HEALTH/ENVIRONMENT LABORATORY
ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY RECORD

№ 1389

ADMIN RECORD

oject Description (No.) Ambient Air Samples

Project Responsibility

mpler(s): (Signature)

ample Type	Customer Identification	H/E Lab Number (By CRL)	Comp.	GRAB	Time (Milt.)	Date	Sample Location	Dis. Spl. Volume (ml)	Aligust Volume/Run No.			Plutonium (PHA)	Americium (PHA)	Uranium (PHA)	Uranium-Phosphorim	Tritium				Remarks
109	3-4-96 → 4	1.96																		
09	10-1-96 → 11	4-96	Impacter pads																	
09	16-97 → 2	4-97	and Fiberglass Filters																	
09	12-7-96 → 1	6-97																		

nquished by: (Signature)	Date/Time	Received for: by (Signature)	Relinquished by: (Signature)	Date/Time	Received for: by (Signature)
[signature]	8-20-97 4:30 pm	BDHay			
nquished by: (Signature)	Date/Time	Received for: by (Signature)	Relinquished by: (Signature)	Date/Time	Received for: by (Signature)
nquished by: (Signature)	Date/Time	Received for: by (Signature)	Relinquished by: (Signature)	Date/Time	Received for: by (Signature)
quished by (Signature)	Date/Time	Received for: by (Signature)	Relinquished by: (Signature)	Date/Time	Received for: by (signature)

stody Record Page _____ of _____ Pages | Sample Batch No. _____ | Reagent Nos. _____

151 (4/87)

Best Available Copy

SW-A-004078

155

SAMPLERS (Signature) [illegible]

REPORT IDENTIFICATION NUMBER (RIN) 97L2050

LAB/LOCATION: Colorado School of Mines

RFETS CONTRACTOR Tierra

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE CHAIN OF CUSTODY

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX
06-26-97	1012	N/A	N/A	SS02007RM	14297	Plastic tube	Soil
	1046			SS02008RM	14397		
	1120			SS02009RM	14497		
	1140			SS02010RM	14597		
	1205			SS02011RM	14697		

Preservation: Cooled to 4° C; NaOH; HNO3; H2 SO4; HCl; N/A

Analytes

Relinquished By:	Received By/Organization	Date	Time
[illegible] 7/2/97 0855	[illegible]	7/2/97	0855
[illegible]	[illegible]		

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	Y
SAMPLE LABELS/COCs AGREE	Y
TEMPERATURE AT TIME OF RECEIPT ___°C	N/A
	N/A

REMARKS: Hold on Samples Pending RAD Screen Results

Charge # 0903100

Project #

Required delivery time: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

EG&G Rocky Flats

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 97L1879
Analysis Requested - Rad Screen Level II
10-Jun-97

tracer

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha pCi/G	Gross Alpha 2σ	Gross Beta pCi/G	Gross Beta 2σ	Total Activity pCi/G	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
NA	97L1879-001.001	Soil	187	20	22	5	244.00	NONRAD	45.08	460.89
NA	97L1879-002.002	Soil	338	34	18	6	356.00	NONRAD	27.10	271.00
NA	97L1879-003.003	Soil	194	22	21	5	242.00	NONRAD	48.30	482.98
NA	97L1879-004.004	Soil	89	13	26	6	133.00	NONRAD	66.04	389.88
NA	97L1879-005.005	Soil	43	8	21	4	79.00	NONRAD	186.09	1860.76
NA	97L1879-006.006	Soil	86	10	13	4	99.00	NONRAD	131.68	1318.79

10 mL
15 mL
10 mL
5
2
5
47 mL

Category I Shipping Limits: Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

Category II Shipping Limits: Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

DOT Classification: <2000 pCi/g total activity is NONRAD
>= 2000 pCi/g total activity is RAD

Total Activity: Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements. If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods: Sample Preparation Procedure: L-6283-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional C
Counting Procedure: L6295-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval K M Hoggland Date 6/10/97

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EG&G Rocky Flats

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 87L1879
Analysis Requested - Rad Screen Level II
10-Jun-87

tracer

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha pCi/G	Gross Alpha 2σ	Gross Beta pCi/G	Gross Beta 2σ	Total Activity pCi/G	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
NA	87L1879-001.001	Soil	187	20	22	6	244.00	NONRAD	45.09	460.89
NA	87L1879-002.002	Soil	336	34	18	6	388.00	NONRAD	27.10	271.00
NA	87L1879-003.003	Soil	194	22	21	5	242.00	NONRAD	46.30	462.98
NA	87L1879-004.004	Soil	89	13	25	6	133.00	NONRAD	66.04	660.38
NA	87L1879-005.005	Soil	43	8	21	4	76.00	NONRAD	125.09	1250.78
NA	87L1879-006.006	Soil	86	10	13	4	99.00	NONRAD	131.58	1316.79

10 nL
15 nL
10 nL
5
2
5
47 nL

Category I Shipping Limits: Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

Category II Shipping Limits: Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

DOT Classification: <2000 pCi/g total activity is NONRAD; >= 2000 pCi/g total activity is RAD

Total Activity: Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements. If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods: Sample Preparation Procedure: L-8263-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional C"
Counting Procedure: L6295-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval K M Hoggland Date 6/18/87

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SAMPLERS L Andy Carpenter, D M Spruce, R L Singleton

REPORT IDENTIFICATION NUMBER (RIN) NA

LAB/LOCATION: CSM

RFETS CONTRACTOR Advanced Sciences

ROCKY FLATS
ENVIRONMENTAL TECHNOLOGY SITE
CHAIN OF CUSTODY NUMBER _____

DATE	TIME	EVENT	BOTTLE	USER ID	CONTAINER	MATRIX	Preservation: Cooled to 4° C	NaOH	HNO3	H2 SO4	HCl			Analytes													
5/29/97	0900		2	970529 B501	125ml WM	sed																					
5/29/97	0940		2	970529 B502																							
5/29/97	1000		2	970529 B503																							
5/29/97	1100		2	970529 B506																							
5/29/97	1000		2	970529 B504																							
5/29/97	1120		2	970529 B507																							
5/29/97	1030		1	970529 B505	core	sed																					

Relinquished By:	Received By/Organization	Date	Time	LABORATORY USE ONLY	Y/N
				PCKG REC'D/CUSTODY SEALS INTACT	
				SAMPLE LABELS/COCs AGREE	
				TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS: core is frozen

Charge #

Project Name

Required delivery time: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

APO COC DRAFT 5/15/97

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SAMPLERS D M Spruce / L A Carpenter /

REPORT IDENTIFICATION NUMBER (RIN) 97L1837 LAB/LOCATION: 881

RFETS CONTRACTOR ASI

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE CHAIN OF CUSTODY NUMBER NT

DATE	TIME	EVENT	BOTTLE	USER ID	CONTAINER	MATRIX	Preservation: Cooled to 4° C	NaOH	HNO3	H2 SO4	HCl	Analytes: Rad Screen									
05-29-97	0900	—	—	970529B5 01	125 ml WM	Sediment						X									
	0940	—	—	970529B5 02								X									
	1000	—	—	970529B5 03								X									
				~~970529B5 04~~								X									
	1030	—	—	970529B5 05	125ml WM	sediment						X									
	1100	—	—	970529B5 06	125ml WM	sediment						X									
	1120	—	—	970529B5 07								X									

Relinquished By:	Received By/Organization	Date	Time	LABORATORY USE ONLY	Y/N
[signature]	[signature]	5/29/97	1410	PCKG REC'D/CUSTODY SEALS INTACT	Y
				SAMPLE LABELS/COCs AGREE	Y
				TEMPERATURE AT TIME OF RECEIPT ___°C	NA
					NA

REMARKS: please fax results to D. Spruce # 7228

Charge # CG1000-00

Project Name NPDES

Required delivery time: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

APO COC DRAFT 5/15/97

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RFETS

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 97L1837
Analysis Requested - Rad Screen Level II
2-Jun-97

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha pCi/G	Gross Alpha 2σ	Gross Beta pCi/G	Gross Beta 2σ	Total Activity pCi/G	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
NA	97052985-01	Sediment	27	8	31	5	71.00	NONRAD	285.71	2857.14
NA	97052985-02	Sediment	22	7	32	5	66.00	NONRAD	344.83	3448.28
NA	97052985-03	Sediment	26	7	29	5	67.00	NONRAD	303.03	3030.30
NA	97052985-05	Sediment	31	8	33	5	77.00	NONRAD	256.41	2564.10
NA	97052985-06	Sediment	25	7	30	5	67.00	NONRAD	312.50	3125.00
NA	97052985-07	Sediment	13	6	25	4	48.00	NONRAD	526.32	5263.16

Category I Shipping Limits Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

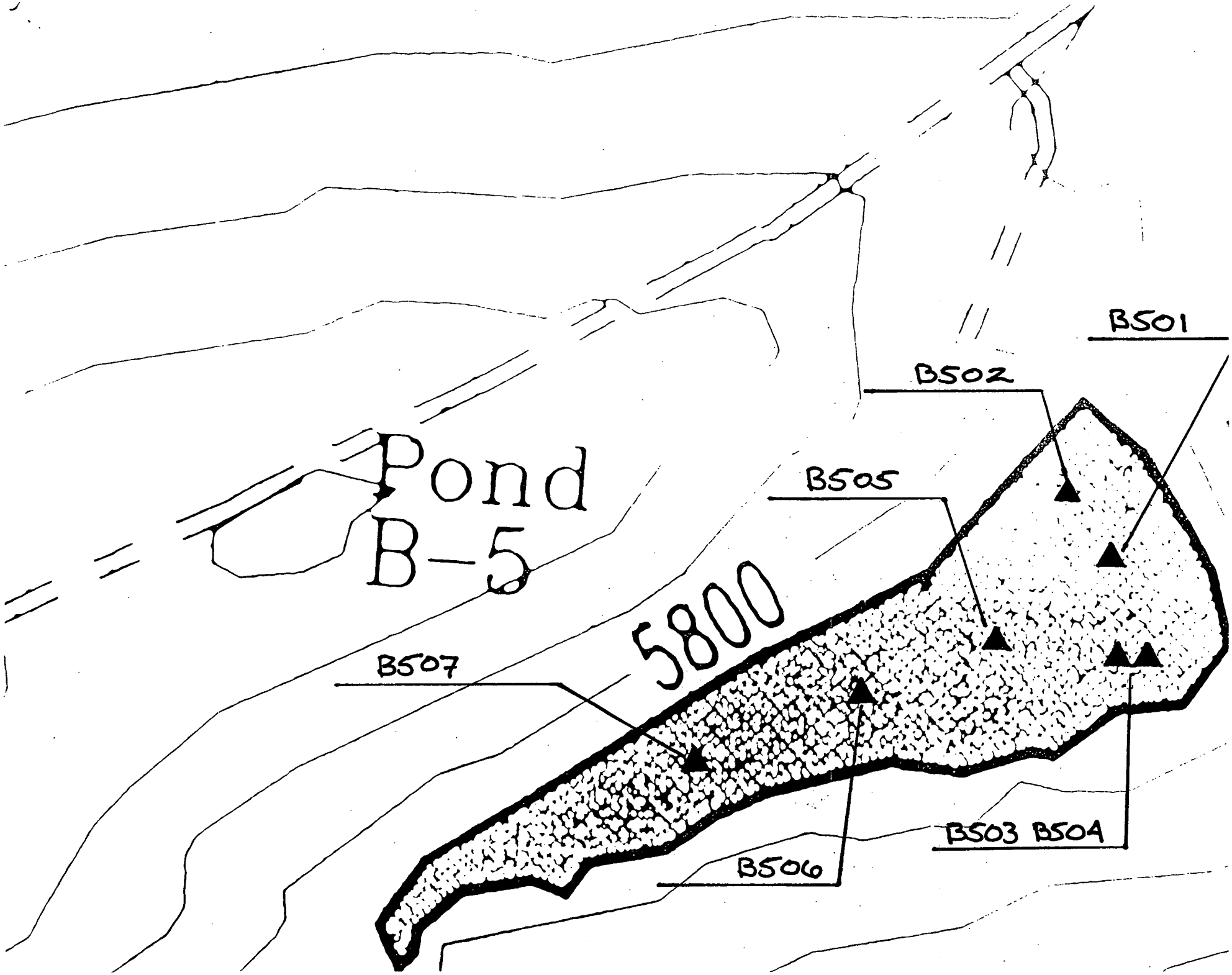
Category II Shipping Limit Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

DOT Classification <2000 pCi/g total activity is NONRAD
> = 2000 pCi/g total activity is RAD

Total Activity Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods Sample Preparation Procedure: L-6283-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: L-6295-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval L M Hoagland /Date 6/2/97


Pond
B-5
5800
B501
B502
B505
B507
B506
B503 B504

ADVANCED SCIENCES JOB SAFETY ANALYSIS (JSA)

ACTIVITY: Pond boat operations Sediment Sampling.

LOCATION: Pond B-5

DATE: May 29, 1997

CONDUCTED BY: David M. Spruce ASI PHSM

COMPLETED: May 29, 1997

Water hazards

- The Surface water Health and Safety plan requires that all personnel that are in the boat during pond operations must wear approved Coast Guard life preservers.
- All pond operations that include the use of a boat and where a third man is involved on or near dam slopes the third man must wear an approved Coast Guard life jacket.

Physical Hazards

- Tripping hazards of cables and other equipment in the boat.
- Use correct lifting practices when retrieving sample core from depth of pond.
- Avoid walking or working on dam slopes during boat operations, if there is a necessity to walk on the slope use extreme caution. Slowly ease your way down the slope at angles that insure the best footing possible.
- Walking on dam slopes when there is ice, snow or when the rocks are wet (from rain or melting snow or ice) is strictly prohibited unless reviewed by the PHSM.
- Walking on dam slopes when rocks are covered with mud or soil (wet or loose material) or when slope is of natural material (soil) is strictly prohibited unless reviewed by the PHSM.
- If wind speeds exceed 15 mph the sampling task in the boat will terminate until the winds subside and the PHSM can assess and authorize the sampling task to resume to normal activities.

PPE Requirements

- Tyvek coveralls over blue coveralls and rubber slip over bootie's
- Approved Coast Guard life preserver (must be worn and zipped up fully), safety glasses, butyl gloves, nitrile gloves inner gloves (2), leather gloves, steel toe boots, two float cushions, and two oars.
- A ring buoy with at least 90 ft. of rope attached must be available in the boat with the loose end of the rope secured to the boat.

Radiological Requirements

- Rad screens will be collected at each sampling point (7 total)
- Surveys will be conducted on cores and sample bottles at sampling location (Electra DP6B probe)
- Cores will be placed in plastic bags when transported to T891-R
- All samples and cores will be screened (Ludlum 2929) at T891-R prior to being placed in the freezer (as per the sampling plan)
- If a sample equals or exceeds 2 nCi/g the custodian shall provide a copy of the Gamma Spec (or equivalent screen to Radiological Engineering for further direction
- Radiological Surveys will be conducted on all equipment used in the sampling event

JOB SAFETY ANALYSIS
DATED MARCH 29, 1997

POND BOAT OPERATIONS AND DAM SLOPE PROCEDURES
Pond B-5

NAME	SIGNATURE	S.S. #	COMPANY
R. L. Singleton		[redacted]	AST
DM Spruce			AST
Tyler Smart			AST
L Harpenter			AST
JL Christman			AST

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT

FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: sediment special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B501 SAMPLE NUMBER: 970529B501

SAMPLE COLLECTION DATE: 05/29/97 SAMPLE COLLECTION TIME: 0900

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: RL Singleton

SAMPLE CREW MEMEBER 2: DM Spruce

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: X FOG: ___

(Pick 1 from each line) HOT: ___ WARM: ___ COOL: X COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 13 FT DEPTH OF TAKE: 8 IN

COMMENTS: are core composited for samples

Completed By: L. Andy Carpenter [signature] Date: 5/29/97
Print Name Signature

Checked By: R. L. Singleton [signature] Date: 5-29-97
Print Name Signature

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT

FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: B502 SAMPLE NUMBER: 970529B502

SAMPLE COLLECTION DATE: 05/29/97 SAMPLE COLLECTION TIME: 0940

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: RL Singleton

SAMPLE CREW MEMEBER 2: DM Spruce

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: X FOG: ___

(Pick 1 from each line) HOT: ___ WARM: ___ COOL: X COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 17 FT DEPTH OF TAKE: 8 IN

COMMENTS: one core composited for samples

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 5/29/97

Checked By: R L. Singleton (Print Name) [signature] (Signature) Date: 5-29-97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: B503 SAMPLE NUMBER: 970529B503

SAMPLE COLLECTION DATE: 5/29/97 SAMPLE COLLECTION TIME: 1000

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: RL Singleton

SAMPLE CREW MEMEBER 2: DM Spruce

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: X FOG: ___

(Pick 1 from each line) HOT: ___ WARM: ___ COOL: X COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 12 FT DEPTH OF TAKE: 7 IN

COMMENTS: 2 cores composited for samples

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 5/29/97

Checked By: R.L. Singleton (Print Name) [signature] (Signature) Date: 5-29-97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT

FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: sediment special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B504 SAMPLE NUMBER: 970529B504

SAMPLE COLLECTION DATE: 05/29/97 SAMPLE COLLECTION TIME: 1000

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: RL Singleton

SAMPLE CREW MEMEBER 2: DM Spruce

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: X FOG: ___

(Pick 1 from each line) HOT: ___ WARM: ___ COOL: X COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 12 FT DEPTH OF TAKE: 7 IN

COMMENTS: 2 cores taken and composited for samples

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 05/29/97

Checked By: RL Singleton (Print Name) [signature] (Signature) Date: 5-29-97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: ~~B6~~ B505 SAMPLE NUMBER: 970529 B505

SAMPLE COLLECTION DATE: 05/29/97 SAMPLE COLLECTION TIME: 1030

SAMPLE TYPE: real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): N SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: RL Singleton

SAMPLE CREW MEMEBER 2: DM Spruce

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: X FOG: ____

(Pick 1 from each line) HOT: ____ WARM: ____ COOL: X COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 18 FT DEPTH OF TAKE: 20 IN

COMMENTS: one core kept intact, one taken for radscreen

Completed By: L. Andy Carpenter [signature] Date: 05/29/97
Print Name Signature

Checked By: RL Singleton [signature] Date: 05-29-97
Print Name Signature

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT

FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B5O6 SAMPLE NUMBER: 970529B5O6

SAMPLE COLLECTION DATE: 05/29/97 SAMPLE COLLECTION TIME: 1100

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: RL Singleton

SAMPLE CREW MEMEBER 2: DM Spruce

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: X FOG: ___

(Pick 1 from each line) HOT: ___ WARM: ___ COOL: X COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 13 FT DEPTH OF TAKE: 8 IN

COMMENTS: ove core taken and composited for samples

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 05/29/97

Checked By: R L Singleton (Print Name) [signature] (Signature) Date: 5-29-97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT

FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: B507 SAMPLE NUMBER: 970529B507

SAMPLE COLLECTION DATE: 05/29/97 SAMPLE COLLECTION TIME: 1120

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: X FOG: ____

(Pick 1 from each line) HOT: ____ WARM: ____ COOL: X COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 6 FT DEPTH OF TAKE: 12 IN

COMMENTS: one core taken and composited for samples

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 05/29/97

Checked By: R L Singleton (Print Name) [signature] (Signature) Date: 5-29-97

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SAMPLERS (Signature) L. Andy Carpenter / David M Sprouse / _____

REPORT IDENTIFICATION NUMBER (RIN) NA

LAB/LOCATION: CSM

RFETS CONTRACTOR AST

ROCKY FLATS
ENVIRONMENTAL TECHNOLOGY SITE
CHAIN OF CUSTODY NUMBER _____

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX
6/24/97	1000			97-06-24	B1-01	2x125 wm	sed
	1030				B1-02		
	1130				B1-03	core	
	1115				B1-04	2x125 mm	
	1115				B1-05		
	1100				B1-06		
	1045				B1-07		

Preservation: Cooled to 4° C; NaOH; HNO3; H2 SO4; HCl

Analytes

Relinquished By:	Date	Time	Received By/Organization	Date	Time
[signature]	7-8-97	13:40	[signature]	7-8-97	13:40

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS:

Charge #

Project

Shipping Requirements: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

SAMPLERS (Signature) L. Andy Carpenter / David M Spruce /

REPORT IDENTIFICATION NUMBER (RIN) NA

LAB/LOCATION: CSM

RFETS CONTRACTOR ASI

ROCKY FLATS
ENVIRONMENTAL TECHNOLOGY SITE
CHAIN OF CUSTODY NUMBER _____

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4° C	NaOH	HNO3	H2 SO4	HCl	Analytes
6/24/97	1000			97-06-24	B1-01	2x125 wm	sed						
	1030				B1-02								
	1130				B1-03	core							
	1115				B1-04	2x125 mm							
	1115				B1-05								
	1100				B1-06								
	1045				B1-07								

Relinquished By:	Date	Time	Received By/Organization	Date	Time	LABORATORY USE ONLY	Y/N
	7-8-97	1340		7-8-97	13:40	PCKG REC'D/CUSTODY SEALS INTACT	
						SAMPLE LABELS/COCs AGREE	
						TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS:

Charge #

Project

Shipping Requirements: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

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RFETS

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 97L2022
Analysis Requested - Rad Screen Level II
30-Jun-97

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha		Gross Beta		Total Activity	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
			pCi/G	2σ	pCi/G	2σ	pCi/G			
NA	97-06-24-B101	Soil	159	20	18	6	203.00	NONRAD	55.87	558.66
NA	97-06-24-B102	Soil	364	37	15	5	421.00	NONRAD	24.94	249.38
NA	97-06-24-B103	Soil	3385	323	-189	19	3727.00	RAD	DO NOT SHIP AS CAT I	26.97
NA	97-06-24-B105	Soil	782	73	21	8	884.00	NONRAD	11.70	116.96
NA	97-06-24-B106	Soil	1059	95	-8	8	1163.00	NONRAD	8.67	86.66
NA	97-06-24-B107	Soil	338	33	11	6	387.00	NONRAD	26.95	269.54

Category I Shipping Limits Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

Category II Shipping Limit Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

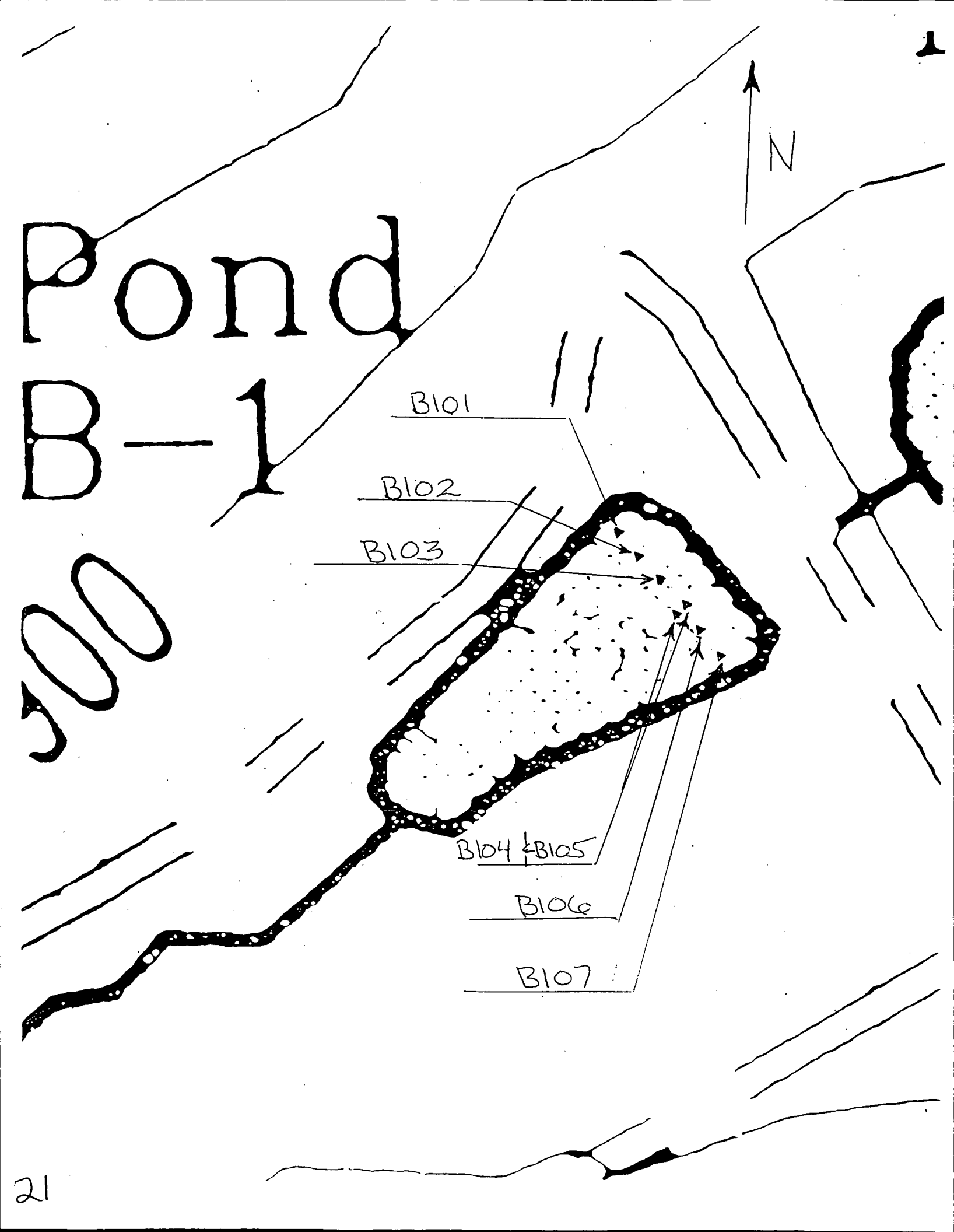
DOT Classification <2000 pCi/g total activity is NONRAD
>= 2000 pCi/g total activity is RAD

Total Activity Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements. If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods Sample Preparation Procedure: L-6283-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: L-6285-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval [illegible] **Date** 6/30/97

20


1
N
Pond
B-1
500
B101
B102
B103
B104 & B105
B106
B107

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B101 SAMPLE NUMBER: 970624B101

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1000

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): ____ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprouse

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: X WARM: ____ COOL: ____ COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 2.5 FT DEPTH OF TAKE: 14 IN

COMMENTS: one core taken and composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprouse (Print Name) [signature] (Signature) Date: 6/24/97

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B106 SAMPLE NUMBER: 970624B106

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1100

SAMPLE TYPE: Real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): ____ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprue

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: X WARM: ____ COOL: ____ COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 2.5 FT DEPTH OF TAKE: 14 IN

COMMENTS: one core taken and composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprue (Print Name) [signature] (Signature) Date: 6/24/97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B107 SAMPLE NUMBER: 970624B107

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1045

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): ___ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprue

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ___ SUNNY: X PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: ___ FOG: ___

(Pick 1 from each line) HOT: X WARM: ___ COOL: ___ COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 2 FT DEPTH OF TAKE: 12 IN

COMMENTS: One core sampled and composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprue (Print Name) [signature] (Signature) Date: 6/24/97

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B102 SAMPLE NUMBER: 970624B102

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1030

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): ___ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprouse

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ___ SUNNY: X PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: ___ FOG: ___

(Pick 1 from each line) HOT: X WARM: ___ COOL: ___ COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 2.5 FT DEPTH OF TAKE: 14 IN

COMMENTS: one core taken and composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprouse (Print Name) [signature] (Signature) Date: 6/24/97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B103 SAMPLE NUMBER: 970624B103

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1130

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): ___ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprue

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ___ SUNNY: X PRTLY/SNNY: ___ PTRLY/CLDY: ___ CLOUDY: ___ FOG: ___

(Pick 1 from each line) HOT: X WARM: ___ COOL: ___ COLD: ___ VERY COLD: ___

CALM: X BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 3 FT DEPTH OF TAKE: 16 IN

COMMENTS: 2 cores taken one kept complete, one composited for radscreens

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprue (Print Name) [signature] (Signature) Date: 6/24/97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B104 SAMPLE NUMBER: 970624B104

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1115

SAMPLE TYPE: Real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): ____ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprouse

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: X WARM: ____ COOL: ____ COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 3 FT DEPTH OF TAKE: 14 IN

COMMENTS: B104 and B105 are the same site
one core taken and composited for B104

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprouse (Print Name) [signature] (Signature) Date: 6/24/97

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B105 SAMPLE NUMBER: 970624B105

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: ____

SAMPLE TYPE: Real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): ____ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprue

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: X WARM: ____ COOL: ____ COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 3 FT DEPTH OF TAKE: 14 IN

COMMENTS: B104 and B105 are the same site
are core taken and composited for B105

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprue (Print Name) [signature] (Signature) Date: 6/24/97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B106 SAMPLE NUMBER: 970624B106

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1100

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): ____ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprue

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: X WARM: ____ COOL: ____ COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 2.5 FT DEPTH OF TAKE: 14 IN

COMMENTS: one core taken and composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprue (Print Name) [signature] (Signature) Date: 6/24/97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: B107 SAMPLE NUMBER: 970624B107

SAMPLE COLLECTION DATE: 06/24/97 SAMPLE COLLECTION TIME: 1045

SAMPLE TYPE: Real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): ____ SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M. Sprue

SAMPLE CREW MEMEBER 2: Robert L. Singleton

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: X WARM: ____ COOL: ____ COLD: ____ VERY COLD: ____

CALM: X BREEZY: ____ GUSTY: ____ WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 2 FT DEPTH OF TAKE: 12 IN

COMMENTS: One core sampled and composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 6/24/97

Checked By: David M. Sprue (Print Name) [signature] (Signature) Date: 6/24/97

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SAMPLERS (Signature) L. Andy Carpenter LAC, David M Spruce,

REPORT IDENTIFICATION NUMBER (RIN) _____ LAB/LOCATION: CSM

RFETS CONTRACTOR ASJ

ROCKY FLATS
ENVIRONMENTAL TECHNOLOGY SITE
CHAIN OF CUSTODY NUMBER _____

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4° C	NaOH	HNO3	H2 SO4	HCl	Analytes
7/1/97	0930	01	01	97-07-01	Sed039	2x120ml	Sed						
	0945	02	02	97-07-01	Sed029								
	0955	03	03	97-07-01	Sed025								

LAC

Relinquished By:	Date	Time	Received By/Organization	Date	Time
	7/3/97	0900		7-3-97	0900
	7-3-97				

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS:

Charge #

Project

Shipping Requirements: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

SAMPLERS L. Andy Carpenter CK, David M. Spruce

REPORT IDENTIFICATION NUMBER (RIN) 97L 2083 LAB/LOCATION: 881

RFETS CONTRACTOR ASI

ROCKY FLATS
ENVIRONMENTAL TECHNOLOGY SITE
CHAIN OF CUSTODY NUMBER _____

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4°C	NaOH	HNO3	H2SO4	HCl		Analytes: Rad screen											
7/1/97	0930	01	01	97-07-01-	Sed-039	120ml WM	Sed							X											
	0945	02	02	97-07-01-	Sed-029									X											
	0955	03	03	97-07-01-	Sed-025									X											

CLP

Relinquished By:	Received By/Organization	Date	Time	LABORATORY USE ONLY	Y/N
[signature]	[signature]	7/2/97	0915	PCKG REC'D/CUSTODY SEALS INTACT	
				SAMPLE LABELS/COCs AGREE	
				TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS: please fax results to D. Spruce at #7228

Charge # CG1000-00

Project Name NPDES

Required delivery time: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

APO COC DRAFT 5/15/97

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RFETS

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 97L2083
Analysis Requested - Rad Screen Level II
3-Jul-97

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha pCi/G	Gross Alpha 2σ	Gross Beta pCi/G	Gross Beta 2σ	Total Activity pCi/G	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
NA	SED039	Soil	31	8	35	5	79.00	NONRAD	256.41	2564.10
NA	SED029	Soil	29	7	27	5	68.00	NONRAD	277.78	2777.78
NA	SED025	Soil	31	8	29	5	73.00	NONRAD	256.41	2564.10

Category I Shipping Limits Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

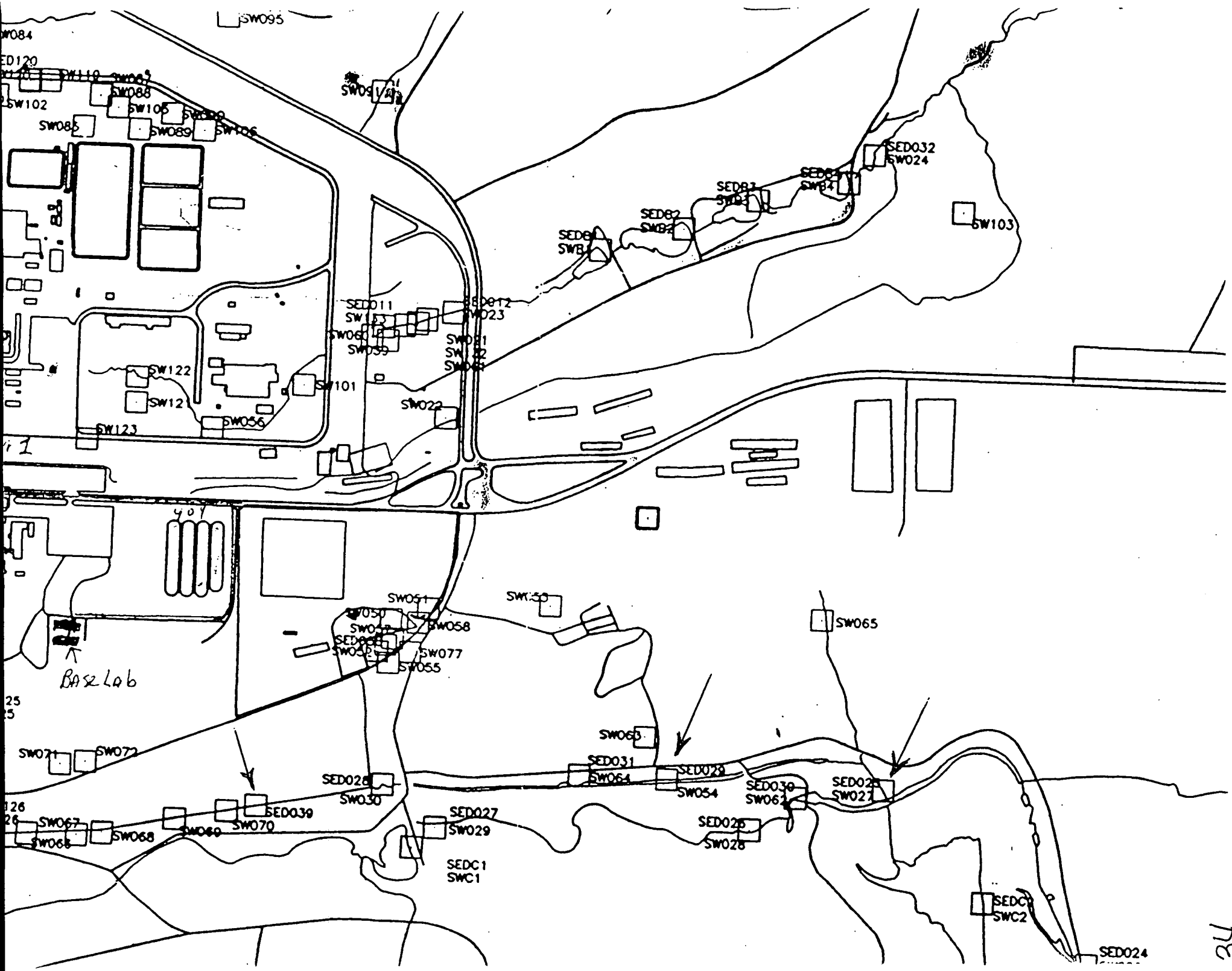
Category II Shipping Limit Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

DOT Classification <2000 pCi/g total activity is NONRAD
> = 2000 pCi/g total activity is RAD

Total Activity Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods Sample Preparation Procedure: L-6283-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: L-6295-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval M K Hamrin /Date 7/3/97


SW095
SW084
SED120
SW102
SW088
SW085
SW089
SW106
SED032
SW024
SW103
SED083
SED082
SW082
SED081
SW081
SED011
SED012
SW023
SW059
SW101
SW122
SW056
SW123
SW022
SW051
SW050
SW058
SW077
SW055
SW065
Base Lab
SW071
SW072
SED026
SW030
SED039
SW070
SW067
SW068
SED031
SW064
SED029
SW054
SED030
SW061
SED025
SW027
SED027
SW029
SED028
SEDC1
SWC1
SEDC2
SWC2
SED024

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT

FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: Sed025 SAMPLE NUMBER: 97-07-01-Sed025

SAMPLE COLLECTION DATE: 07/01/97 SAMPLE COLLECTION TIME: 0955

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: X DREDGE: ____ CORE: ____ OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: ____ BRIDGE: ____ CROSS-SECTION DRY AREA: X

SAMPLING CONDITIONS: STREAM: ____ POND: ____ PUDDLE: ____ DRY: ____ Ditch X

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M Spruce

SAMPLE CREW MEMEBER 2: ____

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: ____ WINDY: X RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 0 FT DEPTH OF TAKE: 1 IN

COMMENTS: Sed025 is at SW027 - several sediment scrapes composited

Completed By: L Andy Carpenter (Print Name) [signature] (Signature) Date: 7-1-97

Checked By: David Spruce (Print Name) [signature] (Signature) Date: 7-1-97

B5

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: Sed029 SAMPLE NUMBER: 97-07-01-Sed-029

SAMPLE COLLECTION DATE: 07/01/97 SAMPLE COLLECTION TIME: 0945

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: X DREDGE: ____ CORE: ____ OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: ____ BRIDGE: ____ CROSS-SECTION DRY AREA: X

SAMPLING CONDITIONS: STREAM: ____ POND: ____ PUDDLE: ____ DRY: ____ Ditch X

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M Spruce

SAMPLE CREW MEMEBER 2: ____

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: ____ WINDY: X RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: Ø FT DEPTH OF TAKE: 1 IN

COMMENTS: Several sediment scrapes composited

Completed By: L. Andy Carpenter (Print Name) [signature] (Signature) Date: 7/1/97

Checked By: David M Spruce (Print Name) [signature] (Signature) Date: 7/1/97

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: Sed039 SAMPLE NUMBER: 97-07-01-Sed-039

SAMPLE COLLECTION DATE: 07/01/97 SAMPLE COLLECTION TIME: 0930

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: X DREDGE: ____ CORE: ____ OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: ____ BRIDGE: ____ CROSS-SECTION DRY AREA: X

SAMPLING CONDITIONS: STREAM: ____ POND: ____ PUDDLE: ____ DRY: ____ Ditch X

SAMPLE TEAM LEADER: L. Andy Carpenter

SAMPLE CREW MEMEBER 1: David M Spruce

SAMPLE CREW MEMEBER 2: ____

WEATHER: CLEAR: ____ SUNNY: X PRTLY/SNNY: ____ PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: ____ WINDY: X RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 0.1 FT DEPTH OF TAKE: 1 IN

COMMENTS: several sediment scrapes composited

Completed By: L. Andy Carpenter (Print Name) (Signature) Date: 7/1/97

Checked By: David Spruce (Print Name) (Signature) Date: 7/1/97

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SAMPLERS (Signature) W. Seal / / /

REPORT IDENTIFICATION NUMBER (RIN) 97L1879 LAB/LOCATION: School of mines

RFETS CONTRACTOR

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE CHAIN OF CUSTODY NUMBER

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4°C	NaOH	HNO3	H2SO4	HCl	Frozen	Analytes: Special
6-9-97	10:00	003	001	East +	South	Alum Foil	Soil						X	X
			002	of 903	Pad								X	X
			003										X	X
		004	001										X	X
			002										X	X
			003										X	X
			004										X	X
		005	001										X	X
	1300	006	001										X	X
	1300	006	002										X	X

Relinquished By:	Date	Time	Received By/Organization	Date	Time
[signature]	6/8/97	7100	[signature]	6/8/97	7100

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS:

Charge #

Project

Shipping Requirements: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. _____

SAMPLERS (Signature) W Seel / / /

REPORT IDENTIFICATION NUMBER (RIN) ~~97~~ RIS 97L 1879 LAB/LOCATION: School of mines

RFETS CONTRACTOR

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE CHAIN OF CUSTODY NUMBER

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4° C	NaOH	HNO3	H2 SO4	HCl	Freech	Analytes: Special
6-9-97	10:00	001	001	(East + South		Alum. Foil	Soil						X	X
			002	of 903 Pad)									X	X
			003										X	X
			004										X	X
			005										X	X
		002	001										X	X
			002										X	X
			003.										X	X
			004										X	X
			005										X	X

Relinquished By:	Date	Time	Received By/Organization	Date	Time
[signature] KT	6/18/97	1100	[signature]	6/18/97	1100

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECEIPT ___°C	

REMARKS:

Charge #

Project

Shipping Requirements: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No.

page 1 of 2 (See Remar.)

SAMPLERS (Signature/Emp. No.) W. Seal / [redacted] / [redacted]

REPORT ID # 97L 1879

Lab Location: MBA: ~~371~~ 1378-37 | ~~550~~ 0361-31 | ~~771~~ 0387-71 | ~~881~~ 0363-31

Contractor Lab: School of Mines

SAMPLE LOCATION: EAST + South of 903 PAD

KAISER-HILL ANALYTICAL LABORATORIES

CHAIN OF CUSTODY

Date	Time	Event #	Bottle #	Container # (If Required)	Cooled to 4°C	NaOH	HNO3	H2SO4	None		α/β Screen	Gross α/β	Total VOA	Total SVOA	ICPES	ICPES & Hg	TCLP VOA	TCLP SVOA	Metals - TCLP	Metals - TCLP & Hg	VOA Sweep	MetalScreen	Fingerprint	Cn	Iso	g/l	SPECIAL		
5 6-9-97	1000	001	~~007~~																								X		
5		002	~~008~~																								X		
3		003	~~009~~																								X		
4		004	~~010~~																								X		
		005	~~011~~																								X		
2	1300	006	~~012~~																								X		

6-9-97

Relinquished By / ORG	Date/Time		Received By / ORG.	Date/Time	
[redacted] / APO	6/9/97	1510	[redacted] 0870 / APO	6/9/97	1510
T6900 Fridge [redacted] APO	6-17-97	1010	/ APO	6-17-97	1010
/ APO	6-17-97	1020	/ AST	6-17-97	1020
/			/		

LABORATORY USE ONLY	Y / N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECIEPT ___°C	N/A
CORRECTED COPY ATTACHED	

Charge #: 90310000 Cost Center:

Remarks: New C.O.C. printed due to division of samples.

NMC Approval for movement of nonaccountable radioactive samples from an MAA. TID/NMDTR is not required for movement of this material.
NMC Transfer Approval:

07

SAMPLERS (Signature/Emp. No.) W. Seal / [redacted] / [redacted]

REPORT ID # 97L 1879

Lab Location: ~~371~~ ~~559~~ ~~771~~ ~~881~~

MBA: 1378-37 0361-31 0387-71 0383-31

Contractor Lab: School of Mines

SAMPLE LOCATION: EAST + South of 903 PAD

KAISER-HILL ANALYTICAL LABORATORIES

CHAIN OF CUSTODY

Date	Time	Event #	Bottle #	Container # (If Required)	Cooled to 4°C	NaOH	HNO3	H2SO4	None		α/β Screen	Gross α/β	Total VOA	Total SVOA	ICPES	ICPES & Hg	TCLP VOA	TCLP SVOA	Metals - TCLP	Metals - TCLP & Hg	VOA Sweep	MetalScreen	Fingerprint	Cn	Iso	g/l	SPECIAL		
6-9-97	1000	001	007																								X		
		002	008																								X		
		003	009																								X		
		004	010																								X		
	↓	005	011																								X		
↓	1300	006	012																								X		

6-9-97

Relinquished By / ORG	Date/Time		Received By / ORG.	Date/Time	
[redacted] / APO	6/9/97	1510	[redacted] 0870 / APO	6/9/97	1510
T690J Fridge [redacted]	6-17-97	1010	/ APO	6-17-97	1010
/ APO	6-17-97	1020	/ AST	6-17-97	1020
/ AST			/		
/			/		

LABORATORY USE ONLY	Y / N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECIEPT ___°C	N/A
CORRECTED COPY ATTACHED	

Charge #: 90310000 Cost Center:

Remarks:

NMC Approval for movement of nonaccountable radioactive samples from an MAA. TID/NMDTR is not required for movement of this material.
NMC Transfer Approval:

EG&G Rocky Flats

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 97L1879
Analysis Requested - Rad Screen Level II
10-Jun-97

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha pCi/G	Gross Alpha 2σ	Gross Beta pCi/G	Gross Beta 2σ	Total Activity pCi/G	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
NA	97L1879-001.001	Soil	187	20	22	5	244.00	NONRAD	46.08	469.83
NA	97L1879-002.002	Soil	335	34	18	6	353.00	NONRAD	27.10	271.00
NA	97L1879-003.003	Soil	194	24	21	5	242.00	NONRAD	46.30	462.98
NA	97L1879-004.004	Soil	89	13	25	6	133.00	NONRAD	96.04	960.39
NA	97L1879-005.005	Soil	43	8	21	4	76.00	NONRAD	198.08	1980.78
NA	97L1879-006.006	Soil	86	10	19	4	99.00	NONRAD	131.58	1315.79

Category I Shipping Limits: Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

Category II Shipping Limits: Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

DOT Classification: <2000 pCi/g total activity is NONRAD; >= 2000 pCi/g total activity is RAD

Total Activity: Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements. If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods: Sample Preparation Procedure: L-6283-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional C Counting Procedure: L6295-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval K M Hoggard /Date 6/10/97

Post-it® Fax Note 7671	Date	# of pages ▶
To Honeyman / McPherson	From Hoggard	
Co./Dept.	Co.	
Phone #	Phone #	
Fax # 273 3413	Fax #	

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SAMPLERS (Signature) L.C. / DM Sprague

REPORT IDENTIFICATION NUMBER (RIN) _____

LAB/LOCATION: CSM

RFETS CONTRACTOR _____

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE CHAIN OF CUSTODY

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4°C	NaOH	HNO3	H2SO4	HCl	Analyses
5/20/97	1130		2	9705200203	C203	125mlWM	Sed	X					
	1200		2	9705200206	C206			X					
	1		2	9705200207	C207			X					
	1220		2	9705200205	C205			X					
	1245		2	9705200204	C204			X					
	1300		2	9705200202	C202			X					
	1000		1	9705200201	C201	core	Sed	X					

Relinquished By	Received By/Organization	Date	Time

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECEIPT ___ °C	

REMARKS: Core is frozen

Charge #

Project #

Required delivery time: Overnight Delivery ☐ 2-Day Delivery ☐

APO COC DRAFT 5/15/97

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RFETS

881 GENERAL LABORATORY

RAD SCREEN RESULTS

Lab Report Number - 97L1758
Analysis Requested - Rad Screen Level II
22-May-97

881 Sample ID	Customer Sample ID	Matrix	Gross Alpha pCi/G	Gross Alpha 2σ	Gross Beta pCi/G	Gross Beta 2σ	Total Activity pCi/G	DOT Class	Maximum Shipping Amt (g) for Category I	Maximum Shipping Amt (g) for Category II
NA	97-05-20-C2-01	Soil	22	6	40	5	73.00	NONRAD	357.14	3571.43
NA	97-05-20-C2-02	Soil	28	7	33	5	73.00	NONRAD	285.71	2857.14
NA	97-05-20-C2-03	Soil	23	6	36	5	70.00	NONRAD	344.83	3448.28
NA	97-05-20-C2-04	Soil	18	6	37	5	66.00	NONRAD	416.67	4166.67
NA	97-05-20-C2-05	Soil	30	7	38	5	80.00	NONRAD	270.27	2702.70
NA	97-05-20-C2-06	Soil	27	7	42	5	81.00	NONRAD	294.12	2941.18

Category I Shipping Limits Alpha = <0.01 uCi/sample; Beta = <0.1 uCi/sample

Category II Shipping Limit Alpha = <0.1 uCi/sample; Beta = <1 uCi/sample

DOT Classification <2000 pCi/g total activity is NONRAD
> = 2000 pCi/g total activity is RAD

Total Activity Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/G (instead of the negative value) is used to calculate the total activity.

Analysis Methods Sample Preparation Procedure: L-6283-A, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: L-6295-A, "Operation of Tennelec LB4100 Gas Proportional Counters".

Laboratory Approval K M Hagglund /Date 5/22/97

hh

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: C201 SAMPLE NUMBER: 97-05-20-C2-01

SAMPLE COLLECTION DATE: 5/20/96 SAMPLE COLLECTION TIME: 1006

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): N SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L. A. Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: X PTRLY/CLDY: ___ CLOUDY: ___ FOG: ___

(Pick 1 from each line) HOT: ___ WARM: X COOL: ___ COLD: ___ VERY COLD: ___

CALM: ___ BREEZY: ___ GUSTY: X WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 12 FT DEPTH OF TAKE: 13 IN

COMMENTS: core and radscreen sampled

Completed By: L. A. Carpenter (Print Name) [signature] (Signature) Date: 5/20/96

Checked By: D.M. Spruce (Print Name) [signature] (Signature) Date: 5/20/96

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: AST LOCATION CODE: C202 SAMPLE NUMBER: 97-05-20-C202

SAMPLE COLLECTION DATE: 05/20/97 SAMPLE COLLECTION TIME: 1300

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. A Carpenter

SAMPLE CREW MEMEBER 1: DM. Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: X PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: X WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 4 FT DEPTH OF TAKE: 4 IN

COMMENTS: three coves composited for sample and radscreen

Completed By: L A Carpenter (Print Name) [signature] (Signature) Date: 5/20/97

Checked By: DM Spruce (Print Name) [signature] (Signature) Date: 5-20-97

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: ASI LOCATION CODE: C203 SAMPLE NUMBER: 97-05-20-C2-03

SAMPLE COLLECTION DATE: 05/20/97 SAMPLE COLLECTION TIME: 1130

SAMPLE TYPE: real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. A. Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RC Singleton

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: X PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: X WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 6 FT DEPTH OF TAKE: 5 IN

COMMENTS: three cores composited for sample and rad screen.

Completed By: LA Carpenter (Print Name) [signature] (Signature) Date: 5/20/96

Checked By: DM Spruce (Print Name) [signature] (Signature) Date: 5-20-97

1.47

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: C204 SAMPLE NUMBER: 97-05-20 C204

SAMPLE COLLECTION DATE: 05/20/97 SAMPLE COLLECTION TIME: 1245

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. A Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: X PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: X WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 4 FT DEPTH OF TAKE: 4 IN

COMMENTS: four cores composited for sample ~~of~~ And rad screen

Completed By: LA Carpenter (Print Name) [signature] (Signature) Date: 5/20/97

Checked By: David Spruce (Print Name) [signature] (Signature) Date: 5-20-97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: ASI LOCATION CODE: C205 SAMPLE NUMBER: 97-05-20-C2-05

SAMPLE COLLECTION DATE: 05/20/97 SAMPLE COLLECTION TIME: 1220

SAMPLE TYPE: real DISPOSITION: sampled

QC TYPE (CHECK): REAL: X MS: ___ MSD: ___ LR: ___ DUP: ___ RNS: ___

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ___ SCREEN: ___

SAMPLING TECHNIQUE: SCOOP: ___ DREDGE: ___ CORE: X OTHER: ___

SAMPLED FROM: SHORE: ___ STREAM: ___ BOAT: X BRIDGE: ___ CROSS-SECTION DRY AREA: ___

SAMPLING CONDITIONS: STREAM: ___ POND: X PUDDLE: ___ DRY: ___

SAMPLE TEAM LEADER: L.A Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ___ SUNNY: ___ PRTLY/SNNY: X PTRLY/CLDY: ___ CLOUDY: ___ FOG: ___

(Pick 1 from each line) HOT: ___ WARM: X COOL: ___ COLD: ___ VERY COLD: ___

CALM: ___ BREEZY: ___ GUSTY: ___ WINDY: ___ RAIN: ___ SLEET: ___ SNOW: ___

DEPTH OF WATER: 3 FT DEPTH OF TAKE: 4 IN

COMMENTS: five cores composited for sample and rad screen

Completed By: L.A. Carpenter (Print Name) [signature] (Signature) Date: 5/20/97

Checked By: DM Spruce (Print Name) [signature] (Signature) Date: 5-20-97

1.49

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment special PROJECT CHARGED: special

SUBCONTRACTOR: AST LOCATION CODE: C206 SAMPLE NUMBER: 97-05-20-C2-06

SAMPLE COLLECTION DATE: 05/20/97 SAMPLE COLLECTION TIME: 1200

SAMPLE TYPE: Real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L. A Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: X PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: X WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 3 FT DEPTH OF TAKE: 4 IN

COMMENTS: four cores taken and composited for sample and radscreen

Completed By: L.A. Carpenter (Print Name) [signature] (Signature) Date: 5/20/97

Checked By: D M Spruce (Print Name) [signature] (Signature) Date: 5-20-97

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U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT FORM SW.6A (REV. 2)

SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: Sediment Special PROJECT CHARGED: Special

SUBCONTRACTOR: AST LOCATION CODE: C207 SAMPLE NUMBER: 97-05-20-C2-07

SAMPLE COLLECTION DATE: 05/20/97 SAMPLE COLLECTION TIME: 1200

SAMPLE TYPE: real DISPOSITION: Sampled

QC TYPE (CHECK): REAL: X MS: ____ MSD: ____ LR: ____ DUP: ____ RNS: ____

COMPOSITE (Y/N): Y SIEVED (Y/N): N SIEVE SIZE NO.: 10 SIEVE MATERIAL: FRAME: ____ SCREEN: ____

SAMPLING TECHNIQUE: SCOOP: ____ DREDGE: ____ CORE: X OTHER: ____

SAMPLED FROM: SHORE: ____ STREAM: ____ BOAT: X BRIDGE: ____ CROSS-SECTION DRY AREA: ____

SAMPLING CONDITIONS: STREAM: ____ POND: X PUDDLE: ____ DRY: ____

SAMPLE TEAM LEADER: L A Carpenter

SAMPLE CREW MEMEBER 1: DM Spruce

SAMPLE CREW MEMEBER 2: RL Singleton

WEATHER: CLEAR: ____ SUNNY: ____ PRTLY/SNNY: X PTRLY/CLDY: ____ CLOUDY: ____ FOG: ____

(Pick 1 from each line) HOT: ____ WARM: X COOL: ____ COLD: ____ VERY COLD: ____

CALM: ____ BREEZY: ____ GUSTY: X WINDY: ____ RAIN: ____ SLEET: ____ SNOW: ____

DEPTH OF WATER: 3 FT DEPTH OF TAKE: 4 IN

COMMENTS: * Same location as C206 - four cores taken and composited for sample

Completed By: L A Carpenter (Print Name) [signature] (Signature) Date: 05/20/97

Checked By: M Spruce (Print Name) [signature] (Signature) Date: 5-20-97

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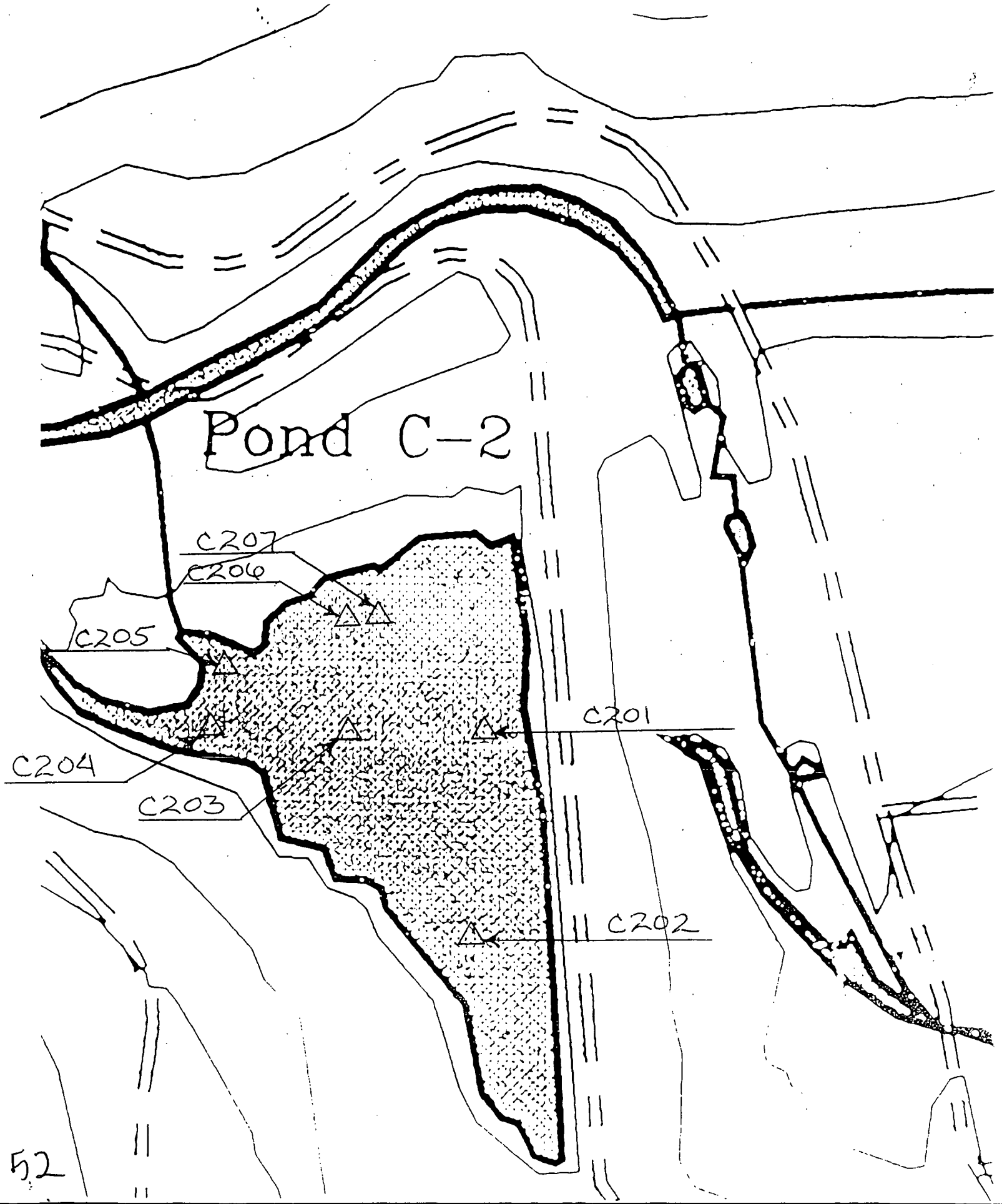
Pond C-2
C207
C206
C205
C204
C203
C201
C202

SAMPLERS (Signature) R Michael / R Koehler /

REPORT IDENTIFICATION NUMBER (RIN) _____

LAB/LOCATION: _____

RFETS CONTRACTOR Tierra

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE CHAIN OF CUSTODY

DATE	TIME	EVENT	BOTTLE	USER ID	LOCATION	CONTAINER	MATRIX	Preservation: Cooled to 4° C	NaOH	HNO3	H2 SO4	HCl	Analytes: Actinide migration
6-20-97	0951				00491	1 Gal	W	X					X
6-20-97	0935				00491	1 l	W	X					X
6-23-97	1430				05193	1 Gal	W	X					X
6-23-97	1430				05193	1 l	W	X					X
6-24-97	1129				1786	1 Gal	W	X					X
6-23-97	1606				1786	1 l	W	X					X

Relinquished By:	Received By/Organization	Date	Time
Ray W Michael 6-24-97	[signature]	6-24-97	1610

LABORATORY USE ONLY	Y/N
PCKG REC'D/CUSTODY SEALS INTACT	
SAMPLE LABELS/COCs AGREE	
TEMPERATURE AT TIME OF RECEIPT 4 °C	

REMARKS:

Charge # 09031000

Project #

Required delivery time: Overnight Delivery ☐ 2-Day Delivery ☐ Air Bill No. N/A

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Bruce D. Honeyman

From: Craig Cowdery <Craig.Cowdery@rfets.gov>
To: bhoneyma@slate.Mines.EDU
Cc: John Hopkins <John.Hopkins@rfets.gov>; Annette Primrose <Annette.Primrose@rfets.gov>
Subject: Water Sample Locations at RFETS
Date: Thursday, June 26, 1997 8:18 AM

Annette Primrose requested that I send you the following information:

Water Sample Locations

00491 - 903 Pad
5193 - High Nitrate
1786 - Low Nitrate

If you have any questions please contact A. Primrose at 966-4385.

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PROPERTY RELEASE EVALUATION

PRE Number: 970623-T690B-009 Charge Number: 09031000

EXTENDED: YES EXPIRES: 12/31/97

PART I SENDER/CUSTODIAN

Description of Property/Waste To Be Released/Transferred:	Groundwater samples from well #00491, #5193, #1786 (each sample is comprised of a one liter and a one gallon container).
Property's Current Location:	T891O; well #00491, #5193, and #1786.
Property's Destination:	Colorado School of Mines, 1500 Illinois Street, Golden, CO 08401.
Property's New Recipient/Custodian:	Bruce D. Honeyman, Colorado School of Mines. Tel.# (303) 692-3030.
Property History/Process Knowledge:	The above specified water samples originated from sitewide groundwells from around RFETS. These wells have had at least eight quarters of radiological survey data indicating <2 nCi/g.
Has the specified property/waste ever been in an RMMA or contacted DOE controlled radioactive materials?	No.

ACKNOWLEDGEMENT:

By signing below, the sender/custodian verifies the following information to be true and correct:

(1) Alpha and Beta screening demonstrate the samples do not exceed 2 nanoCi/gm of radioactive material.

(2) Samples shall be shipped in accordance with 49CFR (DOT) requirements.

Fred Dougherty for:

Sender/Custodian: Ray Michael Emp.No.: [redacted] Date: 06/20/97 Ext: 4953 Pager: N/A

PART II RADIOLOGICAL ENGINEERING

No Radiological Survey is required due to the property's location, history, and/or characteristics.

SPECIFIC REQUIREMENTS AND/OR COMMENTS:

Process knowledge/history of the groundwater samples taken from wells on RFETS (data provided in RFETS database) indicates that no samples have approached the DOT shipping value of 2 nCi/g; since these samples are being shipped to a licensed facility, no surveys are required for shipment. This does not override the requirement of surveying out any samples taken inside a Radiological Area posted for contamination purposes (i.e., a CA, HCA, or ARA) at the Step-Off Pad.

APPROVAL FOR TRANSFER/SHIPMENT

The samples specified in Part I of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CRF) regulations. This approval does not constitute an unrestricted release from DOE radiological controls.

Approved: [signature] Emp.No.: [redacted] Date: 06/24/97 Ext.: 8148 Pager: 3977

RE

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