a	n/a	42.40	n/a
S95T004200	A	Titanium-ICP-Acid Digest	ug/g	87.80	<1.00e-02	76.90	78.10	77.50	1.55	n/a	4.240	n/a
S95T004200	A	Thallium-ICP-Acid Digest	ug/g	86.80	<2.00e-01	<4.240	<4.08e0	n/a	n/a	n/a	84.90	n/a
S95T004200	A	Vanadium -ICP-Acid Digest	ug/g	88.20	<5.00e-02	<21.20	<2.04e1	n/a	n/a	n/a	21.20	n/a
S95T004200	A	Zinc -ICP-Acid Digest	ug/g	86.40	1.50e-02	23.70	21.30	22.50	10.7	n/a	4.240	n/a
S95T004200	A	Zirconium -ICP-Acid Digest	ug/g	88.40	<1.00e-02	7.600	7.050	7.325	7.51	n/a	4.240	n/a

WHC-SD-WM-DP-103, REV. 1

CORE NUMBER: 121
SEGMENT #: 9

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BT-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	El	AW	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk	Rec %	Det	Limit	Count	Err%
S95T004190	Z		Aluminum - ICP-Fusion	ug/g	98.20	< 5.00e-02	7.02e+04	6.90e+04	6.90e+04	3.63	96.80	1.13e+03	n/a			
S95T004190	Z		Boron - ICP-Fusion	ug/g	101.4	< 5.00e-02	< 1.13e+03	< 1.07e3	n/a	n/a	96.40	1.13e+03	n/a			
S95T004190	Z		Berlin - ICP-Fusion	ug/g	99.20	< 5.00e-02	< 1.13e+03	< 1.07e3	n/a	n/a	95.20	1.13e+03	n/a			
S95T004190	Z		B Smith - ICP-Fusion	ug/g	98.80	< 1.00e-01	< 2.26e+03	< 2.15e3	n/a	n/a	94.70	2.26e+03	n/a			
S95T004190	Z		Calcium - ICP-Fusion	ug/g	100.6	< 1.00e-01	< 2.26e+03	< 2.15e3	n/a	n/a	97.60	2.26e+03	n/a			
S95T004190	Z		Chromium - ICP-Fusion	ug/g	101.6	< 1.00e-02	1.82e+03	1.79e+03	1.78e+03	3.92	99.10	226.0	n/a			
S95T004190	Z		Iron - ICP-Fusion	ug/g	101.6	< 1.00e-02	< 1.13e+03	< 1.07e3	n/a	n/a	102.2	1.13e+03	n/a			
S95T004190	Z		Lithium - ICP-Fusion	ug/g	100.6	< 1.00e-02	< 2.26e+02	< 2.15e2	n/a	n/a	98.50	226.0	n/a			
S95T004190	Z		Manganese - ICP-Fusion	ug/g	100.8	< 1.00e-02	< 2.26e+02	< 2.15e2	n/a	n/a	98.80	226.0	n/a			
S95T004190	Z		Sodium - ICP-Fusion	ug/g	99.20	< 1.00e-01	2.01e+01	1.89e+01	1.95e+01	6.15	93.30	2.26e+03	n/a			
S95T004190	Z		Strontium - ICP-Fusion	ug/g	100.0	< 2.00e-02	4.52e+02	4.27e2	n/a	n/a	99.10	452.0	n/a			
S95T004190	Z		Vanadium - ICP-Fusion	ug/g	107.4	< 2.00e-01	< 4.52e+03	< 4.27e3	n/a	n/a	109.6	4.52e+03	n/a			
S95T004190	Z		Yttrium - ICP-Fusion	ug/g	97.40	< 2.00e-02	< 1.13e+03	< 1.07e3	n/a	n/a	97.60	1.13e+03	n/a			
S95T004190	Z		Zinc - ICP-Fusion	ug/g	101.2	< 1.00e-02	< 2.26e+02	< 2.15e2	n/a	n/a	98.10	226.0	n/a			
S95T004201	Z		Aluminum - ICP-Fusion	ug/g	98.00	< 5.00e-02	5.42e+03	5.10e+03	5.26e+03	6.08	96.60	226.0	n/a			
S95T004201	A		Silver - ICP-Acid Digest	ug/g	91.60	< 1.00e-02	17.00	16.70	16.85	1.78	n/a	4.750	n/a			
S95T004201	A		Barium - ICP-Acid Digest	ug/g	91.40	< 1.00e-02	< 4.750	< 4.62e1	1.42e+04	6.36	n/a	23.70	n/a			
S95T004201	A		Boron - ICP-Acid Digest	ug/g	110.2	< 5.00e-02	1.25e+02	88.70	106.8	34.0	n/a	47.50	n/a			
S95T004201	A		Beryllium - ICP-Acid Digest	ug/g	91.00	< 5.00e-03	< 2.370	< 2.31e1	n/a	n/a	n/a	23.70	n/a			
S95T004201	A		B Smith - ICP-Acid Digest	ug/g	98.80	< 1.00e-01	< 4.750	< 4.62e1	n/a	n/a	n/a	2.380	n/a			
S95T004201	A		Calcium - ICP-Acid Digest	ug/g	93.20	< 4.12e-01	2.51e+02	411.0	331.0	48.3	n/a	47.50	n/a			
S95T004201	A		Cadmium - ICP-Acid Digest	ug/g	88.60	< 5.00e-03	7.940	8.070	8.005	1.62	n/a	2.380	n/a			
S95T004201	A		Cerium - ICP-Acid Digest	ug/g	94.20	< 1.00e-01	< 4.750	< 4.62e1	n/a	n/a	n/a	47.50	n/a			
S95T004201	A		Cobalt - ICP-Acid Digest	ug/g	89.80	< 2.00e-02	< 9.500	< 9.24e0	n/a	n/a	n/a	9.500	n/a			
S95T004201	A		Copper - ICP-Acid Digest	ug/g	91.20	< 1.00e-02	1.04e+03	1.12e+03	1.08e+03	7.41	n/a	4.750	n/a			
S95T004201	A		Iron - ICP-Acid Digest	ug/g	90.60	< 1.00e-02	< 4.750	< 4.62e0	n/a	n/a	n/a	4.750	n/a			
S95T004201	A		Potassium - ICP-Acid Digest	ug/g	91.40	< 5.00e-02	2.62e+02	303.0	282.5	14.5	n/a	23.70	n/a			
S95T004201	A		Lithium - ICP-Acid Digest	ug/g	92.80	< 1.00e-02	< 2.370	< 2.31e1	2.32e+03	1.72	n/a	237.0	n/a			
S95T004201	A		Magnesium - ICP-Acid Digest	ug/g	92.80	< 1.00e-02	< 4.750	< 4.62e0	n/a	n/a	n/a	4.750	n/a			
S95T004201	A		Manganese - ICP-Acid Digest	ug/g	89.00	< 1.00e-02	< 4.750	< 4.62e0	n/a	n/a	n/a	4.750	n/a			
S95T004201	A		Molybdenum - ICP-Acid Digest	ug/g	89.00	< 1.00e-02	< 4.750	< 4.62e0	n/a	n/a	n/a	4.750	n/a			
S95T004201	A		Sodium - ICP-Acid Digest	ug/g	112.2	< 1.00e-01	2.08e+05	2.11e+05	2.10e+05	1.43	n/a	23.70	n/a			
S95T004201	A		Strontium - ICP-Acid Digest	ug/g	91.20	< 2.00e-02	< 4.750	< 4.62e1	n/a	n/a	n/a	47.50	n/a			
S95T004201	A		Vanadium - ICP-Acid Digest	ug/g	88.80	< 2.00e-01	1.15e+03	395.0	75.75	10.2	n/a	9.500	n/a			
S95T004201	A		Yttrium - ICP-Acid Digest	ug/g	88.80	< 1.00e-01	5.61e+02	772.5	52.90	12.1	n/a	47.50	n/a			
S95T004201	A		Zinc - ICP-Acid Digest	ug/g	86.40	< 1.00e-01	4.78e+03	5.43e+03	5.10e+03	12.7	n/a	47.50	n/a			
S95T004201	A		Antimony - ICP-Acid Digest	ug/g	83.60	< 6.00e-02	< 28.50	< 27.61	n/a	n/a	n/a	28.50	n/a			
S95T004201	A		Selenium - ICP-Acid Digest	ug/g	89.20	< 1.00e-01	< 4.750	< 4.62e1	n/a	n/a	n/a	47.50	n/a			

WHC-SD-WM-DP-103, REV. 1

WHC-SD-WM-DP-103, REV. 1

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004201	A	Silicon -ICP-Acid Digest	ug/g	274.0	5.40e-02	2.72e-02	266.0	239.0	22.6	n/a	n/a	n/a
S95T004201	A	Samarium -ICP-Acid Digest	ug/g	90.00	<1.00e-01	< 47.50	<4.62e1	n/a	n/a	n/a	n/a	n/a
S95T004201	A	Strontium -ICP-Acid Digest	ug/g	91.20	<1.00e-02	62.70	72.90	67.80	15.0	n/a	n/a	n/a
S95T004201	A	Titanium -ICP-Acid Digest	ug/g	87.80	<1.00e-02	< 4.750	<4.62e0	n/a	n/a	n/a	n/a	n/a
S95T004201	A	Thallium -ICP-Acid Digest	ug/g	86.60	<2.00e-01	< 95.00	<9.24e1	n/a	n/a	n/a	n/a	n/a
S95T004201	A	Vanadium -ICP-Acid Digest	ug/g	88.20	<5.00e-02	< 23.70	<2.31e1	n/a	n/a	n/a	n/a	n/a
S95T004201	A	Zinc -ICP-Acid Digest	ug/g	86.40	1.50e-02	22.80	21.90	22.35	4.03	n/a	n/a	n/a
S95T004201	A	Zirconium -ICP-Acid Digest	ug/g	88.40	<1.00e-02	7.760	7.360	7.560	5.29	n/a	n/a	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk	Rec %	Det Limit	Count Err%
S967000708	A	Silicon - ICP-Acid Digest	ug/g	97.20	6.70e-02	93.50	94.20	93.85	0.75	159.7	159.7	22.70	n/a
S967000708	A	Samarium - ICP-Acid Digest	ug/g	97.40	<1.00e-01	< 45.30	<4.68e1	n/a	n/a	83.20	83.20	45.30	n/a
S967000708	A	Strontium - ICP-Acid Digest	ug/g	98.20	<1.00e-02	16.40	10.10	13.25	47.5	82.80	82.80	4.530	n/a
S967000708	A	Titanium - ICP-Acid Digest	ug/g	98.20	<1.00e-02	< 4.530	<4.68e0	n/a	n/a	80.60	80.60	4.530	n/a
S967000708	A	Thallium - ICP-Acid Digest	ug/g	90.20	<2.00e-01	< 90.60	<9.36e1	n/a	n/a	80.20	80.20	90.40	n/a
S967000708	A	Vanadium - ICP-Acid Digest	ug/g	90.80	<5.00e-02	< 22.70	<2.34e1	n/a	n/a	83.20	83.20	22.70	n/a
S967000708	A	Zinc - ICP-Acid Digest	ug/g	89.40	<1.00e-02	16.70	18.10	17.40	8.05	85.56	85.56	4.530	n/a
S967000708	A	Zirconium - ICP-Acid Digest	ug/g	90.40	<1.00e-02	< 4.530	<4.68e0	n/a	n/a	83.00	83.00	4.530	n/a

WHC-SD-WM-DP-103, REV. 1

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Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
B1-106

CORE NUMBER: 121
SEGMENT #: 10A

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPO %	Spk Rec %	Det Limit	Count	Err%
S96T000107	Z	Aluminum - ICP-Fusion	ug/g	98.80	<5.00e-02	1.61e+04	1.37e+04	1.59e+04	2.52	97.40	1.09e+03		N/A
S96T000107	Z	Boron - ICP-Fusion	ug/g	101.0	<5.00e-02	<1.09e+03	<1.07e3	N/A	N/A	96.90	1.09e+03		N/A
S96T000107	Z	Barium - ICP-Fusion	ug/g	99.40	<5.00e-02	<1.09e+03	<1.07e3	N/A	N/A	96.40	1.09e+03		N/A
S96T000107	Z	Bismuth - ICP-Fusion	ug/g	99.20	<1.00e-01	<2.20e+03	<2.15e3	N/A	N/A	99.10	2.19e+03		N/A
S96T000107	Z	Calcium - ICP-Fusion	ug/g	99.60	<1.00e-01	<2.20e+03	<2.15e3	N/A	N/A	97.10	2.19e+03		N/A
S96T000107	Z	Chromium - ICP-Fusion	ug/g	102.4	<1.00e-02	<5.59e+03	5.35e+03	5.57e+03	0.72	102.0	219.0		N/A
S96T000107	Z	Iron - ICP-Fusion	ug/g	101.6	<5.00e-02	<1.09e+03	<1.07e3	N/A	N/A	103.9	1.09e+03		N/A
S96T000107	Z	Lithium - ICP-Fusion	ug/g	100.0	<1.00e-02	<2.20e+02	<2.15e2	N/A	N/A	99.50	219.0		N/A
S96T000107	Z	Manganese - ICP-Fusion	ug/g	101.2	<1.00e-02	<2.20e+02	<2.15e2	N/A	N/A	100.0	219.0		N/A
S96T000107	Z	Sodium - ICP-Fusion	ug/g	99.00	1.11e-01	2.18e+05	2.11e+05	2.14e+05	3.26	88.20	2.19e+03		N/A
S96T000107	Z	Nickel - ICP-Fusion	ug/g	101.0	<2.00e-02	5.78e+02	564.0	571.0	2.43	99.80	4.37e+03		N/A
S96T000107	Z	Phosphorus - ICP-Fusion	ug/g	97.80	<2.00e-01	<4.37e+03	<4.27e3	N/A	N/A	96.10	4.37e+03		N/A
S96T000107	Z	Silicon - ICP-Fusion	ug/g	96.80	<5.00e-02	<1.09e+03	<1.07e3	N/A	N/A	101.3	1.09e+03		N/A
S96T000107	Z	Zinc - ICP-Fusion	ug/g	102.2	<1.00e-02	<2.20e+02	<2.15e2	N/A	N/A	100.5	219.0		N/A
S96T000107	Z	Zirconium - ICP-Fusion	ug/g	98.60	3.20e-01	5.71e+03	5.35e+03	5.63e+03	2.84	97.60	219.0		N/A

WHC-SD-WM-DP-103, REV. 1

CORE NUMBER: 121
SEGMENT #: 108

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
8Y-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk	Rec %	Det	Limit	Count	Err%
S961000250	2	Aluminum - ICP-Fusion	ug/g	98.80	<5.00e-02	2.55e+04	2.43e+04	2.49e+04	4.82	98.90	98.90	908.0	n/a	n/a	n/a
S961000250	2	Boron - ICP-Fusion	ug/g	101.0	<5.00e-02	<9.08e+02	<8.63e2	n/a	n/a	n/a	97.40	908.0	n/a	n/a	n/a
S961000250	2	Barium - ICP-Fusion	ug/g	99.40	<5.00e-02	<9.08e+02	<8.63e2	n/a	n/a	n/a	97.40	908.0	n/a	n/a	n/a
S961000250	2	Bismuth - ICP-Fusion	ug/g	99.20	<1.00e-01	<1.82e+03	<1.73e3	n/a	n/a	n/a	n/a	1.82e+03	n/a	n/a	n/a
S961000250	2	Calcium - ICP-Fusion	ug/g	99.60	<1.00e-01	<1.82e+03	<1.73e3	n/a	n/a	n/a	96.60	1.82e+03	n/a	n/a	n/a
S961000250	2	Chromium - ICP-Fusion	ug/g	102.4	<1.00e-02	4.16e+02	371.0	393.5	11.4	101.4	101.4	182.0	n/a	n/a	n/a
S961000250	2	Iron - ICP-Fusion	ug/g	101.6	<1.00e-02	<9.08e+02	<8.63e2	n/a	n/a	100.8	99.80	908.0	n/a	n/a	n/a
S961000250	2	Lithium - ICP-Fusion	ug/g	100.0	<1.00e-02	<1.82e+02	<1.73e2	n/a	n/a	93.00	93.00	182.0	n/a	n/a	n/a
S961000250	2	Manganese - ICP-Fusion	ug/g	101.2	<1.00e-02	<1.82e+02	<1.73e2	n/a	n/a	99.80	99.80	182.0	n/a	n/a	n/a
S961000250	2	Sodium - ICP-Fusion	ug/g	99.00	1.11e-01	1.95e+05	1.86e+05	1.90e+05	4.72	109.8	109.8	1.82e+03	n/a	n/a	n/a
S961000250	2	Nickel - ICP-Fusion	ug/g	101.0	<2.00e-02	3.63e+02	3.45e2	n/a	n/a	100.3	100.3	363.0	n/a	n/a	n/a
S961000250	2	Phosphorus - ICP-Fusion	ug/g	97.80	<5.00e-01	3.63e+03	<3.45e3	n/a	n/a	101.0	101.0	3.63e+03	n/a	n/a	n/a
S961000250	2	Silicon - ICP-Fusion	ug/g	96.80	<5.00e-02	<9.08e+02	<8.63e2	n/a	n/a	96.90	96.90	908.0	n/a	n/a	n/a
S961000250	2	Zinc - ICP-Fusion	ug/g	102.2	<1.00e-02	<1.82e+02	<1.73e2	n/a	n/a	100.3	100.3	182.0	n/a	n/a	n/a
S961000250	2	Zirconium - ICP-Fusion	ug/g	98.60	3.20e-01	3.70e+03	3.58e+03	3.64e+03	3.30	104.3	104.3	182.0	n/a	n/a	n/a
S961000252	A	Aluminum - ICP-Acid Digest	ug/g	93.80	<1.00e-02	12.80	12.00	12.40	6.45	n/a	n/a	4.320	n/a	n/a	n/a
S961000252	A	Arsenic - ICP-Acid Digest	ug/g	98.40	<5.00e-02	1.89e+04	1.84e+04	1.86e+04	2.68	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Boron - ICP-Acid Digest	ug/g	95.00	<1.00e-01	<43.20	<4.42e1	n/a	n/a	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Barium - ICP-Acid Digest	ug/g	108.6	<5.00e-02	<21.60	<2.21e1	n/a	n/a	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Beryllium - ICP-Acid Digest	ug/g	92.40	<5.00e-02	<21.60	<2.21e1	n/a	n/a	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Bismuth - ICP-Acid Digest	ug/g	102.2	<5.00e-02	<21.60	<2.21e1	n/a	n/a	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Calcium - ICP-Acid Digest	ug/g	91.80	<1.00e-01	43.20	43.20	46.8	46.8	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Cadmium - ICP-Acid Digest	ug/g	98.20	2.54e-01	2.24e+02	139.0	181.5	181.5	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Cerium - ICP-Acid Digest	ug/g	92.40	<5.00e-03	<21.60	<2.21e1	n/a	n/a	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Cobalt - ICP-Acid Digest	ug/g	96.00	<1.00e-01	43.20	<4.42e1	n/a	n/a	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Copper - ICP-Acid Digest	ug/g	92.80	<2.00e-02	8.640	<8.65e0	267.0	3.00	n/a	n/a	8.650	n/a	n/a	n/a
S961000252	A	Chromium - ICP-Acid Digest	ug/g	94.60	<1.00e-02	2.71e+02	263.0	267.0	3.00	n/a	n/a	4.320	n/a	n/a	n/a
S961000252	A	Iron - ICP-Acid Digest	ug/g	91.00	<1.00e-02	43.20	<4.42e1	n/a	n/a	n/a	n/a	4.320	n/a	n/a	n/a
S961000252	A	Potassium - ICP-Acid Digest	ug/g	94.00	5.60e-02	45.90	43.50	44.70	5.37	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Lanthanum - ICP-Acid Digest	ug/g	92.60	<5.00e-01	3.28e+03	3.30e+03	3.29e+03	0.61	n/a	n/a	216.0	n/a	n/a	n/a
S961000252	A	Lithium - ICP-Acid Digest	ug/g	94.60	<1.00e-02	<21.60	<2.21e1	n/a	n/a	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Magnesium - ICP-Acid Digest	ug/g	89.80	<1.00e-01	43.20	<4.42e1	n/a	n/a	n/a	n/a	4.320	n/a	n/a	n/a
S961000252	A	Manganese - ICP-Acid Digest	ug/g	92.80	<1.00e-02	43.20	<4.42e1	n/a	n/a	n/a	n/a	4.320	n/a	n/a	n/a
S961000252	A	Molybdenum - ICP-Acid Digest	ug/g	92.80	<1.00e-02	26.60	26.60	35.70	0.75	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Sodium - ICP-Acid Digest	ug/g	110.0	1.12e-01	1.83e+05	1.72e+05	1.78e+05	6.20	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Neodymium - ICP-Acid Digest	ug/g	93.00	<1.00e-01	43.20	<4.42e1	n/a	n/a	n/a	n/a	21.60	n/a	n/a	n/a
S961000252	A	Nickel - ICP-Acid Digest	ug/g	94.60	<2.00e-02	16.20	11.70	18.83	7.72	n/a	n/a	8.600	n/a	n/a	n/a
S961000252	A	Phosphorus - ICP-Acid Digest	ug/g	95.60	<2.00e-01	1.54e+03	1.45e+03	1.50e+03	6.02	n/a	n/a	86.40	n/a	n/a	n/a
S961000252	A	Lead - ICP-Acid Digest	ug/g	92.80	<1.00e-01	43.20	<4.42e1	n/a	n/a	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Sulfur - ICP-Acid Digest	ug/g	89.80	<1.00e-01	3.22e+02	309.0	315.3	4.12	n/a	n/a	43.20	n/a	n/a	n/a
S961000252	A	Antimony - ICP-Acid Digest	ug/g	85.80	<6.00e-02	23.90	<2.85e1	n/a	n/a	n/a	n/a	25.90	n/a	n/a	n/a
S961000252	A	Selenium - ICP-Acid Digest	ug/g	93.00	<1.00e-01	43.20	<4.42e1	n/a	n/a	n/a	n/a	43.20	n/a	n/a	n/a

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Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPO %	Spk Rec %	Det Limit	Count Err%
S961000252	Z	Silicon - ICP-Acid Digest	ug/g	272.0	6.70e-02	38.50	37.10	37.80	3.70	n/a	21.40	n/a
S961000252	Z	Samarium - ICP-Acid Digest	ug/g	91.40	<1.00e-02	<4.320	<4.42e1	n/a	n/a	n/a	43.20	n/a
S961000252	Z	Strontium - ICP-Acid Digest	ug/g	93.20	<1.00e-02	<4.320	<4.42e1	n/a	n/a	n/a	4.320	n/a
S961000252	Z	Titanium - ICP-Acid Digest	ug/g	89.40	<1.00e-02	<4.320	<4.42e1	n/a	n/a	n/a	4.320	n/a
S961000252	Z	Thallium - ICP-Acid Digest	ug/g	90.20	<2.00e-01	86.40	<8.86e1	n/a	n/a	n/a	86.40	n/a
S961000252	Z	Vanadium - ICP-Acid Digest	ug/g	90.80	<5.00e-02	<2.160	<2.21e1	n/a	n/a	n/a	2.160	n/a
S961000252	Z	Zinc - ICP-Acid Digest	ug/g	89.40	<1.00e-02	16.90	16.90	16.85	0.59	n/a	4.320	n/a
S961000252	Z	Zirconium - ICP-Acid Digest	ug/g	90.40	<1.00e-02	<4.320	<4.42e1	n/a	n/a	n/a	4.320	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPO %	Spk Rec %	Det Limit	Count Err%
S961000251	Z	Aluminum - ICP-Fusion	ug/g	98.80	<5.00e-02	1.48e+04	1.34e+04	1.41e+04	9.93	97.20	1.17e+03	n/a
S961000251	Z	Boron - ICP-Fusion	ug/g	101.0	<5.00e-02	<1.17e+03	<1.20e3	n/a	n/a	96.90	1.17e+03	n/a
S961000251	Z	Barium - ICP-Fusion	ug/g	99.40	<5.00e-02	<1.17e+03	<1.20e3	n/a	n/a	97.10	1.17e+03	n/a
S961000251	Z	Bismuth - ICP-Fusion	ug/g	99.20	<1.00e-01	<2.33e+03	<2.32e3	n/a	n/a	98.30	2.33e+03	n/a
S961000251	Z	Calcium - ICP-Fusion	ug/g	99.60	<1.00e-01	<2.33e+03	<2.32e3	n/a	n/a	98.60	2.33e+03	n/a
S961000251	Z	Chromium - ICP-Fusion	ug/g	102.4	<1.00e-02	6.93e+02	6.98e2	675.5	5.18	101.7	233.0	n/a
S961000251	Z	Iron - ICP-Fusion	ug/g	101.6	<5.00e-02	<1.17e+03	<1.20e3	n/a	n/a	101.3	1.17e+03	n/a
S961000251	Z	Lithium - ICP-Fusion	ug/g	100.0	<1.00e-02	<2.33e+02	<2.32e2	n/a	n/a	91.30	233.0	n/a
S961000251	Z	Manganese - ICP-Fusion	ug/g	101.2	<1.00e-02	<2.33e+02	<2.32e2	n/a	n/a	99.30	233.0	n/a
S961000251	Z	Nickel - ICP-Fusion	ug/g	99.00	<1.10e-01	<2.33e+02	<2.32e2	2.10e+05	7.34	94.80	2.33e+03	n/a
S961000251	Z	Sodium - ICP-Fusion	ug/g	101.0	<2.00e-02	<4.66e+02	<4.79e2	n/a	n/a	100.3	466.0	n/a
S961000251	Z	Phosphorus - ICP-Fusion	ug/g	97.80	<2.00e-01	<4.66e+02	<4.79e2	n/a	n/a	92.30	466e+03	n/a
S961000251	Z	Silicon - ICP-Fusion	ug/g	96.80	<5.00e-02	<1.17e+03	<1.20e3	n/a	n/a	98.60	1.17e+03	n/a
S961000251	Z	Zinc - ICP-Fusion	ug/g	102.2	<1.00e-02	<2.33e+02	<2.32e2	n/a	n/a	100.3	233.0	n/a
S961000251	Z	Zirconium - ICP-Fusion	ug/g	98.60	<3.20e-01	6.59e+03	3.97e+03	5.28e+03	49.6	97.90	233.0	n/a
S961000251	Z	Silver - ICP-Acid Digest	ug/g	93.80	<1.00e-02	14.30	10.30	12.40	30.6	n/a	4.150	n/a
S961000251	Z	Aluminum - ICP-Acid Digest	ug/g	98.40	<5.00e-02	1.30e+04	1.31e+04	1.30e+04	0.77	n/a	2.160	n/a
S961000251	Z	Arsenic - ICP-Acid Digest	ug/g	95.00	<1.00e-01	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Boron - ICP-Acid Digest	ug/g	108.6	<5.00e-02	<1.17e+02	<2.250	69.75	133	n/a	20.80	n/a
S961000251	Z	Barium - ICP-Acid Digest	ug/g	92.40	<5.00e-02	<2.080	<1.99e1	n/a	n/a	n/a	20.80	n/a
S961000251	Z	Beryllium - ICP-Acid Digest	ug/g	102.2	<5.00e-03	<2.080	<1.99e1	n/a	n/a	n/a	2.080	n/a
S961000251	Z	Bismuth - ICP-Acid Digest	ug/g	91.80	<1.00e-01	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Calcium - ICP-Acid Digest	ug/g	98.20	<2.50e-01	1.60e+02	184.0	172.0	14.0	n/a	4.150	n/a
S961000251	Z	Cadmium - ICP-Acid Digest	ug/g	92.40	<5.00e-03	3.640	5.090	4.365	33.2	n/a	2.080	n/a
S961000251	Z	Cerium - ICP-Acid Digest	ug/g	96.00	<1.00e-01	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Cobalt - ICP-Acid Digest	ug/g	92.80	<2.00e-02	<8.310	<7.92e1	699.0	n/a	n/a	8.310	n/a
S961000251	Z	Chromium - ICP-Acid Digest	ug/g	94.60	<1.00e-02	4.72e+02	<4.750	585.3	38.8	n/a	4.150	n/a
S961000251	Z	Copper - ICP-Acid Digest	ug/g	91.00	<1.00e-02	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Iron - ICP-Acid Digest	ug/g	94.00	<5.60e-02	1.03e+02	134.0	128.3	39.7	n/a	20.80	n/a
S961000251	Z	Potassium - ICP-Acid Digest	ug/g	92.60	<5.00e-01	2.12e+03	2.13e+03	2.12e+03	0.47	n/a	20.80	n/a
S961000251	Z	Lanthanum - ICP-Acid Digest	ug/g	94.60	<5.00e-02	<2.080	<1.99e1	n/a	n/a	n/a	20.80	n/a
S961000251	Z	Lithium - ICP-Acid Digest	ug/g	92.60	<5.00e-02	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Magnesium - ICP-Acid Digest	ug/g	89.80	<1.00e-01	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Manganese - ICP-Acid Digest	ug/g	92.00	<1.00e-02	6.780	7.840	7.310	14.5	n/a	20.80	n/a
S961000251	Z	Molybdenum - ICP-Acid Digest	ug/g	92.80	<5.00e-02	<2.080	<1.99e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Sodium - ICP-Acid Digest	ug/g	110.0	<1.12e-01	2.00e+05	1.66e+05	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Neodymium - ICP-Acid Digest	ug/g	93.00	<1.00e-01	<4.150	<4.00e1	n/a	n/a	n/a	4.150	n/a
S961000251	Z	Nickel - ICP-Acid Digest	ug/g	94.60	<2.00e-02	<4.150	<4.00e1	40.30	0.00	n/a	8.310	n/a

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-0002-3

Sample#	P#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S961000253	A	Phosphorus - ICP-Acid Digest	ug/g	95.40	< 2.00e-01	3.11e+02	4.79.0	395.0	4.2.5	n/a	83.10		n/a
S961000253	A	Lead - ICP-Acid Digest	ug/g	92.80	< 1.00e-01	< 41.50	47.90	n/a	n/a	n/a	41.50		n/a
S961000253	A	Sulfur - ICP-Acid Digest	ug/g	89.80	< 1.00e-01	1.05e+03	3.53e+03	2.29e+03	103	n/a	41.50		n/a
S961000253	A	Antimony - ICP-Acid Digest	ug/g	89.80	< 5.00e-02	< 26.90	< 2.39e1	n/a	n/a	n/a	24.90		n/a
S961000253	A	Selenium - ICP-Acid Digest	ug/g	93.00	< 1.00e-01	< 41.50	< 4.00e1	n/a	n/a	n/a	41.50		n/a
S961000253	A	Silicon - ICP-Acid Digest	ug/g	272.0	< 5.00e-02	< 78.10	10.0	94.05	33.5	n/a	20.80		n/a
S961000253	A	Samarium - ICP-Acid Digest	ug/g	91.40	< 1.00e-01	< 12.20	< 4.00e1	n/a	n/a	n/a	41.50		n/a
S961000253	A	Strontium - ICP-Acid Digest	ug/g	93.20	< 1.00e-01	< 12.60	< 4.00e1	26.70	103	n/a	41.50		n/a
S961000253	A	Titanium - ICP-Acid Digest	ug/g	89.40	< 5.00e-02	< 4.150	< 4.00e0	n/a	n/a	n/a	83.10		n/a
S961000253	A	Thallium - ICP-Acid Digest	ug/g	90.20	< 2.00e-01	< 85.10	< 1.97e1	n/a	n/a	n/a	20.80		n/a
S961000253	A	Vanadium - ICP-Acid Digest	ug/g	90.80	< 5.00e-02	< 20.80	< 1.97e1	16.5	7.67	n/a	4.150		n/a
S961000253	A	Zinc - ICP-Acid Digest	ug/g	89.40	< 1.00e-02	17.60	16.30	n/a	n/a	n/a	4.150		n/a
S961000253	A	Zirconium - ICP-Acid Digest	ug/g	90.40	< 1.00e-02	4.310	5.390	4.890	22.3	n/a	4.150		n/a

Drainable Liquid: Drainable Liquid

Sample#	P#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S961000253	P	Striver-ICP-Acid Dill.	ug/mL	98.40	< 1.00e-02	< 14.00	< 1.40e1	n/a	n/a	n/a	14.00		n/a
S961000253	P	Aluminum-ICP-Acid Dill.	ug/mL	96.20	< 5.00e-02	6.10e+04	6.14e+04	6.14e+04	1.30	117.0	70.00		n/a
S961000253	P	Arsenic-ICP-Acid Dill.	ug/mL	100.0	< 1.00e-01	< 1.00e-02	< 1.40e2	n/a	n/a	100.7	14.00		n/a
S961000253	P	Boron-ICP-Acid Dill.	ug/mL	98.80	< 5.00e-02	< 70.00	< 7.00e1	n/a	n/a	101.7	70.00		n/a
S961000253	P	Barium-ICP-Acid Dill.	ug/mL	98.40	< 5.00e-02	< 70.00	< 7.00e1	n/a	n/a	100.7	70.00		n/a
S961000253	P	Beryllium-ICP-Acid Dill.	ug/mL	100.8	< 5.00e-03	< 7.000	< 7.00e0	n/a	n/a	102.8	7.000		n/a
S961000253	P	Bismuth-ICP-Acid Dill.	ug/mL	97.20	< 1.00e-01	< 1.40e+02	< 1.40e2	n/a	n/a	96.40	14.00		n/a
S961000253	P	Calcium-ICP-Acid Dill.	ug/mL	97.80	< 1.00e-01	< 1.40e+02	< 1.40e2	n/a	n/a	99.20	7.000		n/a
S961000253	P	Cadmium-ICP-Acid Dill.	ug/mL	100.9	< 1.00e-03	< 7.000	< 7.00e0	n/a	n/a	99.20	7.000		n/a
S961000253	P	Cerium-ICP-Acid Dill.	ug/mL	100.2	< 2.00e-02	28.00	< 1.40e2	n/a	n/a	102.10	14.00		n/a
S961000253	P	Cobalt-ICP-Acid Dill.	ug/mL	99.40	< 1.00e-02	< 14.00	< 353.0	353.5	0.68	100.7	14.00		n/a
S961000253	P	Chromium-ICP-Acid Dill.	ug/mL	99.40	< 1.00e-02	< 70.00	< 7.00e1	n/a	n/a	101.7	70.00		n/a
S961000253	P	Copper-ICP-Acid Dill.	ug/mL	98.00	< 5.00e-02	< 70.00	< 7.00e1	n/a	n/a	101.7	70.00		n/a
S961000253	P	Iron-ICP-Acid Dill.	ug/mL	99.60	< 5.00e-02	8.91e+03	8.92e+03	8.92e+03	0.34	106.7	700.0		n/a
S961000253	P	Potassium-ICP-Acid Dill.	ug/mL	97.60	< 5.00e-02	< 70.00	< 7.00e1	n/a	n/a	99.20	70.00		n/a
S961000253	P	Lanthanum-ICP-Acid Dill.	ug/mL	100.2	< 1.00e-02	< 70.00	< 7.00e1	n/a	n/a	100.9	14.00		n/a
S961000253	P	Lithium-ICP-Acid Dill.	ug/mL	96.20	< 1.00e-02	< 1.40e+02	< 1.40e2	n/a	n/a	95.70	14.00		n/a
S961000253	P	Magnesium-ICP-Acid Dill.	ug/mL	98.40	< 5.00e-02	< 14.00	< 1.40e1	n/a	n/a	100.7	14.00		n/a
S961000253	P	Manganese-ICP-Acid Dill.	ug/mL	100.4	< 5.00e-02	< 14.00	< 1.40e1	n/a	n/a	101.3	70.00		n/a
S961000253	P	Molybdenum-ICP-Acid Dill.	ug/mL	100.4	< 1.00e-01	81.10	77.60	79.35	4.74	101.3	14.00		n/a
S961000253	P	Niobium-ICP-Acid Dill.	ug/mL	99.00	< 1.00e-01	2.53e+03	2.60e+03	2.56e+03	2.73	334.1	140.0		n/a
S961000253	P	Nickel-ICP-Acid Dill.	ug/mL	97.00	< 2.00e-02	< 1.40e+02	< 1.40e2	n/a	n/a	98.50	14.00		n/a
S961000253	P	Neodymium-ICP-Acid Dill.	ug/mL	98.40	< 2.00e-02	< 28.00	< 3.0e2	n/a	n/a	99.50	28.00		n/a
S961000253	P	Phosphorus-ICP-Acid Dill.	ug/mL	100.8	< 2.00e-02	< 28.00	< 3.0e2	423.0	0.00	99.00	280.0		n/a
S961000253	P	Lead-ICP-Acid Dill.	ug/mL	100.2	< 1.00e-01	< 1.40e+02	< 1.40e2	n/a	n/a	106.2	14.00		n/a
S961000253	P	Sulfur-ICP-Acid Dill.	ug/mL	100.2	< 5.00e-02	< 84.10	< 8.42e1	333.5	5.10	101.3	14.00		n/a
S961000253	P	Tantalum-ICP-Acid Dill.	ug/mL	100.2	< 1.00e-02	< 1.40e+02	< 1.40e2	n/a	n/a	95.70	84.10		n/a
S961000253	P	Antimony-ICP-Acid Dill.	ug/mL	107.3	< 1.00e-01	< 1.40e+02	< 1.40e2	n/a	n/a	110.7	14.00		n/a
S961000253	P	Selenium-ICP-Acid Dill.	ug/mL	96.20	< 5.00e-02	< 1.40e+02	< 1.40e2	187.0	3.21	101.8	70.00		n/a
S961000253	P	Silicon-ICP-Acid Dill.	ug/mL	97.80	< 1.00e-01	< 14.00	< 1.40e1	n/a	n/a	93.50	14.00		n/a
S961000253	P	Strontium-ICP-Acid Dill.	ug/mL	97.80	< 1.00e-02	< 14.00	< 1.40e1	n/a	n/a	100.9	14.00		n/a
S961000253	P	Titanium-ICP-Acid Dill.	ug/mL	97.20	< 1.00e-02	< 2.80e+02	< 2.80e2	n/a	n/a	99.20	14.00		n/a

WHC-SD-WM-DP-103, REV. 1

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000258	D	Vanadium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	< 70.00	<7.00e1	n/a	n/a	100.7	70.00	n/a
S96T000258	D	Zinc-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	< 14.00	<1.40e1	n/a	n/a	100.7	14.00	n/a
S96T000258	D	Zirconium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-02	< 14.00	<1.40e1	n/a	n/a	98.50	14.00	n/a

CORE NUMBER: 121
SEGMENT #: 1-108

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
BY-106

Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000379	Z	Aluminum - ICP-Fusion	ug/g	100.4	< 5.00e-02	1.52e+02	1.13e+04	1.48e+04	7.41	98.90	897.0	N/A
S96T000379	Z	Boron - ICP-Fusion	ug/g	104.0	< 5.00e-02	8.97e+02	-9.55e+2	N/A	N/A	98.30	897.0	N/A
S96T000379	Z	Barium - ICP-Fusion	ug/g	103.2	< 5.00e-02	8.97e+02	-9.55e+2	N/A	N/A	98.30	897.0	N/A
S96T000379	Z	Bismuth - ICP-Fusion	ug/g	101.0	< 1.00e-01	1.79e+03	< 1.93e+3	N/A	N/A	96.90	1.79e+03	N/A
S96T000379	Z	Calcium - ICP-Fusion	ug/g	102.8	< 1.00e-01	1.79e+03	< 1.93e+3	N/A	N/A	99.10	1.79e+03	N/A
S96T000379	Z	Chromium - ICP-Fusion	ug/g	101.4	< 1.00e-02	1.29e+03	1.05e+03	1.16e+03	18.2	99.40	179.0	N/A
S96T000379	Z	Iron - ICP-Fusion	ug/g	102.6	< 5.00e-02	8.97e+02	-9.55e+2	N/A	N/A	99.80	897.0	N/A
S96T000379	Z	Lithium - ICP-Fusion	ug/g	101.0	< 1.00e-02	1.79e+02	< 1.93e+2	N/A	N/A	99.30	179.0	N/A
S96T000379	Z	Manganese - ICP-Fusion	ug/g	107.0	< 1.00e-02	1.58e+02	< 1.93e+2	N/A	N/A	97.80	179.0	N/A
S96T000379	Z	Sodium - ICP-Fusion	ug/g	104.8	1.25e-01	2.58e+02	2.56e+05	2.57e+05	0.78	80.80	1.79e+03	N/A
S96T000379	Z	Nickel - ICP-Fusion	ug/g	101.0	< 2.00e-02	3.79e+02	-3.86e+2	N/A	N/A	98.10	359.0	N/A
S96T000379	Z	Phosphorus - ICP-Fusion	ug/g	103.8	< 5.00e-02	8.97e+02	-9.55e+2	N/A	N/A	116.1	3.59e+03	N/A
S96T000379	Z	Silicon - ICP-Fusion	ug/g	98.20	< 5.00e-02	1.79e+02	< 1.93e+2	N/A	N/A	96.40	897.0	N/A
S96T000379	Z	Zinc - ICP-Fusion	ug/g	101.6	< 1.00e-02	3.79e+02	2.15e+03	3.12e+03	42.9	97.80	179.0	N/A
S96T000380	A	Aluminum - ICP-Acid Digest	ug/g	88.40	< 1.00e-02	16.80	1.26e+04	1.26e+04	0.80	N/A	4.770	N/A
S96T000380	A	Aluminum - ICP-Acid Digest	ug/g	95.20	1.70e-01	1.27e+02	< 1.93e+2	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Arsenic - ICP-Acid Digest	ug/g	92.60	< 1.00e-01	1.37e+02	< 1.93e+2	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Boron - ICP-Acid Digest	ug/g	107.4	7.61e-01	1.37e+02	< 1.93e+2	N/A	N/A	N/A	23.90	N/A
S96T000380	A	Barium - ICP-Acid Digest	ug/g	90.80	< 5.00e-03	< 2.90e	< 2.90e	N/A	N/A	N/A	23.90	N/A
S96T000380	A	Beryllium - ICP-Acid Digest	ug/g	105.2	< 5.00e-03	< 2.90e	< 2.90e	N/A	N/A	N/A	23.90	N/A
S96T000380	A	Bismuth - ICP-Acid Digest	ug/g	89.20	< 1.00e-01	4.77e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Calcium - ICP-Acid Digest	ug/g	88.00	< 5.00e-03	2.67e+02	272.0	266.0	4.51	N/A	4.770	N/A
S96T000380	A	Cadmium - ICP-Acid Digest	ug/g	88.00	< 5.00e-03	8.680	8.160	8.160	13.3	N/A	2.350	N/A
S96T000380	A	Cerium - ICP-Acid Digest	ug/g	93.40	< 1.00e-02	< 7.70e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Cobalt - ICP-Acid Digest	ug/g	90.40	< 2.00e-02	< 9.550	< 9.550	N/A	N/A	N/A	9.550	N/A
S96T000380	A	Chromium - ICP-Acid Digest	ug/g	91.00	< 1.00e-02	7.93e+02	7.65e	7.65e	6.11	N/A	4.770	N/A
S96T000380	A	Copper - ICP-Acid Digest	ug/g	92.00	< 1.00e-02	4.77e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Iron - ICP-Acid Digest	ug/g	91.80	1.03e-01	1.93e+02	155.0	160.0	6.25	N/A	23.90	N/A
S96T000380	A	Potassium - ICP-Acid Digest	ug/g	94.80	< 5.00e-01	1.93e+03	1.94e+03	1.94e+03	0.52	N/A	23.90	N/A
S96T000380	A	Lanthanum - ICP-Acid Digest	ug/g	92.40	< 5.00e-02	< 2.90e	< 2.90e	N/A	N/A	N/A	23.90	N/A
S96T000380	A	Lithium - ICP-Acid Digest	ug/g	94.60	< 1.00e-02	< 7.70e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Magnesium - ICP-Acid Digest	ug/g	88.20	< 1.00e-01	< 4.77e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Manganese - ICP-Acid Digest	ug/g	88.60	< 5.00e-02	2.830	2.750	2.750	2.46	N/A	4.770	N/A
S96T000380	A	Molybdenum - ICP-Acid Digest	ug/g	91.00	< 5.00e-02	< 23.90e	< 23.90e	N/A	N/A	N/A	23.90	N/A
S96T000380	A	Sodium - ICP-Acid Digest	ug/g	112.2	8.18e-01	2.24e+03	2.11e+05	2.18e+05	5.98	N/A	4.770	N/A
S96T000380	A	Neodymium - ICP-Acid Digest	ug/g	89.60	< 1.00e-01	< 4.77e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Nickel - ICP-Acid Digest	ug/g	89.20	< 2.00e-02	3.50e	37.60	37.5e	0.27	N/A	9.550	N/A
S96T000380	A	Phosphorus - ICP-Acid Digest	ug/g	87.80	< 2.00e-01	9.11e+02	2.78e+03	1.84e+03	101	N/A	4.770	N/A
S96T000380	A	Lead - ICP-Acid Digest	ug/g	87.60	< 1.00e-01	< 4.77e	< 4.99e	N/A	N/A	N/A	4.770	N/A
S96T000380	A	Sulfur - ICP-Acid Digest	ug/g	86.20	< 1.00e-01	3.37e+03	3.05e+03	3.21e+03	9.97	N/A	4.770	N/A
S96T000380	A	Tantalum - ICP-Acid Digest	ug/g	85.00	< 1.00e-02	< 28.60e	< 28.60e	N/A	N/A	N/A	28.60	N/A
S96T000380	A	Selenium - ICP-Acid Digest	ug/g	91.40	< 1.00e-01	< 4.77e	< 4.99e	N/A	N/A	N/A	4.770	N/A

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000380	A	Silicon - ICP-Acid Digest	ug/g	99.8	5.65e-01	4.05e+02	445.0	425.0	9.41	n/a	23.90	n/a
S961000380	A	Samarium - ICP-Acid Digest	ug/g	91.50	<1.00e-01	< 47.70	<4.69e1	n/a	n/a	n/a	47.70	n/a
S961000380	A	Strontium - ICP-Acid Digest	ug/g	91.50	<1.00e-02	42.60	42.40	42.65	1.17	n/a	47.70	n/a
S961000380	A	Titanium - ICP-Acid Digest	ug/g	91.50	<1.00e-02	< 47.70	<4.69e0	n/a	n/a	n/a	47.70	n/a
S961000380	A	Thallium - ICP-Acid Digest	ug/g	83.80	<2.00e-01	< 95.50	<9.38e1	n/a	n/a	n/a	95.50	n/a
S961000380	A	Vanadium - ICP-Acid Digest	ug/g	89.20	<5.00e-02	< 23.90	<2.35e1	n/a	n/a	n/a	23.90	n/a
S961000380	A	Zinc - ICP-Acid Digest	ug/g	86.80	<1.00e-02	22.00	17.40	19.70	23.4	n/a	47.70	n/a
S961000380	A	Zirconium - ICP-Acid Digest	ug/g	89.20	<1.00e-02	4.860	<4.69e0	n/a	n/a	n/a	47.70	n/a

WHC-SD-WM-DP-103, REV. 1

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
81-106

SEGMENT PORTION: Core Composite		Sample#	RAP Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk	Rec %	Det Limit	Count	Err%
CORE NUMBER: 121 SEGMENT #: S1-108	SE	S96T000381	1 Silver - ICP-H20 Dig/Acid	ug/g	100.2	<1.00e-02	18.20	2.120	19.70	15.2	87.80	5.700	N/A	N/A
		S96T000381	1 Aluminum - ICP-H20 Dig/Acid	ug/g	98.40	<5.00e-01	1.44e+04	1.76e+04	1.62e+04	19.8	69.50	28.50	N/A	N/A
		S96T000381	1 Arsenic - ICP-H20 Dig/Acid	ug/g	103.0	<1.00e-01	< 57.00	<5.81e1	<5.81e1	N/A	101.7	57.00	N/A	N/A
		S96T000381	1 Boron - ICP-H20 Dig/Acid	ug/g	100.0	<5.00e-02	< 28.50	<2.81e1	N/A	N/A	98.70	28.50	N/A	N/A
		S96T000381	1 Barium - ICP-H20 Dig/Acid	ug/g	102.2	<5.00e-02	< 28.50	<2.81e1	N/A	N/A	98.70	28.50	N/A	N/A
		S96T000381	1 Beryllium - ICP-H20 Dig/Acid	ug/g	103.8	<5.00e-03	< 2.850	<2.81e1	N/A	N/A	101.3	2.850	N/A	N/A
		S96T000381	1 Bismuth - ICP-H20 Dig/Acid	ug/g	102.6	<1.00e-01	< 57.00	<5.81e1	N/A	N/A	101.7	57.00	N/A	N/A
		S96T000381	1 Calcium - ICP-H20 Dig/Acid	ug/g	102.4	<5.00e-03	1.09e+02	1.120	110.6	27.4	103.8	57.00	N/A	N/A
		S96T000381	1 Cadmium - ICP-H20 Dig/Acid	ug/g	101.2	<5.00e-03	4.4020	4.943	4.943	37.4	100.3	2.850	N/A	N/A
		S96T000381	1 Cerium - ICP-H20 Dig/Acid	ug/g	104.8	<1.00e-01	< 57.00	<5.81e1	N/A	N/A	102.3	57.00	N/A	N/A
		S96T000381	1 Cerium - ICP-H20 Dig/Acid	ug/g	101.4	<2.00e-02	< 11.40	<1.16e1	N/A	N/A	100.0	11.40	N/A	N/A
		S96T000381	1 Cobalt - ICP-H20 Dig/Acid	ug/g	102.6	<1.00e-02	3.93e+02	523.0	459.0	28.8	101.0	5.700	N/A	N/A
		S96T000381	1 Chromium - ICP-H20 Dig/Acid	ug/g	104.0	<1.00e-02	< 57.00	<5.81e1	N/A	N/A	100.7	5.700	N/A	N/A
		S96T000381	1 Copper - ICP-H20 Dig/Acid	ug/g	103.2	<5.00e-01	52.00	84.50	67.5	45	99.90	28.50	N/A	N/A
		S96T000381	1 Iron - ICP-H20 Dig/Acid	ug/g	102.0	<5.00e-02	2.31e+03	2.81e+03	2.56e+03	19.5	81.90	28.50	N/A	N/A
		S96T000381	1 Potassium - ICP-H20 Dig/Acid	ug/g	103.0	<5.00e-02	< 28.50	<2.81e1	N/A	N/A	99.30	57.00	N/A	N/A
		S96T000381	1 Lanthanum - ICP-H20 Dig/Acid	ug/g	101.6	<1.00e-01	< 57.00	<5.81e1	N/A	N/A	95.70	57.00	N/A	N/A
		S96T000381	1 Lithium - ICP-H20 Dig/Acid	ug/g	99.60	<1.00e-02	< 57.00	<5.81e1	N/A	N/A	96.30	57.00	N/A	N/A
		S96T000381	1 Manganese - ICP-H20 Dig/Acid	ug/g	101.2	<5.00e-02	< 28.50	31.00	N/A	N/A	104.3	28.50	N/A	N/A
		S96T000381	1 Molybdenum - ICP-H20 Dig/Acid	ug/g	100.6	<1.00e-01	2.58e+05	3.05e+05	2.82e+05	16.7	101.3	57.00	N/A	N/A
		S96T000381	1 Neodymium - ICP-H20 Dig/Acid	ug/g	104.0	<1.00e-01	< 57.00	<5.81e1	N/A	N/A	101.3	57.00	N/A	N/A
		S96T000381	1 Nickel - ICP-H20 Dig/Acid	ug/g	100.0	<2.00e-02	15.00	24.40	19.6	47.9	98.70	11.40	N/A	N/A
		S96T000381	1 Phosphorus - ICP-H20 Dig/Acid	ug/g	102.6	<2.00e-01	9.71e+02	3.06e+03	2.02e+03	104	101.9	57.00	N/A	N/A
		S96T000381	1 Lead - ICP-H20 Dig/Acid	ug/g	100.6	<1.00e-01	< 57.00	<5.81e1	N/A	N/A	101.7	57.00	N/A	N/A
		S96T000381	1 Sulfur - ICP-H20 Dig/Acid	ug/g	99.60	<1.00e-01	4.29e+03	4.77e+03	4.51e+03	11.5	87.60	57.00	N/A	N/A
		S96T000381	1 Antimony - ICP-H20 Dig/Acid	ug/g	98.40	<1.00e-02	< 34.20	<3.47e1	N/A	N/A	105.7	34.20	N/A	N/A
		S96T000381	1 Selenium - ICP-H20 Dig/Acid	ug/g	95.60	<5.00e-02	< 57.00	<5.81e1	N/A	N/A	96.30	57.00	N/A	N/A
		S96T000381	1 Silicon - ICP-H20 Dig/Acid	ug/g	95.60	<5.00e-02	1.52e+02	196.0	174.0	25.3	104.0	28.50	N/A	N/A
		S96T000381	1 Samarium - ICP-H20 Dig/Acid	ug/g	100.6	<1.00e-01	< 57.00	<5.81e1	N/A	N/A	98.00	57.00	N/A	N/A
		S96T000381	1 Strontium - ICP-H20 Dig/Acid	ug/g	101.2	<1.00e-02	15.60	24.40	20.00	44.0	98.30	57.00	N/A	N/A
		S96T000381	1 Titanium - ICP-H20 Dig/Acid	ug/g	98.80	<2.00e-02	< 5.400	<5.81e1	N/A	N/A	97.00	57.00	N/A	N/A
		S96T000381	1 Thallium - ICP-H20 Dig/Acid	ug/g	99.20	<2.00e-01	<1.14e+02	<1.16e2	N/A	N/A	93.30	11.40	N/A	N/A
		S96T000381	1 Vanadium - ICP-H20 Dig/Acid	ug/g	101.4	<5.00e-02	< 28.50	<2.81e1	N/A	N/A	99.70	28.50	N/A	N/A
		S96T000381	1 Zinc - ICP-H20 Dig/Acid	ug/g	100.8	<1.00e-02	12.20	17.10	14.65	35.4	101.2	57.00	N/A	N/A
		S96T000381	1 Zirconium - ICP-H20 Dig/Acid	ug/g	100.0	<1.00e-02	< 57.00	<5.81e1	N/A	N/A	98.30	57.00	N/A	N/A

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CORE NUMBER: 121
SEGMENT #: n/a

Table 8. ICP Analytical Summary - Cores 64, 65, & 121.
81-106

SEGMENT PORTION: Field Blank													
Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T000279	D	Aluminum-ICP-Acid Dil.	ug/mL	97.60	<5.00e-02	<5.00e-02	<5.00e-02	n/a	n/a	100.7	5.00e-02		n/a
S96T000279	D	Calcium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-01	5.59e-01	5.69e-01	5.64e-01	1.77	99.30	1.00e-01		n/a
S96T000279	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	<1.00e-02	<1.00e-02	n/a	n/a	100.7	1.00e-02		n/a
S96T000279	D	Iron-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	<5.00e-02	<5.00e-02	n/a	n/a	101.5	5.00e-02		n/a
S96T000279	D	Potassium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-01	5.65e-01	<5.00e-01	n/a	n/a	88.80	5.00e-01		n/a
S96T000279	D	Magnesium-ICP-Acid Dil.	ug/mL	97.40	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	103.8	1.00e-01		n/a
S96T000279	D	Manganese-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	1.65e-02	1.64e-02	1.63e-02	0.61	99.50	1.00e-02		n/a
S96T000279	D	Sodium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	2.080	2.080	2.080	0.00	97.80	1.00e-01		n/a
S96T000279	D	Nickel-ICP-Acid Dil.	ug/mL	100.2	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	100.0	2.00e-02		n/a
S96T000279	D	Zirconium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	<1.00e-02	<1.00e-02	n/a	n/a	95.40	1.00e-02		n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941003506	F	Strontium-89/90 High Level	uCi/g	97.32	1.10e-02	2.780	2.760	2.770	0.72	n/a	1.10e-02	2.7
S941003506	F	Cesium-137 by GEA	uCi/g	102.7	<1.25e-02	1.25e-02	130.0	127.5	3.92	n/a	1.30e-02	.24
S941003507	R	Cesium-137 by GEA	uCi/g	101.1	<8.28e-03	1.36e-02	136.0	135.0	0.00	n/a	8.00e-03	.26

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CORE NUMBER: 64
SEGMENT #: 2

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S94I000312	F	Strontium-89/90 High Level	uCi/g	97.32	1.10e-02	3.940	3.380	3.660	15.3	n/a	1.20e-02	2.2	2.2
S94I000312	F	Cesium-137 by GEA	uCi/g	102.7	<1.25e-02	1.70e+02	174.0	172.0	2.33	n/a	1.30e-02	.2	.2
S94I000317	R	Cesium-137 by GEA	uCi/g	101.1	<8.28e-03	1.63e+02	160.0	161.5	1.86	n/a	8.00e-03	.14	.14

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000314	F	Strontium-89/90 High Level	uCi/g	88.57	2.75e-03	9.57e-01	7.71e-01	8.64e-01	21.5	n/a	3.65e-03	22.2
S941000314	F	Cesium-137 by GEA	uCi/g	100.4	<3.07e-02	2.18e-02	215.0	216.5	1.59	n/a	3.10e-02	0.33
S941000318	R	Cesium-137 by GEA	uCi/g	101.1	<8.28e-03	1.61e-02	154.0	157.5	4.44	n/a	8.00e-03	.21

Drainable Liquid: Drainable Liquid												
Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000004		Strontium-89/90 High Level	uCi/mL	94.59	8.00e-03	6.10e-02	5.07e-02	5.58e-02	18.4	n/a	3.00e-03	8.8
S951000004		Pu-239/240 by TRU-SPEC Resin	uCi/mL	106.3	<9.96e-06	<7.00e-06	<9.97e-06	n/a	n/a	n/a	7.00e-06	9.3
S951000004		Cesium-137 by GEA	uCi/mL	103.8	<7.37e-01	1.86e-02	184.0	185.0	1.08	n/a	7.37e-01	1.8
S951000004		Am-241 by Extraction	uCi/mL	91.29	<4.46e-05	<4.66e-05	<4.87e-05	n/a	n/a	n/a	4.66e-05	47.6

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CORE NUMBER: 64
SEGMENT #: 4

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
B1-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	Rid#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000315	F	Strontium-89/90 High Level	uCi/g	88.57	2.73e-01	7.000	7.130	7.065	1.84	n/a	1.45e-01	6.7
S94T000315	F	Cesium-137 by GEA	uCi/g	94.64	2.80e-02	1.33e+02	134.0	133.5	0.75	n/a	2.00e-02	4
S94T000319	R	Cesium-137 by GEA	uCi/g	101.1	<2.36e-03	1.08e+02	129.0	118.5	17.7	n/a	2.00e-03	18

Lower Half of Segment: L Lower Half of Segment

Sample#	Rid#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000316	F	Strontium-89/90 High Level	uCi/g	88.57	1.74e-01	1.490	1.410	1.450	5.52	n/a	1.47e-01	15.7
S94T000316	F	Cesium-137 by GEA	uCi/g	94.64	2.70e-02	63.00	62.70	62.85	0.48	n/a	2.70e-02	59
S94T000320	R	Cesium-137 by GEA	uCi/g	101.1	<2.36e-03	59.50	68.10	63.80	13.5	n/a	2.00e-03	24

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000355		Strontium-89/90 High Level	UCI/mL	96.59	8.00e-03	2.07e-02	1.72e-02	1.90e-02	18.5	N/A	3.00e-03	16.4
S94T000355		Pu-239/240 by TRU-SPEC Resin	UCI/mL	106.3	<9.96e-06	<9.62e-06	<8.07e-06	N/A	N/A	N/A	9.62e-06	8.4
S94T000355		Cesium-137 by deA	UCI/mL	103.8	<7.37e-01	2.26e+02	225.0	225.5	0.44	N/A	7.37e-01	1.64
S94T000355		Am-241 by Extraction	UCI/mL	97.29	<4.46e-05	<4.87e-05	<4.51e-5	N/A	N/A	N/A	4.87e-05	40.1

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000347	F		Strontium-89/90 High Level	UC1/g	97.32	<6.09e-03	3.92e-01	4.99e-01	4.46e-01	24.0	n/a	1.20e-02	7.3
S941000347	F		Cesium-137 by GEA	UC1/g	102.7	<1.30e-02	73.50	89.00	81.25	19.1	n/a	1.30e-02	7.3
S941000351	R		Cesium-137 by GEA	UC1/g	95.77	<6.87e-03	66.20	95.80	81.00	36.5	n/a	7.00e-03	.3

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000348	F		Strontium-89/90 High Level	UC1/g	97.32	<6.09e-03	7.31e-01	7.86e-01	7.58e-01	7.25	n/a	1.10e-02	5.1
S941000348	F		Cesium-137 by GEA	UC1/g	104.6	<1.27e-02	80.30	103.0	91.65	24.8	n/a	1.30e-02	1.6
S941000349	F		Strontium-89/90 High Level	UC1/g	90.18	1.00e-03	9.13e-01	6.35e-01	7.74e-01	35.9	n/a	1.00e-02	1.6
S941000349	F		Cesium-137 by GEA	UC1/g	101.1	<2.13e-02	2.22e-02	2.19e-02	220.5	1.36	n/a	2.10e-02	1.6
S941000352	R		Cesium-137 by GEA	UC1/g	101.9	<7.10e-03	76.30	219.0	70.55	16.3	n/a	7.00e-03	.3
S941000353	R		Cesium-137 by GEA	UC1/g	101.9	<7.10e-03	2.24e-02	232.0	228.0	3.51	n/a	7.00e-03	.17

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 64
SEGMENT #: 9

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000350	F		Strontium-89/90 High Level	uCi/g	91.07	1.00e-03	5.09e-01	4.46e-01	4.78e-01	13.2	n/a	1.00e-03	2
S94T000350	F		Cesium-137 By GEA	uCi/g	101.1	<2.05e-02	61.20	56.20	58.70	8.52	n/a	2.10e-02	.62
S94T000354	R		Cesium-137 By GEA	uCi/g	101.9	<7.10e-03	60.00	58.30	59.15	2.87	n/a	7.00e-03	.32

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 64
SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000374	F	Strontium-89/90 High Level	uCi/g	90.18	1.00e-03	6.92e-01	6.72e-01	6.82e-01	2.93	n/a	2.00e-03	2.4
S94T000374	F	Cesium-137 by GEA	uCi/g	99.23	<1.71e-02	97.70	102.0	89.95	4.31	n/a	1.70e-02	4.9
S94T000376	R	Cesium-137 by GEA	uCi/g	104.6	<3.57e-03	90.20	89.30	89.75	1.00	n/a	4.00e-03	-23

L Lower Half of Segment: L Lower Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000375	F	Strontium-89/90 High Level	uCi/g	93.69	<1.34e-03	1.89e-01	2.82e-01	2.25e-01	32.6	n/a	2.00e-03	3.4
S94T000375	F	Cesium-137 by GEA	uCi/g	99.23	<1.71e-02	62.30	61.20	61.75	1.70	n/a	1.70e-02	59
S94T000377	R	Cesium-137 by GEA	uCi/g	100.0	<3.27e-03	60.70	47.00	53.85	25.4	n/a	3.00e-03	-28

Drainable Liquid: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000371	F	Strontium-89/90 High Level	uCi/mL	94.59	8.00e-03	3.95e-02	3.70e-02	3.82e-02	6.54	n/a	3.00e-03	11.2
S94T000371	F	Pu-239/240 by TRU-SPEC Resin	uCi/mL	106.3	<9.96e-06	<6.72e-06	<6.90e-06	n/a	n/a	n/a	6.72e-06	10.4
S94T000371	F	Cesium-137 by GEA	uCi/mL	103.8	<7.57e-01	2.10e+02	212.0	211.0	0.50	n/a	7.57e-01	1.71
S94T000371	F	Am-241 by Extraction	uCi/mL	91.29	<4.46e-05	<4.38e-05	<4.75e-05	n/a	n/a	n/a	4.38e-05	50.7

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 64
SEGMENT #: 11

SEGMENT PORTION: U Upper Half of Segment

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000392	F	Strontium-89/90	High Level	94.59	1.00e-03	3.03e-01	2.91e-01	2.97e-01	4.04	n/a	1.00e-03	2.7
S941000392	F	Cesium-137 by GEA	uc1/g	96.17	<3.63e-02	20.10	19.50	19.80	3.03	n/a	3.60e-02	1.23
S941000395	R	Cesium-137 by GEA	uc1/g	104.6	<3.57e-03	21.60	18.90	20.25	13.3	n/a	4.00e-03	.46

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 12

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000393	F		Strontium-89/90 High Level	µCi/g	91.59	1.00e-03	9.49e-01	1.060	1.004	11.1	n/a	1.10e-02	4.8
S94T000393	F		Cesium-137 by GEA	µCi/g	95.00	<3.59e-02	85.70	107.0	96.35	22.1	n/a	3.80e-02	.59
S94T000396	R		Cesium-137 by GEA	µCi/g	97.69	<3.68e-03	1.45e+02	142.0	143.5	2.09	n/a	4.00e-03	.18

CORE NUMBER: 64
SEGMENT #: 13

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
B1-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count Err%
IS94T000394	F	Strontium-89/90 High Level	uCi/g	94.59	1.00e-03	1.86e-01	1.86e-01	1.85e-01	n/a	1.00e-03	3.4
IS94T000394	F	Cesium-137 By GEA	uCi/g	96.17	<3.68e-02	15.10	15.30	15.20	n/a	3.60e-02	1.53
IS94T000397	R	Cesium-137 By GEA	uCi/g	97.69	<3.68e-03	12.90	13.40	13.15	n/a	4.00e-03	.61

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 64
SEGMENT #: field blank

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	AnalYTE	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000389		Strontium-89/90 High Level	uCi/mL	92.86	<1.10e-05	4.40e-05	<1.10e-05	0.0	0.0	0.0	2.28e-05	47.1
S94T000389		Pu-239/240 by TRU-SPEC Resin	uCi/mL	123.2	<5.60e-06	<7.60e-06	<7.60e-06	0.0	0.0	0.0	7.60e-06	100
S94T000389		Cesium-137 by GEA	uCi/mL	100.4	<2.31e-05	1.22e-01	1.22e-01	1.22e-01	0.00	0.0	2.31e-05	-32
S94T000389		Am-241 by Extraction	uCi/mL	90.87	<2.92e-05	<2.99e-05	<2.74E-3	0.0	0.0	0.0	2.99e-05	54.4

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 65
SEGMENT #: 13

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000100	Z	Alpha of Digested Solid	uCi/g	92.75	<2.90e-03	<4.82e-03	5.99e-03	n/a	n/a	68.10	7.00e-03	350.5
S95T000101		Strontium-89/90 High Level	uCi/g	80.45	1.900	7.83e+02	743.0	763.0	5.24	n/a	2.470	1.7
S95T000101		Pu-239/240 by TRU-SPEC Resin	uCi/g	99.22	5.00e-03	1.05e-01	9.43e-02	9.96e-02	10.7	n/a	6.00e-03	1.9
S95T000101		Cobalt-60 by GEA	uCi/g	101.0	<8.93e-03	<1.29e-02	<1.82e-2	n/a	n/a	n/a	9.00e-03	n/a
S95T000101		Cesium-137 by GEA	uCi/g	104.2	1.04e-01	3.94e+02	621.0	507.5	44.7	n/a	1.04e-01	n/a
S95T000101		Europium-154 by GEA	uCi/g	n/a	<2.26e-02	<6.34e-02	<1.03e-1	n/a	n/a	n/a	2.30e-02	n/a
S95T000101		Europium-155 by GEA	uCi/g	92.75	<2.90e-03	<2.20e-01	<3.55e-1	n/a	n/a	n/a	1.70e-02	n/a
S95T000322	F	Alpha of Digested Solid	uCi/g	95.05	<2.90e-03	2.90e-01	2.15e-01	2.53e-01	29.7	85.90	2.32e-01	n/a
		Uranium - ICP-Fusion	ug/g		-2.250e0	<1.76e+04	<17567.6	n/a	n/a	87.53	1.76e+04	n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 121
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004179	2	Uranium by Phosphorescence	ug/g	99.22	6.40e-01	12.70	11.90	12.30	6.50	n/a	2.070	n/a
S95T004179	2	Strontium-89/90 High Level	ug/g	102.4	1.10e-02	9.41e-01	9.81e-01	9.61e-01	4.16	n/a	1.00e-02	3.34E+00
S95T004179	2	Uranium - ICP Fusion	ug/g	96.90	<1.70e-02	<1.04e+04	<1.05e+4	n/a	n/a	96.60	1.04e+04	n/a
S95T004179	2	Cobalt-60 by GEA	ug/g	99.06	<1.70e-02	<1.39e-02	<1.67e-2	n/a	n/a	n/a	1.40e-02	n/a
S95T004179	2	Cesium-137 by GEA	ug/g	99.33	<1.87e-02	56.88	57.50	57.19	1.05	n/a	n/a	0.720
S95T004179	2	Europium-154 by GEA	ug/g	n/a	<4.45e-02	<4.07e-02	<5.30e-2	n/a	n/a	n/a	4.10e-02	n/a
S95T004179	2	Europium-155 by GEA	ug/g	n/a	<4.10e-02	<2.33e-01	<2.33e-1	n/a	n/a	n/a	2.33e-01	n/a
S95T004179	2	Americium-241 by GEA	ug/g	n/a	<9.31e-02	<4.98e-01	<4.98e-1	n/a	n/a	n/a	4.93e-01	n/a
S95T004179	2	Alpha of Digested Solid	ug/g	86.75	<2.26e-03	<1.75e-03	<2.29e-3	n/a	n/a	65.90	4.00e-03	5.00E+02

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
By-106

Core Number: 121
Segment #: 2

Segment Portion: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004180	Z	Uranium by Phosphorescence	ug/g	99.23	6.40e-01	1.32e-02	110.0	121.0	18.2	n/a	1.67e-01	n/a
S95T004180	Z	Strontium-89/90 High Level	ug/g	101.6	4.70e-03	3.950	8.840	7.995	39.1	n/a	5.00e-03	1.16E+00
S95T004180	Z	Uranium - ICP-Fusion	ug/g	96.90	5.70e-01	9.24e-03	<1.01e4	n/a	n/a	100.8	9.24e+03	n/a
S95T004180	Z	Cobalt-60 by GEA	ug/g	99.06	4.70e-02	<1.32e-02	<2.03e-2	n/a	n/a	n/a	1.30e-02	n/a
S95T004180	Z	Cesium-137 by GEA	ug/g	99.33	3.87e-02	3.95e-04	60.40	60.17	0.83	n/a	n/a	0.660
S95T004180	Z	Europium-154 by GEA	ug/g	n/a	4.40e-02	4.83e-02	<5.06e-2	n/a	n/a	n/a	4.80e-02	n/a
S95T004180	Z	Americium-241 by GEA	ug/g	n/a	3.31e-02	4.81e-01	<5.01e-1	n/a	n/a	n/a	2.28e-01	n/a
S95T004180	Z	Alpha of Digested Solid	ug/g	83.73	3.66e-03	3.09e-03	5.59e-03	5.34e-03	9.36	73.98	5.00e-03	8.73E-01
S95T004191	A	Uranium - ICP-Acid Digest	ug/g	95.46	3.66e-03	3.09e-03	<1.92e-2	n/a	n/a	93.50	185.0	n/a
S96T001415	Z	Uranium by Phosphorescence	ug/g	113.00	3.640	1.89e-02	189.0	187.0	2.14	n/a	2.09e-01	1.5
S96T001415	Z	U-Phosphorescence Inst. Error	% Inst Error	3.10	3.000	1.500	1.700	1.600	1.70	n/a	2.00e-01	n/a
S96T001415	Z	Strontium-89/90 High Level	ug/g	91.87	5.00e-03	9.310	8.800	9.055	5.63	n/a	2.00e+03	4.98E-01
S96T001415	Z	Uranium - ICP-Fusion	ug/g	98.00	3.20e-01	<7.33e+03	<7.22e3	n/a	n/a	94.40	7.33e+03	n/a
S96T001415	Z	Cobalt-60 by GEA	ug/g	96.11	3.20e-02	<3.37e-02	<3.46e-2	n/a	n/a	n/a	3.40e-02	n/a
S96T001415	Z	Cesium-137 by GEA	ug/g	104.1	3.00e-02	65.94	67.20	66.57	1.95	n/a	n/a	0.670
S96T001415	Z	Europium-154 by GEA	ug/g	n/a	6.84e-02	<7.59e-02	<8.79e-2	n/a	n/a	n/a	7.60e-02	n/a
S96T001415	Z	Europium-155 by GEA	ug/g	n/a	<6.40e-02	<1.59e-01	<1.58e-1	n/a	n/a	n/a	1.55e-01	n/a
S96T001415	Z	Americium-241 by GEA	ug/g	n/a	3.24e-02	<8.39e-02	<8.52e-2	n/a	n/a	n/a	8.30e-02	n/a

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-0002-3Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106CORE NUMBER: 121
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004181	Z	Uranium by Phosphorescence	ug/g	99.22	6.40e-01	1.42e+02	138.0	140.0	2.85	n/a	1.77e-01	n/a
S95T004181	Z	Strontium-89/90 High Level	uc1/g	102.4	1.10e-02	6.020	5.910	5.965	1.84	n/a	9.10e-03	1.26E+00
S95T004181	Z	Uranium - ICP-Fusion	ug/g	96.90	<5.00e-01	<9.83e+03	<9.77e+3	n/a	n/a	103.6	9.33e+03	n/a
S95T004181	Z	Cobalt-60 by GEA	uc1/g	99.06	<1.70e-02	<1.82e-02	<1.93e-2	n/a	n/a	n/a	1.80e-02	n/a
S95T004181	Z	Cesium-137 by GEA	uc1/g	99.33	<3.87e-02	64.74	65.30	65.02	0.92	n/a	n/a	0.640
S95T004181	Z	Europium-154 by GEA	uc1/g	n/a	<4.45e-02	<3.33e-02	<4.28e-2	n/a	n/a	n/a	3.30e-02	n/a
S95T004181	Z	Europium-155 by GEA	uc1/g	n/a	<4.10e-02	<2.45e-01	<2.40e-1	n/a	n/a	n/a	2.75e-01	n/a
S95T004181	Z	Americium-241 by GEA	uc1/g	n/a	<9.31e-02	<5.16e-01	<5.10e-1	n/a	n/a	n/a	5.16e-01	n/a
S95T004181	Z	Alpha of Digested Solid	uc1/g	83.72	<3.62e-03	8.74e-03	6.28e-03	7.51e-03	32.3	68.11	5.10e-03	5.92E+01
S95T004192	A	Uranium - ICP-Acid Digest	ug/g	92.80	<5.00e-01	<2.31e+02	<2.37e2	n/a	n/a	n/a	231.0	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004182	Z	Uranium by Phosphorescence	ug/g	99.22	6.40e-01	1.15e+02	123.0	116	10.1	108.4	1.93e-01	n/a
S95T004182	Z	Strontium-89/90 High Level	uc1/g	102.4	1.10e-02	7.520	7.390	7.455	1.74	n/a	9.10e-03	1.12E+00
S95T004182	Z	Uranium - ICP-Fusion	ug/g	96.90	<5.00e-01	<1.07e+04	<1.06e4	n/a	n/a	99.20	1.07e+04	n/a
S95T004182	Z	Cobalt-60 by GEA	uc1/g	99.06	<1.70e-02	<2.24e-02	<1.37e-2	n/a	n/a	n/a	2.20e-02	n/a
S95T004182	Z	Cesium-137 by GEA	uc1/g	99.33	<3.87e-02	83.42	82.00	82.71	1.69	n/a	n/a	0.600
S95T004182	Z	Europium-154 by GEA	uc1/g	n/a	<4.45e-02	<6.27e-02	<5.83e-2	n/a	n/a	n/a	6.30e-02	n/a
S95T004182	Z	Europium-155 by GEA	uc1/g	n/a	<4.10e-02	<2.86e-01	<2.83e-1	n/a	n/a	n/a	2.87e-01	n/a
S95T004182	Z	Americium-241 by GEA	uc1/g	n/a	<9.31e-02	<5.99e-01	<5.88e-1	n/a	n/a	n/a	5.99e-01	n/a
S95T004182	Z	Alpha of Digested Solid	uc1/g	83.72	<3.62e-03	7.86e-03	7.45e-03	7.66e-03	5.36	n/a	5.10e-03	6.39E+01
S95T004193	A	Uranium - ICP-Acid Digest	ug/g	92.80	<5.00e-01	<2.03e+02	<1.88e2	n/a	n/a	n/a	203.0	n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004183	2	Uranium by Phosphorescence	ug/g	93.73	1.290	1.68e+02	169.0	168.5	0.59	N/A	1.69e-01	N/A
S951004183	2	Strontium by Phosphorescence	ug/g	95.94	2.00e-02	6.490	6.910	6.700	6.27	N/A	6.00e-03	1.09E+00
S951004183	2	Uranium - CP-Fusion	ug/g	92.90	<5.00e-01	<9.35e+03	<9.35e+3	N/A	N/A	94.80	9.35e+03	N/A
S951004183	2	Cesium-60 by GEA	ug/g	100.0	<1.51e-02	<1.48e-02	<1.35e-2	N/A	N/A	N/A	1.50e-02	N/A
S951004183	2	Cesium-137 by GEA	ug/g	101.1	<1.64e-02	1.62e-2	64.80	63.86	2.98	N/A	N/A	0.590
S951004183	2	Europium-152 by GEA	ug/g	N/A	<3.19e-02	<4.94e-02	<3.55e-2	N/A	N/A	N/A	4.90e-02	N/A
S951004183	2	Europium-154 by GEA	ug/g	N/A	<6.44e-02	<4.02e-01	<4.29e-1	N/A	N/A	N/A	4.03e-01	N/A
S951004183	2	Alpha of Digested Solid	ug/g	102.0	4.00e-03	1.28e-02	1.20e-02	1.24e-02	6.45	N/A	5.00e-03	3.80E+01
S951004194	4	Uranium - CP-ACid Digest	ug/g	92.80	<5.00e-01	<2.22e+02	<2.60e2	N/A	N/A	N/A	222.0	N/A

L Lower Half of Segment: L Lower Half of Segment

Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004184	2	Uranium by Phosphorescence	ug/g	93.73	1.290	3.03e+02	316.0	309.5	4.20	N/A	1.76e-01	N/A
S951004184	2	Strontium by Phosphorescence	ug/g	95.94	2.00e-02	8.820	10.20	9.510	14.5	N/A	6.00e-03	9.41E-01
S951004184	2	Uranium - CP-Fusion	ug/g	92.90	<5.00e-01	<9.75e+03	<9.40e3	N/A	N/A	95.90	9.75e+03	N/A
S951004184	2	Cesium-60 by GEA	ug/g	100.0	<1.51e-02	<1.79e-02	<1.86e-2	N/A	N/A	N/A	1.80e-02	N/A
S951004184	2	Cesium-137 by GEA	ug/g	101.1	<1.64e-02	52.79	60.50	56.64	13.6	N/A	N/A	0.650
S951004184	2	Europium-152 by GEA	ug/g	N/A	<3.19e-02	<4.90e-02	<4.10e-2	N/A	N/A	N/A	4.90e-02	N/A
S951004184	2	Europium-154 by GEA	ug/g	N/A	<6.44e-02	<3.84e-01	<4.10e-1	N/A	N/A	N/A	3.84e-01	N/A
S951004184	2	Alpha of Digested Solid	ug/g	102.0	4.00e-03	1.78e-02	1.19e-02	1.49e-02	39.7	N/A	5.00e-03	3.41E+01
S951004193	4	Uranium - CP-ACid Digest	ug/g	92.80	<5.00e-01	2.75e+02	267.0	271.0	2.95	N/A	253.0	N/A

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample #	R A#	Analyle	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004185	2	Uranium by Phosphorescence	ug/g	93.73	1.290	2.71e+02	339.0	305.0	22.3	n/a	1.59e-01	n/a
S95T004185	2	Strontium-89/90 High Level	uCi/g	95.94	2.00e-02	9.130	9.530	9.330	4.29	n/a	6.00e-03	9.25E-01
S95T004185	2	Uranium -ICP-Fusion	ug/g	92.90	<5.00e-01	<8.82e+03	<9.29e3	n/a	n/a	98.10	8.82e-03	n/a
S95T004185	2	Cobalt-60 by GEA	uCi/g	100.0	<1.51e-02	<1.35e-02	<1.44e-2	n/a	n/a	n/a	1.30e-02	n/a
S95T004185	2	Cesium-137 by GEA	uCi/g	101.1	<1.64e-02	77.48	81.10	79.29	4.54	n/a	n/a	0.510
S95T004185	2	Europium-154 by GEA	uCi/g	n/a	<3.19e-02	<4.04e-02	<4.24e-2	n/a	n/a	n/a	4.00e-02	n/a
S95T004185	2	Neptunium-237 by GEA	uCi/g	n/a	<6.46e-02	<4.36e-01	<4.52e-1	n/a	n/a	n/a	4.36e-01	n/a
S95T004185	2	Alpha of Digested Solid	uCi/g	99.40	<1.42e-03	1.46e-02	1.70e-02	1.58e-02	15.2	88.70	4.00e-03	3.12E+01
S95T004196	A	Uranium -ICP-Acid Digest	ug/g	86.10	<5.00e-01	<2.64e+02	<2.34e2	n/a	n/a	91.60	264.0	n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121

SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004-186	Z	Uranium by Phosphorescence	ug/g	93.74	1.420	1.74e-02	206.0	192.3	14.0	114.9	1.85e-01	n/a
S95T004-186	Z	Strontium-89/90 High Level	ug/g	92.94	2.00e-02	6.500	3.670	6.085	13.6	n/a	7.00e-03	1.21E+00
S95T004-186	Z	Uranium - ICP-Fusion	ug/g	92.94	< 1.00e-03	< 1.03e-04	< 1.03e-04	n/a	n/a	95.73	1.03e+04	n/a
S95T004-186	Z	Cobalt-60 by GEA	ug/g	100.0	< 1.21e-03	< 1.39e-02	< 1.54e-2	n/a	n/a	n/a	1.40e-02	n/a
S95T004-186	Z	Cesium-137 by GEA	ug/g	101.1	< 1.21e-03	< 3.56e-12	< 3.96e-01	57.96	6.38	n/a	n/a	0.650
S95T004-186	Z	Europium-154 by GEA	ug/g	n/a	< 3.19e-03	< 3.34e-02	< 4.70e-2	n/a	n/a	n/a	3.30e-02	n/a
S95T004-186	Z	Neptunium-237 by GEA	ug/g	n/a	< 2.43e-02	< 9.02e-03	< 4.06e-1	n/a	n/a	n/a	4.09e-01	n/a
S95T004-186	Z	Alpha of Digested Solid	ug/g	102.0	< 1.00e-03	9.02e-03	1.20e-02	1.08e-02	22.0	n/a	6.00e-03	5.09E+01
S95T004-197	A	Uranium - ICP-Acid Digest	ug/g	86.10	< 5.00e-01	< 2.51e-02	< 2.59e2	n/a	n/a	n/a	250.0	n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004187	Z	Uranium by Phosphorescence	ug/g	107.2	1.80e-02	44.20	173.0	108.6	74.5	n/a	1.80e-02	n/a
S951004187	Z	Strontium-89/90 High Level	uc/g	99.19	1.00e-03	1.210	5.950	3.580	132	n/a	1.00e-03	1.28E+00
S951004187	Z	Uranium -ICP-Fusion	ug/g	93.00	<5.00e-01	<9.67e+03	<9.69e+03	n/a	n/a	96.50	9.67e+03	n/a
S951004187	Z	Cobalt-60 by GEA	uc/g	100.0	<1.21e-02	<1.07e-02	<1.36e-2	n/a	n/a	n/a	1.10e-02	n/a
S951004187	Z	Cesium-137 by GEA	uc/g	101.1	<2.99e-02	38.36	69.90	54.13	58.2	n/a	n/a	0.780
S951004187	Z	Neptunium-154 by GEA	uc/g	n/a	<3.73e-02	<2.62e-02	<4.22e-2	n/a	n/a	n/a	2.60e-02	n/a
S951004187	Z	Alpha of Digested Solid	uc/g	90.00	<3.40e-03	<3.30e-01	<4.28e-1	n/a	n/a	n/a	3.30e-01	n/a
S951004198	A	Uranium -ICP-Acid Digest	ug/g	86.10	<5.00e-01	<2.38e+02	<2.37e+02	n/a	n/a	n/a	8.00e-03	5.00E+02
S961001378	Z	Uranium by Phosphorescence	ug/g	113.0	5.640	2.18e+02	196.5	207.0	n/a	119.0	238.0	n/a
S961001378	Z	Strontium-89/90 High Level	uc/g	3.30	3.100	5.120	1.900	1.900	160	n/a	1.00e-03	n/a
S961001378	Z	Uranium -ICP-Fusion	ug/g	91.87	5.00e-03	<5.75e+03	<4.17e+3	5.450	11.4	n/a	6.75e+03	n/a
S961001378	Z	Cobalt-60 by GEA	uc/g	98.11	<3.24e-03	<3.19e-02	<2.80e-2	n/a	n/a	92.30	3.10e-02	n/a
S961001378	Z	Cesium-137 by GEA	uc/g	104.1	<3.00e-03	79.42	5.00	77.21	5.70	n/a	n/a	0.580
S961001378	Z	Neptunium-154 by GEA	uc/g	n/a	<6.84e-03	<7.63e-02	<6.57e-2	n/a	n/a	n/a	7.40e-02	n/a
S961001378	Z	Europium-155 by GEA	uc/g	n/a	<6.40e-03	<1.59e-01	<1.40e-1	n/a	n/a	n/a	1.59e-01	n/a
S961001378	Z	Americium-241 by GEA	uc/g	n/a	<3.24e-02	<8.42e-02	<8.11e-2	n/a	n/a	n/a	8.40e-02	n/a

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-0002-3

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

Core Number: 121
Segment #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004188	Z	Uranium by Phosphorescence	ug/g	100.0	0.00e+00	2.38e+02	253.0	245.5	6.11	n/a	1.57e-01	n/a
S951004188	Z	Strontium-87/90 High Level	uc1/g	105.7	2.50e-02	8.950	9.750	9.350	8.56	n/a	7.00e-03	9.40E-01
S951004188	Z	Uranium -ICP-Fusion	ug/g	93.00	<5.00e-01	<8.71e+03	<9.48e3	n/a	n/a	91.15	8.71e-03	n/a
S951004188	Z	Cobalt-60 by GEA	uc1/g	100.0	<1.21e-02	<1.38e-02	<1.76e-2	n/a	n/a	n/a	1.40e-02	n/a
S951004188	Z	Cesium-137 by GEA	uc1/g	101.1	<2.99e-02	<1.14e+02	<1.25e-2	119.7	9.21	n/a	n/a	0.420
S951004188	Z	Europium-154 by GEA	uc1/g	n/a	<5.73e-03	<4.28e-02	<4.35e-2	n/a	n/a	n/a	4.30e-02	n/a
S951004188	Z	Neptunium-237 by GEA	uc1/g	n/a	<7.70e-03	<5.21e-01	<5.75e-1	n/a	n/a	n/a	5.21e-01	n/a
S951004188	Z	Alpha of Digested Solid	uc1/g	90.00	<3.40e-03	1.05e-02	9.34e-03	9.92e-03	11.7	80.10	7.00e-03	5.19E+01
S951004199	A	Uranium -ICP-Acid Digest	ug/g	86.10	<5.00e-01	<2.41e+02	<2.33e2	n/a	n/a	n/a	242.0	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004189	Z	Uranium by Phosphorescence	ug/g	100.0	0.00e+00	3.40e+02	327.0	333.5	3.30	n/a	1.89e-01	n/a
S951004189	Z	Strontium-87/90 High Level	uc1/g	99.19	1.00e-03	9.910	9.320	9.615	6.14	n/a	3.00e-03	6.51E-01
S951004189	Z	Uranium -ICP-Fusion	ug/g	93.00	<5.00e-01	<1.05e+04	<1.13e4	n/a	n/a	92.35	1.05e+04	n/a
S951004189	Z	Cobalt-60 by GEA	uc1/g	100.0	<1.21e-02	<1.83e-2	<1.83e-2	n/a	n/a	n/a	2.00e-02	n/a
S951004189	Z	Cesium-137 by GEA	uc1/g	101.1	<2.99e-02	<1.28e+02	<1.24e-2	125.8	3.17	n/a	n/a	0.440
S951004189	Z	Europium-154 by GEA	uc1/g	n/a	<5.73e-03	<4.97e-02	<6.06e-2	n/a	n/a	n/a	5.00e-02	n/a
S951004189	Z	Neptunium-237 by GEA	uc1/g	n/a	<7.70e-03	<6.03e-01	<6.19e-1	n/a	n/a	n/a	6.03e-01	n/a
S951004189	Z	Alpha of Digested Solid	uc1/g	90.00	<3.40e-03	1.14e-02	1.49e-02	1.32e-02	26.6	75.77	8.00e-03	6.09E+01
S951004200	A	Uranium -ICP-Acid Digest	ug/g	86.10	<5.00e-01	2.58e+02	274.0	266.0	6.02	n/a	212.0	n/a

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-0002-3CORE NUMBER: 121
SEGMENT #: 9

SEGMENT PORTION: U Upper Half of Segment

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

Sample#	Rad Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004190	Z Uranium by Phosphorescence	ug/g	100.0	0.00e+00	2.34e+02	235.0	234.5	0.43	107.4	2.04e-01	n/a
S95T004190	Z Strontium-89/90 High Level	UC/g	105.7	2.50e-02	9.460	8.680	9.070	8.60	n/a	9.00e-03	1.03e+00
S95T004190	Z Strontium-89/90 Fusion	ug/g	93.00	<5.00e-01	<1.13e+04	<1.07e4	n/a	n/a	98.45	1.73e+04	n/a
S95T004190	Z Cadmium-109 by GEA	UC/g	100.0	<1.21e-02	<1.95e-02	<1.79e-2	n/a	n/a	n/a	2.00e-02	n/a
S95T004190	Z Cesium-137 by GEA	UC/g	101.1	<2.99e-02	82.67	77.10	79.288	7.01	n/a	n/a	0.560
S95T004190	Z Europium-152 by GEA	UC/g	n/a	<3.73e-02	<5.53e-02	<4.81e-2	n/a	n/a	n/a	5.50e-02	n/a
S95T004190	Z Neptunium-237 by GEA	UC/g	n/a	<7.00e-02	<5.00e-01	<4.86e-1	n/a	n/a	n/a	5.00e-01	n/a
S95T004190	Z Alpha of Digested Solid	UC/g	90.00	<3.40e-03	1.00e-02	6.74e-03	8.37e-03	38.9	76.53	9.00e-03	6.70e+01
S95T004201	A Uranium-107-Acid Digest	ug/g	86.10	<3.00e-01	2.64e+02	266.0	266.0	1.50	n/a	237.0	n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 121
SEGMENT #: 10

SEGMENT POSITION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S981000106	Z	Uranium by Phosphorescence	ug/g	95.14	<1.95e-01	64.80	71.80	68.30	10.2	92.70	1.95e-01	n/a
S981000106	Z	Strontium-99/90 High Level	uCi/g	101.0	2.00e-03	2.610	3.040	2.825	15.2	n/a	3.09e-03	1.23E+00
S981000106	Z	Uranium -ICP-Fusion	ug/g	96.50	<3.00e-01	<1.07e+04	<1.17e4	n/a	n/a	102.1	1.07e+04	n/a
S981000106	Z	Cobalt-60 by GEA	uCi/g	98.86	<3.02e-02	<1.64e-02	<1.11e-2	n/a	n/a	n/a	1.60e-02	n/a
S981000106	Z	Cesium-137 by GEA	uCi/g	101.2	<3.26e-02	45.59	50.00	47.80	9.21	n/a	n/a	0.730
S981000106	Z	Europium-154 by GEA	uCi/g	n/a	<3.90e-02	<3.95e-02	<4.68e-2	n/a	n/a	n/a	4.00e-02	n/a
S981000106	Z	Neptunium-237 by GEA	uCi/g	98.80	<3.20e-02	<3.75e-01	<4.04e-1	n/a	n/a	n/a	3.75e-01	n/a
S981000106	Z	Alpha of Digested Solid	uCi/g	98.80	<3.67e-03	2.85e-03	4.74e-03	3.80e-03	49.8	n/a	4.00e-03	1.20E+02
S981000108	A	Uranium -ICP-Acid Digest	ug/g	88.40	<3.00e-01	<2.27e+02	<2.34e2	n/a	n/a	83.00	227.0	n/a

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 10A

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000107	2	Uranium by Phosphorescence	ug/g	95.14	<1.93e-01	1.27e+02	114.0	120.5	10.8	n/a	1.97e-01	n/a
S941000107	2	Strontium-89/90 High Level	uCi/g	100.0	2.00e-03	13.00	12.30	12.65	5.53	n/a	3.00e-03	5.57E-01
S941000107	2	Uranium -ICP Fusion	ug/g	96.50	<5.00e-01	<1.09e+04	<1.07e4	n/a	n/a	103.6	1.09e+04	n/a
S941000107	2	Cobalt-60 by GEA	uCi/g	98.84	<1.02e-02	<2.64e-2	<2.64e-2	n/a	n/a	n/a	2.00e-02	n/a
S941000107	2	Cesium-137 by GEA	uCi/g	101.5	<3.24e-02	80.49	79.10	79.79	1.75	n/a	n/a	0.560
S941000107	2	Europium-154 by GEA	uCi/g	n/a	<3.90e-02	<5.09e-02	<5.72e-2	n/a	n/a	n/a	5.10e-02	n/a
S941000107	2	Neptunium-237 by GEA	uCi/g	n/a	<8.20e-02	<4.95e-01	<4.94e-1	n/a	n/a	n/a	4.95e-01	n/a
S941000107	2	Alpha of Digested Solid	uCi/g	98.80	<3.67e-03	3.16e-02	3.19e-02	3.18e-02	0.94	n/a	5.00e-03	2.33E+01

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CORE NUMBER: 121
SEGMENT #: 08

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
81-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S967000250	Z	Uranium by Phosphorescence	ug/g	95.14	<1.93e-01	20.10	19.10	19.60	5.10	n/a	1.44e-01	n/a
S967000250	Z	Strontium-89/90 High Level	uCi/g	100.0	2.00e-03	6.67e-01	6.73e-01	6.70e-01	0.90	n/a	2.00e-03	2.22e+00
S967000250	Z	Uranium -TCP-Fusion	ug/g	96.50	<5.00e-01	<9.08e-03	<8.63e-3	n/a	n/a	98.95	9.08e-03	n/a
S967000250	Z	Cobalt-60 by GEA	uCi/g	98.96	<1.02e-02	<1.32e-02	<1.22e-2	n/a	n/a	n/a	1.30e-02	n/a
S967000250	Z	Cesium-137 by GEA	uCi/g	101.5	<3.24e-02	<1.35e-02	<1.30e-2	132.6	3.77	n/a	n/a	0.390
S967000250	Z	Europium-154 by GEA	uCi/g	n/a	<3.90e-02	<3.79e-02	<3.76e-2	n/a	n/a	n/a	3.70e-02	n/a
S967000250	Z	Neptunium-237 by GEA	uCi/g	n/a	<8.20e-02	<5.81e-01	<3.50e-1	n/a	n/a	n/a	5.81e-01	n/a
S967000250	Z	Alpha of Digested Solid	uCi/g	98.80	<3.67e-03	<1.62e-03	<3.35e-3	n/a	n/a	87.90	4.00e-03	5.00e+01
S967000252	A	Uranium -TCP-Acid Digest	ug/g	88.40	<5.00e-01	<2.16e+02	<2.21e2	n/a	n/a	n/a	2.16e+0	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S967000251	Z	Uranium by Phosphorescence	ug/g	95.14	<1.93e-01	66.60	60.80	63.70	2.11	n/a	2.10e-01	n/a
S967000251	Z	Strontium-89/90 High Level	uCi/g	100.0	2.00e-03	2.220	2.350	2.285	5.69	n/a	2.00e-03	1.39e+00
S967000251	Z	Uranium -TCP-Fusion	ug/g	96.50	<5.00e-01	<1.17e+04	<1.20e4	n/a	n/a	101.4	1.17e+03	n/a
S967000251	Z	Cobalt-60 by GEA	uCi/g	98.96	<1.02e-02	<1.59e-02	<1.53e-2	n/a	n/a	n/a	1.50e-02	n/a
S967000251	Z	Cesium-137 by GEA	uCi/g	101.5	<3.24e-02	<1.35e-02	<1.30e-2	73.45	13.8	n/a	n/a	0.580
S967000251	Z	Europium-154 by GEA	uCi/g	n/a	<3.90e-02	<4.89e-02	<5.04e-2	n/a	n/a	n/a	4.90e-02	n/a
S967000251	Z	Neptunium-237 by GEA	uCi/g	n/a	<8.20e-02	<5.09e-01	<4.75e-1	n/a	n/a	n/a	5.09e-01	n/a
S967000251	Z	Alpha of Digested Solid	uCi/g	98.80	<3.67e-03	<4.93e-03	<5.49e-03	5.21e-03	10.7	83.69	5.00e-03	7.68e+01
S967000253	A	Uranium -TCP-Acid Digest	ug/g	88.40	<5.00e-01	<2.08e+02	<1.99e2	n/a	n/a	n/a	2.08e+0	n/a

Drainable Liquid: Drainable Liquid

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S967000258	D	Uranium-TCP-Acid Dil.	ug/mL	97.20	<5.00e-01	<7.00e-02	<7.00e-2	n/a	n/a	97.45	700.0	n/a
S967000258	D	Alpha in Liquid Samples	uCi/mL	96.08	<5.65e-03	<4.86e-03	<1.97e-2	n/a	n/a	n/a	1.20e-02	500.0

CORE NUMBER: 121
SEGMENT #: 1-10B

Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: Core Composite

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000379	7	Uranium by Phosphorescence	ug/g	99.06	7.92e-01	1.67e-02	183.0	175.0	9.14	106.7	1.62e-01	1.73E+00
S96T000379	7	U-Phosphorescence Inst. Error	ug/g									
S96T000379	7	Strontium-89/90 High Level	uc/g	99.18	<5.35e-03	1.730	n/a	n/a	n/a	n/a	1.730	n/a
S96T000379	7	Uranium -ICP-Fusion	ug/g	102.0	<3.00e-01	6.420	6.160	6.290	4.13	n/a	6.00e-03	1.22E+00
S96T000379	7	Cobalt-60 by GEA	uc/g	98.86	<1.35e-02	<1.47e-02	<9.63e3	n/a	n/a	97.35	8.97e-03	n/a
S96T000379	7	Cesium-137 by GEA	uc/g	97.06	<2.97e-02	70.90	<1.27e-2	n/a	n/a	n/a	1.50e-02	n/a
S96T000379	7	Europium-154 by GEA	uc/g	n/a	<3.57e-02	<4.30e-02	67.30	69.10	5.21	n/a	n/a	0.600
S96T000379	7	Neptunium-237 by GEA	uc/g	98.74	<8.16e-02	<5.50e-01	<5.63e-1	n/a	n/a	n/a	4.30e-02	n/a
S96T000379	7	Alpha of Digested Solid	uc/g	98.89	<3.31e-03	8.60e-03	1.18e-02	n/a	n/a	87.19	5.50e-01	n/a
S96T000380	7	Beta of Solid Sample	uc/g	88.10	8.90e-02	83.20	77.20	80.20	7.48	94.79	1.10e-02	4.45E+01
S96T000380	7	Uranium -ICP-Acid Digest	ug/g	88.10	<5.00e-01	<2.39e+02	<2.35e2	n/a	n/a	n/a	239.0	n/a

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Table 9. Radchem Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: S1-108

SEGMENT PORTION: Core Composite

Sample#	g/g	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000381	1	Uranium - ICP-H2O Dig/Acid	ug/g	98.40	<5.00e-01	<2.85e+02	<2.91e2	n/a	n/a	105.8	285.0	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64

SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000004		Sulfate by IC-Dionex4000/4500	ug/mL	96.83	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.120e3	n/a
S951000004		Phosphate by IC-Dionex 4000/4500	ug/mL	93.99	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.120e3	n/a
S951000004		Nitrate-IC - Dionex 4000/4500	ug/mL	95.67	<1.000	9.93e+04	9.960e4	9.940e4	0.30	n/a	2.120e3	n/a
S951000004		Nitrite-IC - Dionex 4000/4500	ug/mL	97.37	<1.000	6.50e+04	6.410e4	6.460e4	1.39	n/a	2.120e3	n/a
S951000004		Fluoride-IC-Dionex 4000/4500	ug/mL	93.93	<1.000e-1	2.23e+02	2.130e2	2.180e2	4.59	n/a	212.0	n/a
S951000004		Chloride-IC-Dionex 4000/4500	ug/mL	96.13	<2.000e-1	3.79e+03	3.880e3	3.840e3	2.35	n/a	424.0	n/a
S951000004		Bromide by Ion Chromatogr aph	ug/mL	98.78	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.120e3	n/a
S951000228		Sulfate by IC-Dionex4000/4500	ug/mL	100.7	<8.000e-1	<1.70e+03	<1.70e3	n/a	n/a	103.6	1.700e3	n/a
S951000228		Phosphate by IC-Dionex 4000/4500	ug/mL	92.83	<6.000e-1	<1.27e+03	<1.27e3	n/a	n/a	n/a	1.270e3	n/a
S951000228		Nitrate by IC - Dionex 4000/4500	ug/mL	95.24	<5.000e-1	<1.06e+03	<1.06e3	n/a	n/a	98.50	1.060e3	n/a
S951000228		Nitrite-IC - Dionex 4000/4500	ug/mL	101.2	<1.000	1.13e+05	1.130e5	1.140e5	1.75	107.8	2.120e3	n/a
S951000228		Fluoride-IC - Dionex 4000/4500	ug/mL	99.44	<8.000e-1	6.15e+04	6.020e4	6.080e4	2.14	76.60	1.700e3	n/a
S951000228		Chloride-IC-Dionex 4000/4500	ug/mL	95.71	<6.000e-2	2.22e+02	2.270e2	2.24e2	2.23	50.10	127.0	n/a
S951000228		Bromide by Ion Chromatogr aph	ug/mL	101.2	<1.000e-1	3.61e+03	3.510e3	3.560e3	2.81	87.80	212.0	n/a
S951000228			ug/mL	100.7	<8.000e-1	<1.70e+03	<1.70e3	n/a	n/a	97.80	1.700e3	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 64
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000355		Sulfate by IC-Dionex4000/4500	ug/ml	96.83	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.12e3	n/a
S94T000355		Phosphate-IC-Dionex 4000/4500	ug/ml	93.99	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.12e3	n/a
S94T000355		Nitrate-IC - Dionex 4000/4500	ug/ml	95.67	<1.000	7.92e+04	7.950e4	7.920e4	0.13	n/a	2.12e3	n/a
S94T000355		Fluoride-IC-Dionex 4000/4500	ug/ml	93.37	<1.000	7.10e+04	7.170e4	7.140e4	0.98	n/a	2.12e3	n/a
S94T000355		Chloride-IC-Dionex 4000/4500	ug/ml	93.93	<1.000e-1	2.46e+02	2.420e2	2.440e2	1.64	n/a	212.0	n/a
S94T000355		Bromide by Ion Chromatograph	ug/ml	96.13	<2.000e-1	4.43e+03	4.280e3	4.350e3	3.22	n/a	424.0	n/a
				98.78	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.12e3	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample #	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S941000371		Sulfate by IC-Dionex40001/4500	ug/mL	96.83	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.120e3	n/a
S941000371		Phosphate-IC-Dionex 40001/4500	ug/mL	93.99	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.120e3	n/a
S941000371		Nitrate-IC - Dionex 40001/4500	ug/mL	95.67	<1.000	9.31e+04	9.350e4	9.350e4	0.43	n/a	2.120e3	n/a
S941000371		Nitrite-IC - Dionex 40001/4500	ug/mL	97.37	<1.000	7.38e+04	7.370e4	7.380e4	0.14	n/a	2.120e3	n/a
S941000371		Fluoride-IC-Dionex 40001/4500	ug/mL	93.93	<1.000e-1	2.31e+02	2.140e2	2.239e2	6.71	n/a	212.0	n/a
S941000371		Chloride-IC-Dionex 40001/4500	ug/mL	96.13	<2.000e-1	4.36e+03	4.470e3	4.420e3	2.49	n/a	424.0	n/a
S941000371		Bromide by Ion Chromatograph	ug/mL	98.78	<1.000	<2.12e+03	<2.12e3	n/a	n/a	n/a	2.120e3	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 64
SEGMENT #: field blank

SEGMENT PORTION: Drainable Liquid

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000389		Sulfate by IC-Dionex 4000/4500	ug/mL	95.33	<1.000	< 1.000	NA	D/A	D/A	D/A	9.990e-1	D/A
S94T000389		Phosphate-IC-Dionex 4000/4500	ug/mL	94.19	<1.000	1.370	NA	D/A	D/A	D/A	9.990e-1	D/A
S94T000389		Nitrate-IC - Dionex 4000/4500	ug/mL	99.14	<1.000	1.74e+02	NA	D/A	D/A	D/A	11.00	D/A
S94T000389		Nitrite-IC - Dionex 4000/4500	ug/mL	96.40	<1.000	47.30	NA	D/A	D/A	D/A	11.00	D/A
S94T000389		Fluoride-IC-Dionex 4000/4500	ug/mL	94.64	<1.000e-1	4.42e-01	NA	D/A	D/A	D/A	1.000e-1	D/A
S94T000389		Chloride-IC-Dionex 4000/4500	ug/mL	104.5	<2.000e-1	3.030	NA	D/A	D/A	D/A	2.000e-1	D/A
S94T000389		Bromide by Ion Chromatograph	ug/mL	94.06	<1.000	< 1.000	NA	D/A	D/A	D/A	1.000	D/A
S95T000116		Sulfate by IC-Dionex 4000/4500	ug/mL	99.00	<1.000	1.420	9.990e-1	D/A	D/A	D/A	9.990e-1	D/A
S95T000116		Phosphate-IC-Dionex 4000/4500	ug/mL	99.61	<1.000	1.440e0	1.40e0	1.430e0	1.40	D/A	9.990e-1	D/A
S95T000116		Nitrate-IC - Dionex 4000/4500	ug/mL	99.65	<1.000	1.65e+02	1.680e2	1.670e2	1.20	D/A	9.990e-1	D/A
S95T000116		Nitrite-IC - Dionex 4000/4500	ug/mL	100.9	<1.000e-1	44.00	4.750e1	4.675e1	3.21	D/A	1.000	D/A
S95T000116		Fluoride-IC-Dionex 4000/4500	ug/mL	101.8	<1.000e-1	2.95e-01	2.880e-1	2.910e-1	2.40	D/A	1.000e-1	D/A
S95T000116		Chloride-IC-Dionex 4000/4500	ug/mL	107.5	<2.000e-1	3.020	3.040e0	3.030e0	0.66	D/A	2.000e-1	D/A
S95T000116		Bromide by Ion Chromatograph	ug/mL	98.43	<1.000	< 1.000	<1.0	D/A	D/A	D/A	1.000	D/A

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 121
SEGMENT #: 1

SEGMENT POSITION: U Upper Half of Segment

Sample#	R	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004202	W	Acetate by IC - Dionex 4000i	ug/g	105.5	<2.00e-01	3.57e+02	488.0	422.6	51.0	102.4	222.2	n/a
S95T004202	W	Formate by IC - Dionex 4000i	ug/g	100.0	<2.00e-01	3.65e+02	363.0	363.0	0.55	105.6	222.2	n/a
S95T004202	W	Fluoride-IC-Dionex 4000i/4500	ug/g	100.5	<1.30e-02	9.12e+02	1.09e+03	1.00e+03	17.8	106.1	98.73	n/a
S95T004202	W	Chloride-IC-Dionex 4000i/4500	ug/g	92.86	<1.70e-02	6.95e+02	979.0	812.2	28.8	93.50	129.1	n/a
S95T004202	W	Nitrite-IC - Dionex 4000i/4500	ug/g	103.0	<1.07e-01	1.27e+04	1.59e+04	1.43e+04	22.4	101.3	812.7	n/a
S95T004202	W	Bromide by Ion Chromatograph	ug/g	98.26	<1.26e-01	<9.57e+02	<1.07e+03	n/a	n/a	96.96	957.0	n/a
S95T004202	W	Nitrate by IC-Dionex4000i/4500	ug/g	101.3	<1.40e-01	2.27e+02	2.84e+05	2.55e+05	22.3	104.4	1.06e+03	n/a
S95T004202	W	Phosphate-IC-Dionex 4000i/4500	ug/g	99.90	<1.20e-01	4.38e+03	5.02e+03	4.70e+03	13.6	89.46	910.7	n/a
S95T004202	W	Sulfate by IC-Dionex4000i/4500	ug/g	100.5	<1.36e-01	3.71e+03	4.36e+03	4.03e+03	16.1	94.29	1.03e+03	n/a
S95T004202	W	Oxalate by IC - Dionex 4000i	ug/g	104.7	<1.05e-01	1.33e+03	1.39e+03	1.36e+03	4.41	103.1	797.5	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BT-106

CORE NUMBER: 121
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	Rad	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004203	W	Acetate by IC - Dionex 40001	ug/g	105.3	<2.00e-01	8.07e+02	1.11e+03	958.6	31.6	n/a	216.7	n/a
S95T004203	W	Formate by IC - Dionex 40001	ug/g	100.0	<2.00e-01	4.69e+02	459.0	461.9	1.30	n/a	216.7	n/a
S95T004203	W	Fluoride by IC - Dionex 40001/4500	ug/g	94.24	<1.30e-02	7.43e+03	7.81e+03	7.63e+03	4.72	n/a	96.27	n/a
S95T004203	W	Chloride by IC - Dionex 40001/4500	ug/g	62.15	<1.70e-02	1.46e+03	1.58e+03	1.53e+03	6.34	n/a	125.9	n/a
S95T004203	W	Nitrite by IC - Dionex 40001/4500	ug/g	96.30	<1.07e-01	2.14e+04	2.18e+04	2.16e+04	1.85	n/a	792.4	n/a
S95T004203	W	Bromide by IC - Dionex 40001/4500	ug/g	97.63	<1.26e-01	<9.33e+02	<1.06e3	n/a	n/a	n/a	933.2	n/a
S95T004203	W	Nitrate by IC - Dionex 40001/4500	ug/g	97.39	2.31e-01	4.97e+04	5.09e+04	5.03e+04	2.39	n/a	1.04e+03	n/a
S95T004203	W	Phosphate by IC - Dionex 40001/4500	ug/g	97.60	<1.20e-01	1.26e+04	1.55e+04	1.40e+04	20.6	n/a	888.0	n/a
S95T004203	W	Sulfate by IC - Dionex 40001/4500	ug/g	97.46	<1.36e-01	1.34e+04	1.64e+04	1.59e+04	6.29	n/a	1.01e+03	n/a
S95T004203	W	Oxalate by IC - Dionex 40001	ug/g	98.64	<1.05e-01	1.23e+04	1.27e+04	1.23e+04	3.20	n/a	777.6	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004204	W	Acetate by IC - Dionex 40001	ug/g	91.34	<2.00e-01	<2.56e+02	<2.49e+02	496.9	n/a	140.2	256.3	n/a
S951004204	W	Formate by IC - Dionex 40001	ug/g	99.20	<2.00e-01	5.10e+02	484.0	496.9	5.23	95.20	256.3	n/a
S951004204	W	Fluoride-IC-Dionex 40001/4500	ug/g	92.20	<1.30e-02	5.06e+03	5.16e+03	5.11e+03	1.96	94.07	113.9	n/a
S951004204	W	Chloride-IC-Dionex 40001/4500	ug/g	90.38	<1.70e-02	1.39e+03	1.31e+03	1.35e+03	5.93	87.36	148.1	n/a
S951004204	W	Nitrite-IC - Dionex 40001/4500	ug/g	95.03	<1.07e-01	1.96e+04	1.89e+04	1.92e+04	3.64	96.91	937.6	n/a
S951004204	W	Nitrate by Ion Chroma500-epd	ug/g	93.74	<1.26e-01	<1.10e+03	<1.16e3	n/a	n/a	92.61	1.10e+03	n/a
S951004204	W	Bromide by Ion Chroma500-epd	ug/g	92.14	<2.61e-01	4.00e+03	4.01e+03	4.01e+03	0.25	80.62	1.23e+03	n/a
S951004204	W	Nitrate by IC-Dionex40001/4500	ug/g	93.59	<1.20e-01	4.98e+03	8.89e+03	6.91e+03	57.3	91.08	1.05e+03	n/a
S951004204	W	Phosphate-IC-Dionex 40001/4500	ug/g	95.40	<1.36e-01	1.39e+04	1.24e+04	1.32e+04	11.4	91.90	1.19e+03	n/a
S951004204	W	Sulfate by IC-Dionex40001/4500	ug/g	95.40	<1.36e-01	1.39e+04	1.24e+04	1.32e+04	11.4	91.90	1.19e+03	n/a
S951004204	W	Oxalate by IC - Dionex 40001	ug/g	98.06	<1.05e-01	9.47e+03	8.33e+03	8.90e+03	12.8	95.30	920.1	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004205	W	Acetate by IC - Dionex 40001	ug/g	91.34	<2.00e-01	<2.20e+02	<2.10e2	n/a	n/a	n/a	220.4	n/a
S951004205	W	Formate by IC - Dionex 40001	ug/g	99.20	<2.00e-01	6.03e+02	616.0	609.5	2.13	n/a	220.4	n/a
S951004205	W	Fluoride-IC-Dionex 40001/4500	ug/g	92.20	<1.30e-02	6.32e+03	6.58e+03	6.45e+03	4.03	n/a	97.95	n/a
S951004205	W	Chloride-IC-Dionex 40001/4500	ug/g	90.38	<1.70e-02	1.73e+03	1.74e+03	1.74e+03	0.58	n/a	128.1	n/a
S951004205	W	Nitrite-IC - Dionex 40001/4500	ug/g	95.03	<1.07e-01	2.60e+04	2.73e+04	2.67e+04	4.88	n/a	806.1	n/a
S951004205	W	Bromide by Ion Chroma500-epd	ug/g	93.74	<1.26e-01	<9.49e+02	<9.05e2	n/a	n/a	n/a	949.3	n/a
S951004205	W	Nitrate by IC-Dionex40001/4500	ug/g	92.14	<2.61e-01	3.50e+03	3.27e+03	3.38e+03	6.79	n/a	1.05e+03	n/a
S951004205	W	Phosphate-IC-Dionex 40001/4500	ug/g	93.59	<1.20e-01	5.58e+03	4.24e+03	4.80e+03	26.8	n/a	903.3	n/a
S951004205	W	Sulfate by IC-Dionex40001/4500	ug/g	95.40	<1.36e-01	1.27e+04	1.30e+04	1.28e+04	2.33	n/a	1.02e+03	n/a
S951004205	W	Oxalate by IC - Dionex 40001	ug/g	98.06	<1.05e-01	1.06e+04	1.10e+04	1.08e+04	3.70	n/a	791.1	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 121
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004206	W	Acetate by IC - Dionex 40001	ug/g	94.49	<2.00e-01	<2.18e-02	2.38e2	n/a	0.00	n/a	6.052	n/a
S951004206	W	Formate by IC - Dionex 40001	ug/g	104.8	<2.00e-01	4.03e-02	4.05	405.2	0.00	n/a	6.052	n/a
S951004206	W	Fluoride-IC-Dionex 40001/4500	ug/g	105.1	<1.00e-02	6.01e-03	5.49e+03	5.75e+03	9.04	n/a	120.4	n/a
S951004206	W	Chloride-IC-Dionex 40001/4500	ug/g	93.80	<1.70e-02	1.25e-02	1.09e+03	1.26e+03	27.0	n/a	157.5	n/a
S951004206	W	Nitrite-IC - Dionex 40001/4500	ug/g	103.5	<1.07e-01	2.28e-02	2.30e+04	2.29e+04	0.87	n/a	1.96e+03	n/a
S951004206	W	Bromide by Ion Chromatograph	ug/g	94.96	<1.28e-01	1.70e-03	<1.27e3	n/a	n/a	n/a	1.17e+03	n/a
S951004206	W	Nitrate by IC-Dionex40001/4500	ug/g	96.09	<1.59e-01	3.70e-03	5.37e+05	5.53e+05	5.96	n/a	1.30e+03	n/a
S951004206	W	Phosphate-IC-Dionex 40001/4500	ug/g	102.0	<1.20e-01	3.2e-03	2.47e+03	2.90e+03	29.4	n/a	1.11e+03	n/a
S951004206	W	Sulfate by IC-Dionex40001/4500	ug/g	96.36	<1.36e-01	2.32e-03	5.39e+03	5.36e+03	1.12	n/a	1.26e+03	n/a
S951004206	W	Oxalate by IC - Dionex 40001	ug/g	95.54	<1.05e-01	3.20e-03	5.41e+03	5.30e+03	3.96	n/a	972.8	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951004207	W	Acetate by IC - Dionex 40001	ug/g	94.49	<2.00e-01	<2.31e-02	<2.40e2	n/a	n/a	n/a	6.412	n/a
S951004207	W	Formate by IC - Dionex 40001	ug/g	104.8	<2.00e-01	4.93e-02	480.0	486.4	2.67	n/a	6.412	n/a
S951004207	W	Fluoride-IC-Dionex 40001/4500	ug/g	95.41	<1.30e-02	1.22e-02	5.61e+03	8.92e+03	74.0	n/a	127.6	n/a
S951004207	W	Chloride-IC-Dionex 40001/4500	ug/g	93.80	<1.70e-02	1.34e-03	531.0	934.0	86.5	n/a	166.9	n/a
S951004207	W	Nitrite-IC - Dionex 40001/4500	ug/g	103.5	<1.07e-01	2.58e-02	2.61e+04	2.60e+04	1.16	n/a	2.08e+03	n/a
S951004207	W	Bromide by Ion Chromatograph	ug/g	94.96	<1.28e-01	<1.23e+03	<1.29e3	n/a	n/a	n/a	1.24e+03	n/a
S951004207	W	Nitrate by IC-Dionex40001/4500	ug/g	96.09	<1.59e-01	4.63e-03	2.46e+05	3.54e+05	61.2	n/a	1.37e+03	n/a
S951004207	W	Phosphate-IC-Dionex 40001/4500	ug/g	102.0	<1.20e-01	3.12e-03	2.40e+03	2.76e+03	26.1	n/a	1.18e+03	n/a
S951004207	W	Sulfate by IC-Dionex40001/4500	ug/g	96.36	<1.36e-01	1.26e-02	6.32e+03	9.54e+03	63.6	n/a	1.33e+03	n/a
S951004207	W	Oxalate by IC - Dionex 40001	ug/g	95.54	<1.05e-01	1.41e+04	6.54e+03	1.03e+04	73.3	n/a	1.03e+03	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
8Y-106

CORE NUMBER: 121
SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004208	W	Acetate by IC - Dionex 4000	ug/g	100.8	<2.00e-01	<2.37e+02	<2.36e2	n/a	n/a	98.43	236.9	n/a
S95T004208	W	Formate by IC - Dionex 4000	ug/g	102.4	<2.00e-01	5.56e+02	572.0	564.1	2.84	96.00	236.9	n/a
S95T004208	W	Fluoride-IC-Dionex 4000/4500	ug/g	104.4	<1.30e-02	1.30e+04	1.53e+04	1.42e+04	16.3	94.58	105.3	n/a
S95T004208	W	Chloride-IC-Dionex 4000/4500	ug/g	99.87	<1.70e-02	1.81e+03	1.62e+03	1.72e+03	11.1	143.0	137.7	n/a
S95T004208	W	Nitrite-IC - Dionex 4000/4500	ug/g	105.2	<1.07e-01	2.74e+04	2.48e+04	2.61e+04	9.96	102.8	866.3	n/a
S95T004208	W	Bromide by Ion Chromatograph	ug/g	101.9	<1.26e-01	<1.02e+03	<1.02e3	n/a	n/a	97.39	1.02e+03	n/a
S95T004208	W	Nitrate by IC-Dionex4000/4500	ug/g	105.0	5.07e-01	3.55e+05	3.10e+05	3.32e+05	13.5	83.88	1.13e+03	n/a
S95T004208	W	Phosphate-IC-Dionex 4000/4500	ug/g	101.1	<1.19e-01	1.47e+04	1.25e+04	1.36e+04	16.2	91.39	962.7	n/a
S95T004208	W	Sulfate by IC-Dionex4000/4500	ug/g	104.0	<1.36e-01	1.80e+04	1.53e+04	1.66e+04	16.2	98.42	1.10e+03	n/a
S95T004208	W	Oxalate by IC - Dionex 4000	ug/g	108.8	<1.05e-01	1.61e+04	1.49e+04	1.55e+04	7.74	103.9	850.3	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004209	W	Acetate by IC - Dionex 40001	ug/g	100.8	<2.00e-01	<2.14e+03	<2.24e2	n/a	n/a	n/a	214.3	n/a
S95T004209	W	Formate by IC - Dionex 40001	ug/g	102.4	<2.00e-01	4.49e+03	432.0	440.4	3.86	n/a	214.3	n/a
S95T004209	W	Fluoride-IC-Dionex 40001/4500	ug/g	104.4	<1.30e-02	4.81e+03	4.24e+03	4.53e+03	12.6	n/a	157.2	n/a
S95T004209	W	Chloride-IC-Dionex 40001/4500	ug/g	99.87	<1.70e-02	1.60e+03	1.39e+03	1.50e+03	14.0	n/a	205.6	n/a
S95T004209	W	Nitrite-IC - Dionex 40001/4500	ug/g	105.2	<1.07e-01	2.39e+04	2.10e+04	2.24e+04	12.9	n/a	1.29e+03	n/a
S95T004209	W	Bromide by Ion Chromatograph	ug/g	101.9	<1.26e-01	<1.52e+03	<1.159e3	n/a	n/a	n/a	1.52e+03	n/a
S95T004209	W	Nitrate by IC-Dionex40001/4500	ug/g	105.0	5.07e-01	5.18e+03	4.54e+03	4.86e+03	13.2	n/a	1.69e+03	n/a
S95T004209	W	Phosphate-IC-Dionex 40001/4500	ug/g	101.1	<1.19e-01	6.51e+03	6.65e+03	6.58e+03	2.13	n/a	1.44e+03	n/a
S95T004209	W	Sulfate by IC-Dionex40001/4500	ug/g	104.0	<1.36e-01	1.48e+04	1.30e+04	1.39e+04	12.9	n/a	1.64e+03	n/a
S95T004209	W	Oxalate by IC - Dionex 40001	ug/g	108.8	<1.05e-01	1.22e+04	1.07e+04	1.15e+04	13.1	n/a	1.27e+03	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004210	M		Acetate by IC - Dionex 4000i	ug/g	98.42	<2.00e-01	<2.35e+02	<2.39e2	n/a	n/a	144.9	234.7	n/a
S95T004210	M		Formate by IC - Dionex 4000i	ug/g	102.4	<2.00e-01	5.37e+02	507.0	522.0	5.75	97.60	234.7	n/a
S95T004210	M		Fluoride-IC-Dionex 4000i/4500	ug/g	101.2	<1.30e-02	4.23e+03	4.26e+03	4.24e+03	0.71	n/a	120.3	n/a
S95T004210	M		Chloride-IC-Dionex 4000i/4500	ug/g	94.43	<1.70e-02	1.64e+03	1.72e+03	1.68e+03	4.76	n/a	157.3	n/a
S95T004210	M		Nitrite-IC - Dionex 4000i/4500	ug/g	103.5	<1.07e-01	2.59e+04	2.70e+04	2.64e+04	4.16	n/a	990.4	n/a
S95T004210	M		Bromide by Ion Chromatograph	ug/g	98.96	<1.26e-01	<1.17e+03	<1.28e3	n/a	n/a	n/a	1.17e+03	n/a
S95T004210	M		Nitrate by IC-Dionex4000i/4500	ug/g	101.3	4.10e-01	4.57e+05	4.41e+05	4.49e+05	3.56	n/a	1.30e+03	n/a
S95T004210	M		Phosphate-IC-Dionex 4000i/4500	ug/g	97.98	<1.19e-01	4.82e+03	5.33e+03	5.08e+03	10.0	n/a	1.10e+03	n/a
S95T004210	M		Sulfate by IC-Dionex4000i/4500	ug/g	101.0	<1.36e-01	1.64e+04	1.64e+04	1.64e+04	0.00	n/a	1.26e+03	n/a
S95T004210	M		Oxalate by IC - Dionex 4000i	ug/g	104.5	<1.03e-01	1.28e+04	1.27e+04	1.27e+04	0.78	n/a	971.6	n/a

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.

CORE NUMBER: 121
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95 004211	W	Acetate by IC - Dionex 4000i	ug/g	98.42	<2.00e-01	9.12e+02	1.21e+03	1.06e+03	28.1	n/a	223.1	n/a
S95 004211	W	Formate by IC - Dionex 4000i	ug/g	102.4	<2.00e-01	8.02e+02	768.0	784.9	4.33	n/a	223.1	n/a
S95 004211	W	Fluoride by IC - Dionex 4000i /4500	ug/g	101.2	<1.30e-02	5.82e+03	6.21e+03	6.02e+03	6.48	93.90	99.14	n/a
S95 004211	W	Chloride by IC - Dionex 4000i /4500	ug/g	94.43	<1.70e-02	1.90e+03	2.13e+03	2.01e+03	11.4	116.1	66.40	n/a
S95 004211	W	Nitrite by IC - Dionex 4000i /4500	ug/g	103.5	<1.07e-01	3.89e+04	4.31e+04	4.10e+04	10.2	102.0	815.9	n/a
S95 004211	W	Nitrate by Ion Chromatograph	ug/g	98.96	<1.26e-01	<4.92e+02	<4.41e2	n/a	n/a	97.57	492.0	n/a
S95 004211	W	Bromide by IC-Dionex4000i /4500	ug/g	101.3	<4.10e-01	1.95e+03	2.38e+03	2.16e+03	19.9	82.08	1.07e+03	n/a
S95 004211	W	Phosphate by IC-Dionex4000i /4500	ug/g	97.98	<1.19e-01	2.53e+03	2.41e+03	2.47e+03	4.86	88.83	464.3	n/a
S95 004211	W	Sulfate by IC-Dionex4000i /4500	ug/g	101.0	<1.36e-01	1.48e+04	1.58e+04	1.53e+04	6.54	121.4	530.7	n/a
S95 004211	W	Oxalate by IC - Dionex 4000i	ug/g	104.5	<1.05e-01	1.27e+04	1.36e+04	1.32e+04	6.84	126.3	410.1	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95 004212	W	Acetate by IC - Dionex 4000i	ug/g	100.8	<2.00e-01	1.22e+03	1.21e+03	1.22e+03	0.82	n/a	272.3	n/a
S95 004212	W	Formate by IC - Dionex 4000i	ug/g	102.4	<2.00e-01	8.76e+02	835.0	855.8	4.79	n/a	272.3	n/a
S95 004212	W	Fluoride by IC - Dionex 4000i /4500	ug/g	93.56	<1.30e-02	7.34e+03	7.17e+03	7.26e+03	2.34	94.32	121.0	n/a
S95 004212	W	Chloride by IC - Dionex 4000i /4500	ug/g	94.94	<1.70e-02	2.96e+03	3.62e+03	3.29e+03	20.1	91.67	158.3	n/a
S95 004212	W	Nitrite by IC - Dionex 4000i /4500	ug/g	98.71	<1.07e-01	4.65e+04	4.51e+04	4.58e+04	3.06	97.72	996.1	n/a
S95 004212	W	Nitrate by Ion Chromatograph	ug/g	95.48	<1.26e-01	<1.17e+03	<1.07e3	n/a	n/a	93.91	1.17e+03	n/a
S95 004212	W	Bromide by IC-Dionex4000i /4500	ug/g	95.77	<2.32e-01	1.37e+05	1.60e+05	1.48e+05	15.5	101.2	1.30e+03	n/a
S95 004212	W	Phosphate by IC-Dionex4000i /4500	ug/g	94.87	<1.20e-01	2.39e+03	2.36e+03	2.38e+03	1.26	91.33	1.12e+03	n/a
S95 004212	W	Sulfate by IC-Dionex4000i /4500	ug/g	97.15	<1.86e-01	2.18e+04	2.19e+04	2.09e+04	9.11	96.21	1.26e+03	n/a
S95 004212	W	Oxalate by IC - Dionex 4000i	ug/g	100.0	<1.05e-01	1.82e+04	1.67e+04	1.75e+04	8.60	100.1	977.5	n/a

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CORE NUMBER: 121
SEGMENT #: 9

Table 10. IC Analytical Summary - Cores 64, 65, & 121.
B1-106

SEGMENT PORTION: U Upper Half of Segment

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T004213	W	Acetate by IC - Dionex 40001	ug/g	100.8	<2.00e-01	<2.05e-02	<2.18e-02	613.9	8.49	N/A	205.3	N/A
S95T004213	W	Formate by IC - Dionex 40001	ug/g	102.4	<2.00e-01	6.40e-02	588.3	613.9	8.49	N/A	205.3	N/A
S95T004213	W	Fluoride-IC-Dionex 40001/4500	ug/g	93.36	<1.30e-02	6.68e-03	6.47e-03	6.57e-03	3.19	N/A	91.23	N/A
S95T004213	W	Chloride-IC-Dionex 40001/4500	ug/g	94.94	<1.70e-02	4.47e-03	1.96e-03	3.22e-03	76.1	N/A	119.3	N/A
S95T004213	W	Nitrite-IC - Dionex 40001/4500	ug/g	98.71	<1.07e-01	3.05e-04	2.91e-04	2.98e-04	4.70	N/A	750.1	N/A
S95T004213	W	Bromide by Ion Chromatograph	ug/g	95.43	<1.26e-01	<8.84e-02	<9.05e-02	N/A	N/A	N/A	884.3	N/A
S95T004213	W	Nitrate by IC-Dionex40001/4500	ug/g	95.77	2.32e-01	2.82e-03	2.72e-03	2.77e-03	3.74	N/A	981.8	N/A
S95T004213	W	Phosphate-IC-Dionex 40001/4500	ug/g	94.87	<1.20e-01	2.30e-03	2.42e-03	2.36e-03	5.08	N/A	84.1	N/A
S95T004213	W	Sulfate by IC-Dionex40001/4500	ug/g	97.15	1.86e-01	1.97e-04	1.85e-04	1.90e-04	6.28	N/A	953.8	N/A
S95T004213	W	Oxalate by IC - Dionex 40001	ug/g	100.0	<1.05e-01	1.60e-04	1.32e-04	1.56e-04	5.13	N/A	736.9	N/A

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Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

CORE NUMBER: 121
SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000109	W	Acetate by IC - Dionex 40001	ug/g	95.28	<2.00e-01	4.83e+02		551.1	25.0	79.53	216.1	n/a
S961000109	W	Formate by IC - Dionex 40001	ug/g	102.4	<2.00e-01	3.25e+02	620.0	383.9	9.90	96.00	216.1	n/a
S961000109	W	Fluoride-IC-Dionex 40001/4500	ug/g	101.0	<1.30e-02	1.52e+03	1.93e+03	1.73e+03	23.8	91.19	95.98	n/a
S961000109	W	Chloride-IC-Dionex 40001/4500	ug/g	95.19	<1.70e-02	1.52e+03	1.20e+03	1.17e+03	5.13	90.51	125.5	n/a
S961000109	W	Nitrite-IC - Dionex 40001/4500	ug/g	101.7	<1.07e-01	1.72e+02	1.80e+04	1.80e+04	8.89	98.32	790.1	n/a
S961000109	W	Bromide by Ion Chromatograph	ug/g	99.30	<1.26e-01	<9.36e+02	9.75e2	n/a	n/a	94.61	930.3	n/a
S961000109	W	Nitrate by IC-Dionex40001/4500	ug/g	99.51	<1.40e-01	5.39e+02	5.23e+05	5.46e+05	8.42	61.07	1.03e+03	n/a
S961000109	W	Phosphate-IC-Dionex40001/4500	ug/g	99.08	<1.19e-01	3.85e+03	9.20e2	n/a	n/a	89.38	878.2	n/a
S961000109	W	Sulfate by IC-Dionex40001/4500	ug/g	100.2	<1.34e-01	6.23e+03	8.01e+03	7.27e+03	20.4	96.83	1.00e+03	n/a
S961000109	W	Oxalate by IC - Dionex 40001	ug/g	104.5	<1.09e-01	3.02e+03	4.70e+03	4.16e+03	26.0	103.1	775.3	n/a

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CORE NUMBER: 121
SEGMENT #: 108

Table 10. IC Analytical Summary - Cores 64, 65, & 121.
BY-106

SEGMENT PORTION: U Upper Half of Segment

Sample #	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000254	W	Acetate by IC - DioneX 40001	ug/g	95.28	<2.00e-01	1.36e+03	1.09e+03	1.23e+03	22.0	N/A	236.0	N/A
S961000254	W	Formate by IC - DioneX 40001	ug/g	102.4	<2.00e-01	1.01e+03	809.0	909.5	22.1	N/A	236.0	N/A
S961000254	W	Fluoride by IC - DioneX 40001 / 2500	ug/g	101.0	<1.30e-02	9.57e+02	1.06e+03	1.06e+03	19.2	N/A	104.9	N/A
S961000254	W	Chloride by IC - DioneX 40001 / 2500	ug/g	95.19	<1.70e-02	3.66e+03	2.85e+03	3.26e+03	24.9	N/A	137.2	N/A
S961000254	W	Nitrite by IC - DioneX 40001 / 2500	ug/g	101.7	<1.07e-01	6.07e+04	4.33e+04	5.30e+04	29.1	N/A	863.5	N/A
S961000254	W	Bromide by Ion Chromatograph	ug/g	99.30	<1.02e+03	<1.3e3	N/A	N/A	N/A	N/A	1.02e+03	N/A
S961000254	W	Phosphate by IC - DioneX 40001 / 2500	ug/g	99.51	<1.40e-01	2.37e+05	3.75e+05	3.03e+05	47.9	N/A	1.13e+03	N/A
S961000254	W	Phosphate by IC - DioneX 40001 / 2500	ug/g	99.08	<1.19e-01	6.97e+03	8.50e+03	7.73e+03	19.8	N/A	959.4	N/A
S961000254	W	Sulfate by IC - DioneX 40001 / 2500	ug/g	100.2	<1.36e-01	3.48e+03	4.06e+03	3.77e+03	15.4	N/A	1.10e+03	N/A
S961000254	W	Oxalate by IC - DioneX 40001	ug/g	104.5	<1.05e-01	1.28e+03	1.66e+03	1.47e+03	25.9	N/A	847.5	N/A

L Lower Half of Segment: L Lower Half of Segment

Sample #	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000255	W	Acetate by IC - DioneX 40001	ug/g	95.28	<2.00e-01	8.02e+02	797.0	799.5	0.63	N/A	222.1	N/A
S961000255	W	Formate by IC - DioneX 40001	ug/g	102.4	<2.00e-01	6.16e+02	601.0	608.5	2.47	N/A	222.1	N/A
S961000255	W	Fluoride by IC - DioneX 40001 / 2500	ug/g	102.4	<1.30e-02	1.50e+03	833.0	1.17e+03	57.2	N/A	122.8	N/A
S961000255	W	Chloride by IC - DioneX 40001 / 2500	ug/g	98.86	<1.70e-02	2.16e+03	2.16e+03	2.15e+03	0.93	95.82	160.5	N/A
S961000255	W	Nitrite by IC - DioneX 40001 / 2500	ug/g	103.6	<1.07e-01	3.26e+04	3.01e+04	3.14e+04	7.97	107.3	1.01e+03	N/A
S961000255	W	Bromide by Ion Chromatograph	ug/g	103.1	<1.26e-01	<1.19e+03	<1.09e3	N/A	N/A	98.26	1.19e+03	N/A
S961000255	W	Phosphate by IC - DioneX 40001 / 2500	ug/g	100.2	<1.40e-01	4.51e+05	3.97e+05	4.24e+05	12.7	92.67	1.32e+03	N/A
S961000255	W	Phosphate by IC - DioneX 40001 / 2500	ug/g	98.53	<1.19e-01	3.96e+03	3.74e+03	3.85e+03	5.71	91.76	1.12e+03	N/A
S961000255	W	Sulfate by IC - DioneX 40001 / 2500	ug/g	102.2	<1.36e-01	6.04e+03	5.03e+03	5.54e+03	18.2	97.78	1.28e+03	N/A
S961000255	W	Oxalate by IC - DioneX 40001	ug/g	104.0	<1.05e-01	3.29e+03	2.33e+03	2.81e+03	34.2	103.2	991.4	N/A

Drainable Liquid: Drainable Liquid

Sample #	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000258	W	Formate by Ion Chromatograph	ug/mL	100.0	<2.00e-01	2.06e+03	2.14e+03	2.10e+03	3.81	N/A	222.1	N/A
S961000258	W	Fluoride by IC - DioneX 40001 / 2500	ug/mL	97.80	<1.30e-02	5.68e+02	541.0	554.3	4.87	62.60	53.83	N/A
S961000258	W	Chloride by IC - DioneX 40001 / 2500	ug/mL	91.34	<1.70e-02	7.21e+03	6.99e+03	7.10e+03	3.10	97.23	70.40	N/A
S961000258	W	Nitrite by IC - DioneX 40001 / 2500	ug/mL	100.7	<1.07e-01	1.19e+05	1.21e+05	1.20e+05	1.67	121.4	443.1	N/A
S961000258	W	Bromide by Ion Chromatograph	ug/mL	94.56	<1.26e-01	<5.22e2	<5.22e2	N/A	N/A	105.7	521.8	N/A
S961000258	W	Phosphate by IC - DioneX 40001 / 2500	ug/mL	97.56	<1.40e-01	1.66e+05	1.65e+05	1.65e+05	0.60	104.9	579.7	N/A
S961000258	W	Phosphate by IC - DioneX 40001 / 2500	ug/mL	95.97	<1.19e-01	2.32e+03	2.32e+03	2.31e+03	0.87	99.73	496.9	N/A
S961000258	W	Sulfate by IC - DioneX 40001 / 2500	ug/mL	97.15	<1.36e-01	1.94e+03	2.17e+03	2.06e+03	11.2	104.4	563.2	N/A
S961000258	W	Oxalate by IC - DioneX 40001	ug/mL	100.8	<1.05e-01	<4.35e+02	<4.35e2	N/A	N/A	116.2	434.8	N/A

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-0002-3

Table 10. IC Analytical Summary - Cores 64, 65, & 121.
81-106

CORE NUMBER: 121
SEGMENT #: S1-106

SEGMENT PORTION: Core Composite

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961000381	W	Fluoride-IC-Dionex 40001/4500	ug/g	95.90	<1.50e-03	6.38e-03	9.23e+03	7.80e+03	36.5	101.0	101.3	n/a
S961000381	W	Chloride-IC-Dionex 40001/4500	ug/g	94.81	3.50e-04	1.96e-03	2.46e+03	2.21e+03	22.6	84.05	132.4	n/a
S961000381	W	Nitrite-IC - Dionex 40001/4500	ug/g	96.25	<1.07e-04	2.36e-04	3.10e+04	2.72e+04	27.9	98.31	833.5	n/a
S961000381	W	Bromide by Ion Chromatograph	ug/g	97.91	<1.05e-01	9.82e-02	<1.00e-3	n/a	n/a	94.43	981.5	n/a
S961000381	W	Nitrate by IC-Dionex40001/4500	ug/g	99.19	2.17e-01	3.82e-05	4.68e+05	4.25e+05	20.2	94.14	1.09e+03	n/a
S961000381	W	Phosphate-IC-Dionex 40001/4500	ug/g	96.70	<1.19e-01	3.17e-03	9.28e+03	6.23e+03	98.2	93.04	926.2	n/a
S961000381	W	Sulfate by IC-Dionex40001/4500	ug/g	97.94	2.63e-01	1.20e-04	1.42e+04	1.31e+04	16.8	94.29	1.06e+03	n/a
S961000381	W	Oxalate by IC - Dionex 40001	ug/g	100.4	<1.05e-01	1.10e-04	1.33e+04	1.21e+04	18.9	99.43	817.9	n/a

WHC-SD-WM-DP-103, REV. 1

134.2

Table 10. IC Analytical Summary - Cores 64, 65, & 121.
B7-106

CORE NUMBER: 121
SEGMENT #: n/a

SEGMENT PORTION: Field Blank

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S961000279		Chloride-IC-Dionex 4000/4500	ug/mL	91.14	<1.70e-02	2.20e-01	2.25e-01	2.23e-01	2.25	n/a	1.70e-02		n/a
S961000279		Nitrite-IC - Dionex 4000/4500	ug/mL	100.7	<1.07e-01	3.95e-01	3.99e-01	3.95e-01	0.25	n/a	1.07e-01		n/a
S961000279		Nitrate-IC - Dionex 4000/4500	ug/mL	97.56	<1.40e-01	6.34e-01	6.32e-01	6.33e-01	0.32	n/a	1.40e-01		n/a
S961000279		Phosphate-IC-Dionex 4000/4500	ug/mL	95.97	<1.19e-01	<1.20e-01	<1.20e-01	n/a	n/a	n/a	1.20e-01		n/a
S961000279		Sulfate by IC-Dionex4000/4500	ug/mL	97.15	<1.36e-01	8.43e-01	7.58e-01	8.00e-01	10.6	n/a	1.36e-01		n/a

134.3

WHC-SD-WM-DP-103, REV. 1

WHC-SD-WM-DP-103, REV. 1

ATTACHMENT 1
CHAIN OF CUSTODY FORMS

WMC-SD-WM-DP-103, REV. 1

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

D. K. H. H. H.

(1) Shipment Number AMUS-001	(2) Sample Number 94-024	(3) Supervisor D. K. H. H. H.	(8) Cask Serial Number C1038
(4) Tank 241-B4-106	(5) Riser 103	(6) Segment #1	(7) Core 064

(9) FIELD		(10) SHIPMENT DESCRIPTION	
Radiation Survey Data:		A. Work Package Number	2E-94-00808/10
Over Top Dose Rate	2.5 mV/HR	B. Cask Seal Number	2576
Side Dose Rate	3 mV/HR	C. Sampler Serial Number	94-075
Bottom Dose Rate	4.5 mV/HR	D. Date and Time Sampler Unseated	11-17-94, 1330
Smearable Contamination	2.02	E. Expected Liquid Content	0
	(Alpha)	F. Expected Solid Content	100%
	(Beta-Gamma)	G. Dose Rate Through Drill String	70 mV/HR
RCT* (HPT)	Anna Weiss	H. Expected Sample Length	4.1
RCT* (HPT)	CBW		
	(Signature)		

(11) INFORMATION (Include statement of laboratory tests to be performed.)

WHC-SD-WM-Tp-217

(12) Field Comments

MATERIAL ON END OF SAMPLER

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 1

(13) Point of Origin 941-149-106	(14) Destination 2225	(15) Sender Name (Sign and PRINT) D. C. Hartley	(16) Date/Time 11/21/94	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) D. C. Hartley	(20) Received By (Sign and PRINT) D. C. Hartley	(21) Date/Time 11-21-94	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) D. C. Hartley	(24) Received By (Sign and PRINT) D. C. Hartley	(25) Date/Time 11-21-94	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Data Consistent with this Record? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Cask Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

1) Shipment Number RMS-001 (2) Sample Number 94-025 (3) Supervisor D. Hartley
 4) Tank 241-B4-106 (5) Riser 108 (6) Segment #2 (7) Core 064 (8) Cask Serial Number C1048

(10) Shipment Description	
A. Work Package Number	<u>25-94-008086W</u>
B. Cask Seal Number	<u>2583</u>
C. Sampler Serial Number	<u>94-027</u>
D. Date and Time Sampler Unseated	<u>11-21-94 1132</u>
E. Expected Liquid Content	<u>0</u>
F. Expected Solid Content	<u>100%</u>
G. Dose Rate Through Drill String	<u>200mV/hr.</u>
H. Expected Sample Length	<u>19'</u>

1) INFORMATION (include statement of laboratory tests to be performed.)

1 HC - 5D-WM-TP-217

WHC-SD-WM-DP-103, REV. 1

12) Field Comments

(34) Laboratory Comments

(15) Sender Name (Sign and PRINT)		(17) Sender Comments	
14) Point of Origin	14) Destination	14) Date/Time	14) Date/Time
<u>241-B4-106</u>	<u>2225</u>	<u>11-21-94</u>	<u>1430</u>
19) Requisitioned By (Sign and PRINT)	20) Received By (Sign and PRINT)	21) Date/Time	22) Receiver Comments
<u>D. Hartley</u>	<u>Ed Byrd</u>	<u>11-21-94</u>	
23) Requisitioned By (Sign and PRINT)	24) Received By (Sign and PRINT)	25) Date/Time	26) Receiver Comments
<u>D. Hartley</u>	<u>Sandra Cobb</u>	<u>11-21-94</u>	
27) Requisitioned By (Sign and PRINT)	28) Received By (Sign and PRINT)	29) Date/Time	30) Receiver Comments

(32) Seal Data Consistent with this Record?	
18) Seal Intact Upon Release?	19) Seal Intact Upon Receipt?
☒ Yes ☐ No	☒ Yes ☐ No
Cask Seal No. ☒ Yes ☐ No	
Sample No. ☒ Yes ☐ No	

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number RM5-002 (2) Sample Number 94-026 (3) Supervisor D. Hartley (8) Cask Serial Number 2582
 (4) Tank 241-B4-106 (5) Riser 10B (6) Segment 3 (7) Core 004 (8) Cask Serial Number 2582

Radiation Survey Data:

Over Top Dose Rate 1.5 mR/hr
 Side Dose Rate 35 mR/hr
 Bottom Dose Rate 12 mR/hr
 Smearable Contamination < 20 dpm/100 cm²

(9) FIELD
 (10) LABORATORY
 (11) SHIPMENT DESCRIPTION
 (12) DATE AND TIME
 (13) EXPECTED LIQUID CONTENT
 (14) EXPECTED SOLID CONTENT
 (15) EXPECTED RATE THROUGH DRILL STRING
 (16) EXPECTED SAMPLE LENGTH

(33) LABORATORY

Over Top Dose Rate 20.5 mR/hr
 Side Dose Rate 3.2 mR/hr
 Bottom Dose Rate 1.0 mR/hr
 Smearable Contamination < 20 dpm/100 cm²

(17) SENDER COMMENTS
 (18) RECEIVED BY (SIGN AND PRINT)
 (19) RECEIVED BY (SIGN AND PRINT)
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 (27) RECEIVED BY (SIGN AND PRINT)

(10) SHIPMENT DESCRIPTION

A. Work Package Number
 B. Cask Seal Number
 C. Sampler Serial Number
 D. Date and Time Sampler Unseated
 E. Expected Liquid Content
 F. Expected Solid Content
 G. Dose Rate Through Drill String
 H. Expected Sample Length

(11) INFORMATION (Include statement of laboratory tests to be performed.)

WHC-SD-WM-DP-103, REV. 1

(12) FIELD COMMENTS

WHC-SD-WM-DP-103, REV. 1

(13) LABORATORY

WHC-SD-WM-DP-103, REV. 1

(14) DESTINATION

WHC-SD-WM-DP-103, REV. 1

(15) SENDER NAME (Sign and Print)

WHC-SD-WM-DP-103, REV. 1

(16) RECEIVED BY (Sign and Print)

WHC-SD-WM-DP-103, REV. 1

(17) SENDER COMMENTS

WHC-SD-WM-DP-103, REV. 1

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(31) SEAL INTACT UPON RECEIPT?

WHC-SD-WM-DP-103, REV. 1

(32) SEAL DATA CONSISTENT WITH THIS RECORD?

WHC-SD-WM-DP-103, REV. 1

(33) SHIPMENT NO.

WHC-SD-WM-DP-103, REV. 1

(34) LABORATORY COMMENTS

WHC-SD-WM-DP-103, REV. 1

(35) FIELD COMMENTS

WHC-SD-WM-DP-103, REV. 1

(36) SENDER NAME (Sign and Print)

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

WUPV

WHC-SD-WM-DP-103, REV. 1

(1) Shipment Number RMC-003 (2) Sample Number 94-029 (3) Supervisor* M.C. Jones
 (4) Tank 106 BY (5) Riser 10B (6) Segment 06 (7) Core 104 (8) Cask Serial Number 1005-C

Radiation Survey Data:		(9) FIELD		(26) LABORATORY		(10) Shipment Description:	
Over Top Dose Rate	<u>1 mR/hr</u>	<u>100</u>	<u>1 mR/hr</u>	A. Work Package Number	<u>2E-94-00808</u>		
Side Dose Rate	<u>4 mR/hr</u>	<u>100</u>	<u>9 mR/hr</u>	B. Cask Seal Number	<u>1769</u>		
Bottom Dose Rate	<u>9 mR/hr</u>	<u>100</u>	<u>9 mR/hr</u>	C. Sampler Number Used	<u>94-028</u>		
Smearable Contamination	<u>100</u>	<u>100</u>	<u>100</u>	D. Date and Time Sampler Unseated	<u>928 PM, 12-2-94</u>		
	<u>100</u>	<u>100</u>	<u>100</u>	E. Expected Liquid Content	<u>10%</u>		
	<u>100</u>	<u>100</u>	<u>100</u>	F. Expected Solid Content	<u>90%</u>		
	<u>100</u>	<u>100</u>	<u>100</u>	G. Dose Rate Through Drill String	<u>1.2 R/hr (Dose rate corrected)</u>		
	<u>100</u>	<u>100</u>	<u>100</u>	H. Expected Sample Length	<u>19"</u>		

(11) INFORMATION (Include statement of laboratory tests to be performed.)

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 Prefurn Testing per WHC-SD-WM-Tp-217

(12) Field Comments:		(27) Laboratory Comments	
N/A			
(13) POINT OF ORIGIN <u>241 BY-106</u>	(14) SENDER NAME <u>M.C. Jones</u>	(16) DATE RELEASED <u>12-5-94</u>	(18) DESTINATION <u>2225</u>
(15) SENDER SIGNATURE* <u>M.C. Jones</u>	(17) TIME RELEASED <u>9:50</u>	(20) RECIPIENT NAME <u>MICHAEL A. COOK</u>	(22) DATE RECEIVED <u>12/5/94</u>
(19) Seal Intact Upon Release? ☒ Yes ☐ No	(24) Seal Intact Upon Receipt? ☒ Yes ☐ No	(21) RECIPIENT SIGNATURE* <u>Michael</u>	(23) TIME RECEIVED <u>1125</u>
(25) Seal Data Consistent with this Record? ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	

DISTRIBUTION: Yellow - Recipient of Sample
 White - Office of Sample Management
 Goldenrod - Tank Farm Operations, T4-01
 Pink - Process Engineering, R1-51

BC-6000-309 (02/90)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2MS-004 (2) Sample Number 94-030 (3) Supervisor M.C. Jones
 (4) Tank 106 BX (5) Riser 103 (6) Segment D7 (7) Core 064 (8) Cask Serial Number 1014 C

Radiation Survey Data:

(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>20.5 uR/hr</u>		<u>1.5 uR/hr</u>	A. Work Package Number	<u>2E-94-0808</u>
Side Dose Rate	<u>2 mR/hr @ 10'</u>		<u>2 mR/hr</u>	B. Cask Seal Number	<u>1779</u>
Bottom Dose Rate	<u>2 mR/hr @ 10'</u>		<u>2 mR/hr</u>	C. Sampler Serial Number	<u>94-001</u>
Smearable Contamination	<u>2200/area</u>		<u>220</u> (Alpha)	D. Date and Time Sampler Unseated	<u>12-5-94 11:25 AM</u>
	<u>41000 dpm/l</u>		<u>41000</u> (Beta-Gamma)	E. Expected Liquid Content	<u>10%</u>
				F. Expected Solid Content	<u>90%</u>
				G. Dose Rate Through Drill String	<u>125 mR not corrected</u>
				H. Expected Sample Length	<u>19"</u>

RCT* (HPT) [Signature]
 RCT* (HPT) [Signature]

(11) INFORMATION (Include statement of laboratory tests to be performed.)

143

(12) Field Comments

WENT IN and OUT OF ROTARY MODE,
 LAST 6" WERE SOFT.

(34) Laboratory Comments

WHO-SD-WM-DP-103, REV. 1

(13) Point of Origin		(14) Destination		(15) Sender Name (Sign and PRINT)		(16) Date/Time		(17) Sender Comments	
<u>206 BX</u>	<u>227-S</u>	<u>M.C. Jones</u>	<u>M.C. Jones</u>	<u>12-5-94 11:25</u>					
(19) Relinquished By (Sign and PRINT)		(20) Received By (Sign and PRINT)		(21) Date/Time		(22) Receiver Comments			
<u>[Signature]</u>		<u>DA WICK DAVID KOHN</u>		<u>11-6-94 4:49</u>					
(23) Relinquished By (Sign and PRINT)		(24) Received By (Sign and PRINT)		(25) Date/Time		(26) Receiver Comments			
<u>[Signature]</u>		<u>[Signature]</u>		<u>12-01-94</u>		<u>NAO</u>			
(27) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)		(29) Date/Time		(30) Receiver Comments			
(31) Seal Intact Upon Receipt?				(32) Seal Data Consistent with this Record?					
☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No			

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number RMS-004 (2) Sample Number 94-031 (3) Supervisor M.C. Jones
 (4) Tank 106 BY (5) Riser 10B (6) Segment 08 (7) Core 64 (8) Cask Serial Number 1043

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>LO.5 mR/hr</u>	<u>LO.5 mR/hr</u>	<u>1.5 mR/hr</u>	A. Work Package Number <u>25-94-00808</u>
Side Dose Rate	<u>24 mR/hr</u>	<u>24 mR/hr</u>	<u>10 mR/hr</u>	B. Cask Seal Number <u>9780</u>
Bottom Dose Rate	<u>13 mR/hr</u>	<u>13 mR/hr</u>	<u>8 mR/hr</u>	C. Sampler Serial Number <u>94-014</u>
Smearable Contamination	<u>620 p/m²</u>	<u>620 p/m²</u>	<u>220</u>	D. Date and Time Sampler Unseated <u>12-5-94 12:49 PM</u>
	<u>(Alpha)</u>	<u>(Alpha)</u>	<u>(Alpha)</u>	E. Expected Liquid Content <u>10%</u>
	<u>1000 p/m²</u>	<u>(Beta-Gamma)</u>	<u>(Beta-Gamma)</u>	F. Expected Solid Content <u>90%</u>
RCT* (HPT)	<u>1000 p/m²</u>	<u>(Signature)</u>	<u>(Signature)</u>	G. Dose Rate Through Drill String <u>1.3 R/hr at count rate</u>
	<u>(Signature)</u>	<u>(Signature)</u>	<u>(Signature)</u>	H. Expected Sample Length <u>19"</u>

(11) INFORMATION (Include statement of laboratory tests to be performed.)

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(12) Field Comments		(34) Laboratory Comments		WHC-SD-WM-DP-103, REV.	
First 6" Rotary the rest was push					
(13) Point of Origin <u>106 BY</u>	(14) Destination <u>22RS</u>	(15) Sender Name (Sign and PRINT) <u>M.C. Jones M.C. Jones</u>	(16) Date/Time <u>12-6-94</u>	(17) Sender Comments	
(19) Reinquished By (Sign and PRINT) <u>M.C. Jones</u>	(20) Received By (Sign and PRINT) <u>DAVID KRIVIN</u>	(21) Date/Time <u>12-6-94</u>	(22) Receiver Comments		
(23) Reinquished By (Sign and PRINT) <u>DAVID KRIVIN</u>	(24) Received By (Sign and PRINT) <u>DAVID KRIVIN</u>	(25) Date/Time <u>12-6-94</u>	(26) Receiver Comments		
(27) Reinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments		
(18) Seal Intact Upon Release? ☐ Yes ☐ No		(31) Seal Intact Upon Receipt? ☒ Yes ☐ No		(32) Seal Data Consistent with this Record? ☐ Yes ☐ No	
Sample No. ☐ Yes ☐ No		Cask Seal No. ☒ Yes ☐ No		Sample No. ☐ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number RMS-005 (2) Sample Number 94-032 (3) Supervisor M.C. Jones
 (4) Tank 106 B (5) Riser 103 (6) Segment 09 (7) Core 64 (8) Cask Serial Number C1050

Radiation Survey Data:		(9) FIELD	(10) Shipment Description
Over Top Dose Rate	<u>10.5 mR/hr</u>	(13) LABORATORY	A. Work Package Number <u>2E-94-808</u>
Side Dose Rate	<u>5 mR/hr</u>	<u>1.5 mR/hr</u>	B. Cask Seal Number <u>1781</u>
Bottom Dose Rate	<u>5 mR/hr</u>	<u>4 mR/hr</u>	C. Sampler Serial Number <u>94-015</u>
Smearable Contamination	<u>< 20</u>	<u>220</u>	D. Date and Time Sampler Unsealed <u>12-5-94 16:45</u>
	(Alpha)	(Alpha)	E. Expected Liquid Content <u>10%</u>
	<u>21,000</u>	<u>5000</u>	F. Expected Solid Content <u>90%</u>
	(Beta-Gamma)	(Beta-Gamma)	G. Dose Rate Through Drill String <u>300 mR/hr Measured</u>
RCT* <u>Rama Holland</u>	(Signature)	RCT* <u>W.D. Land</u>	H. Expected Sample Length <u>19"</u>
(HPT)		(HPT)	

(11) INFORMATION (Include statement of laboratory tests to be performed.)

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(12) Field Comments

FIRST 4" WAS PUSH REST WAS ROTARY.

WHC-SD-WM-DP-108, REV. 1

(13) Laboratory Comments

(13) Point of Origin <u>22 106 B</u>	(14) Destination <u>222-5</u>	(15) Sender Name (Sign and PRINT) <u>M.C. Jones</u>	(16) Date/Time <u>12-9-94</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>M.C. Jones</u>	(20) Received By (Sign and PRINT) <u>W.D. Land</u>	(21) Date/Time <u>12-9-94</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>W.D. Land</u>	(24) Received By (Sign and PRINT) <u>W.D. Land</u>	(25) Date/Time <u>12-9-94</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☐ Yes ☐ No	(32) Seal Data Consistent with this Record? ☐ Yes ☐ No	Sample No. ☐ Yes ☐ No
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, \$6-95 Goldenrod - Tank Farm Operations, \$4-43 BC-6000-309 (02/84)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Copy

1) Shipment Number RMS-006 (2) Sample Number 94-033 (3) Supervisor M.C. JONES

4) Tank 106 BX (5) Riser 10B (6) Segment 10 (7) Core 064 (8) Cask Serial Number 1006-C

Irradiation Survey Data:

(9) FIELD

Over Top Dose Rate <0.5 mR/hr

Side Dose Rate 33 mR/hr

Bottom Dose Rate 10 mR/hr

Smearable Contamination <20/100 cm²

(10) LABORATORY

A. Work Package Number 2E-94-00808

B. Cask Seal Number 1771

C. Sampler Serial Number 94-451

D. Date and Time Sampler Unseated 12-20-94 6:30 PM

E. Expected Liquid Content 1090

F. Expected Solid Content 9090

G. Dose Rate Through Drill String 1.5 R/hr

H. Expected Sample Length 19"

(11) Shipment Description

A. Work Package Number 2E-94-00808

B. Cask Seal Number 1771

C. Sampler Serial Number 94-451

D. Date and Time Sampler Unseated 12-20-94 6:30 PM

E. Expected Liquid Content 1090

F. Expected Solid Content 9090

G. Dose Rate Through Drill String 1.5 R/hr

H. Expected Sample Length 19"

11) INFORMATION (Include statement of laboratory tests to be performed.)

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WHC-SD-WM-TP-217

12) Field Comments

WAS IN ROTARY FOR 9 1/2"

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 1

13) Point of Origin 106 BX (14) Destination 222-S

19) Reinquished By (Sign and PRINT) M.C. JONES (20) Received By (Sign and PRINT) M.C. JONES

23) Reinquished By (Sign and PRINT) M.C. JONES (24) Received By (Sign and PRINT) M.C. JONES

27) Reinquished By (Sign and PRINT) M.C. JONES (28) Received By (Sign and PRINT) M.C. JONES

(15) Sender Name (Sign and PRINT) M.C. JONES (16) Date/Time 12-21-94

(20) Received By (Sign and PRINT) M.C. JONES (21) Date/Time 12-21-94

(24) Received By (Sign and PRINT) M.C. JONES (25) Date/Time 12-21-94

(28) Received By (Sign and PRINT) M.C. JONES (29) Date/Time 12-21-94

(17) Sender Comments

(22) Receiver Comments

(26) Receiver Comments

(30) Receiver Comments

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No

(32) Seal Data Consistent with this Record? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

18) Seal Intact Upon Release? ☒ Yes ☐ No19) Seal Intact Upon Receipt? ☒ Yes ☐ No20) Seal Intact Upon Receipt? ☒ Yes ☐ No21) Seal Intact Upon Receipt? ☒ Yes ☐ No22) Seal Intact Upon Receipt? ☒ Yes ☐ No23) Seal Intact Upon Receipt? ☒ Yes ☐ No24) Seal Intact Upon Receipt? ☒ Yes ☐ No25) Seal Intact Upon Receipt? ☒ Yes ☐ No26) Seal Intact Upon Receipt? ☒ Yes ☐ No27) Seal Intact Upon Receipt? ☒ Yes ☐ No28) Seal Intact Upon Receipt? ☒ Yes ☐ No29) Seal Intact Upon Receipt? ☒ Yes ☐ No30) Seal Intact Upon Receipt? ☒ Yes ☐ No31) Seal Intact Upon Receipt? ☒ Yes ☐ No32) Seal Intact Upon Receipt? ☒ Yes ☐ No33) Seal Intact Upon Receipt? ☒ Yes ☐ No34) Seal Intact Upon Receipt? ☒ Yes ☐ No35) Seal Intact Upon Receipt? ☒ Yes ☐ No36) Seal Intact Upon Receipt? ☒ Yes ☐ No37) Seal Intact Upon Receipt? ☒ Yes ☐ No38) Seal Intact Upon Receipt? ☒ Yes ☐ No39) Seal Intact Upon Receipt? ☒ Yes ☐ No40) Seal Intact Upon Receipt? ☒ Yes ☐ No41) Seal Intact Upon Receipt? ☒ Yes ☐ No42) Seal Intact Upon Receipt? ☒ Yes ☐ No43) Seal Intact Upon Receipt? ☒ Yes ☐ No44) Seal Intact Upon Receipt? ☒ Yes ☐ No45) Seal Intact Upon Receipt? ☒ Yes ☐ No46) Seal Intact Upon Receipt? ☒ Yes ☐ No47) Seal Intact Upon Receipt? ☒ Yes ☐ No48) Seal Intact Upon Receipt? ☒ Yes ☐ No49) Seal Intact Upon Receipt? ☒ Yes ☐ No50) Seal Intact Upon Receipt? ☒ Yes ☐ No51) Seal Intact Upon Receipt? ☒ Yes ☐ No52) Seal Intact Upon Receipt? ☒ Yes ☐ No53) Seal Intact Upon Receipt? ☒ Yes ☐ No54) Seal Intact Upon Receipt? ☒ Yes ☐ No55) Seal Intact Upon Receipt? ☒ Yes ☐ No56) Seal Intact Upon Receipt? ☒ Yes ☐ No57) Seal Intact Upon Receipt? ☒ Yes ☐ No58) Seal Intact Upon Receipt? ☒ Yes ☐ No59) Seal Intact Upon Receipt? ☒ Yes ☐ No60) Seal Intact Upon Receipt? ☒ Yes ☐ No61) Seal Intact Upon Receipt? ☒ Yes ☐ No62) Seal Intact Upon Receipt? ☒ Yes ☐ No63) Seal Intact Upon Receipt? ☒ Yes ☐ No64) Seal Intact Upon Receipt? ☒ Yes ☐ No65) Seal Intact Upon Receipt? ☒ Yes ☐ No66) Seal Intact Upon Receipt? ☒ Yes ☐ No67) Seal Intact Upon Receipt? ☒ Yes ☐ No68) Seal Intact Upon Receipt? ☒ Yes ☐ No69) Seal Intact Upon Receipt? ☒ Yes ☐ No70) Seal Intact Upon Receipt? ☒ Yes ☐ No71) Seal Intact Upon Receipt? ☒ Yes ☐ No72) Seal Intact Upon Receipt? ☒ Yes ☐ No73) Seal Intact Upon Receipt? ☒ Yes ☐ No74) Seal Intact Upon Receipt? ☒ Yes ☐ No75) Seal Intact Upon Receipt? ☒ Yes ☐ No76) Seal Intact Upon Receipt? ☒ Yes ☐ No77) Seal Intact Upon Receipt? ☒ Yes ☐ No78) Seal Intact Upon Receipt? ☒ Yes ☐ No79) Seal Intact Upon Receipt? ☒ Yes ☐ No80) Seal Intact Upon Receipt? ☒ Yes ☐ No81) Seal Intact Upon Receipt? ☒ Yes ☐ No82) Seal Intact Upon Receipt? ☒ Yes ☐ No83) Seal Intact Upon Receipt? ☒ Yes ☐ No84) Seal Intact Upon Receipt? ☒ Yes ☐ No85) Seal Intact Upon Receipt? ☒ Yes ☐ No86) Seal Intact Upon Receipt? ☒ Yes ☐ No87) Seal Intact Upon Receipt? ☒ Yes ☐ No88) Seal Intact Upon Receipt? ☒ Yes ☐ No89) Seal Intact Upon Receipt? ☒ Yes ☐ No90) Seal Intact Upon Receipt? ☒ Yes ☐ No91) Seal Intact Upon Receipt? ☒ Yes ☐ No92) Seal Intact Upon Receipt? ☒ Yes ☐ No93) Seal Intact Upon Receipt? ☒ Yes ☐ No94) Seal Intact Upon Receipt? ☒ Yes ☐ No95) Seal Intact Upon Receipt? ☒ Yes ☐ No96) Seal Intact Upon Receipt? ☒ Yes ☐ No97) Seal Intact Upon Receipt? ☒ Yes ☐ No98) Seal Intact Upon Receipt? ☒ Yes ☐ No99) Seal Intact Upon Receipt? ☒ Yes ☐ No100) Seal Intact Upon Receipt? ☒ Yes ☐ No101) Seal Intact Upon Receipt? ☒ Yes ☐ No102) Seal Intact Upon Receipt? ☒ Yes ☐ No103) Seal Intact Upon Receipt? ☒ Yes ☐ No104) Seal Intact Upon Receipt? ☒ Yes ☐ No105) Seal Intact Upon Receipt? ☒ Yes ☐ No106) Seal Intact Upon Receipt? ☒ Yes ☐ No107) Seal Intact Upon Receipt? ☒ Yes ☐ No108) Seal Intact Upon Receipt? ☒ Yes ☐ No109) Seal Intact Upon Receipt? ☒ Yes ☐ No110) Seal Intact Upon Receipt? ☒ Yes ☐ No111) Seal Intact Upon Receipt? ☒ Yes ☐ No112) Seal Intact Upon Receipt? ☒ Yes ☐ No113) Seal Intact Upon Receipt? ☒ Yes ☐ No114) Seal Intact Upon Receipt? ☒ Yes ☐ No115) Seal Intact Upon Receipt? ☒ Yes ☐ No116) Seal Intact Upon Receipt? ☒ Yes ☐ No117) Seal Intact Upon Receipt? ☒ Yes ☐ No118) Seal Intact Upon Receipt? ☒ Yes ☐ No119) Seal Intact Upon Receipt? ☒ Yes ☐ No120) Seal Intact Upon Receipt? ☒ Yes ☐ No121) Seal Intact Upon Receipt? ☒ Yes ☐ No122) Seal Intact Upon Receipt? ☒ Yes ☐ No123) Seal Intact Upon Receipt? ☒ Yes ☐ No124) Seal Intact Upon Receipt? ☒ Yes ☐ No125) Seal Intact Upon Receipt? ☒ Yes ☐ No126) Seal Intact Upon Receipt? ☒ Yes ☐ No127) Seal Intact Upon Receipt? ☒ Yes ☐ No128) Seal Intact Upon Receipt? ☒ Yes ☐ No129) Seal Intact Upon Receipt? ☒ Yes ☐ No130) Seal Intact Upon Receipt? ☒ Yes ☐ No131) Seal Intact Upon Receipt? ☒ Yes ☐ No132) Seal Intact Upon Receipt? ☒ Yes ☐ No133) Seal Intact Upon Receipt? ☒ Yes ☐ No134) Seal Intact Upon Receipt? ☒ Yes ☐ No135) Seal Intact Upon Receipt? ☒ Yes ☐ No136) Seal Intact Upon Receipt? ☒ Yes ☐ No137) Seal Intact Upon Receipt? ☒ Yes ☐ No138) Seal Intact Upon Receipt? ☒ Yes ☐ No139) Seal Intact Upon Receipt? ☒ Yes ☐ No140) Seal Intact Upon Receipt? ☒ Yes ☐ No141) Seal Intact Upon Receipt? ☒ Yes ☐ No142) Seal Intact Upon Receipt? ☒ Yes ☐ No143) Seal Intact Upon Receipt? ☒ Yes ☐ No144) Seal Intact Upon Receipt? ☒ Yes ☐ No145) Seal Intact Upon Receipt? ☒ Yes ☐ No146) Seal Intact Upon Receipt? ☒ Yes ☐ No147) Seal Intact Upon Receipt? ☒ Yes ☐ No148) Seal Intact Upon Receipt? ☒ Yes ☐ No149) Seal Intact Upon Receipt? ☒ Yes ☐ No150) Seal Intact Upon Receipt? ☒ Yes ☐ No151) Seal Intact Upon Receipt? ☒ Yes ☐ No152) Seal Intact Upon Receipt? ☒ Yes ☐ No153) Seal Intact Upon Receipt? ☒ Yes ☐ No154) Seal Intact Upon Receipt? ☒ Yes ☐ No155) Seal Intact Upon Receipt? ☒ Yes ☐ No156) Seal Intact Upon Receipt? ☒ Yes ☐ No157) Seal Intact Upon Receipt? ☒ Yes ☐ No158) Seal Intact Upon Receipt? ☒ Yes ☐ No159) Seal Intact Upon Receipt? ☒ Yes ☐ No160) Seal Intact Upon Receipt? ☒ Yes ☐ No161) Seal Intact Upon Receipt? ☒ Yes ☐ No162) Seal Intact Upon Receipt? ☒ Yes ☐ No163) Seal Intact Upon Receipt? ☒ Yes ☐ No164) Seal Intact Upon Receipt? ☒ Yes ☐ No165) Seal Intact Upon Receipt? ☒ Yes ☐ No166) Seal Intact Upon Receipt? ☒ Yes ☐ No167) Seal Intact Upon Receipt? ☒ Yes ☐ No168) Seal Intact Upon Receipt? ☒ Yes ☐ No169) Seal Intact Upon Receipt? ☒ Yes ☐ No170) Seal Intact Upon Receipt? ☒ Yes ☐ No171) Seal Intact Upon Receipt? ☒ Yes ☐ No172) Seal Intact Upon Receipt? ☒ Yes ☐ No173) Seal Intact Upon Receipt? ☒ Yes ☐ No174) Seal Intact Upon Receipt? ☒ Yes ☐ No175) Seal Intact Upon Receipt? ☒ Yes ☐ No176) Seal Intact Upon Receipt? ☒ Yes ☐ No177) Seal Intact Upon Receipt? ☒ Yes ☐ No178) Seal Intact Upon Receipt? ☒ Yes ☐ No179) Seal Intact Upon Receipt? ☒ Yes ☐ No180) Seal Intact Upon Receipt? ☒ Yes ☐ No181) Seal Intact Upon Receipt? ☒ Yes ☐ No182) Seal Intact Upon Receipt? ☒ Yes ☐ No183) Seal Intact Upon Receipt? ☒ Yes ☐ No184) Seal Intact Upon Receipt? ☒ Yes ☐ No185) Seal Intact Upon Receipt? ☒ Yes ☐ No186) Seal Intact Upon Receipt? ☒ Yes ☐ No187) Seal Intact Upon Receipt? ☒ Yes ☐ No188) Seal Intact Upon Receipt? ☒ Yes ☐ No189) Seal Intact Upon Receipt? ☒ Yes ☐ No190) Seal Intact Upon Receipt? ☒ Yes ☐ No191) Seal Intact Upon Receipt? ☒ Yes ☐ No192) Seal Intact Upon Receipt? ☒ Yes ☐ No193) Seal Intact Upon Receipt? ☒ Yes ☐ No194) Seal Intact Upon Receipt? ☒ Yes ☐ No195) Seal Intact Upon Receipt? ☒ Yes ☐ No196) Seal Intact Upon Receipt? ☒ Yes ☐ No197) Seal Intact Upon Receipt? ☒ Yes ☐ No198) Seal Intact Upon Receipt? ☒ Yes ☐ No199) Seal Intact Upon Receipt? ☒ Yes ☐ No200) Seal Intact Upon Receipt? ☒ Yes ☐ No201) Seal Intact Upon Receipt? ☒ Yes ☐ No202) Seal Intact Upon Receipt? ☒ Yes ☐ No203) Seal Intact Upon Receipt? ☒ Yes ☐ No204) Seal Intact Upon Receipt? ☒ Yes ☐ No205) Seal Intact Upon Receipt? ☒ Yes ☐ No206) Seal Intact Upon Receipt? ☒ Yes ☐ No207) Seal Intact Upon Receipt? ☒ Yes ☐ No208) Seal Intact Upon Receipt? ☒ Yes ☐ No209) Seal Intact Upon Receipt? ☒ Yes ☐ No210) Seal Intact Upon Receipt? ☒ Yes ☐ No211) Seal Intact Upon Receipt? ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RMS-007 (2) Sample Number 94-034 (3) Supervisor D. H. Hay
 1) Tank 241B7106 (5) Riser 10B (6) Segment 11 (7) Core 069 (8) Cask Serial Number C1046

Irradiation Survey Data:		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate		<u>1.5</u>		<u>1.5</u>		A. Work Package Number	<u>25-94-0088 kw</u>
Side Dose Rate		<u>1</u>		<u>1</u>		B. Cask Seal Number	<u>1707</u>
Bottom Dose Rate		<u>2</u>		<u>2</u>		C. Sampler Serial Number	<u>54-004</u>
Smearable Contamination		<u>420 dpm</u>	(Alpha)	<u>420 dpm</u>	(Alpha)	D. Date and Time Sampler Unseated	<u>12-21-94 1807</u>
		<u>1000 dpm</u>	(Beta-Gamma)	<u>1000 dpm</u>	(Beta-Gamma)	E. Expected Liquid Content	<u>000</u>
		<u>1000 dpm</u>	(Signature)	<u>1000 dpm</u>	(Signature)	F. Expected Solid Content	<u>000</u>
		<u>1000 dpm</u>		<u>1000 dpm</u>		G. Dose Rate Through Drill String	<u>80 mV / hr.</u>
		<u>1000 dpm</u>		<u>1000 dpm</u>		H. Expected Sample Length	<u>19'</u>

1) INFORMATION (include statement of laboratory tests to be performed.)

147 WHC-SD-WM-TP-217

2) Field Comments		34) Laboratory Comments	
<p>WHC-SD-WM-TP-103, REV. 1</p> <p>COPY</p>		<p>(15) Sender Name (Sign and PRINT) <u>M. C. JONES</u></p> <p>(20) Received By (Sign and PRINT) <u>RECEIVED BY</u></p> <p>(24) Received By (Sign and PRINT) <u>R. K. Fuller</u></p> <p>(28) Received By (Sign and PRINT) <u>Deirdre Zwick</u></p>	
		<p>(16) Date/Time <u>12-22-94 10:20</u></p> <p>(21) Date/Time <u>12/22/94</u></p> <p>(25) Date/Time <u>12/22/94</u></p> <p>(29) Date/Time <u>12/22/94</u></p>	
		<p>(17) Sender Comments</p> <p>(22) Receiver Comments</p> <p>(26) Receiver Comments</p> <p>(30) Receiver Comments</p>	
		<p>(31) Seal Intact Upon Receipt?</p> <p>☒ Yes ☐ No</p>	
		<p>(32) Seal Data Consistent with this Record?</p> <p>☒ Yes ☐ No</p>	
		<p>(33) Seal Intact Upon Release?</p> <p>☒ Yes ☐ No</p>	
		<p>(34) Laboratory Comments</p>	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number RMS-007 (2) Sample Number 94-035 (3) Supervisor D. Hartley (8) Cask Serial Number C1034
 Tank 241-B4106 (5) Riser 10B (6) Segment 12 (7) Core 064

ATION SURVEY DATA:

(9) FIELD

Top Dose Rate 1.5

Side Dose Rate 15

Bottom Dose Rate 10

measurable Contamination 200 dpm (Alpha)

1000 (Beta-Gamma)

ACT* James Brainerd RCT* John Moore (HPT) (Signature) (Beta-Gamma) (Signature)

(10) SHIPMENT DESCRIPTION

A. Work Package Number AE-94-008086W

B. Cask Seal Number 1708

C. Sampler Serial Number 94-003

D. Date and Time Sampler Unseated 12-21-94, 1935

E. Expected Liquid Content 100lb

F. Expected Solid Content 500lb

G. Dose Rate Through Drill String 500 mV/hr

H. Expected Sample Length 1911

INFORMATION (Include statement of laboratory tests to be performed.)

WHC-SD-WM-TP-217

WHC-SD-WM-DP-103, REV. 1

Field Comments

(34) Laboratory Comments

COPY

Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
41-B4106	2225	M.C. Jones	12-22-94 10:20	
Relinquished By (Sign and PRINT)	Relinquished By (Sign and PRINT)	1201 Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
M.C. Jones	M.C. Jones	John Moore	12/24/94	
Relinquished By (Sign and PRINT)	Relinquished By (Sign and PRINT)	1204 Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
John Moore	R.C. Lee	John Moore	12/24/94	
Relinquished By (Sign and PRINT)	Relinquished By (Sign and PRINT)	1208 Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments
John Moore	R.C. Lee	John Moore	12/24/94	
(31) Seal Intact Upon Receipt?	(32) Seal Data Consistent with this Record?			
☒ Yes ☐ No	☒ Yes ☐ No			
(18) Seal Intact Upon Release?	(19) Seal Intact Upon Receipt?			
☒ Yes ☐ No	☒ Yes ☐ No			
		Shipment No.	Cask Seal No.	Sample No.
		☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RMS-007 (2) Sample Number 94-036 (3) Supervisor D. Hartley
 1) Tank 241-34-406 (5) Riser 10 B (6) Segment 13 (7) Core 064 (8) Cask Serial Number C1048

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate		<u>4.5</u>		A. Work Package Number <u>25-94-008086W</u>
Side Dose Rate		<u>2</u>		B. Cask Seal Number <u>1750</u>
Bottom Dose Rate		<u>3.5</u>		C. Sampler Serial Number <u>94-018</u>
Smearable Contamination		<u>4.20</u>		D. Date and Time Sampler Unsealed <u>12-21-94 2030</u>
		(Alpha)		E. Expected Liquid Content <u>100%</u>
		<u>4.1000</u>		F. Expected Solid Content <u>90%</u>
		(Beta-Gamma)		G. Dose Rate Through Drill String <u>150mV/hr</u>
				H. Expected Sample Length <u>1911</u>

RCI: James B. Ward (HPT) RCI: J. M. Moore (HPT) (Signature)

1) INFORMATION (Include statement of laboratory tests to be performed.)

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WHC-SD-WM-TP-217

2) Field Comments		(34) Laboratory Comments	
Bottom detector alarmed at 4" sample taken, 4" sample taken,		COPY	

3) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
4134 116	2225	M.C. JONES OFFICINE	12-22-94 10:20	
Relinquished By (Sign and PRINT)		Relinquished By (Sign and PRINT)		(22) Receiver Comments
M.C. JONES	M.C. JONES	M.C. JONES	12/22/94 10:55	
Relinquished By (Sign and PRINT)		Relinquished By (Sign and PRINT)		(26) Receiver Comments
M.C. JONES	KAREN C. LEE	M.C. JONES	12/22/94 11:35	
Relinquished By (Sign and PRINT)		Relinquished By (Sign and PRINT)		(30) Receiver Comments
			12/22/94 11:35	

(32) Seal Data Consistent with this Record?

Shipment No. ☒ Yes ☐ No Cask Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number RMS-006 (2) Sample Number Blank-001 (3) Supervisor M.C. Jones (4) Tank 106 BX (5) Riser 105 (6) Segment Blank (7) Core 064 (8) Cask Serial Number 1009-C

Radiation Survey Data:

(9) FIELD	(10) Shipment Description
Over Top Dose Rate <u>20.5</u>	A. Work Package Number <u>2E-94-00808</u>
Side Dose Rate <u>20.5</u>	B. Cask Seal Number <u>1751</u>
Bottom Dose Rate <u>20.5</u>	C. Sampler Serial Number <u>94-029</u>
Smearable Contamination <u>20.5</u>	D. Date and Time Sampler Unsealed <u>12-21-94 9:00 A.M.</u>
(Alpha)	E. Expected Liquid Content <u>0</u>
(Beta-Gamma)	F. Expected Solid Content <u>0</u>
ECT* (HPT)	G. Dose Rate Through Drill String <u>0</u>
(Signature)	H. Expected Sample Length <u>19"</u>

(11) INFORMATION (Include statement of laboratory tests to be performed.)

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WHC-SD-WM-TP-217

WHC-SD-WM-DP-103, REV. 1

(12) Field Comments		(34) Laboratory Comments	
This is a Blank with H ₂ O from the LAB.			

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
106 BX	222-S	M.C. Jones	12-21-94 9:10	
M.C. Jones		Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
Relinquished By (Sign and PRINT)		Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
Relinquished By (Sign and PRINT)		Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	(32) Seal Date Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RMS-007 (2) Sample Number 95-001 (3) Supervisor M.C. Jones

4) Tank 106 BX (5) Riser 10B Brake (6) Segment 065 (7) Core 065 (8) Cask Serial Number 1003-C

(9) FIELD		(33) LABORATORY	
Over Top Dose Rate	<u>< 0.5 mR/hr</u>	A. Work Package Number	<u>ES-94-00808</u>
Side Dose Rate	<u>35 mR/hr</u>	B. Cask Seal Number	<u>1705</u>
Bottom Dose Rate	<u>12 mR/hr</u>	C. Sampler Serial Number	<u>94-256</u>
Smearable Contamination	<u>< 20 dpm</u> (Alpha)	D. Date and Time Sampler Unseated	<u>1-18-95 2:00</u>
	<u>< 1000 dpm</u> (Beta-Gamma)	E. Expected Liquid Content	<u>100%</u>
		F. Expected Solid Content	<u>0%</u>
RCT* (HPT)	<u>[Signature]</u>	G. Dose Rate Through Drill String	<u>1.5 R/HR (unknown)</u>
RCT* (HPT)	<u>[Signature]</u>	H. Expected Sample Length	<u>10 3/4"</u>

(10) Shipment Description

11) INFORMATION (include statement of laboratory tests to be performed.)

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12) Field Comments

RETAKE OF Riser 10B

WHC-SD-WM-OP-103, REV. 1

34) Laboratory Comments

COPY

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
106 BX	R22S	M.C. Jones M.C. Jones	1-20-95/907	
Relinquished By (Sign and PRINT)		Paula Bailey Paula Bailey	1-20-95/1000	(22) Receiver Comments
Relinquished By (Sign and PRINT)		Raymond White Raymond White	1-20-95/1495	(26) Receiver Comments
Relinquished By (Sign and PRINT)				(30) Receiver Comments

(32) Seal Data Consistent with this Record?

(31) Seal Intact Upon Receipt?

(18) Seal Intact Upon Release?

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43 BC-6000-309 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RM 007 (2) Sample Number 95-002 (3) Supervisor M. C. Jones (8) Cask Serial Number C-1053

1) Tank BX-106 (5) Riser 103 Riser (6) Segment 002 (7) Core 065

(33) LABORATORY		(10) Shipment Description	
(9) FIELD	(10) Shipment Description	A. Work Package Number	<u>ES-44-00508</u>
Over Top Dose Rate	<u>< 0.5 mB/h</u>	B. Cask Seal Number	<u>1706</u>
Side Dose Rate	<u>30 mB/h</u>	C. Sampler Serial Number	<u>94-251</u>
Bottom Dose Rate	<u>12 mB/h</u>	D. Date and Time Sampler Unseated	<u>1-19-95 / 10:56 AM</u>
Smearable Contamination	<u>< 20</u>	E. Expected Liquid Content	<u>100%</u>
(Alpha)	<u>< 1000</u>	F. Expected Solid Content	<u>0%</u>
(Beta-Gamma)	<u>< 1000</u>	G. Dose Rate Through Drill String	<u>1.6 R/hr measured</u>
RCT* (HPT)	<u>CTC</u>	H. Expected Sample Length	<u>19"</u>

1) INFORMATION (Include statement of laboratory tests to be performed.)

152

(34) Laboratory Comments

COPY

1) Field Comments

4 gal of water added back sample
Retaken riser 103

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
<u>106 Box</u>	<u>222-S</u>	<u>M.C. Jones</u>	<u>1-20-95 9:07</u>	
(19) Relinquished By (Sign and PRINT)		(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
<u>M.C. Jones</u>		<u>Paula Bailey</u>	<u>1-20-95 10:00</u>	
(23) Relinquished By (Sign and PRINT)		(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
<u>Paula Bailey</u>		<u>Raymond White</u>	<u>1-20-95 10:32</u>	
(27) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(31) Seal Intact Upon Receipt?	(32) Seal Data Consistent with this Record?
Yes ☒ No ☐	Yes ☒ No ☐

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number <u>AMS-007</u>	(2) Sample Number <u>95-003</u>	(3) Supervisor <u>M.C. Jones</u>
4) Tank <u>By the 100</u>	(5) Riser <u>NR MAKE</u>	(6) Segment <u>003</u>
Radiation Survey Data: Over Top Dose Rate <u>< 0.5 mR/hr</u> Side Dose Rate <u>40 mR/hr</u> Bottom Dose Rate <u>11 mR/hr</u> Smearable Contamination <u>< 20 dpm/100cm²</u> (Alpha) <u>< 1000 dpm/100cm²</u> (Beta-Gamma)		
RCT* (HPT) <u>Jan 1984</u> (Signature)	RCT* (HPT) <u>[Signature]</u> (Signature)	(33) LABORATORY <u>LOS ANGELES</u> <u>40 mR/hr</u> <u>11 mR/hr</u> <u>< 20 dpm</u> (Alpha) <u>< 1000 dpm</u> (Beta-Gamma)
(10) Shipment Description A. Work Package Number <u>65-44-00808</u> B. Cask Seal Number <u>1704</u> C. Sampler Serial Number <u>94-255</u> D. Date and Time Sampler Unsealed <u>1-19-95 / 12:30 PM</u> E. Expected Liquid Content <u>100 g</u> F. Expected Solid Content <u>0 g</u> G. Dose Rate Through Drill String <u>1.4 R/hr</u> H. Expected Sample Length <u>19"</u>		

11) INFORMATION (Include statement of laboratory tests to be performed.)

COPY

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12) Field Comments ReTake 10B Riser.		(34) Laboratory Comments	
13) Point of Origin 106 BX	14) Destination 222-5	15) Sender Name (Sign and PRINT) M.C. Jakes	16) Date/Time 1-20-78 9:57
19) Relinquished By (Sign and PRINT) M.C. Jakes	20) Received By (Sign and PRINT) Paula Bailey	21) Date/Time 1/20/78 10:00	22) Receiver Comments
23) Relinquished By (Sign and PRINT) Paula Bailey	24) Received By (Sign and PRINT) Raymond White	25) Date/Time 1/26/78 12:55	26) Receiver Comments
27) Relinquished By (Sign and PRINT)	28) Received By (Sign and PRINT)	29) Date/Time	30) Receiver Comments
(31) Seal Intact Upon Receipt?		(32) Seal Date Consistent with this Record?	
☒ Yes ☐ No	☒ Yes ☐ No	Seal Seal No.	Sample No.
		☒ Yes ☐ No	☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43 BC-6000-309 (02/94)

DISTRIBUTION: White - Office of Sample Management
Yellow - Recipient of Sample
Pink - Core Sampling, S6-85
Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (02/94)

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RMS-008 (2) Sample Number 95-004 (3) Supervisor MC Jones (8) Cask Serial Number C-1038
 2) Tank 106 BY (5) Riser 10B Airline (6) Segment 004 (7) Core 65

Irradiation Survey Data:		(9) FIELD	(13) LABORATORY	(10) Shipment Description
Over Top Dose Rate		<u>40.5"</u>		A. Work Package Number <u>ES-94-00808</u>
Side Dose Rate		<u>1.6</u>		B. Cask Seal Number <u>1778</u>
Bottom Dose Rate		<u>2.5</u>		C. Sampler Serial Number <u>94-253</u>
Smearable Contamination		<u>420 dpm</u>	<u>420 dpm / m²</u>	D. Date and Time Sampler Unseated <u>120-95/9:05 AM</u>
			(Alpha)	E. Expected Liquid Content <u>100%</u>
		<u>11000 dpm</u>	<u>4100 / m²</u>	F. Expected Solid Content <u>0%</u>
			(Beta-Gamma)	G. Dose Rate Through Drill String <u>1.5 R/hr uncorrected</u>
RCT* (HPT)		<u>MM</u>		H. Expected Sample Length <u>19"</u>
RCT* (HPT)			(Signature)	

1) INFORMATION (include statement of laboratory tests to be performed.)

154
 Preform Test TO
 WHC-SD-WM-TP-217

2) Field Comments

Sampled in push mode.

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 1

3) Point-of-Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
22 106 BY	222-S	MC Jones	1-20-95 2:00	
9) Relinquished By (Sign and PRINT)		(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
MC Jones	MC Jones	JL Hensley	1-20-95/1400	
3) Relinquished By (Sign and PRINT)		(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
JL Hensley	JL Hensley	David C. Cobb	1-20-95/1535	
7) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release?

☒ Yes
☐ No

(31) Seal Intact Upon Receipt?

☒ Yes
☐ No

(32) Seal Data Consistent with this Record?

 Shipment No. Not here
☐ Yes
☒ No

Cask Seal No.

☒ Yes
☐ No

Sample No.

☒ Yes
☐ No

DISTRIBUTION: White - Office of Sample Management

Yellow - Recipient of Sample

Pink - Core Sampling, SS-85

Goldenrod - Tank Farm Operations, S4-43

BC-6000-308 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number AMS-005 (2) Sample Number 95-005 (3) Supervisor M.C. Jones
 4) Tank 106 BX (5) Riser 10B Rake (6) Segment 65-005 (7) Core 65 (8) Cask Serial Number 1014C

Radiation Survey Data.		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>6.5</u>	(Alpha)	<u>2.5</u>	A. Work Package Number	<u>25-94-00608</u>	B. Cask Seal Number	<u>1770</u>
Side Dose Rate	<u>1.4</u>	(Beta-Gamma)	<u>2.5</u>	C. Sampler Serial Number	<u>94-252</u>	D. Date and Time Sampler Unseated	<u>1-20-95/ 10:33</u>
Bottom Dose Rate	<u>2.5</u>	(Alpha)	<u>2.5</u>	E. Expected Liquid Content	<u>25.00</u>	F. Expected Solid Content	<u>25.00</u>
Smearable Contamination	<u>4.0000</u>	(Beta-Gamma)	<u>2.5</u>	G. Dose Rate Through Drill String	<u>1.94HR UNCORRECTED</u>	H. Expected Sample Length	<u>8"</u>
RCT* (HPT)	<u>AK</u> (Signature)	RCT* (HPT)	<u>AK</u> (Signature)				

1) INFORMATION (Include statement of laboratory tests to be performed.)

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2) Field Comments		(34) Laboratory Comments	
had to stop push mode after 8" into sample wired sampler and install rotary mode. .02 gal of water added.			
3) Point of Origin <u>106 BX</u>	(14) Destination <u>322-S</u>	(15) Sender Name (Sign and PRINT) <u>M.C. Jones</u>	(16) Date/Time <u>1-20-95 2:00</u>
9) Relinquished By (Sign and PRINT) <u>M.C. Jones</u>	(20) Received By (Sign and PRINT) <u>J.L. HENSELEY</u>	(21) Date/Time <u>1-20-95 1:00</u>	(22) Receiver Comments
3) Relinquished By (Sign and PRINT) <u>J.L. HENSELEY</u>	(24) Received By (Sign and PRINT) <u>J.L. HENSELEY</u>	(25) Date/Time <u>1-20-95/5:25</u>	(26) Receiver Comments
7) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments
(31) Seal Intact Upon Receipt?		(32) Seal Data Consistent with this Record?	
Yes ☒ No ☐	Yes ☒ No ☐	Yes ☒ No ☐	Yes ☒ No ☐
Shipment No. <u>not there</u>		Cask Seal No. <u>1014C</u>	

WHC-SD-WM-OP-103, REV. 1

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RMS-008 (2) Sample Number 95-005A (3) Supervisor M.C. Jones (8) Cask Serial Number C-1043
 1) Tank 106 BY (5) Riser 10B RISK (6) Segment 005A (7) Core 65

adulation Survey Data:		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate		<u>10.5</u>		<u>20.5</u>		A. Work Package Number	<u>ES-94-00808</u>
Side Dose Rate		<u>0.8</u>		<u>0.3</u>		B. Cask Seal Number	<u>0120-45-1761</u>
Bottom Dose Rate		<u>25</u>		<u>15</u>		C. Sampler Serial Number	<u>94-252 94-021</u>
Smearable Contamination		<u>1200ppm</u>	(Alpha)	<u>220 ppb</u>		D. Date and Time Sampler Unseated	<u>1-20-95 / 12:07 P.M.</u>
		<u>11000 ppb</u>	(Beta-Gamma)	<u>1000 ppb</u>		E. Expected Liquid Content	<u>0%</u>
						F. Expected Solid Content	<u>0%</u>
RCT* (HPT)		<u>NA</u>				G. Dose Rate Through Drill String	<u>45 MR/HR uncorrected</u>
RCT* (HPT)						H. Expected Sample Length	<u>11"</u>

(1) INFORMATION (include statement of laboratory tests to be performed.)

PreForm Test To

156 WHC-SD-WM-TP-217

(2) Field Comments (34) Laboratory Comments

This sample is the LAST 11" OF SAMPLE
 95-005 IT WAS TAKE IN ROTARY MOBE. 02 GAL
 OF WATER WAS ADDS TRUCK SHUT DOWN DURING
 SAMPLING DO TO RPM BLIMS. SAMPLE RECOVERY MAY BE POOR.

WHC-SD-WM-DP-103, REV. 1

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
<u>106 BY</u>	<u>222-S</u>	<u>M.C. JONES Milgram</u>	<u>1-20-95 200</u>	
(19) Relinquished By (Sign and PRINT)		(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
<u>MIC JONES - MIC JONES</u>		<u>JL HENSELEY</u>	<u>1-20-95 200</u>	
(23) Relinquished By (Sign and PRINT)		(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
<u>JL HENSELEY</u>			<u>1-20-95/1525</u>	
(27) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	(32) Seal Data Consistent with this Record?	Cask Seal No.	Sample No.
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	<u>See above</u>	☒ Yes ☐ No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RM5009 (2) Sample Number 95006 (3) Supervisor D. C. HARTLEY
 4) Tank 241-106 (5) Riser 108 (6) Segment 6 (7) Core 065 (8) Cask Serial Number C1017

Irradiation Survey Data:

(9) FIELD
 Over Top Dose Rate < 0.5
 Side Dose Rate 2
 Bottom Dose Rate 2.8
 Smearable Contamination < 2.0
 (Alpha)
11000
 (Beta-Gamma)
 RCT* ALW (HPT)
 (Signature)

(33) LABORATORY

40.5
3
30
2.0
11K
 (Alpha)
 (Beta-Gamma)
 RCT* A. J. Hermal (HPT)
 (Signature)

(10) Shipment Description

A. Work Package Number E3-94-808
 B. Cask Seal Number 1702
 C. Sampler Serial Number 74-024
 D. Date and Time Sampler Unseated 11/09/95, 1800
 E. Expected Liquid Content 100%
 F. Expected Solid Content 0
 G. Dose Rate Through Drill String 1.9 R/hr
 H. Expected Sample Length 14'

11) INFORMATION (Include statement of laboratory tests to be performed.)

WHC-SD-44M-TP-217

12) Field Comments

(34) Laboratory Comments

2 gallon water added to lot
 previous to this sample push

WHC-SD-WM-DP-103, REV. 1

13) Point of Origin

(14) Destination

(15) Sender Name (Sign and PRINT)

(16) Date/Time

(17) Sender Comments

19) Relinquished By (Sign and PRINT)

(20) Received By (Sign and PRINT)

(21) Date/Time

(22) Receiver Comments

23) Relinquished By (Sign and PRINT)

(24) Received By (Sign and PRINT)

(25) Date/Time

(26) Receiver Comments

27) Relinquished By (Sign and PRINT)

(28) Received By (Sign and PRINT)

(29) Date/Time

(30) Receiver Comments

(18) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

(32) Seal Data Consistent with this Record?

☒ Yes ☐ No

☐ Yes ☐ No

☒ Yes ☐ No

Shipment No.
☐ Yes ☐ No

Cask Seal No.
☐ Yes ☐ No

Sample No.
☐ Yes ☐ No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RMS 009 (2) Sample Number 95-007 (3) Supervisor D. G. Hickey
 4) Tank 241-B4-106 (5) Riser 10B (6) Segment 7 (7) Core 065 (8) Cask Serial Number 1005C

Radiation Survey Data:

(9) FIELD (33) LABORATORY
 Over Top Dose Rate 0.5 40.5
 Side Dose Rate 0.5 0.5
 Bottom Dose Rate 2.8 30
 Smearable Contamination 420 140
 (Alpha) (Alpha)
4000 11K
 (Beta-Gamma) (Beta-Gamma)
 RCT* ADN RCT* ADN
 (HPT) (HPT) (Signature) (Signature)

(10) Shipment Description

A. Work Package Number ES-94-808
 B. Cask Seal Number 1772
 C. Sampler Serial Number 94-007
 D. Date and Time Sampler Unseated 1-20-95, 1938
 E. Expected Liquid Content 100%
 F. Expected Solid Content 0
 G. Dose Rate Through Drill String 1.9 R/hr
 H. Expected Sample Length 19.1

1) INFORMATION (Include statement of laboratory tests to be performed.)

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WHC-SD-WM-TP-217

2) Field Comments

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 1

3) Point of Origin 241-B4-106 (14) Destination 2225 (15) Sender Name (Sign and PRINT)
 9) Relinquished By (Sign and PRINT) Robert D. Gaultney (20) Received By (Sign and PRINT) Robert D. Gaultney
 3) Relinquished By (Sign and PRINT) Robert D. Gaultney (24) Received By (Sign and PRINT) Robert D. Gaultney
 7) Relinquished By (Sign and PRINT) Robert D. Gaultney (28) Received By (Sign and PRINT) Robert D. Gaultney

(18) Seal Intact Upon Release?

☒ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

Shipment No. ☐ Yes ☐ No

Cask Seal No. ☐ Yes ☐ No

Sample No. ☐ Yes ☐ No

(32) Seal Data Consistent with this Record?

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RM5009 (2) Sample Number 95-008 (3) Supervisor DC Hartley
 4) Tank 244-106 (5) Riser 106 (6) Segment 8 (7) Core 065-8 (8) Cask Serial Number C1048

radiation Survey Date:

(9) FIELD

Over Top Dose Rate 1

Side Dose Rate 4

Bottom Dose Rate 35

Smearable Contamination 520x

(Alpha)

61000 B

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

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(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(10) Shipment Description

A. Work Package Number 65-94-808

B. Cask Seal Number 1774

C. Sampler Serial Number 1774-808-94-011

D. Date and Time Sampler Unseated 1-20-94 2038

E. Expected Liquid Content 9000

F. Expected Solid Content 1000

G. Dose Rate Through Drill String 1.8 RHE

H. Expected Sample Length 19"

(33) LABORATORY

1

5

30

20

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

LK

(Beta-Gamma)

1000 B

(Alpha)

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(Alpha)

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(Beta-Gamma)

1000 B

(11) INFORMATION (Include statement of laboratory tests to be performed.)

WHC-SD-WM-TP-217

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(2) Field Comments

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 1

3) Point of Origin 244-106 (14) Destination 2225

4) Relinquished By (Sign and PRINT) DC Hartley (20) Received By (Sign and PRINT) DC Hartley

5) Relinquished By (Sign and PRINT) DC Hartley (24) Received By (Sign and PRINT) DC Hartley

6) Relinquished By (Sign and PRINT) DC Hartley (28) Received By (Sign and PRINT) DC Hartley

7) Relinquished By (Sign and PRINT) DC Hartley (32) Received By (Sign and PRINT) DC Hartley

(16) Date/Time 1-20-94 1500

(21) Date/Time 1-20-94 1500

(25) Date/Time 1-20-94 1500

(29) Date/Time 1-20-94 1500

(17) Sender Comments

(22) Receiver Comments

(26) Receiver Comments

(30) Receiver Comments

(18) Seal Intact Upon Release? ☒ Yes ☐ No

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No

(32) Seal Date Consistent with this Record? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number RMS-010 (2) Sample Number 95-009 (3) Supervisor M.C. Jones
 (4) Tank 10B (5) Riser 10B (6) Segment 95-009 (7) Core 65 (8) Cask Serial Number C-1052

Radiation Survey Data:		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>0.5 mR/h</u>		<u>0.5 mR/h</u>	A. Work Package Number	<u>94-0088</u>		
Side Dose Rate	<u>0.5 mR/h</u>		<u>0.5 mR/h</u>	B. Cask Seal Number	<u>1777</u>		
Bottom Dose Rate	<u>2 mR/h</u>		<u>2 mR/h</u>	C. Sampler Serial Number	<u>94-008</u>		
Smearable Contamination	<u>200</u>		<u>200</u>	D. Date and Time Sampler Unseated	<u>1-23-95/20:37</u>		
				E. Expected Liquid Content	<u>0%</u>		
				F. Expected Solid Content	<u>0%</u>		
				G. Dose Rate Through Drill String	<u>25 mR/hr uncorrected</u>		
				H. Expected Sample Length	<u>19"</u>		

(11) INFORMATION (Include statement of laboratory tests to be performed.)

perform TEST WHC-SD-WM-TP-217

160

(12) Field Comments		(34) Laboratory Comments	
This sample was taken in rotary mode, as GEL was added before sampling.			

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and Print)	(16) Date/Time	(17) Sender Comments
<u>241134106</u>	<u>2225</u>	<u>DAVID DAKEAN</u>	<u>1255/12</u>	
(18) Relinquished By (Sign and Print)	(20) Received By (Sign and Print)	(21) Date/Time	(22) Receiver Comments	
<u>David H. Dakean</u>	<u>VS wa/la</u>	<u>1-25-95/12</u>		
(23) Relinquished By (Sign and Print)	(24) Received By (Sign and Print)	(25) Date/Time	(26) Receiver Comments	
<u>VS wa/la</u>	<u>N. DAPIERIS</u>	<u>12-5-95</u>		
(27) Relinquished By (Sign and Print)	(28) Received By (Sign and Print)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	(32) Seal Data Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No Cask Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

D. Hartley

(1) Shipment Number RMS-010 (2) Sample Number 95-010 (3) Supervisor D. Hartley (8) Cask Serial Number 51034
 (4) Tank 241B41048 Riser 106 (6) Segment 10 (7) Core 065

Radiation Survey Data:		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate		<u>40.5 mR/hr</u>		<u>40.5 mR/hr</u>		A. Work Package Number	<u>94-00808</u>
Side Dose Rate		<u>40 mR/hr</u>		<u>40 mR/hr</u>		B. Cask Seal Number	<u>1775</u>
Bottom Dose Rate		<u>5 mR/hr</u>		<u>5 mR/hr</u>		C. Sampler Serial Number	<u>94-009</u>
Smearable Contamination		<u>420 d</u>		<u>420 d</u>		D. Date and Time Sampler Unseated	<u>1-24-95 14:12</u>
						E. Expected Liquid Content	<u>660 g</u>
						F. Expected Solid Content	<u>400 g</u>
						G. Dose Rate Through Drill String	<u>2 R/hr</u>
						H. Expected Sample Length	<u>19'</u>

RCT* K. Smith (HPT) RCT* J. Smith (HPT) (Signature) (Signature)

(11) INFORMATION (include statement of laboratory tests to be performed.)

161

(12) Field Comments		(34) Laboratory Comments	
<u>2 gallons of water added to sample to close bit.</u>			

WHC-SD-WM-DP-103, REV. 1

(13) Point of Origin		(14) Destination		(15) Sender Name (Sign and PRINT)		(16) Date/Time		(17) Sender Comments	
<u>241B41048</u>	<u>2225</u>	<u>2225</u>	<u>2225</u>	<u>DAKAL DAKARN</u>	<u>1-25-95</u>	<u>12</u>			
(19) Relinquished By (Sign and PRINT)		(20) Received By (Sign and PRINT)		(21) Date/Time		(22) Receiver Comments			
<u>D. Hartley</u>		<u>V. Wallace</u>		<u>1-25-95</u>		<u>12</u>			
(23) Relinquished By (Sign and PRINT)		(24) Received By (Sign and PRINT)		(25) Date/Time		(26) Receiver Comments			
<u>V. Wallace</u>		<u>V. Wallace</u>		<u>1-25-95</u>		<u>12</u>			
(27) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)		(29) Date/Time		(30) Receiver Comments			

(18) Seal Intact Upon Release?		(31) Seal Intact Upon Receipt?		(32) Seal Data Consistent with this Record?		Sample No.	
☒ Yes	☐ No	☒ Yes	☐ No	☒ Yes	☐ No	☒ Yes	☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43 BC-6000-309 (02/94)

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number RMS-010 (2) Sample Number 95-011 (3) Supervisor M. C. JONES (4) Tank 16.6 BY (5) Riser 11.3 (6) Segment 95-011 (7) Core 6.5 (8) Cask Serial Number C-10222

Radiation Survey Data:

(9) FIELD

Over Top Dose Rate 40.5 mR/hr

Side Dose Rate 16 mR/hr

Bottom Dose Rate 12 mR/hr

Smearable Contamination 420 d

(10) LABORATORY

A. Work Package Number 614-00908

B. Cask Seal Number 1773

C. Sampler Serial Number 94-023

D. Date and Time Sampler Unseated 1-24-95, 6:00 P.M.

E. Expected Liquid Content 6.0 %

F. Expected Solid Content 40.9%

G. Dose Rate Through Drill String 620 mR/hr

H. Expected Sample Length 19"

(11) INFORMATION (Include statement of laboratory tests to be performed.)

RCT* (HPT) [Signature] RCT* (HPT) [Signature]

162

(12) Field Comments

PUSH THE FIRST 14" HAD TO GO INTO
ACTUARY LAST 5" IT WAS NOT FULL RETURN SAMPLE IN AND OUT

(13) Point of Origin 241 BY 106 (14) Destination 222 S

(15) Sender Name (Sign and PRINT) DAVID DA KRAHN

(16) Date/Time 1-25-95/12

(17) Sender Comments

(19) Relinquished By (Sign and PRINT) [Signature]

(20) Received By (Sign and PRINT) VS Wallace

(21) Date/Time 1-25-95/12

(22) Receiver Comments

(23) Relinquished By (Sign and PRINT) VS Wallace

(24) Received By (Sign and PRINT) VS Wallace

(25) Date/Time 1-25-95

(26) Receiver Comments

(27) Relinquished By (Sign and PRINT)

(28) Received By (Sign and PRINT)

(29) Date/Time

(30) Receiver Comments

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No

(32) Seal Data Consistent with this Record? ☒ Yes ☐ No

(33) Seal Intact Upon Release? ☒ Yes ☐ No

(34) Laboratory Comments

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

WHC-SD-WM-DP-103, REV. 1

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number RMS 011 (2) Sample Number 95-012 (3) Supervisor M.C. Jones (8) Cask Serial Number 54771054

Tank DLB (5) Riser 10B (6) Segment 95-012 (7) Core 65

Shipment Description (10)

(9) FIELD

Over Top Dose Rate 6.5 m/hr

Side Dose Rate 13 m/hr

Bottom Dose Rate 10 m/hr

Smearable Contamination < 20 x

(Alpha) < 100 Bq

(Beta-Gamma) Smearable

RCT* (HPT) Smearable RCT* (HPT) Smearable

(33) LABORATORY

A. Work Package Number 94-00508

B. Cask Seal Number 1763

C. Sampler Serial Number 94-319 94-320

D. Date and Time Sampler Unseated 1-24-95, 19:26

E. Expected Liquid Content 1000

F. Expected Solid Content 4000

G. Dose Rate Through Drill String 500 mBq/hr

H. Expected Sample Length 19"

1) INFORMATION (Include statement of laboratory tests to be performed.)

163

WHC-SD-WM-DP-103, REV. 1

(34) Laboratory Comments

2) Field Comments

ADD 2 gals water WAS IN CONDUCT OF ROTARY
Through whole sample.

(15) Sender Name (Sign and PRINT) Wick DAKRAHL (16) Date/Time 1-25-95/14 (17) Sender Comments

(20) Received By (Sign and PRINT) S. Smith / S. GENTLE (21) Date/Time 25 Jan 95 13:00 (22) Receiver Comments

(24) Received By (Sign and PRINT) Suzanne Hunt / S. GENTLE (25) Date/Time 01-25-95/1400 (26) Receiver Comments

(28) Received By (Sign and PRINT) Suzanne Hunt / S. GENTLE (29) Date/Time 01-25-95/1400 (30) Receiver Comments

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No (32) Seal Data Consistent with this Record? ☒ Yes ☐ No

(18) Seal Intact Upon Release? ☒ Yes ☐ No (33) Seal Data Consistent with this Record? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

WRI

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number RUN 5011 (2) Sample Number 95-013 (3) Supervisor DLH TPLES
 4) Tank 116 B (5) Riser 116 (6) Segment 95-013 (7) Core 65 (8) Cask Serial Number C-1049

Radiation Survey Data:		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>60.5 m/hr</u>	<u>< 0.5 m/hr</u>		A. Work Package Number	<u>94-00808</u>		
Side Dose Rate	<u>30 m/hr</u>	<u>28 m/hr</u>		B. Cask Seal Number	<u>1764</u>		
Bottom Dose Rate	<u>22 m/hr</u>	<u>20 m/hr</u>		C. Sampler Serial Number	<u>94-319</u>		
Smearable Contamination	<u>< 20 d</u>	<u>20 d</u>		D. Date and Time Sampler Unsealed	<u>1-24-95, 21:07</u>		
		(Alpha)		E. Expected Liquid Content	<u>50%</u>		
	<u>< 1000 Bq</u>	(Beta-Gamma)		F. Expected Solid Content	<u>50%</u>		
ACT* (HPT)	<u>[Signature]</u>			G. Dose Rate Through Drill String	<u>1 A/hr increased</u>		
RCT* (HPT)	<u>[Signature]</u>			H. Expected Sample Length	<u>18"</u>		

11) INFORMATION (Include statement of laboratory tests to be performed.)

164

12) Field Comments		13) Laboratory Comments	
ADD - 2 GAL WATER SAMPLE DONE ALL IN RETURN NUCLE, STORED 1" BEFOR BOTTOM.		WHC-SD-WM-DP-03, REV.	

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
<u>241 B4106</u>	<u>272 S</u>	<u>DAVE DAKRAN</u>	<u>1-25-95/PA</u>	
(19) Relinquished By (Sign and PRINT)	(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments	
<u>[Signature]</u>	<u>Suzanne Sparty</u>	<u>25 Jan 95</u>		
(23) Relinquished By (Sign and PRINT)	(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments	
<u>Suzanne Sparty</u>	<u>[Signature]</u>	<u>01-25-95/PA</u>		
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	(32) Seal Data Consistent with this Record?	Shipment No.	Cask Seal No.	Sample No.
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number: 200W-08-7F (2) Sample Number: 95-309 (3) Supervisor: R. Frank Hunt (4) Tank: Bx-106 (5) Riser: 5 (6) Segment: 1 (7) Core: 121 (8) Cask Serial Number: 2-1028

Radiation Survey Data:		(9) FIELD		(32) LABORATORY		(110) Shipment Description	
Over Top Dose Rate		<u>2.05</u>		<u>2.5 mR</u>		A. Work Package Number	<u>ES-95-00508</u>
Side Dose Rate		<u>2.05</u>		<u>2.5 mR</u>		B. Cask Seal Number	<u>10397</u>
Bottom Dose Rate		<u>2.05</u>		<u>2.5 mR</u>		C. Sampler Serial Number	<u>95-151</u>
Smearable Contamination		<u>220</u>		<u>220 dpm</u>		D. Date and Time Sampler Unseated	<u>12-15-95 0331</u>
				(Alpha)		E. Expected Liquid Content	<u>20%</u>
		<u>21000</u>		<u>100W dpm</u>		F. Expected Solid Content	<u>80%</u>
				(Beta/Gamma)		G. Dose Rate Through Drill String	<u>30 mR</u>
				(Signature)		H. Expected Sample Length	<u>19"</u>

(111) INFORMATION (include statement of laboratory tests to be performed.)

1651

(112) Field Comments		(34) Laboratory Comments		(116) Date/Time		(117) Sender Comments	
X-ray showed approx. 1" recovery from 6" push.		(115) Sender Name (Sign and PRINT)		<u>W. A. Hartley</u>		<u>12-15-95</u>	
		(120) Received By (Sign and PRINT)		<u>David J. Kelane</u>		(121) Date/Time	
		(124) Received By (Sign and PRINT)		<u>David J. Kelane</u>		(122) Receiver Comments	
		(128) Received By (Sign and PRINT)		<u>W. A. Hartley</u>		(126) Receiver Comments	
(118) Seal Intact Upon Release?		(119) Seal Intact Upon Receipt?		(125) Date/Time		(127) Receiver Comments	
☒ Yes ☐ No		☒ Yes ☐ No		<u>12-18-95</u>		<u>19"</u>	
(131) Seal Intact Upon Receipt?		(132) Seal Data Consistent with this Record?		(129) Date/Time		(130) Receiver Comments	
☒ Yes ☐ No		☒ Yes ☐ No		<u>12-18-95</u>			

Sample No. ES ☒ Yes ☐ No

Cask Seal No. ES ☒ Yes ☐ No

Shipment No. ES ☒ Yes ☐ No

Seal Intact Upon Release? ☒ Yes ☐ No

Seal Intact Upon Receipt? ☒ Yes ☐ No

WHC-SD-WM-DP-103, REV. 1

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 95-311 (3) Supervisor Chav+124 (8) Cask Serial Number C1025

(4) Tank 57106 (5) Riser 5 (6) Segment 3 (7) Core 121

Radiation Survey Data:		(10) Shipment Description	
Over Top Dose Rate	<u>2</u>	A. Work Package Number	<u>ES-95-00508/c</u>
Side Dose Rate	<u>10</u>	B. Cask Seal Number	<u>4445</u>
Bottom Dose Rate	<u>2</u>	C. Sampler Serial Number	<u>95-156</u>
Smearable Contamination	<u><200 dpm</u>	D. Date and Time Sampler Unsealed	<u>12-15-95 1720</u>
	(Alpha)	E. Expected Liquid Content	<u>1096</u>
	<u><1K dpm</u>	F. Expected Solid Content	<u>9096</u>
	(Beta-Gamma)	G. Dose Rate Through Drill String	<u>450 mV/142</u>
RCPT* (HPT)	<u>RCPT: Smbwbr</u>	H. Expected Sample Length	<u>19'</u>
	(Signature)		

(11) INFORMATION (Include statement of laboratory tests to be performed.)

167

(12) Field Comments

Sludge on bottom of sampler
x-ray showed 12" of material

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 1

(13) Point of Origin	(14) Destination	(15) Sample Name (Sign and Print)	(16) Date/Time	(17) Sender Comments
<u>57106</u>	<u>2225</u>	<u>RCPT: Smbwbr</u>	<u>12/15/95</u>	
(18) Requisitioned By (Sign and Print)	(19) Received By (Sign and Print)	(20) Requisitioned By (Sign and Print)	(21) Date/Time	(22) Receiver Comments
<u>RCPT: Smbwbr</u>	<u>RCPT: Smbwbr</u>	<u>RCPT: Smbwbr</u>	<u>12-15-95</u>	
(23) Requisitioned By (Sign and Print)	(24) Received By (Sign and Print)	(25) Date/Time	(26) Receiver Comments	
<u>RCPT: Smbwbr</u>	<u>RCPT: Smbwbr</u>	<u>12-15-95</u>		
(27) Requisitioned By (Sign and Print)	(28) Received By (Sign and Print)	(29) Date/Time	(30) Receiver Comments	

(32) Seal Data Consistent with this Record?

Seal Intact Upon Receipt? ☒ Yes ☐ No

Seal Intact Upon Release? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-71 (2) Sample Number 95-312 (3) Supervisor Harley
 (4) Tank 64106 (5) Riser 5 (6) Segment 4 (7) Core 121 (8) Cask Serial Number 17-9

(9) FIELD (10) SHIPMENT DESCRIPTION
 Over Top Dose Rate 2 A. Work Package Number 25-95-005080
 Side Dose Rate 10 B. Cask Seal Number 4435
 Bottom Dose Rate 2 C. Sampler Serial Number 95-102
 Smearable Contamination <20 dpm D. Date and Time Sampler Unseated 12-15-95, 1859
 (Alpha) 11K dpm E. Expected Liquid Content 10%
 (Beta-Gamma) 11K dpm F. Expected Solid Content 90%
 (Signature) Sam Bower G. Dose Rate Through Drill String 306 mCi/hr
 RCT* (HPT) (Signature) (HPT) (Signature) H. Expected Sample Length 14"

(1) INFORMATION (include statement of laboratory tests to be performed.)

168

(2) Field Comments

Sampler clean on Bottom
 X-RAY SHOWS 14" IN Sampler

(34) Laboratory Comments

WHC-SD-WM-DP-103, REV. 4

(13) Point of Origin <u>34106</u>	(14) Destination <u>2225</u>	(15) Sampler Name (Sign and PRINT) <u>W. E. Harley</u>	(16) Date/Time <u>12/15/95</u>	(17) Sender Comments
(18) Relinquished By (Sign and PRINT) <u>W. E. Harley</u>	(19) Received By (Sign and PRINT) <u>Sam Bower</u>	(20) Relinquished By (Sign and PRINT) <u>W. E. Harley</u>	(21) Date/Time <u>12/15/95</u>	(22) Receiver Comments
(23) Relinquished By (Sign and PRINT) <u>W. E. Harley</u>	(24) Received By (Sign and PRINT) <u>Sam Bower</u>	(25) Date/Time <u>12-15-95</u>	(26) Receiver Comments	(27) Receiver Comments
(28) Relinquished By (Sign and PRINT) <u>W. E. Harley</u>	(29) Received By (Sign and PRINT) <u>Sam Bower</u>	(30) Date/Time <u>12-15-95</u>	(31) Receiver Comments	(32) Receiver Comments

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No
 (32) Seal Data Consistent with this Record? ☒ Yes ☐ No
 Shipment No. ☒ Yes ☐ No
 Sample No. ☒ Yes ☐ No

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

CN- DETERMINATION : LA-695-102 (C-0) SPIKE, STANDARD

Type	NA	STANDARD
Standard	Standard Aliquot in mL	0.250
Work List	Diluent + Standard Volume	25.00
641	Diluted Standard in mL to be Analyzed	0.500
Test Code	True Value CN- Concentration (µg/mL)	915
	Absorbance of Blank	0.073
Matrix	Absorbance of Standard	0.749
Liquid	Y-Intercept Value	-0.009320
Sample #	Slope Value	0.146120
CCV	µg of CN in Standard	4.690
Instrument Code		
Analyst		
JT KNIGHT		
Date	µg of CN-/mL in Standard	938
03/15/95		
Time	Standard % Recovery	102.5%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration	
02/03/95	Original Sample Calculation from Form 695102C1	

$$\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$$

$$\mu\text{g/mL of CN-} = \mu\text{g of CN- in Standard} / \text{Diluted Standard} * \text{Dilution Factor}$$

$$\text{Dilution Factor} = \text{Flask Volume} / \text{Standard Aliquot}$$

$$\text{Standard \% Recovery} = (\mu\text{g of CN-/mL in Standard} / \text{True Value CN- Concentration } (\mu\text{g/mL})) * 100$$

Data Entry by:	<i>Rus Schmitt</i>	Date:	03/23/95
Approved by:	<i>[Signature]</i>	Date:	3/23/95
Form X2 Rev. 1.0			

LABCORE Data Entry Template for Worklist# 1072

Analyst: JTK Instrument: SP01 WA 33252 Book # 54NBB

Method: LA-695-102 Rev/Mod C-O

Worklist Comment: BY-106 CN-

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			CN-01	SOLID	<u>1</u>	<u>1.04</u>	<u>N/A</u>	ug/g
		2 STD	<u>54NBB</u>		CN-01	SOLID	<u>917</u>	<u>972</u>	<u>N/A</u>	ug/me ug/g gwb 4/19/95
95000007	BY-106	3 SAMPLE	S95T000099	0	CN-01	SOLID	<u>N/A</u>	<u>98.9</u>	<u>17.9</u>	ug/g
95000007	BY-106	4 DUP	S95T000099	0	CN-01	SOLID	<u>98.9</u>	<u>88.9</u>	<u>N/A</u>	ug/g
95000007	BY-106	5 SPK	S95T000099	0	CN-01	SOLID	<u>100</u>	<u>93.0</u>	<u>N/A</u>	ug/g gwb 4/19/95
		6 STD	<u>54NBB</u>		CN-01	SOLID	<u>917</u>	<u>880</u>	<u>N/A</u>	ug/me ug/g gwb 4/19/95

Final page for worklist # 1072

[Signature] FOR JTK 4/19/95
Analyst Signature Date

[Signature] 4/19/95
Analyst Signature Date

Reviewed Rob Schoedon 4-19-95

Data Entry Comments: Original worklist attached with tech's notes. C-103 sample deleted
off original worklist.

LABCORE Data Entry Template for Worklist# 1072

Analyst: R Instrument: SP01 WA 93252 Book # _____

Method: LA-695-102 Rev/Mod C-0

Worklist Comment: CN-, BY-106, C-103 - use EDTA/en

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			CN-01	SOLID	_____	_____	N/A	ug/g
		2 STD			CN-01	SOLID	_____	_____	N/A	ug/g
95000007	BY-106	3 SAMPLE	S95T000099 0		CN-01	SOLID	N/A	<u>98.9</u> ^{Rek} <u>48.95</u>		ug/g
95000007	BY-106	4 DUP	S95T000099 0		CN-01	SOLID	<u>98.9</u>	<u>88.9</u> ^{Rek} <u>48.95</u>	N/A	ug/g
95000007	BY-106	5 SPK	S95T000099 0		CN-01	SOLID	_____	_____	N/A	ug/g
94000012	C-103	6 SAMPLE	S95T000046 0		CN-01	SOLID	N/A	_____		ug/g
94000042	C-103	7 DUP	S95T000046 0		CN-01	SOLID	_____	_____	N/A	ug/g
		618-STD			CN-01	SOLID	_____	_____	N/A	ug/g

Final page for worklist # 1072

Analyst Signature

Date

4.19.95

Analyst Signature

Date

4.19.95

.615 g into 10ml EDTA/en solution
Std 5408B .250 to 2.5ml & .500ml used for Std
.051
.765
.105
.101
.426
.698
.250ml used for spike

Data Entry Comments:

C-103 Not done

(1) Blank

$$\frac{(0.051) - 0.014205}{0.143914} = 0.256 \mu\text{g}$$

$$\left(\frac{0.256}{4.0 \text{ mL max. vol.}} \right) \left(\frac{10}{0.6159} \right) = 1.04 \mu\text{g/g}$$

(3) gwb 4/11/95 S95T000099

$$\text{(2)} \quad \frac{(0.105 - 0.051) - 0.014205}{0.143914} = 0.277 \mu\text{g CN}^-$$

$$\frac{0.277 \mu\text{g}}{0.500 \text{ mL}} \times 11 \text{ d.f.} \times \frac{10 \text{ mL}}{0.6159 \text{ g}} = \underline{98.9 \mu\text{g/g}}$$

(4) gwb 4/11/95 S95T000099 Dup.

$$\text{(15)} \quad \frac{(0.101 - 0.051) - 0.014205}{0.143914} = 0.249 \mu\text{g CN}^-$$

$$\frac{0.249 \mu\text{g}}{0.500 \text{ mL}} \times 11 \text{ d.f.} \times \frac{10 \text{ mL}}{0.6159 \text{ g}} = \underline{88.9 \mu\text{g/g}}$$

(5) gwb 4/11/95 S95T000099 Spike

$$\frac{(0.426 - 0.105) - 0.014205}{0.143914} = 2.13 \mu\text{g CN}$$

$$\frac{917 \mu\text{g/mL}}{100 \text{ d.f.}} \times 0.250 \text{ mL} = 2.29 \mu\text{g CN}$$

$$2.13 \mu\text{g} / 2.29 \mu\text{g} \times 100\% = \underline{93.0\% \text{ recovery}}$$

(2) Beginning Std. 54NB-B

$$\frac{(0.765 - 0.051) - 0.014205}{0.143914} = 4.86 \mu\text{g}$$

$$4.86 \mu\text{g} / 0.500 \text{ ml} \times 100 \text{ d.f.} = 972 \text{ ppm}$$

$$972 / 917 \times 100 \% = 106 \% \text{ recovery}$$

(6) Ending Std. 54NB-B

$$\frac{(0.698 - 0.051) - 0.014205}{0.143914} = 4.40 \mu\text{g}$$

$$4.40 \mu\text{g} / 0.500 \text{ ml} \times 100 \text{ d.f.} = 880 \text{ ppm}$$

$$880 / 917 \times 100 \% = 96.0 \% \text{ recovery}$$

WHC-SD-WM-DP-103, REV. 1

Cyanide Calibration with EDTA/en and Ammonium Sulfamate

Date: April 18, 1995

Calibration Standard: 44N8C

Instrument ID: WA93252

Working Standard Concentration: 1026 ppm / 100 d.f. = 10.26 ppm

4.19.95

Sample	Vol. Working Std. (ml)	ug CN-	Net Abs.
1	0	0	0
2	0.05	0.513	0.054
3	0.2	2.05	0.358
4	0.4	4.1	0.605
5	0.6	6.16	0.909
6	1	10.26	1.5
7	1.2	12.31	1.767

Regression Output:

Constant	0.014205
Std Err of Y Est	0.029141
R Squared	0.998507
No. of Observations	7
Degrees of Freedom	5

X Coefficient(s)	0.143914
Std Err of Coef.	0.002489

LABCORE Data Entry Template for Worklist#

5468

Analyst: jtk

Instrument: CN01

Book # 71N8G

Method: LA-695-103 Rev/Mod A-0

Worklist Comment: BY-106 CN. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			CN-01	SOLID	<u>1</u>	<u><3.80e⁻²</u>	<u>N/A</u>	ug/g
		2 STD			CN-01	SOLID	<u>9.15e⁺²</u>	<u>9.93e⁺²</u>	<u>N/A</u>	ug/g
95000229	BY-106	3 SAMPLE	S95T004169	0	CN-01	SOLID	<u>N/A</u>	<u>1.56e⁺¹</u>	<u>2.52e⁺⁰</u>	ug/g
95000229	BY-106	4 DUP	S95T004169	0	CN-01	SOLID	<u>1.56e⁺¹</u>	<u>1.67e⁺¹</u>	<u>N/A</u>	ug/g
95000229	BY-106	5 SPK	S95T004169	0	CN-01	SOLID	<u>100.0</u>	<u>104.5</u>	<u>N/A</u>	ug/g
95000229	BY-106	6 SAMPLE	S95T004170	0	CN-01	SOLID	<u>N/A</u>	<u>2.77e⁺¹</u>	<u>2.44e⁺⁰</u>	ug/g
95000229	BY-106	7 DUP	S95T004170	0	CN-01	SOLID	<u>2.77e⁺¹</u>	<u>3.09e⁺¹</u>	<u>N/A</u>	ug/g
95000229	BY-106	8 SPK	S95T004170	0	CN-01	SOLID	<u>100.0</u>	<u>105.5</u>	<u>N/A</u>	ug/g
		9 CCV			CN-01	SOLID	<u>9.15e⁺²</u>	<u>1.00e⁺³</u>	<u>N/A</u>	ug/g
		10 CCB			CN-01	SOLID	<u>1</u>	<u><1.10e⁻²</u>	<u>N/A</u>	ug/g

for JTKnight, Jr

Final page for worklist #

5468

Heather Anastas 3-26-96
Analyst Signature Date

Janis Conlin 3/26/96
Analyst Signature Date

Approved by
H Anastas 3-26-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) ^{103 (A-0)} BLANK, LIQUID, SOLID
 10 3/26/96

Type	SAMPLE	
BLANK		
Work List		
5468	Blank Weight in g (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN-01	Absorbance of Blank (Reagent, Prep)	0.003
Matrix	Digest Dilution Factor	1
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
BLNK	µg of Cyanide	0.020
Instrument Code	µg CN- /g	3.91E-03
SPEC 301		
Analyst	µg of Cyanide = [Absorb. of Blank - Absorb. of Inst. Blank - (Y-Intercept)] / Slope Value	
JT KNIGHT JR	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date		
03/25/96	Detection Limit = 0.19 µg Cyanide * Digest Dilution Factor / SS (mL)	
Time	v RESULTS v	
Calibration Date	Cyanide Concentration (µg/mL)	< Detection Limit
02/23/96		Detection Limit µg CN- / g 3.80E-02

Data Entry by: *John Conlon* Date: 03/26/96
 Approved by: *H. Anastas* Date: 3-26-96
 Form 695102C1 Rev. 1.7 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type	NA	STANDARD
STANDARD		0.250
Work List		25.00
5468		0.500
Test Code		915
CN-01		0.003
Matrix		0.715
SOLID		0.000194
Sample #		0.143424
71N8G	ERR	4.963
Instrument Code		
SPEC 301		
Analyst		
JT KNIGHT JR		
Date	ERR	993
03/25/96		
Time		108.5%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration	
02/23/96	Original Sample Calculation from Form 695102C1	

$\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$

$\mu\text{g/mL of CN-} = \mu\text{g of CN- in Standard} / \text{Diluted Standard} * \text{Dilution Factor}$

$\text{Dilution Factor} = \text{Flask Volume} / \text{Standard Aliquot}$

$\text{Standard \% Recovery} = (\mu\text{g of CN-/mL in Standard} / \text{True Value CN- Concentration } (\mu\text{g/mL})) * 100$

Data Entry by:	<i>Janice Conlin</i>	Date:	03/26/96
Approved by:	<i>Hanastor</i>	Date:	3-26-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 (A-0)
10 3/26/96
CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
SOLID	Sample Weight in grams (SS)	0.75310
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5468	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.172
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004169	µg of Cyanide	1.177
Instrument Code	µg CN- /g	1.56E+01
SPEC 301		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT KNIGHT JR	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF	
Date		
03/25/96	Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF	
Time	v RESULTS v	
	Cyanide Concentration (µg/g)	1.56E+01
Calibration Date		Detection Limit
02/23/96		µg CN- / g
		2.52E+00

Data Entry by: *Janet Coulter* Date: 03/26/96
 Approved by: *Hanastin* Date: 3-26-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) ^{103 (A-D)} BLANK, LIQUID, SOLID
le 3/26/96

Type	SAMPLE
SOLID	Sample Weight in grams (SS) 0.70532
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV) 5.00000
5468	Aliquot Analyzed from Dissolution (A) 0.50000
Test Code	Dilution Factor (DF) 1.000
CN-01	Absorbance of Blank 0.003
Matrix	Absorbance of Sample 0.172
SOLID	Y-Intercept Value 0.000194
Sample #	Slope Value 0.143424
S95T004169 DUP	µg of Cyanide 1.177
Instrument Code	µg CN- /g 1.67E+01
SPEC 301	

Analyst µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value
JT KNIGHT JR µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF

Date
03/25/96 Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF

Time v RESULTS v

Cyanide Concentration (µg/g)	1.67E+01	Detection Limit
Calibration Date		µg CN- / g
02/23/96		2.69E+00

Data Entry by: *Hanastor* *Paul Comb* Date: 03/26/96

Approved by: *Hanastor* Date: 3/26/96

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

103 (A-D)
12/3/26/96
CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type		SPIKE	NA
SPIKE	Spike Aliquot in mL	0.250	
Work List	Diluent + Spike Standard Volume	25.00	
5468	Diluted Spike Standard in mL	0.250	
Test Code	True Value CN- Concentration (µg/mL)	915	
CN-01	Absorbance of Blank	0.003	
Matrix	Absorbance of Sample+Spike	0.515	
SOLID	Y-Intercept Value	0.000194	
Sample #	Slope Value	0.143424	
S95T004169	µg of CN- in Sample+Spike	3.568	ERR
Instrument Code			
SPEC 301			
Analyst	Known µg of CN- in Original Sample	1.1770	
JT KNIGHT JR			
Date	µg of CN- in Spike	2.2875	
03/25/96			
Time	Spike % Recovery	104.5%	
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
02/23/96	Original Sample Calculation from Form 695102C1		

$\mu\text{g of CN- in Sample (Corrected)} = \text{Known } \mu\text{g of CN- in Original Sample} * \text{g of Sample in Spike} / \text{g Used in Original Sample}$
 $\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$
 $\mu\text{g of CN- in Spike} = \text{LMCS Value (ppm)} / \text{Dilution Factor} * \text{Diluted Spike Standard}$
 $\text{Dilution Factor} = \text{Spike Dilution Volume} / \text{Spike Aliquot}$
 $\text{Spike \% Recovery} = (\mu\text{g of CN- in Sample+Spike}) - (\mu\text{g of CN- in Sample}) / (\mu\text{g of CN- in Spike}) * 100\%$

Data Entry by:	<i>Frank Conti</i>	Date:	03/26/96
Approved by:	<i>H. Anast</i>	Date:	3-26-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type		SAMPLE
SOLID	Sample Weight in grams (SS)	0.77730
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5468	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.312
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004170	µg of Cyanide	2.153
Instrument Code	µg CN- /g	2.77E+01
SPEC 301		

Analyst JT KNIGHT JR
 µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value
 µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF

Date 03/25/96
 Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF

Time v RESULTS v

Calibration Date	Cyanide Concentration (µg/g)	Detection Limit µg CN- / g
02/23/96	2.77E+01	2.44E+00

Data Entry by: *H Anastas* Date: 03/26/96
 Approved by: *JT Knight Jr* Date: 3-26-96

Form 695102C1 Rev. 1.7

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) ^{103 (A-D)} BLANK, LIQUID, SOLID
lc 3/26/96

Type	SAMPLE	
SOLID	Sample Weight in grams (SS)	0.71530
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5468	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.32
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004170 DUP	µg of Cyanide	2.209
Instrument Code	µg CN- /g	3.09E+01

SPEC 301

Analyst µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value
 JT KNIGHT JR µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF

Date
 03/25/96 Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF

Time v RESULTS v

Cyanide Concentration (µg/g)	3.09E+01	Detection Limit µg CN- / g
Calibration Date		2.66E+00

02/23/96

Data Entry by:

Date: 03/26/96

Approved by:

Date: 3-26-96

Form 695102C1 Rev. 1.7

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PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

103 (A-D)
10 3/26/96
CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type	SPIKE	NA
SPIKE	Spike Aliquot in mL	0.250
Work List	Diluent + Spike Standard Volume	25.00
5468	Diluted Spike Standard in mL	0.250
Test Code	True Value CN- Concentration (µg/mL)	915
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample+Spike	0.658
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004170	µg of CN- in Sample+Spike	4.566
Instrument Code		ERR
SPEC 301		
Analyst	Known µg of CN- in Original Sample	2.1530
JT KNIGHT JR		
Date	µg of CN- in Spike	2.2875
03/25/96		
Time	Spike % Recovery	105.5%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration	
02/23/96	Original Sample Calculation from Form 695102C1	

$\mu\text{g of CN- in Sample (Corrected)} = \text{Known } \mu\text{g of CN- in Original Sample} * \text{g of Sample in Spike} / \text{g Used in Original Sample}$
 $\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$
 $\mu\text{g of CN- in Spike} = \text{LMCS Value (ppm)} / \text{Dilution Factor} * \text{Diluted Spike Standard}$
 $\text{Dilution Factor} = \text{Spike Dilution Volume} / \text{Spike Aliquot}$
 $\text{Spike \% Recovery} = (\mu\text{g of CN- in Sample+Spike}) - (\mu\text{g of CN- in Sample}) / (\mu\text{g of CN- in Spike}) * 100\%$

Data Entry by:	Date:	03/26/96
Approved by:	Date:	3-26-96

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type	NA	STANDARD
STANDARD		
Standard Aliquot in mL		0.250
Work List		
Diluent + Standard Volume		25.00
5468		
Diluted Standard in mL to be Analyzed		0.500
Test Code		
True Value CN- Concentration (µg/mL)		915
CN-01		
Absorbance of Blank		0.002
Matrix		
Absorbance of Standard		0.746
LIQUID		
Y-Intercept Value		0.007237
Sample #		
Slope Value		0.147420
CCV		
µg of CN in Standard	ERR	4.998
Instrument Code		
SPEC 301		
Analyst		
JT KNIGHT JR		
Date		
µg of CN-/mL in Standard	ERR	1000
03/25/96		
Time		
Standard % Recovery		109.2%
Calibration Date		
02/25/96		

µg of CN- in Sample+Spike = [(Absorbance of Sample+Spike - Absorbance of Blank) - (Y-Intercept)] / Slope Value

µg/mL of CN- = µg of CN- in Standard / Diluted Standard * Dilution Factor

Dilution Factor = Flask Volume / Standard Aliquot

Standard % Recovery = (µg of CN-/mL in Standard / True Value CN- Concentration (µg/mL)) * 100

Data Entry by:	Date:	03/26/96
Approved by:	Date:	3-26-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) ^{103 (A-0)} BLANK, LIQUID, SOLID
u 3/26/96

Type	SAMPLE	
BLANK		
Work List		
5468	Blank Aliquot in mL (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN-01	Absorbance of Blank (Reagent, Prep)	0.002
Matrix	Digest Dilution Factor	1
LIQUID	Y-Intercept Value	0.007237
Sample #	Slope Value	0.147420
CCB	µg of Cyanide	-0.036
Instrument Code	µg CN- /mL	-7.10E-03
SPEC 301		
Analyst	µg of Cyanide = [Absorb. of Blank - Absorb. of Inst. Blank - (Y-Intercept)] / Slope Value	
JT KNIGHT JR	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date	Detection Limit = 0.055 µg Cyanide / SS (mL) * Digest Dilution Factor	
03/25/96	v RESULTS v	
Time	Cyanide Concentration (µg/mL)	< Detection Limit
Calibration Date		Detection Limit
02/25/96		µg CN- / mL
		1.10E-02

Data Entry by: Handwritten Signature Date: 03/26/96
 Approved by: Handwritten Signature Date: 3-26-96

LABCORE Data Entry Template for Worklist#

5484

Analyst: jtk Instrument: CN01 Book # 71N8G

Method: LA-695-103 Rev/Mod C-D
103-AD HA 3-25-96
3/24/96

Worklist Comment: BY-106 FOR CYANIDE RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			CN-01	SOLID	<u>1</u>	<u><3.80e⁻²</u>	<u>N/A</u>	ug/g
		2 STD			CN-01	SOLID	<u>915</u>	<u>931</u>	<u>N/A</u>	ug/g
95000229	BY-106	3 SAMPLE	S95T004171	0	CN-01	SOLID	<u>N/A</u>	<u>1.09e⁺¹</u>	<u>3.08e⁺⁰</u>	ug/g
95000229	BY-106	4 DUP	S95T004171	0	CN-01	SOLID	<u>1.09e⁺¹</u>	<u>1.20e⁺¹</u>	<u>N/A</u>	ug/g
95000229	BY-106	5 SPK	S95T004171	0	CN-01	SOLID	<u>100</u>	<u>102.4</u>	<u>N/A</u>	ug/g
95000229	BY-106	6 SAMPLE	S95T004172	0	CN-01	SOLID	<u>N/A</u>	<u>2.03e⁺¹</u>	<u>2.08e⁺⁰</u>	ug/g
95000229	BY-106	7 DUP	S95T004172	0	CN-01	SOLID	<u>2.03e⁺¹</u>	<u>1.70e⁺¹</u>	<u>N/A</u>	ug/g
95000229	BY-106	8 SPK	S95T004172	0	CN-01	SOLID	<u>100</u>	<u>88.4</u>	<u>N/A</u>	ug/g
		9 CCV			CN-01	SOLID	<u>915</u>	<u>959</u>	<u>N/A</u>	ug/g
		10 CCB			CN-01	SOLID	<u>1</u>	<u><1.10e⁻²</u>	<u>N/A</u>	ug/g

Final page for worklist #

5484

for JTKnight, Jr
Heather Anastor 3-25-96
Analyst Signature Date

Jim Conlin 3/24/96
Analyst Signature Date

Approved by
HA Anastor 3-25-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 A-D Hg 3.25-96
CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
BLANK		
Work List		
5484	Blank Weight in g (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN-01	Absorbance of Blank (Reagent, Prep)	0.003
Matrix	Digest Dilution Factor	1
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
BLANK	µg of Cyanide	0.020
Instrument Code	µg CN- /g	3.91E-03
SPEC 301		
Analyst	µg of Cyanide = [(Absorb. of Blank - Absorb. of Inst. Blank) - (Y-Intercept)] / Slope Value	
JT KNIGHT	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date		
03/21/96	Detection Limit = 0.19 µg Cyanide * Digest Dilution Factor / SS (mL)	
Time	v RESULTS v	
Calibration Date	Cyanide Concentration (µg/mL)	< Detection Limit
02/23/96		Detection Limit µg CN- / g 3.80E-02

Data Entry by: *Janastor* Date: 03/24/96
 Approved by: *Janastor* Date: 3.25.96

Form 695102C1 Rev. 1.7

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PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

103 A-O 44a 32596
CN- DETERMINATION : LA-695-102 (E-0) - SPIKE, STANDARD

Type	NA	STANDARD
STANDARD		0.250
Work List		
5484		25.00
Test Code		0.500
CN-01		915
Matrix		0.003
SOLID		0.671
Sample #		0.000194
71N8G		0.143424
Instrument Code	ERR	4.656
SPEC 301		
Analyst		
JT KNIGHT		
Date	ERR	931
03/21/96		
Time		101.8%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration	
02/23/96	Original Sample Calculation from Form 695102C1	

$\mu\text{g of CN- in Sample+Spoke} = [(\text{Absorbance of Sample+Spoke} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$

$\mu\text{g/mL of CN-} = \mu\text{g of CN- in Standard} / \text{Diluted Standard} * \text{Dilution Factor}$

$\text{Dilution Factor} = \text{Flask Volume} / \text{Standard Aliquot}$

$\text{Standard \% Recovery} = (\mu\text{g of CN-/mL in Standard} / \text{True Value CN- Concentration } (\mu\text{g/mL})) * 100$

Data Entry by:	<i>John Conlin</i>	Date:	03/24/96
Approved by:	<i>A. Anast</i>	Date:	3.25.96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 AD NLA 3-25-96

103 AD NLA 3-25-96
CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
SOLID	Sample Weight in grams (SS)	0.61650
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5484	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.1
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004171	µg of Cyanide	0.675
Instrument Code	µg CN- /g	1.09E+01
SPEC 301		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT KNIGHT	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF	
Date		
03/21/96	Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF	
Time	v RESULTS v	
Calibration Date	Cyanide Concentration (µg/g)	1.09E+01
02/23/96		Detection Limit µg CN- / g 3.08E+00

Data Entry by:

Approved by:

Form 695102C-1 Rev. 1.7

Date: 03/24/96

Date: 3-25-96

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 A-D 11a 3-25-96
CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
SOLID	Sample Weight in grams (SS)	0.84430
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5484	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.148
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004171 DUP	µg of Cyanide	1.010
Instrument Code	µg CN- /g	1.20E+01
SPEC 301		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT KNIGHT	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF	
Date	Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF	
03/21/96	v RESULTS v	
Time	Cyanide Concentration (µg/g)	1.20E+01
Calibration Date		Detection Limit
02/23/96		µg CN- / g
		2.25E+00

Data Entry by: *Janet Conley* Date: 03/24/96
 Approved by: *Hanastin* Date: 3-25-96

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PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

103 A.O. N/A 3.25.96
CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type	SPIKE	NA
SPIKE	Spike Aliquot in mL	0.250
Work List	Diluent + Spike Standard Volume	25.00
5484	Diluted Spike Standard in mL	0.250
Test Code	True Value CN- Concentration (µg/mL)	915
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample+Spike	0.436
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004171	µg of CN- in Sample+Spike	3.018
Instrument Code		ERR
SPEC 301		
Analyst	Known µg of CN- in Original Sample	0.6750
JT KNIGHT		
Date	µg of CN- in Spike	2.2875
03/21/96		
Time	Spike % Recovery	102.4%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration	
02/23/96	Original Sample Calculation from Form 695102C1	

$\mu\text{g of CN- in Sample (Corrected)} = \text{Known } \mu\text{g of CN- in Original Sample} * \text{g of Sample in Spike} / \text{g Used in Original Sample}$
 $\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$
 $\mu\text{g of CN- in Spike} = \text{LMCS Value (ppm)} / \text{Dilution Factor} * \text{Diluted Spike Standard}$
 $\text{Dilution Factor} = \text{Spike Dilution Volume} / \text{Spike Aliquot}$
 $\text{Spike \% Recovery} = (\mu\text{g of CN- in Sample+Spike}) - (\mu\text{g of CN- in Sample}) / (\mu\text{g of CN- in Spike}) * 100\%$

Data Entry by:	<i>Frank Con...</i>	Date:	03/24/96
Approved by:	<i>Hanastor</i>	Date:	3.25.96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 A-D New 3-25-96
CN- DETERMINATION : LA-695-402 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
SOLID	Sample Weight in grams (SS)	0.91250
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5484	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.269
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004172	µg of Cyanide	1.853
Instrument Code	µg CN- /g	2.03E+01
SPEC 301		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT KNIGHT	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF	
Date		
03/21/96	Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF	
Time	v RESULTS v	
Calibration Date	Cyanide Concentration (µg/g)	Detection Limit
02/23/96		µg CN- / g
		2.08E+00

Data Entry by: *Janet Conley* Date: 03/24/96
 Approved by: *H. Anasto* Date: 3-25-96
 Form 695102C1 Rev. 1.7 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 A-D HLA 3-25-96
CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
SOLID	Sample Weight in grams (SS)	0.62230
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5484	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.003
Matrix	Absorbance of Sample	0.155
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004172 DUP	µg of Cyanide	1.058
Instrument Code	µg CN- /g	1.70E+01
SPEC 301		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT KNIGHT	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF	
Date		
03/21/96	Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF	
Time	v RESULTS v	
Calibration Date	Cyanide Concentration (µg/g)	Detection Limit
02/23/96		µg CN- / g
		3.05E+00

Data Entry by: *Janast* *Frank Con...* Date: 03/24/96
 Approved by: *Janast* Date: 3-25-96

Form 695102C1 Rev. 1.7

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PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type		SPIKE	NA
SPIKE	Spike Aliquot in mL	0.250	
Work List	Diluent + Spike Standard Volume	25.00	
5484	Diluted Spike Standard in mL	0.250	
Test Code	True Value CN- Concentration (µg/mL)	915	
CN-01	Absorbance of Blank	0.003	
Matrix	Absorbance of Sample+Spike	0.559	
SOLID	Y-Intercept Value	0.000194	
Sample #	Slope Value	0.143424	
S95T004172	µg of CN- in Sample+Spike	3.875	ERR
Instrument Code			
SPEC 301			
Analyst	Known µg of CN- in Original Sample	1.8530	
JT KNIGHT			
Date	µg of CN- in Spike	2.2875	
03/21/96			
Time	Spike % Recovery	88.4%	
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
02/23/96	Original Sample Calculation from Form 695102C1		

$\mu\text{g of CN- in Sample (Corrected)} = \text{Known } \mu\text{g of CN- in Original Sample} * \text{g of Sample in Spike} / \text{g Used in Original Sample}$

$\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$

$\mu\text{g of CN- in Spike} = \text{LMCS Value (ppm)} / \text{Dilution Factor} * \text{Diluted Spike Standard}$

$\text{Dilution Factor} = \text{Spike Dilution Volume} / \text{Spike Aliquot}$

$\text{Spike \% Recovery} = (\mu\text{g of CN- in Sample+Spike}) - (\mu\text{g of CN- in Sample}) / (\mu\text{g of CN- in Spike}) * 100\%$

Data Entry by:	<i>Frank Conley</i>	Date:	03/24/96
Approved by:	<i>Hanastor</i>	Date:	3-25-96

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) SPIKE, STANDARD

Type	NA	STANDARD
STANDARD		0.250
Work List		25.00
5484		0.500
Test Code		915
CN-01		0.001
Matrix		0.715
SOLID		0.007237
Sample #		0.147420
CCV	ERR	4.794
Instrument Code		
SPEC 301		
Analyst		
JT KNIGHT		
Date	ERR	959
03/21/96		
Time		104.8%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration	
02/25/96	Original Sample Calculation from Form 695102C1	

$\mu\text{g of CN- in Sample+Spike} = [(\text{Absorbance of Sample+Spike} - \text{Absorbance of Blank}) - (\text{Y-Intercept})] / \text{Slope Value}$

$\mu\text{g/mL of CN-} = \mu\text{g of CN- in Standard} / \text{Diluted Standard} * \text{Dilution Factor}$

$\text{Dilution Factor} = \text{Flask Volume} / \text{Standard Aliquot}$

$\text{Standard \% Recovery} = (\mu\text{g of CN-/mL in Standard} / \text{True Value CN- Concentration } (\mu\text{g/mL})) * 100$

Data Entry by:	Date:	03/24/96
Approved by:	Date:	3-25-96

Form X2 Rev. 1.0

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type	SAMPLE	
BLANK		
Work List		
5484	Blank Weight in g (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN-01	Absorbance of Blank (Reagent, Prep)	0.001
Matrix	Digest Dilution Factor	1
SOLID	Y-Intercept Value	0.007237
Sample #	Slope Value	0.147420
CCB	µg of Cyanide	-0.042
Instrument Code	µg CN- /g	-8.46E-03
SPEC 301		
Analyst	µg of Cyanide = [Absorb. of Blank - Absorb. of Inst. Blank - (Y-Intercept)] / Slope Value	
JT KNIGHT	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date	03/21/96	
Time	085	
Calibration Date	Detection Limit = 0.19 µg Cyanide * Digest Dilution Factor / SS (mL)	
02/25/96	Cyanide Concentration (µg/mL)	< Detection Limit
		Detection Limit
		µg CN- / g
		3.80E-02
		1.10E-2
Data Entry by:	Date: 03/24/96	
Approved by: Hanasto	Date: 3-25-96	

3/24/96

LABCORE Data Entry Template for Worklist#

5485

Analyst: jtk Instrument: CN01 Book # 71N8G

Method: LA-695-103 Rev/Mod A-0

Worklist Comment: BY-106 FOR CYANIDE RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			CN-01	SOLID	<u>1</u>	<u><3.80E⁻²</u>	<u>N/A</u>	ug/g
		2 STD			CN-01	SOLID	<u>915</u>	<u>896</u>	<u>N/A</u>	ug/g
95000229	BY-106	3 SAMPLE	S95T004173	0	CN-01	SOLID	<u>N/A</u>	<u>1.29E⁺¹</u>	<u>2.94E⁺⁰</u>	ug/g
95000229	BY-106	4 DUP	S95T004173	0	CN-01	SOLID	<u>1.29E⁺⁰</u>	<u>1.36E⁺¹</u>	<u>N/A</u>	ug/g
95000229	BY-106	5 SPK	S95T004173	0	CN-01	SOLID	<u>100</u>	<u>102.1</u>	<u>N/A</u>	ug/g
95000229	BY-106	6 SAMPLE	S95T004174	0	CN-01	SOLID	<u>N/A</u>	<u>6.13E⁺⁰</u>	<u>2.84E⁺⁰</u>	ug/g
95000229	BY-106	7 DUP	S95T004174	0	CN-01	SOLID	<u>6.13E⁺⁰</u>	<u>6.28E⁺⁰</u>	<u>N/A</u>	ug/g
95000229	BY-106	8 SPK	S95T004174	0	CN-01	SOLID	<u>100</u>	<u>104.2</u>	<u>N/A</u>	ug/g
		9 CCV			CN-01	SOLID	<u>915</u>	<u>957</u>	<u>N/A</u>	ug/g
		10 CCB			CN-01	SOLID	<u>1</u>	<u><1.10E⁻²</u>	<u>N/A</u>	ug/g

Final page for worklist #

5485

Dr JT Knight, Jr
Anastor
Analyst Signature Date 4-1-96

Jessie Corbin 3/31/96
Analyst Signature Date
Approved by
Anastor 4-1-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

103 (A-0)
CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID
10 3/31/96

Type	SAMPLE	
BLANK		
Work List		
5485	Blank Weight in g (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN-01	Absorbance of Blank (Reagent, Prep)	0.004
Matrix	Digest Dilution Factor	1
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
BLNK	µg of Cyanide	0.027
Instrument Code	µg CN- /g	5.31E-03
SPEC 301		
Analyst	µg of Cyanide = [Absorb. of Blank - Absorb. of Inst. Blank - (Y-Intercept)] / Slope Value	
JT KNIGHT JR	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date	Detection Limit = 0.19 µg Cyanide * Digest Dilution Factor / SS (mL)	
03/29/96	v RESULTS v	
Time	Cyanide Concentration (µg/mL)	< Detection Limit
Calibration Date		Detection Limit
02/23/96		µg CN- / g
		3.80E-02

Data Entry by: *Janita Conlin* Date: 03/31/96
 Approved by: *H. Anastos* Date: 4-1-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-103, REV. 1

CN- DETERMINATION : LA-695-102 (E-0) BLANK, LIQUID, SOLID

Type		SAMPLE
SOLID	Sample Weight in grams (SS)	0.64600
Work List	Dissolution Volume (EDTA/en + sample) in mL (DV)	5.00000
5485	Aliquot Analyzed from Dissolution (A)	0.50000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.004
Matrix	Absorbance of Sample	0.124
SOLID	Y-Intercept Value	0.000194
Sample #	Slope Value	0.143424
S95T004173	µg of Cyanide	0.835
Instrument Code	µg CN- /g	1.29E+01
SPEC 301		

Analyst µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value
 JT KNIGHT JR µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g)) * DF

Date 03/29/96 Detection Limit = (0.19 µg Cyanide / A) * (DV / SS) * DF

Time v RESULTS v

Calibration Date	Cyanide Concentration (µg/g)	Detection Limit
02/23/96	1.29E+01	µg CN- / g
		2.94E+00

Data Entry by: *Janet Conner* Date: 03/31/96
 Approved by: *W. Anastos* Date: 4-1-96

Form 695102C1 Rev. 1.7

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BY-106 Core 65 Segment #7

Date: January 27, 1995
Sample number: 95-007
Laboratory #: S95T000043
Cask serial #: 1005C
Logbook #: WHC-N-996

Notes:

- * 20 gram wt. = 19.99 grams 500 gram wt. = 499.95 grams
- * Temp inside hotcell was 76.4 degrees F. Humidity = 20%.
- * Dose rate through drill string was 1.9 R/hr.
- * Expected sample length - 19 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample and performed photography

Sample information:

- * Total amount of solid material recovered was about 26 grams. Solid material was slushy and light yellow in color. The photograph will show material on the sample tray.
- * Collected approximately 300 mL of drainable liquid. The drainable liquid was light yellow in color and appeared to be aqueous. Collected the liquid in two jars. Total weight of the drainable liquid was 422 grams. Approximate density is 1.34 g/mL.

Subsample information:

1) Subsampled Drainable liquid in two jars:

-Jar # 6542 (250 mL-jar size)
-309.36 grams recovered
-230 mL recovered (one phase)

-Jar # 6468 (125 mL-jar size)
-113.18 grams recovered
-75 mL recovered (one phase)

2) Subsampled Solids on tray.

-Jar # 6386 (40 mL-jar size)
-26.74 grams recovered

Sampler Efficiency:

Volume of Sampler: 309 mL
% Volume of Air : 0 %
% Volume of Liquid : 97 %
% Volume of Solids : 3 %
Estimate % Recovery: 100 %

WHC-SD-WM-DP-103, REV. 1
BY-106 Core 65 Segment #8

Date: January 26, 1995
Sample number: 95-008
Laboratory # : S95T000044
Cask serial #: C1048
Logbook # : WHC-N-996

Notes:

- * 20 gram wt. = 19.99 grams 500 gram wt. = 499.95 grams
- * Temp inside hotcell was 76.0 degrees F. Humidity = 20%.
- * Dose rate through drill string was 1.8 R/hr.
- * Expected sample length - 19 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample
- * Performed photography

Sample information:

- * Total amount of solid material recovered was about 44 grams. Solid material was slushy and light yellow in color. The photograph will show material on the sample tray.
- * Collected approximately 290 mL of drainable liquid. The drainable liquid was turbid and yellow-green in color. Collected the drainable liquid in two jars. Approximate density is 1.40 g/mL.

Subsample information:

1) Subsampled Drainable liquid in two jars:

-Jar # 6372 (250 mL-jar size)
-339.62 grams recovered
-250 mL recovered (one phase)

-Jar # 6465 (125 mL-jar size)
-54.63 grams recovered
-40 mL recovered (one phase)

2) Subsampled Solids on tray.

-Jar # 6466 (125 mL-jar size)
-44.15 grams recovered

Sampler Efficiency:

Volume of Sampler: 309 mL
% Volume of Air : 0 %
% Volume of Liquid : 94 %
% Volume of Solids : 6 %
Estimate % Recovery: 100 %

BY-106 Core 65 Segment #9

Date: February 7, 1995
Sample number: 95-009
Laboratory # : S95T000078
Cask serial #: C-1052
Logbook # : WHC-N-996

Notes:

- * 20 gram wt. = 20.00 grams 500 gram wt. = 499.96 grams
- * Temp inside hotcell was 74.6 degrees F. Humidity = 25 %.
- * Dose rate through drill string was 25 mR/hr.
- * Expected sample length - 0 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample and performed photography

Sample information:

- * No drainable liquid recovered. The chain of custody reported that 0 % expected.
- * Recovered 9 grams of solids. Light yellow green crystalline solids.

Subsample information:

- 1) **Subsampled Solids:**
 - Vial # 6404 (40 mL-vial size)
 - 9.56 grams recovered

Sampler Efficiency:

Note: Information provided on the chain of custody indicated no expected solids and liquids. Sample was extruded for verification purposes only.

BY-106 Core 65 Segment #10

Date: February 6, 1995
 Sample number: 95-010
 Laboratory # : S95T000079
 Cask serial #: C-1034
 Logbook # : WHC-N-996

Notes:

- * 20 gram wt. = 20.00 grams 500 gram wt. = 499.95 grams
- * Temp inside hotcell was 77.1 degrees F. Humidity = 28%.
- * Dose rate through drill string was 2 R/hr.
- * Expected sample length - 19 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample and performed photography

Sample information:

- * Recovered approximately 275 mL of drainable liquid. Collected drainable liquid in two jars. Drainable liquid was yellow-green in color and turbid. Net weight of drainable liquid in both jars was 362 grams. Estimated density = 1.32 g/mL.
- * Recovered 90 grams of solids. The solid sample extruded when the piston was nearest to the sampler valve. The first solids to appear were hard chunks that ranged in color from white to gray. The remaining solids were a wet salt cake and yellow-green in color.

Subsample information:

1) Subsampled **Drainable liquid**:

-Jar # 6538 (250 mL-jar size)
 -316.70 grams recovered
 -estimated volume = 230 mL

-Jar # 6473 (125 mL-jar size)
 -46.95 grams recovered
 -estimated volume = 45 mL

2) Subsampled **Solids**:

-Vial # 6475 (125 mL-vial size)
 -90.32 grams recovered

Sampler Efficiency:

Volume of Sampler: 309 mL
 % Volume of Liquid : 90 %
 % Volume of Solids : 10 %
 Estimate % Recovery: 100 %

WHC-SD-WM-DP-103, REV. 1
BY-106 Core 65 Segment #11

Date: February 6, 1995
Sample number: 95-011
Laboratory #: S95T000080
Cask serial #: C-1022
Logbook #: WHC-N-996

Notes:

- * 20 gram wt. = 19.99 grams 500 gram wt. = 499.94 grams
- * Temp inside hotcell was 77.2 degrees F. Humidity = 25%.
- * Dose rate through drill string was 800 mR/hr.
- * Expected sample length - 19 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample and performed photography

Sample information:

- * Recovered 4 grams of solids. Solids were crystalline and light yellow in color.
- * Recovered approximately 70 mL of drainable liquid. Drainable liquid was yellow-green in color and turbid. Net weight of drainable liquid was 82 grams. Estimated density = 1.18 g/mL.

Subsample information:

- 1) Subsampled Drainable liquid:
 - Jar # 6536 (250 mL-jar size)
 - 82.73 grams recovered
- 2) Subsampled Solids:
 - Vial # 6488 (20 mL-vial size)
 - 4.91 grams recovered

Sampler Efficiency:

Volume of Sampler: 309 mL
% Volume of Liquid : 25 %
% Volume of Solids : 1 %
Estimate % Recovery: 26 %

BY-106 Core 65 Segment #12

Date: February 3, 1995
 Sample number: 95-012
 Laboratory # : S95T000081
 Cask serial #: C-1054
 Logbook # : WHC-N-996

Notes:

- * 20 gram wt. = 19.99 grams 500 gram wt. = 499.95 grams
- * Temp inside hotcell was 74.8 degrees F. Humidity = 31%.
- * Dose rate through drill string was 500 mR/hr.
- * Expected sample length - 19 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample and performed photography

Sample information:

- * Recovered approximately 40 mL of drainable liquids. Drainable liquid was light brown in color and turbid. Net weight of drainable liquid was 44 grams.

Subsample information:

- 1) Subsampled Drainable liquid:
 - Jar # 6143 (250 mL-jar size)
 - 44.25 grams recovered

Sampler Efficiency:

Volume of Sampler: 309 mL
 % Volume of Liquid : 15 %
 % Volume of Solids : 0 %
 Estimate % Recovery: 15 %

BY-106 Core 65 Segment #13

Date: February 3, 1995
 Sample number: 95-013
 Laboratory # : S95T000082
 Cask serial #: C-1049
 Logbook # : WHC-N-996

Notes:

- * 20 gram wt. = 20.00 grams 500 gram wt. = 499.96 grams
- * Temp inside hotcell was 74.7 degrees F. Humidity = 25%.
- * Dose rate through drill string was 1 R/hr.
- * Expected sample length - 18 inches
- * This is a rotary mode sampler from riser 10B
- * No liner liquid recovered
- * Valve closed before and after cutting cables
- * Extruded sample and performed photography

Sample information:

- * Observed less than 5 mL of drainable liquids, but did not retain.
- * Total amount of solid material recovered was about 131 grams. Recovered about five inches of solid material. The first two inches were a dark brown sludge. The other three inches of material appeared to be compacted white salt cake material coated with sludge. The photograph will show the material broken into three pieces on the sample tray.

Subsample information:

- 1) Subsampled Sludge solids:
 - Jar # 6471 (125 mL-jar size)
 - 57.15 grams recovered
- 2) Subsampled Saltcake solids:
 - Jar # 6472 (125 mL-jar size)
 - 74.40 grams recovered

Sampler Efficiency:

Volume of Sampler: 309 mL
 % Volume of Liquid : 0 %
 % Volume of Solids : 30 %
 Estimate % Recovery: 30 %

BY-106 Core 121 Segment #1 Riser #5

Date: December 20, 1995
Sample number: 95-309
Labcore #: S95T003985
Cask serial #: C1028
Logbook #: WHC-N-996
Sampler Serial #: 95-151

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.38
- * Hotcell temp was 77.4 degrees F. Humidity = 25%.
- * Dose rate through drill string was 30 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables.
- * Extruded sample and performed photography.

Sample information:

- * No drainable liquid. Extruded approximately 1 inch of solids. Solids were dry, crumbly, white in color and the texture resembled a saltcake.

Subsample information:

- *
 - Subsampled Solids: Upper half
 - Jar # 8583 (125 mL jar size)
 - 10.6 gram net weight

Sample Recovery:

- * Collected 10.6 grams of solids. Dose rate through the drill string was 30 mR/hr.

BY-106 Core 121 Segment #2 Riser #5

Date: December 20, 1995
 Sample number: 95-310
 Labcore # : S95T003986
 Cask serial #: 1013C
 Logbook # : WHC-N-996
 Sampler serial #: 95-149

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.7 degrees F. Humidity = 28%.
- * Dose rate through drill string was 230 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables.
- * Extruded sample and performed photography.

Sample information:

- * No drainable liquid. Extruded 4.5 inches of solids. The first inch was grey and the remaining 3.5 inches were off white in color. The material had the consistency of clay even though the texture of the material appeared to be a saltcake.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8530 (2505 mL jar size)
 -101.1 gram net weight

Notes:

- * Collected 101.1 grams of solids. Dose rate through the drill string was 230 mR/hr.

BY-106 Core 121 Segment #3 Riser #5

Date: December 20, 1995
 Sample number: 95-311
 Labcore # : S95T003987
 Cask serial #: C1025
 Logbook # : WHC-N-996
 Sampler serial #: 95-156

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.4 degrees F. Humidity = 25%.
- * Dose rate through drill string was 450 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables.
- * Extruded sample and performed photography.

Sample information:

- * No drainable liquid. Extruded 12.5 inches of solids. The solids were medium grey in color and the texture was a crumbly saltcake. There were 3 bands of white material 1/4 to 1/2 inch wide that were 2 1/2 to 3 inches apart. The solids were subsampled in half segments.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8531 (250 mL jar size)
 -209.8 gram net weight
- * Subsampled Solids: Lower half
 -Jar # 8524 (250 mL jar size)
 -88.9 gram net weight

Notes:

- * Collected 298.7 grams of solids. Dose rate through the drill string was 450 mR/hr.

BY-106 Core 121 Segment #4 Riser #5

Date: December 20, 1995
Sample number: 95-312
Labcore #: S95T003988
Cask serial #: 17-G
Logbook #: WHC-N-996
Sampler serial #: 95-102

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.4 degrees F. Humidity = 28%.
- * Dose rate through drill string was 300 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables.
- * Extruded and performed photography.

Sample information:

- * No drainable liquid. Extruded approximately 14 inches of solids. The first 4 to 5 inches were medium grey in color as was the last inch. The remainder of the sample was striated with thin sections of grey and white material. The texture of the material was a crumbly saltcake. Subsampled solids in half segments.

Subsample information:

- * Subsampled Solids: Upper half
 - Jar # 8533 (250 mL jar size)
 - 220.2 gram net weight
- * Subsampled Solids: Lower half
 - Jar # 8590 (125 mL jar size)
 - 135.4 gram net weight

Notes:

- * Collected 355.6 grams of solids. Dose rate through the drill string was 300 mR/hr.

BY-106 Core 121 Segment #5 Riser #5

Date: December 20, 1995
 Sample number: 95-313
 Labcore # : S95T003989
 Cask serial #: 27-G
 Logbook # : WHC-N-996
 Sampler serial #: 95-155

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.8 degrees F. Humidity = 28%.
- * Dose rate through drill string was 700 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * No drainable liquid. Extruded approximately 9 inches of solids. The sample was light to medium grey in color and the texture of the material was a damp saltcake. The last 2 to 3 inches were slightly darker than the remaining material.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8536 (250 mL jar size)
 -234.3 gram net weight

Notes:

- * Collected 234.3 grams of solids. Dose rate through the drill string was 700 mR/hr.

BY-106 Core 121 Segment #6 Riser #5

Date: December 20, 1995
 Sample number: 95-314
 Labcore # : S95T003990
 Cask serial #: 1010-C
 Logbook # : WHC-N-996
 Sampler serial #: 95-109

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39 grams
- Hotcell Temp was 77.8 degrees F. Humidity = 28%.
- * Dose rate through drill string was 600 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables.
- * Extruded sample and performed photography.

Sample information:

- No drainable liquid. Extruded approximately 11 inches of solids. The solids were grey in color and the texture resembled a moist saltcake.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8541 (250 mL jar size)
 -286.1 gram net weight

Notes:

- * Collected 286.1 grams of solids. Dose rate through the drill string was 600 mR/hr.

BY-106 Core 121 Segment #7 Riser #5

Date: December 21, 1995
 Sample number: 95-315
 Labcore # : S95T003991
 Cask serial #: 24-G
 Logbook # : WHC-N-996
 Sampler serial #: 95-150

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.6 degrees F. Humidity = 28%.
- * Dose rate through drill string was 700 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * No drainable liquid. Extruded approximately 9 inches of solids. The sample was grey in color and the texture resembled a damp, grainy saltcake. The entire sample was collected as the upper half segment.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8544 (250 ml jar size)
 -234.9 gram net weight

Notes:

- * Collected 234.9 grams of solids. Dose rate through the drill string was 700 mR/hr.

WHC-SD-WM-DP-103, REV. 1
BY-106 Core 121 Segment #8 Riser #5

Date: December 21, 1995
Sample number: 95-316
Labcore # : S95T003992
Cask serial #: 1033
Logbook # : WHC-N-996
Sampler serial #: 95-141

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.6 degrees F. Humidity = 28%.
- * Dose rate through drill string was 1.2 R/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * No drainable liquid. Extruded approximately 16 inches of solids.
The first 2 inches were a very wet, off white colored saltcake.
The remaining 14 inches were medium grey saltcake that were not as moist.

Subsample information:

- * Subsampled Solids: Upper half
-Jar # 8552 (250 mL jar size)
-261.8 gram net weight
- * Subsampled Solids: Lower half
-Jar # 8535 (250 mL jar size)
-88.4 gram net weight

Notes:

- * Collected 350.2 grams of solids. Dose rate through the drill string was 1.2 R/hr.

BY-106 Core 121 Segment #9 Riser #5

Date: December 21, 1995
 Sample number: 95-317
 Labcore # : S95T003993
 Cask serial #: C-1038
 Logbook # : WHC-N-996
 Sampler serial #: 95-144

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 77.6 degrees F. Humidity = 28%.
- * Dose rate through drill string was 500 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * No drainable liquid. Extruded approximately 1 inch of solids. The solids were dark grey in color and the texture resembled a granular, damp, saltcake.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8593 (125 mL jar size)
 -29.5 gram net weight

Notes:

- * Collected 29.5 grams of solids. Dose rate through the drill string was 500 mR/hr.

BY-106 Core 121 Segment #10 Riser #5

Date: January 5, 1996
Sample number: 95-318
Labcore #: S95T004143
Cask serial #: C-1052
Logbook #: WHC-N-996
Sampler serial #: 95-111

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 78.1 degrees F. Humidity = 20%.
- * Dose rate through drill string was 350 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- No drainable liquid. Extruded approximately 7 inches of solids. The solids ranged from medium gray to dark gray in color and the texture resembled a damp saltcake.

Subsample information:

- * Subsampled Solids: Upper half
-Jar # 8833 (250 mL jar size)
-158.6 gram net weight

Notes:

- * Collected 158.6 grams of solids. Dose rate through the drill string was 350 mR/hr.

WHC-SD-WM-DP-103, REV. 1
BY-106 Core 121 Segment #10A Riser #5

Date: January 5, 1996
Sample number: 95-318A
Labcore # : S95T004144
Cask serial #: C-1029
Logbook # : WHC-N-996
Sampler serial #: 95-153

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 78.2 degrees F. Humidity = 25%.
- * Dose rate through drill string was 45 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * No drainable liquid. Extruded approximately 1/2 inch of solids. The solids were dark gray in color and the texture resembled a damp saltcake.

Subsample information:

- * Subsampled Solids: Upper half
-Jar # 8957 (60 mL jar size)
-4.1 gram net weight

Notes:

- * Collected 4.1 grams of solids. Dose rate through the drill string was 45 mR/hr.

BY-106 Core 121 Segment #10B Riser #5

Date: January 16, 1996
 Sample number: 95-318B
 Labcore #: S96T000086
 Cask serial #: 20-G
 Logbook #: WHC-N-996
 Sampler serial #: 95-100

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 76.7 degrees F. Humidity = 28%.
- * Dose rate through drill string was 1.6 R/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * Collected approximately 190 mL of drainable liquid. The liquid was light green in color and opaque. Extruded approximately 7 inches of solids. The upper half was light gray in color and the lower half was light green. The texture of the solids resembled a wet saltcake. The solids were subsampled in two jars.

Subsample information:

- * Subsampled Solids: Upper half
 -Jar # 8859 (250 mL jar size)
 -161.1 gram net weight
- * Subsampled Solids: Lower half
 -Jar # 8597 (125 mL jar size)
 -46.8 gram net weight
- * Subsampled Liquids: Drainable liquid
 -Jar # 8858 (250 mL jar size)
 -241.5 gram net weight

Notes:

- * Collected 449.4 grams of liquid and solids. Dose rate through the drill string was 1.6 R/hr.

BY-106 Core 121 Field Blank Riser #5

Date: January 16, 1996
 Sample number: Field Blank
 Labcore #: S96T000087
 Cask serial #: 16-G
 Logbook #: WHC-N-996
 Sampler serial #: 95-039

Notes:

- * Check weights: 20 gms = 19.97 grams 500 gms = 499.39
- * Hotcell Temp was 76.7 degrees F. Humidity = 28%.
- * Dose rate through drill string was <0.5 mR/hr.
- * Liner liquid: None observed.
- * Valve closed before and after cutting cables
- * Extruded and performed photography

Sample information:

- * Collected approximately 220 mL of drainable liquid. The liquid was clear and colorless. No solids were present. The liquid was subsampled in one jar.

Subsample information:

- * Subsampled Liquid: Drainable liquid
 -Jar # 8857 (250 mL jar size)
 -202.1 gram net weight

Notes:

- * Collected 202.1 grams of liquid. Dose rate through the drill string was <0.5 mR/hr.

WHC-SD-WM-DP-103, REV. 1

ATTACHMENT 3
PHOTOGRAPHS

WHC-SD-WM-DP-103, REV. 1

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BY-106, CORE 64, SEGMENT # 1

BY-106, CORE 64, SEGMENT # 2

BY-106, CORE 64, SEGMENT # 3

BY-106, CORE 64, SEGMENT # 4

BY-106, CORE 64, SEGMENT # 5

BY-106, CORE 64, SEGMENT # 6

BY-106 CORE 64 SEGMENT #7

BY-106, CORE 64, SEGMENT # 8

BY-106, CORE 64, SEGMENT # 9

Control Patches

BY-106, CORE 64, FIELD BLANK

Box 665-103-2

BY-106, CORE 65, SEGMENT # 4

BY-106, CORE 65, SEGMENT # 5

BY-106, CORE 65, SEGMENT # 6

Figure 1-1

BY-106 Core 121 Segment #1

12-20-85

BY-106 Core 121 Segment #2

12-24-75

B1-106 Core 121 Segment #3

12-2-95

BY-106 Core 121 Segment #4

12-20-95

BY-106 Core 121 Segment #5

10-20-83-

BY-106 Core 121 Segment #6

12-30-75

B4-106 Core 121 Segment #7

12-21-95

BY-106 Core 121 Segment #8

12-21-95

WHC-SD-WM-DP-103, REV. 1

252

BY-106 Core 131 Segment #9

12-21-95

BY-106 Core 121 Segment #10

1-5-96

BY-106 Core 121 Segment #10A

1-5-96

WHC-SD-WM-DP-103, REV. 1

092

BY-106 Core 121 Segment 10B

1-16-96

WHC-SD-WM-DP-103, REV. 1

BY-106 Core 121 Field Blank

1-16-96

WHC-SD-WM-DP-103, REV. 1

WHC-SD-WM-DP-103, REV. 1

ATTACHMENT 4
LABCORE SAMPLE NUMBERS

222-S Analytical Laboratory
P.O. BOX 1970 T6-06, Richland, WA 99352
PHONE: (509) 373-4225/FAX: (509) 373-0545

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

WHC-SD-WM-DP-103, REV. 1
Customer Code: TCP
PO#: MDR21
Group#: 94000019
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

The following samples were received from you on 11/21/94. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using 222-S Analytical Laboratory.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S94T000321	BY106 SEG3	DELETED SAMPLE #	Liquid, or handle as liquid	12/01/94
S94T000355	BY106 SEG6	DRLIQ FIL V6270	Liquid, or handle as liquid	12/06/94
		@AM24101 @GEA-01 @IC-01 @ICP-D01 @PU23901		
		@SR90-01 DSC-01 DSC-02 OH-01 PH-01 TGA-0		
		TIC-01 TOC-01		
S94T000366	BY106 C64	FIELD BLANK	Liquid, or handle as liquid	12/21/94
		DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 FSLDWT01		
		LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT		
S94T000371	BY106 SEG10	DRLIQ FIL V6260	Liquid, or handle as liquid	12/20/94
		@AM24101 @GEA-01 @IC-01 @ICP-D01 @PU23901		
		@SR90-01 DSC-01 DSC-02 OH-01 PH-01 SPG-0		
		TGA-01 TIC-01 TOC-01		
S94T000388	BY106 SEG10	DRLIQ DIR V6260	Liquid, or handle as liquid	12/20/94
		FILTER01 ORGVOL01 V%SLD-01		
S94T000389	BY106 FIELD-BLANK	DRLIQ V6268	Liquid, or handle as liquid	12/28/94
		@AM24101 @GEA-01 @IC-01 @PU23901 @SR90-01		
		DSC-01 OH-01 PH-01 SPG-01 TGA-01 TIC-0		
		TOC-01		
S94T000398	BY106 SEG6	DRLIQ DIR V6270	Liquid, or handle as liquid	12/06/94
		FILTER01 ORGVOL01 V%SLD-01		
S95T000003	BY106 SEG3	DRLIQ DIR V6271	Liquid, or handle as liquid	12/06/94
		FILTER01 ORGVOL01 V%SLD-01		
S95T000004	BY106 SEG3	DRLIQ FIL V6271	Liquid, or handle as liquid	12/06/94
		@AM24101 @GEA-01 @IC-01 @ICP-D01 @PU23901		
		@SR90-01 DSC-01 DSC-02 OH-01 PH-01 SPG-0		
		TGA-01 TIC-01 TOC-01		
S95T000116	BY106 FIELD-BLANK	DRLIQ V6397	Liquid, or handle as liquid	02/07/95
		@IC-01 @ICP-D01		
S95T000228	BY106 SEG3	DRLIQ FILTER V6630	Liquid, or handle as liquid	03/02/95
		@IC-01 @ICP-D01 FILTER01 OH-01 TOC-01		

Tank Characterization Program
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Customer Code: TCP
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Group#: 94000019
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000304	BY106 SEG3	DRLIQ DIR V6630 HOLDPJC	Liquid, or handle as liquid	03/09/95
S94T000235	BY106 C64 SEG 1	DLIQVOL1 DLIQWT01 NOTEBOOK ORGVOL01	Solid, or handle as if solid EST.G/ML EXTRUD01	11/17/94
S94T000236	BY106 C64 SEG 2	DLIQVOL1 DLIQWT01 NOTEBOOK ORGVOL01	Solid, or handle as if solid EST.G/ML EXTRUD01	11/21/94
S94T000285	BY106 C64 SEG 3	DLIQVOL1 DLIQWT01 NOTEBOOK ORGVOL01	Solid, or handle as if solid EST.G/ML EXTRUD01	11/21/94
S94T000286	BY106 C64 SEG 4	DLIQVOL1 DLIQWT01 NOTEBOOK ORGVOL01	Solid, or handle as if solid EST.G/ML EXTRUD01	11/23/94
S94T000305	BY106 SEG1 UH	DIR V7008 @TICTOC1 CN-01	Solid, or handle as if solid DSC-01 TGA-01	11/30/94
S94T000306	BY106 SEG1 UH	FUS V7008 @GEA-01 @SR90-01	Solid, or handle as if solid FUSION01	11/30/94
S94T000307	BY106 SEG1 UH	WATER V7008 @GEA-01 H2ORAD01	Solid, or handle as if solid	11/30/94
S94T000308	BY106 SEG2 UH	DIR V7002 @TICTOC1 CN-01	Solid, or handle as if solid DSC-01 DSC-02	11/30/94
S94T000309	BY106 SEG3 UH	DIR V7009 @TICTOC1 CN-01	Solid, or handle as if solid DSC-01 DSC-02	12/01/94
S94T000310	BY106 SEG4 UH	DIR V7001 @TICTOC1 CN-01	Solid, or handle as if solid DSC-01 DSC-02	12/02/94
S94T000311	BY106 SEG4 LH	DIR V6198 @TICTOC1 CN-01	Solid, or handle as if solid DSC-01 DSC-02	12/02/94
S94T000312	BY106 SEG2 UH	FUS V7002 @GEA-01 @SR90-01	Solid, or handle as if solid FUSION01	11/30/94
S94T000314	BY106 SEG3 UH	FUS V7009 @GEA-01 @SR90-01	Solid, or handle as if solid FUSION01	12/01/94
S94T000315	BY106 SEG4 UH	FUS V7001 @GEA-01 @SR90-01	Solid, or handle as if solid FUSION01	12/02/94
S94T000316	BY106 SEG4 LH	FUS V6198 @GEA-01 @SR90-01	Solid, or handle as if solid FUSION01	12/02/94
S94T000317	BY106 SEG2 UH	WATER V7002 @GEA-01 H2ORAD01	Solid, or handle as if solid	11/30/94
S94T000318	BY106 SEG3 UH	WATER V7009 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/01/94
S94T000319	BY106 SEG4 UH	WATER V7001 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/02/94

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

WHC-SD-WM-DP-103, REV. 1
Customer Code: TCP
PO#: MDR21
Group#: 94000019
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S94T000320	BY106 SEG4 LH	WATER V6198 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/02/94
S94T000322	BY106 C64 SEG 5	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	12/02/94
S94T000323	BY106 C64 SEG 6	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	12/02/94
S94T000324	BY106 C64 SEG 7	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	12/05/94
S94T000325	BY106 C64 SEG 8	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	12/05/94
S94T000326	BY106 SEG5 UH	DIR V6199 @TICTOC1 CN-01 DSC-01 TGA-01	Solid, or handle as if solid	12/06/94
S94T000327	BY106 SEG6 DELETED SAMPLE #		Solid, or handle as if solid	12/06/94
S94T000328	BY106 C64 SEG 9	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	12/05/94
S94T000342	BY106 SEG6 UH	DIR V7000 @TICTOC1 CN-01 DSC-01 TGA-01	Solid, or handle as if solid	12/07/94
S94T000343	BY106 SEG8 UH	DIR V7012 @TICTOC1 CN-01 DSC-01 TGA-01	Solid, or handle as if solid	12/08/94
S94T000344	BY106 SEG8 LH	DIR V7011 @TICTOC1 CN-01 DSC-01 TGA-01	Solid, or handle as if solid	12/08/94
S94T000345	BY106 SEG8 SLURRY	DIR V7013 @TICTOC1 CN-01 DSC-01 DSC-02 TGA-01	Solid, or handle as if solid	12/08/94
S94T000346	BY106 SEG9 UH	DIR V7017 @TICTOC1 CN-01 DSC-01 HOMGNZ01 TGA-01	Solid, or handle as if solid	12/09/94
S94T000347	BY106 SEG8 UH	FUS V7012 @GEA-01 @SR90-01 FUSION01	Solid, or handle as if solid	12/08/94
S94T000348	BY106 SEG8 LH	FUS V7011 @GEA-01 @SR90-01 FUSION01	Solid, or handle as if solid	12/08/94
S94T000349	BY106 SEG8 SLURRY	FUS V7013 @GEA-01 @SR90-01 FUSION01	Solid, or handle as if solid	12/08/94
S94T000350	BY106 SEG9 UH	FUS V7017 @GEA-01 @SR90-01 FUSION01	Solid, or handle as if solid	12/09/94
S94T000351	BY106 SEG8 UH	WATER V7012 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/08/94

Tank Characterization Program
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WHC-SD-WM-DP-103, REV. 1
Customer Code: TCP
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Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S94T000352	BY106 SEG8 LH WATER V7011	@GEA-01 H2ORAD01	Solid, or handle as if solid	12/08/94
S94T000353	BY106 SEG8 SLURRY WATER V7013	@GEA-01 H2ORAD01	Solid, or handle as if solid	12/08/94
S94T000354	BY106 SEG9 UH WATER V7017	@GEA-01 H2ORAD01	Solid, or handle as if solid	12/09/94
S94T000365	BY106 C64 SEG 10	DLIQVOL1 DLIQWT01	Solid, or handle as if solid	12/20/94
		NOTEBOOK ORGVOL01	EST.G/ML EXTRUD01 LLIQWT01	
			PCREVIEW SLDVOL01 SLDWT-01	
S94T000372	BY106 SEG10 UH DIR V6263	@TICTOC1 CN-01	Solid, or handle as if solid	12/20/94
S94T000373	BY106 SEG10 LH DIR V6261	@TICTOC1 CN-01	Solid, or handle as if solid	12/20/94
S94T000374	BY106 SEG10 UH FUS V6263	@GEA-01 @SR90-01	Solid, or handle as if solid	12/21/94
			FUSION01	
S94T000375	BY106 SEG10 LH FUS V6261	@GEA-01 @SR90-01	Solid, or handle as if solid	12/21/94
			FUSION01	
S94T000376	BY106 SEG10 UH WATER V6263	@GEA-01 H2ORAD01	Solid, or handle as if solid	12/21/94
S94T000377	BY106 SEG10 LH WATER V6261	@GEA-01 H2ORAD01	Solid, or handle as if solid	12/21/94
S94T000378	BY106 C64 SEG 11	DLIQVOL1 DLIQWT01	Solid, or handle as if solid	12/21/94
		NOTEBOOK ORGVOL01	EST.G/ML EXTRUD01 LLIQWT01	
			PCREVIEW SLDVOL01 SLDWT-01	
S94T000379	BY106 C64 SEG 12	DLIQVOL1 DLIQWT01	Solid, or handle as if solid	12/21/94
		NOTEBOOK ORGVOL01	EST.G/ML EXTRUD01 LLIQWT01	
			PCREVIEW SLDVOL01 SLDWT-01	
S94T000380	BY106 C64 SEG 13	DLIQVOL1 DLIQWT01	Solid, or handle as if solid	12/21/94
		NOTEBOOK ORGVOL01	EST.G/ML EXTRUD01 LLIQWT01	
			PCREVIEW SLDVOL01 SLDWT-01	
S94T000381	BY106 SEG11 UH DIR V7018	@TICTOC1 CN-01	Solid, or handle as if solid	12/27/94
S94T000390	BY106 SEG12 UH DIR V6267	@TICTOC1 CN-01	Solid, or handle as if solid	12/28/94
S94T000391	BY106 SEG13 UH DIR V6258	@TICTOC1 CN-01	Solid, or handle as if solid	12/28/94
S94T000392	BY106 SEG11 UH FUS V7018	@GEA-01 @SR90-01	Solid, or handle as if solid	12/27/94
			FUSION01	
S94T000393	BY106 SEG12 UH FUS V6267	@GEA-01 @SR90-01	Solid, or handle as if solid	12/28/94
			FUSION01	
S94T000394	BY106 SEG13 UH FUS V6258	@GEA-01 @SR90-01	Solid, or handle as if solid	12/28/94
			FUSION01	

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

WHC-SD-WM-DP-103, REV. 1
Customer Code: TCP
PO#: MDR21
Group#: 94000019
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S94T000395	BY106 SEG11	UH WATER V7018 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/27/94
S94T000396	BY106 SEG12	UH WATER V6267 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/28/94
S94T000397	BY106 SEG13	UH WATER V6258 @GEA-01 H2ORAD01	Solid, or handle as if solid	12/28/94

Test Acronym Description

Test Acronym	Description
@AM24101	Am241 by Extraction
@GEA-01	GEA for Co60, Cs137
@IC-01	Anions by IC-Dionex 4000i/4500
@ICP-D01	ICP (Acid Added to Liquid)
@PU23901	Pu239 by TRU-SPEC Resin
@SR90-01	Sr-89/90 High Level
@TICTOC1	TIC/TOC Acid Persulfate
CN-01	Cyanide EDTA Addition
DLIQVOL1	Drainable Liquid Recovrd - Vol
DLIQWT01	Drainable Liquid Recoverd - Wt
DSC-01	DSC Exotherm using Mettler
DSC-02	DSC Exotherm Dry Calculated
EST.G/ML	Estimated g/mL - Calculated
EXTRUD01	Extrusion of a Segment
FILTER01	Filter Liquid / hotcell
FSLDWT01	Weight of Solids - Filtered
FUSION01	Fusion with KOH
H2ORAD01	Water Digest-ACID Alg. Radchem
HOLDPJC	Hold for Proj Coord Attention
HOMGNZ01	Homogenize Sample
LLIQWT01	Liner Liquid Recoverd - Weight
NOTEBOOK	Notebook with source data
OH-01	OH- by Pot. Titration
ORGVOL01	Organic Vol Present / hotcell
PCREVIEW	Review by Project Coordinator
PH-01	pH Direct
SLDVOL01	Solids Recovered - Volume
SLDWT-01	Solids Recovered - Weight
SPG-01	Specific Gravity
TGA-01	% Water by TGA using Mettler
TIC-01	Tot. Inorg. Carbon by Coul.
TOC-01	Tot. Organic Carbon by Coul.
V%SLD-01	Volume % Solids

ACKNOWLEDGMENT OF SAMPLES RECEIVED

WHC-SD-WM-DP-103, REV. 1

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

Customer Code: TCP
PO#: MDR21
Group#: 95000003
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

The following samples were received from you on 01/05/95. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using 222-S Analytical Laboratory.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000019	BY106 C64	SEG3 LIQ ARCH V7032 ARCHIVE	Liquid, or handle as liquid	01/04/95
S95T000020	BY106 C64	SEG10 LIQ ARCH V7045 ARCHIVE	Liquid, or handle as liquid	12/28/94
S95T000181	BY106 C65	SEG1 LIQ ARCH VXXXX ARCHIVE HOLDPJC	Liquid, or handle as liquid	02/22/95
S95T000182	BY106 C65	SEG2 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000183	BY106 C65	SEG3 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000184	BY106 C65	SEG4 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000185	BY106 C65	SEG5 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000186	BY106 C65	SEG6 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000187	BY106 C65	SEG7 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000188	BY106 C65	SEG8 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000189	BY106 C65	SEG10 LIQ ARCH VXXXX ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000336	BY106 C65	SEG11 LIQ ARCH V6423 ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000337	BY106 C65	SEG12 LIQ ARCH V6398 ARCHIVE	Liquid, or handle as liquid	02/22/95
S95T000005	BY106 C64	SEG1 UH ARCH J7025 ARCHIVE	Solid, or handle as if solid	11/28/94
S95T000006	BY106 C64	SEG2 UH ARCH V7033 ARCHIVE	Solid, or handle as if solid	11/28/94

Tank Characterization Program
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 Richland, WA 99352
 Attn: Dave Bratzel

Customer Code: TCP
 PO#: MDR21
 Group#: 95000003
 Project#: BY-106
 Proj Mgr: Kevin Bell
 Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000007	BY106 C64 SEG3	UH ARCH V7026 ARCHIVE	Solid, or handle as if solid	12/05/94
S95T000008	BY106 C64 SEG4	UH ARCH V7031 ARCHIVE	Solid, or handle as if solid	12/05/94
S95T000009	BY106 C64 SEG4	LH ARCH V7030 ARCHIVE	Solid, or handle as if solid	12/05/94
S95T000010	BY106 C64 SEG8	UH ARCH V7027 ARCHIVE	Solid, or handle as if solid	12/13/94
S95T000011	BY106 C64 SEG8	LH ARCH V7040 ARCHIVE	Solid, or handle as if solid	12/13/94
S95T000012	BY106 C64 SEG8	SLRY ARCH V7043 ARCHIVE	Solid, or handle as if solid	12/13/94
S95T000013	BY106 C64 SEG9	UH ARCH V7041 ARCHIVE	Solid, or handle as if solid	12/16/94
S95T000014	BY106 C64 SEG10	UH ARCH V7046 ARCHIVE	Solid, or handle as if solid	12/28/94
S95T000015	BY106 C64 SEG10	LH ARCH V7047 ARCHIVE	Solid, or handle as if solid	12/28/94
S95T000016	BY106 C64 SEG11	UH ARCH V7042 ARCHIVE	Solid, or handle as if solid	11/28/94
S95T000017	BY106 C64 SEG12	UH ARCH V6381 ARCHIVE	Solid, or handle as if solid	12/29/94
S95T000018	BY106 C64 SEG13	UH ARCH V7048 ARCHIVE	Solid, or handle as if solid	12/29/94
S95T000021	BY106 C64 SEG3	ARCH V6135-1 ARCHIVE	Solid, or handle as if solid	01/04/95
S95T000190	BY106 C65 SEG1	UH ARCH V6388 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000191	BY106 C65 SEG2	UH ARCH V6390 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000192	BY106 C65 SEG3	UH ARCH V6400 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000193	BY106 C65 SEG4	UH ARCH V7162 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000194	BY106 C65 SEG5	UH ARCH V7163 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000195	BY106 C65 SEG6	UH ARCH V6385 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000196	BY106 C65 SEG7	UH ARCH V6386 ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000197	BY106 C65 SEG8	UH ARCH V7164 ARCHIVE	Solid, or handle as if solid	02/22/95

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

WHC-SD-WM-DP-103, REV. 1
Customer Code: TCP
PO#: MDR21
Group#: 95000003
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000198	BY106 C65 SEG9 UH ARCH V6404	ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000199	BY106 C65 SEG10 UH ARCH V7165	ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000338	BY106 C65 SEG13 STK ARCH V6402	ARCHIVE	Solid, or handle as if solid	02/22/95
S95T000339	BY106 C65 SEG13 SLG ARCH V6403	ARCHIVE	Solid, or handle as if solid	02/22/95

Test Acronym Description

Test Acronym	Description
ARCHIVE	Archive an aliquot of sample
HOLDPJC	Hold for Proj Coord Attention

222-S Analytical Laboratory
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PHONE: (509) 373-4225/FAX: (509) 373-0545

ACKNOWLEDGMENT OF SAMPLES RECEIVED
WHC-SD-WM-DP-103, REV. 1

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

Customer Code: TCP
PO#: MDR21
Group#: 95000007
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

The following samples were received from you on 01/20/95. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using 222-S Analytical Laboratory.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000089	BY106 SEG4	DRLIQ J6144 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000090	BY106 SEG5	DRLIQ J6145 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000108	BY106 SEG12	DRLIQ J6143 SUBSMPL1	Liquid, or handle as liquid	02/06/95
S95T000109	BY106 SEG12	DRLIQ DIR V6506 @ICP-D03 DSC-01	Liquid, or handle as liquid	02/06/95
S95T000129	BY106 SEG1	DRLIQ J6547 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000130	BY106 SEG1	DRLIQ J6469 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000131	BY106 SEG2	DRLIQ J6141 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000132	BY106 SEG2	DRLIQ J6470 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000133	BY106 SEG3	DRLIQ J6142 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000134	BY106 SEG3	DRLIQ J6474 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000135	BY106 SEG4	DRLIQ J6368 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000136	BY106 SEG5	DRLIQ J6369 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000137	BY106 SEG6	DRLIQ J6537 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000138	BY106 SEG6	DRLIQ J6467 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000139	BY106 SEG7	DRLIQ J6542 HOLDPJC	Liquid, or handle as liquid	01/26/95

Tank Characterization Program
PO Box 1970
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Customer Code: TCP
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Group#: 95000007
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000140	BY106 SEG7	DRLIQ J6468 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000141	BY106 SEG8	DRLIQ J6372 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000142	BY106 SEG8	DRLIQ J6465 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000143	BY106 SEG10	DRLIQ J6538 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000144	BY106 SEG10	DRLIQ J6473 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000145	BY106 SEG11	DRLIQ J6536 HOLDPJC	Liquid, or handle as liquid	01/26/95
S95T000229	BY106 SEG11	DRLIQ DIR V6631 DSC-01	Liquid, or handle as liquid	03/02/95
S95T000035	BY106 C65 SEG 1	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/18/95
S95T000036	BY106 C65 SEG 2	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/19/95
S95T000037	BY106 C65 SEG 3	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/19/95
S95T000039	BY106 C65 SEG 4	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/20/95
S95T000040	BY106 C65 SEG 5	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/20/95
S95T000041	BY106 C65 SEG 5A	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/20/95
S95T000042	BY106 C65 SEG 6	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/20/95
S95T000043	BY106 C65 SEG 7	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/20/95
S95T000044	BY106 C65 SEG 8	DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 PCREVIEW SLDVOL01 SLDWT-01	Solid, or handle as if solid	01/20/95

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

Customer Code: TCP
PO#: MDR21
Group#: 95000007
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000078	BY106 C65 SEG 9		Solid, or handle as if solid	01/23/95
		DLIQVOL1 DLIQWT01	EST.G/ML EXTRUD01	LLIQWT01
		NOTEBOOK ORGVOL01	PCREVIEW SLDVOL01	SLDWT-01
S95T000079	BY106 C65 SEG 10		Solid, or handle as if solid	01/24/95
		DLIQVOL1 DLIQWT01	EST.G/ML EXTRUD01	LLIQWT01
		NOTEBOOK ORGVOL01	PCREVIEW SLDVOL01	SLDWT-01
S95T000080	BY106 C65 SEG 11		Solid, or handle as if solid	01/24/95
		DLIQVOL1 DLIQWT01	EST.G/ML EXTRUD01	LLIQWT01
		NOTEBOOK ORGVOL01	PCREVIEW SLDVOL01	SLDWT-01
S95T000081	BY106 C65 SEG 12		Solid, or handle as if solid	01/24/95
		DLIQVOL1 DLIQWT01	EST.G/ML EXTRUD01	LLIQWT01
		NOTEBOOK ORGVOL01	PCREVIEW SLDVOL01	SLDWT-01
S95T000082	BY106 C65 SEG 13		Solid, or handle as if solid	01/24/95
		DLIQVOL1 DLIQWT01	EST.G/ML EXTRUD01	LLIQWT01
		NOTEBOOK ORGVOL01	PCREVIEW SLDVOL01	SLDWT-01
S95T000083	BY106 SEG11 DELETE SAMPLE		Solid, or handle as if solid	01/26/95
S95T000084	BY106 SEG11 UH DIR V6488		Solid, or handle as if solid	01/26/95
	DSC-01 TGA-01			
S95T000085	BY106 SEG11 UH FUS V6488		Solid, or handle as if solid	01/26/95
	@ICP-F02 FUS-ZR01			
S95T000086	BY106 SEGX DELETED SAMPLE		Solid, or handle as if solid	01/26/95
S95T000087	BY106 SEG4 UH J6463		Solid, or handle as if solid	01/25/95
	HOLDPJC			
S95T000088	BY106 SEG5 UH J6464		Solid, or handle as if solid	01/25/95
	HOLDPJC			
S95T000096	BY106 SEG13 UH SLTCK J6472		Solid, or handle as if solid	02/06/95
	HOLDPJC HOMGNZ01			
S95T000097	BY106 SEG13 UH SLUDGE J6471		Solid, or handle as if solid	02/06/95
	HOLDPJC HOMGNZ01			
S95T000098	BY106 SEG13 UH SLTCK DIR V6507		Solid, or handle as if solid	02/06/95
	DSC-01 DSC-02 TGA-01			
S95T000099	BY106 SEG13 UH SLDGE DIR V6508		Solid, or handle as if solid	02/06/95
	@TICTOC1 CN-01 DSC-01 DSC-02 TGA-01			
S95T000100	BY106 SEG13 UH SLTCK FUS V6507		Solid, or handle as if solid	02/06/95
	@ALPHA01 @ICP-F02 FUS-ZR01			
S95T000101	BY106 SEG13 UH SLUDE FUS V6508		Solid, or handle as if solid	02/06/95
	@ALPHA01 @GEA-02 @ICP-F02 @PU23901 @SR90-01			
	FUS-ZR01			
S95T000146	BY106 SEG1 UH J6388		Solid, or handle as if solid	01/25/95
	HOLDPJC			

Tank Characterization Program
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Customer Code: TCP
PO#: MDR21
Group#: 95000007
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T000147	BY106 SEG2 UH J6390	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000148	BY106 SEG3 UH J6400	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000149	BY106 SEG5A UH J6487	Solid, or handle as if solid	01/25/95	
S95T000150	BY106 SEG6 UH J6385	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000151	BY106 SEG7 UH J6386	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000152	BY106 SEG8 UH J6466	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000153	BY106 SEG9 UH J6404	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000154	BY106 SEG10 UH J6475	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000155	BY106 SEG11 UH J6488	Solid, or handle as if solid	01/25/95	
	HOLDPJC			
S95T000230	BY106 SEG11 DELETED SAMPLE	Solid, or handle as if solid	03/02/95	
S95T000231	BY106 SEG11 DELETED SAMPLE	Solid, or handle as if solid	03/02/95	
S95T000322	BY106 SEG13 UH SLTCK FUS V6507	Solid, or handle as if solid	03/14/95	
	@ICP-F01 FUSION01			
S95T000734	BY106 SEG13 UH SLDGE DIR V6508	Solid, or handle as if solid	04/14/95	
	@TICTOC1			

Test Acronym Description

Test Acronym	Description
@ALPHA01	Alpha of Digested Solid
@GEA-02	GEA:Cs137,Co60,Eu154-155,Am241
@ICP-D03	ICP (Acid Added to Liquid) Li
@ICP-F01	ICP (Fusion Digest) All Metals
@ICP-F02	ICP (Fusion Digest)
@PU23901	Pu239 by TRU-SPEC Resin
@SR90-01	Sr-89/90 High Level
@TICTOC1	TIC/TOC Acid Persulfate
CN-01	Cyanide EDTA Addition
DLIQVOL1	Drainable Liquid Recovrd - Vol
DLIQWT01	Drainable Liquid Recoverd - Wt
DSC-01	DSC Exotherm using Mettler
DSC-02	DSC Exotherm Dry Calculated
EST.G/ML	Estimated g/mL - Calculated

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: Dave Bratzel

Customer Code: TCP
PO#: MDR21
Group#: 95000007
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Test Acronym Description

Test Acronym	Description
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EXTRUD01	Extrusion of a Segment
FUS-ZR01	Fusion (Zr Crucible) with KOH
FUSION01	Fusion with KOH
HOLDPJ01	Hold for Proj Coord Attention
HOMGNZ01	Homogenize Sample
LLIQWT01	Liner Liquid Recoverd - Weight
NOTEBOOK	Notebook with source data
ORGVOL01	Organic Vol Present / hotcell
PCREVIEW	Review by Project Coordinator
SLDVOL01	Solids Recovered - Volume
SLDWT-01	Solids Recovered - Weight
SUBSMPL1	Make a Subsample
TGA-01	% Water by TGA using Mettler

222-S Analytical Laboratory
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ACKNOWLEDGMENT OF SAMPLES RECEIVED

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: John Kristofzski

WHC-SD-WM-DP-103, REV. 1

Customer Code: TCP
Group#: 95000229
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

The following samples were received from you on 12/18/95. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using 222-S Analytical Laboratory.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S96T000257	BY106 C121	S10B DRLIQ J8858 SUBSMPL1	Liquid, or handle as liquid	12/18/95
S96T000258	BY106 C121	S10B DRLIQ FIL @ALPHA01 @IC-01 @IC2-01 @ICP-D01 @TICTOC1 CN-01 CN-03 DOSE-02 DSC-01 FILTER02 SAMPA SPG-01 TGA-01	Liquid, or handle as liquid	12/18/95
S96T000273	BY106 C121	S10B LIQ DIR V9107 DOSE-01 SAMPAMT1	Liquid, or handle as liquid	12/18/95
S96T000274	BY106 C121	S10B LIQ ARCH V8422 ARCHIV01	Liquid, or handle as liquid	12/18/95
S96T000278	BY106 C121	FB DRLIQ J8857 SUBSMPL1	Liquid, or handle as liquid	12/18/95
S96T000279	BY106 C121	FB LIQ DIR V8420 @IC-01 @ICP-D01 DOSE-01 SAMPAMT1 TGA-03 TOC-02	Liquid, or handle as liquid	12/18/95
S95T003985	BY-106 C121	SEG1 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/15/95
S95T003986	BY-106 C121	SEG2 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/15/95
S95T003987	BY-106 C121	SEG3 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/15/95
S95T003988	BY-106 C121	SEG4 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/15/95
S95T003989	BY-106 C121	SEG5 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/16/95

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: John Kristofzski

Customer Code: TCP
Group#: 95000229
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T003990	BY-106 C121	SEG6 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/16/95
S95T003991	BY-106 C121	SEG7 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/16/95
S95T003992	BY-106 C121	SEG8 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/18/95
S95T003993	BY-106 C121	SEG9 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/18/95
S95T004067	BY106 C121	S1 UH SLTCK J8583 HOMGNZ01	Solid, or handle as if solid	12/18/95
S95T004143	BY-106 C121	SEG10 EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/18/95
S95T004144	BY-106 C121	SEG10A EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 EST.G/ML EXTRUD01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid	12/18/95
S95T004145	BY106 C121	S2 UH SLTCK J8530 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004146	BY106 C121	S3 UH SLTCK J8531 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004147	BY106 C121	S3 LH SLTCK J8524 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004148	BY106 C121	S4 UH SLTCK J8533 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004149	BY106 C121	S4 LH SLTCK J8590 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004150	BY106 C121	S5 UH SLTCK J8536 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004151	BY106 C121	S6 UH SLTCK J8541 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/20/95
S95T004152	BY106 C121	S7 UH SLTCK J8544 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/21/95
S95T004153	BY106 C121	S8 UH SLTCK J8552 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/21/95
S95T004154	BY106 C121	S8 LH SLTCK J8535 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/21/95
S95T004155	BY106 C121	S9 UH SLTCK J8593 HOMGNZ01	Solid, or handle as if solid	12/20/95

Tank Characterization Program
PO Box 1970
Richland, WA 99352
Attn: John Kristofzski

Customer Code: TCP
Group#: 95000229
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T004156	BY106 C121 S2	UH ARCH J8980 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004157	BY106 C121 S3	UH ARCH J9003 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004158	BY106 C121 S3	LH ARCH J9002 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004159	BY106 C121 S4	UH ARCH J9004 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004160	BY106 C121 S4	LH ARCH J9005 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004161	BY106 C121 S5	UH ARCH J9006 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004162	BY106 C121 S6	UH ARCH J9007 ARCHIV01	Solid, or handle as if solid	12/20/95
S95T004163	BY106 C121 S7	UH ARCH J9022 ARCHIV01	Solid, or handle as if solid	12/21/95
S95T004164	BY106 C121 S8	UH ARCH J9023 ARCHIV01	Solid, or handle as if solid	12/21/95
S95T004165	BY106 C121 S8	LH ARCH J9024 ARCHIV01	Solid, or handle as if solid	12/21/95
S95T004166	BY106 C121 S9	UH ARCH J8414 ARCHIV01	Solid, or handle as if solid	12/21/95
S95T004167	BY106 C121 S1	UH DIR V8994 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-01 SAMPAMT1	12/20/95
S95T004168	BY106 C121 S2	UH DIR V8995 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-01 SAMPAMT1	12/20/95
S95T004169	BY106 C121 S3	UH DIR V9042 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/20/95
S95T004170	BY106 C121 S3	LH DIR V9030 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/20/95
S95T004171	BY106 C121 S4	UH DIR V8997 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/20/95
S95T004172	BY106 C121 S4	LH DIR V8996 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/20/95
S95T004173	BY106 C121 S5	UH DIR V8998 @TICTOC1 CN-01 SAMPAMT1 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 DSC-03	12/20/95

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Customer Code: TCP
Group#: 95000229
Project#: BY-106
Proj Mgr: Kevin Bell
Phone: 373-1629

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T004174	BY106 C121	S6 UH DIR V8999 @TICTOC1 CN-01 SAMPAMT1 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 DSC-03	12/20/95
S95T004175	BY106 C121	S7 UH DIR V9056 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/21/95
S95T004176	BY106 C121	S8 UH DIR V9060 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/21/95
S95T004177	BY106 C121	S8 LH DIR V9058 @TICTOC1 CN-01 TGA-01 TGA-03	Solid, or handle as if solid DOSE-01 DSC-03 SAMPAMT1	12/21/95
S95T004178	BY106 C121	S9 UH DIR V9059 @TICTOC1 CN-01 SAMPAMT1 TGA-01	Solid, or handle as if solid DOSE-01 DSC-01 DSC-03	12/21/95
S95T004179	BY106 C121	S1 UH FUS @ALPHA01 @GEA-02 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004180	BY106 C121	S2 UH FUS @ALPHA01 @GEA-02 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004181	BY106 C121	S3 UH FUS @ALPHA01 @GEA-02 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004182	BY106 C121	S3 LH FUS @ALPHA01 @GEA-02 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004183	BY106 C121	S4 UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004184	BY106 C121	S4 LH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004185	BY106 C121	S5 UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004186	BY106 C121	S6 UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/20/95
S95T004187	BY106 C121	S7 UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/21/95

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Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T004188	BY106 C121 S8	UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/21/95
S95T004189	BY106 C121 S8	LH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/21/95
S95T004190	BY106 C121 S9	UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	12/21/95
S95T004191	BY106 C121 S2	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004192	BY106 C121 S3	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004193	BY106 C121 S3	LH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004194	BY106 C121 S4	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004195	BY106 C121 S4	LH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004196	BY106 C121 S5	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004197	BY106 C121 S6	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/20/95
S95T004198	BY106 C121 S7	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/21/95
S95T004199	BY106 C121 S8	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/21/95
S95T004200	BY106 C121 S8	LH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/21/95
S95T004201	BY106 C121 S9	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	12/21/95
S95T004202	BY106 C121 S1	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004203	BY106 C121 S2	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004204	BY106 C121 S3	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004205	BY106 C121 S3	LH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004206	BY106 C121 S4	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95

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Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S95T004207	BY106 C121 S4	LH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004208	BY106 C121 S5	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004209	BY106 C121 S6	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/20/95
S95T004210	BY106 C121 S7	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/21/95
S95T004211	BY106 C121 S8	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/21/95
S95T004212	BY106 C121 S8	LH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/21/95
S95T004213	BY106 C121 S9	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	12/21/95
S96T000086	BY-106 C121	SEG10B EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid EST.G/ML EXTRUD01	12/29/95
S96T000087	BY106 C121	FIELD BLANK EXTRUDE APPEAR01 DLIQVOL1 DLIQWT01 LLIQWT01 NOTEBOOK ORGVOL01 SLDWT-01	Solid, or handle as if solid EST.G/ML EXTRUD01	01/02/96
S96T000101	BY106 C121 S10	UH SLTCK J8833 BLKDENO1 HOMGNZ01	Solid, or handle as if solid	12/18/95
S96T000102	BY106 C121 S10A	UH SLTCK J8957 HOMGNZ01	Solid, or handle as if solid	12/29/95
S96T000103	BY106 C121 S10	UH ARCH J9148 ARCHIV01	Solid, or handle as if solid	01/05/96
S96T000104	BY106 C121 S10	UH DIR V9067 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03	01/05/96 SAMPAMT1
S96T000105	BY106 C121 S10A	UH DIR V9103 @TICTOC1 CN-01 TGA-01	Solid, or handle as if solid DOSE-01 DSC-03	01/05/96 SAMPAMT1
S96T000106	BY106 C121 S10	UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	01/05/96
S96T000107	BY106 C121 S10A	UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	01/05/96
S96T000108	BY106 C121 S10	UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	01/05/96
S96T000109	BY106 C121 S10	UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	01/05/96

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Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S96T000244	BY106 C121	S10B UH SLTCK J8597 HOMGNZ01	Solid, or handle as if solid	12/29/95
S96T000245	BY106 C121	S10B LH SLTCK J8859 BLKDEN01 HOMGNZ01	Solid, or handle as if solid	12/29/95
S96T000246	BY106 C121	S10B UH ARCH J9150 ARCHIV01	Solid, or handle as if solid	01/05/96
S96T000247	BY106 C121	S10B LH ARCH J9149 ARCHIV01	Solid, or handle as if solid	01/05/96
S96T000248	BY106 C121	S10B UH DIR V9106 @TICTOC1 CN-01 TGA-03 TGA-03	Solid, or handle as if solid DOSE-01 DSC-03	01/05/96 SAMPAMT1
S96T000249	BY106 C121	S10B LH DIR V9105 @TICTOC1 CN-01 TGA-03	Solid, or handle as if solid DOSE-01 DSC-03	01/05/96 SAMPAMT1
S96T000250	BY106 C121	S10B UH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	01/05/96
S96T000251	BY106 C121	S10B LH FUS @ALPHA01 @GEA-04 FUS-ZR01 U-02	Solid, or handle as if solid @ICP-F01 @SR90-01 DOSE-02	01/05/96
S96T000252	BY106 C121	S10B UH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	01/05/96
S96T000253	BY106 C121	S10B LH ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	01/05/96
S96T000254	BY106 C121	S10B UH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	01/05/96
S96T000255	BY106 C121	S10B LH H2O @IC-01 @IC2-01	Solid, or handle as if solid DOSE-02 H2ODIG01	01/05/96
S96T000376	BY106 C121	S1-10B COMP J8604 ARCHIV01 BLKDEN01	Solid, or handle as if solid COMPOS01	12/18/95
S96T000378	BY106 C121	S1-10B DIR J9232 DOSE-01 SAMPAMT1	Solid, or handle as if solid TGA-01	12/18/95
S96T000379	BY106 C121	S1-10B FUS @AB-01 @GEA-04 DOSE-02 FUS-ZR01	Solid, or handle as if solid @ICP-F01 @SR90-01 @U-01	01/05/96
S96T000380	BY106 C121	S1-10B ACID @ICP-A01 ACIDIG01	Solid, or handle as if solid DOSE-02	01/05/96
S96T000381	BY106 C121	S1-10B H2O @IC-01 @ICP-I01	Solid, or handle as if solid DOSE-02 H2ODIG01	01/05/96
S96T001378	BY106 C121	S7 UH FUS RERUN @GEA-02 @ICP-F01 FUS-ZR01	Solid, or handle as if solid @SR90-01 @U-01 DOSE-02	12/21/95

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Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
S96T001415	BY106 C121 S2 UH FUS RERUN	Solid, or handle as if solid	12/21/95	
	@GEA-02 @ICP-F01 @SR90-01 @U-01 DOSE-02			
	FUS-ZR01			

Test Acronym Description

Test Acronym	Description
@AB-01	Alpha and Beta, Digested Solid
@ALPHA01	Alpha in Liquid Samples
@ALPHA01	Alpha of Digested Solid
@GEA-02	GEA:Cs137,Co60,Eu154-155,Am241
@GEA-04	GEA Large Library Method
@IC-01	Anions by IC-Dionex 4000i/4500
@IC2-01	Organic Acids-IC Dionex 4000
@ICP-A01	ICP (Acid Digest) All Metals
@ICP-D01	ICP (Acid Added to Liquid)
@ICP-F01	ICP (Fusion Digest) All Metals
@ICP-I01	ICP (H2O/Acid) All Metals
@SR90-01	Sr-89/90 High Level
@TICTOC1	TIC/TOC Acid Persulfate
@TICTOC1	TIC/TOC Acid-Persulfate
@U-01	Uranium by Phosphorescence
ACIDIG01	Acid Dig.ICP/AA/Radchem Aliq.
APPEAR01	Appearance of Sample-Hot Cells
ARCHIV01	Archive aliq of sample/hotcell
BLKDEN01	Bulk Density of Sample
CN-01	Cyanide EDTA Addition
CN-03	Cyanide Water Distillation
COMPOS01	Make Composite Sample
DLIQVOL1	Drainable Liquid Recovrd - Vol
DLIQWT01	Drainable Liquid Recoverd - Wt
DOSE-01	Dose Rate(hotcell) in mrad/hr
DOSE-02	Dose Rate(samp prep) in mrad/hr
DSC-01	DSC Exotherm using Mettler
DSC-03	DSC Exotherm using Perkin Elmer
EST.G/ML	Estimated g/mL - Calculated
EXTRUD01	Extrusion of a Segment
FILTER02	Filter Liquid / sample prep
FUS-ZR01	Fusion (Zr Crucible) with KOH
H2ODIG01	Water Digest-NO ACID Aliquot
HOMGNZ01	Homogenize Sample
LLIQWT01	Liner Liquid Recoverd - Weight
NOTEBOOK	Notebook with source data
ORGVOL01	Organic Vol Present / hotcell

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Test Acronym Description

Test Acronym	Description
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SAMPAMT1	Amount of Sam/Present/hotcell
SLDWT-01	Solids Recovered - Weight
SPG-01	Specific Gravity
SUBSMPL1	Make a Subsample
TGA-01	% Water by TGA using Mettler
TGA-03	% Water by TGA on Perkin Elmer
TOC-02	TOC by Persulfate/Coulometry
U-02	Uranium by Phosphorescence