LTSM007950

DOE/OR/21548-883
CONTRACT NO DE-AC05-86OR21548

POST-REMEDIAL ACTION REPORT FOR THE FROG POND WORK ZONE (WP-437/RU016)

WELDON SPRING SITE REMEDIAL ACTION PROJECT
WELDON SPRING, MISSOURI

JULY 2001 **REV. 0**

RECORD

U.S. Department of Energy
Oak Ridge Operations Office
Weldon Spring Site Remedial Action Project

Prepared by MK-Ferguson Company and Jacobs Engineering Group

510.20
~~LWEL 02.03~~

MORRISON KNUDSEN CORPORATION MK-FERGUSON GROUP Weldon Spring Site Remedial Action Project Contract No. DE-AC05-86OR21548	Rev. No. 0
PLAN TITLE: Post-Remedial Action Report for the Frog Pond Work Zone (WP-437/RU016)	

APPROVALS

Environmental Safety and Health Manager	July 02, 2001 Date
Data Administration Coordinator	7/3/01 Date
Engineering Manager	7-12-01 Date
Project Quality Manager	7/12/2001 Date
Deputy Project Director	7/13/01 Date

DOE/OR/21548-883

Weldon Spring Site Remedial Action Project

Post-Remedial Action Report for the Frog Pond Work Zone (WP-437/RU016)
EXECUTIVE SUMMARY

Revision 0

July 2001

Prepared by

MK-FERGUSON COMPANY
and
JACOBS ENGINEERING GROUP
7295 Highway 94 South
St. Charles, Missouri 63304

for the

U.S. DEPARTMENT OF ENERGY
Oak Ridge Operations Office
Under Contract DE-AC05-86OR21548

EXECUTIVE SUMMARY

Work Package-437 (WP-437) consists of twelve work zones and, due to the magnitude of the work package, a distinct Post-Remedial Action Report will address each zone separately. This report refers specifically to activities in the Frog Pond Work Zone.

Contaminated soil and structures were removed as part of WP-437 to remediate the area within the Frog Pond work zone by adhering to the selected remedial action defined in the *Record of Decision for Remedial Action at the Chemical Plant Area of the Weldon Spring Site* (ROD). The objective of this action was to ensure that contaminated areas within the Frog Pond work zone were remediated to meet the cleanup criteria standards stated in the *Chemical Plant Area Cleanup Attainment Confirmation Plan.* The sample locations and analytical parameters are identified in the *Confirmation Sampling Plan Details for the Disposal Cell Facility (WP-437)* (Sampling Plan).

The Frog Pond work zone has been designated Remedial Unit (RU) 16 and subdivided into confirmation units (CUs) that measure approximately 2,000 m^2 each. The work zone includes Frog Pond, one sedimentation basin, and two retention basins. Contaminants of concern (COCs) were developed for each CU using characterization soil sample results. COCs identified in the sampling plan for RU016 include Radium-226 (Ra-226), Radium-228 (Ra-228), Thorium-230 (Th-230), Thorium-232 (Th-232), Uranium-238 (U-238), arsenic (As), chromium (Cr), lead (Pb), thallium (Tl), polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). Nitroaromatics were identified during excavation activities and added as COCs in the affected areas.

Remedial activities for the Frog Pond work zone included excavation of contaminated soil, radiological walkover surveying, and confirmation soil sampling. Preliminary results were reviewed, and the CU was released to the subcontractor for backfill and final grading. When the final analytical results were received, the data were compared to the preliminary results to verify that the established cleanup standards were achieved. Final analytical results for RU016 are presented below. This table was generated using the final data set compiled from all samples representing soils left in place.

SUMMARY OF ANALYTICAL RESULTS FOR RU016 IN WP-437

CONTAMINANT	NO OF SAMPLES	CONCENTRATION RANGE	AVERAGE CONCENTRATION	SURFACE ALARA	SURFACE CRITERIA	RESULTS > ALARA
As (mg/kg)	134	2.9 - 123.0	9.75	45	75	1
Cr (mg/kg)	96	9.4 - 27.4	17.53	90	110	0
Pb (mg/kg)	98	6.6 - 63.4	15.71	240	450	0
Tl (mg/kg)	130	0.34 - 19.0	1.48	16	20	1
Ra-226 (pCi/g)	337	0.13 - 4.09	0.85	5.00	6.20	0
Ra-228 (pCi/g)	337	0.30 - 2.63	1.05	5.00	6.20	0
Total Radium* (pCi/g)	337	0.56 - 6.04	1.90	5.00	6.20	2
Th-230 (pCi/g)	337	0.24 - 6.34	1.37	5.00	6.20	6
Th-232 (pCi/g)	337	0.30 - 2.70	1.08	5.00	6.20	0
U-238 (pCi/g)	350	0.27 - 53.7	3.14	30.00	120.00	4
PAH (mg/kg)	156	0.00 - 1.61	0.05	0.44	5.60	0
PCB (mg/kg)	132	0.00 - 0.16	0.01	0.65	8.00	0
DNT (mg/kg)	53	0.13 - 0.17	0.15	7.4	55	0
TNT (mg/kg)	128	0.07 - 8.90	0.27	14	140	0

* Total Radium consists of Ra-226 values plus Ra-228 values.

Note Final data are presented in table.

As indicated above, the average concentration for each COC was below the corresponding ALARA goal. COC averages were calculated for each CU and found to be below ALARA, and the average radiological contaminant concentration in each 100 m^2 area was below cleanup criteria. Based on the analytical results presented above, all CUs within RU016 were fully released for unrestricted use in accordance with the sampling frequency, sampling methods, and statistical evaluation identified in the *Chemical Plant Area Cleanup Attainment Confirmation Plan.*

DOE/OR/21548-883

Weldon Spring Site Remedial Action Project

Post-Remedial Action Report for the Frog Pond Work Zone (WP-437/RU016)

Revision 0

July 2001

Prepared by

MK-FERGUSON COMPANY
and
JACOBS ENGINEERING GROUP
7295 Highway 94 South
St. Charles, Missouri 63304

for the

U.S. DEPARTMENT OF ENERGY
Oak Ridge Operations Office
Under Contract DE-AC05-86OR21548

ABSTRACT

Work Package-437 (WP-437) has been divided into 12 work zones. This report details the confirmation field activities and analytical results for contaminated soil removal of the Frog Pond work zone portion of WP-437. This 13-acre area is further subdivided into 15 confirmation units.

The Frog Pond work zone included Frog Pond, Sedimentation Basin 1, and Retention Basins 1 and 2. Two areas within this work zone were previously confirmed under a separate work package to support construction of the aforementioned basins.

Soil characterization results and pre-excavation walkovers determined that the work zones contained contaminant concentrations that exceeded as low as reasonable achievable (ALARA) goals established in the *Record of Decision for Remedial Action at the Chemical Plant Area of the Weldon Spring Site* (ROD). Remediation was designed to achieve surface ALARA goals, and confirmation of soil remediation was required to meet ROD cleanup standards. Final confirmation data verified that the established goals and standards were achieved.

TABLE OF CONTENTS

SECTION **PAGE**

1. INTRODUCTION 1
1.1 Purpose 1
1.2 Scope 1
1.3 Remediation and Confirmation Process 1
2. PRE-REMEDIATION ACTIVITIES 5
2.1 Determining Contaminants of Concern 5
2.2 Data Quality Objectives 5
2.3 Cleanup Standards 5
2.4 Cleanup Confirmation Process 6
3. REMEDIAL ACTIVITIES 8
3.1 Excavation Activities 8
3.2 Field Activities 8
3.2.1 Walkover Surveys 8
3.2.2 Soil Sampling 8
3.3 Laboratory Activities 9
3.4 Verification Activities 9
4. Confirmation Units Results Summary 10
5. Data Evaluation 41
5.1 Data Verification 41
5.2 Data Review 41
6. SUMMARY OF CLOSURE REPORT FINDINGS 43
6.1 Data Evaluation 43
6.2 Summary of WP-437 Confirmation Results 43
6.3 Summary of Chemical Plant Confirmation Results 44
6.4 Comparison of Standard Deviations 44
7. REFERENCES 47

APPENDIXES

A WP437 RU16 Final Walkover Form
B WP437 RU16 Final Data
C WP437 RU16 Sample Location Coordinates
D Interoffice Correspondence
E ORISE Hotspot Table

LIST OF FIGURES

NUMBER **PAGE**

Figure 1-1 WP-437 Work Zone Designations 2
Figure 1-2 Confirmation Units in Remedial Unit 16 3
Figure 2-1 Cleanup Confirmation Process 7
Figure 4-1 Sample Locations in Remedial Unit RU016 Confirmation Unit CU357 12
Figure 4-2 Sample Locations in Remedial Unit RU016 Confirmation Unit CU358 14
Figure 4-3 Sample Locations in Remedial Unit RU016 Confirmation Unit CU359 16
Figure 4-4 Sample Locations in Remedial Unit RU016 Confirmation Unit CU360 18
Figure 4-5 Sample Locations in Remedial Unit RU016 Confirmation Unit CU361 20
Figure 4-6 Sample Locations in Remedial Unit RU016 Confirmation Unit CU362 22
Figure 4-7 Sample Locations in Remedial Unit RU016 Confirmation Unit CU363 24
Figure 4-8 Sample Locations in Remedial Unit RU016 Confirmation Unit CU364 26
Figure 4-9 Sample Locations in Remedial Unit RU016 Confirmation Unit CU365 28
Figure 4-10 Sample Locations in Remedial Unit RU016 Confirmation Unit CU366 30
Figure 4-11 Sample Locations in Remedial Unit RU016 Confirmation Unit CU367 32
Figure 4-12 Sample Locations in Remedial Unit RU016 Confirmation Unit CU368 34
Figure 4-13 Sample Locations in Remedial Unit RU016 Confirmation Unit CU387 36
Figure 4-14 Sample Locations in Remedial Unit RU016 Confirmation Unit CU388 38
Figure 4-15 Sample Locations in Remedial Unit RU016 Confirmation Unit CU389 40

LIST OF TABLES

NUMBER **PAGE**

Table 2-1 ROD Cleanup Standards for COCs within the WP-437 Frog Pond Work Zone.....6
Table 4-1 Summary of CU357.....11
Table 4-2 Summary of CU358.....13
Table 4-3 Summary of CU359.....15
Table 4-4 Summary of CU360.....17
Table 4-5 Summary of CU361.....19
Table 4-6 Summary of CU362.....21
Table 4-7 summary of CU363.....23
Table 4-8 Summary of CU364.....25
Table 4-9 Summary of CU365.....27
Table 4-10 Summary CU366.....29
Table 4-11 Summary of CU367.....31
Table 4-12 Summary of CU368.....33
Table 4-13 Summary of CU87.....35
Table 4-14 Summary of CU388.....37
Table 4-15 Summary of CU389.....39
Table 6-1SUMMARY TOTALS FOR RU016.....43
Table 6-2 Summary Totals For Confirmation.....44
Table 6-3 Comparison of Standard Deviations.....45

1. INTRODUCTION

1.1 Purpose

Work Package-437 (WP-437) is divided into 12 work zones, 11 of which are identified in Figure 1-1. In addition, there is the Vicinity Property DA-6 work zone located off site just west of the Ash Pond work zone. This report details the confirmation field activities and analytical results for contaminated soil removal of the Frog Pond work zone portion of WP-437.

Soil characterization results and pre-excavation walkovers determined that the work zones contained contaminant concentrations that exceeded the As Low As Reasonably Achievable (ALARA) goals established in the *Record of Decision for Remedial Action at the Chemical Plant Area of the Weldon Spring Site* (ROD) (Ref. 1). Remediation was designed to achieve surface ALARA goals, and confirmation of soil remediation to the ROD cleanup standards was required.

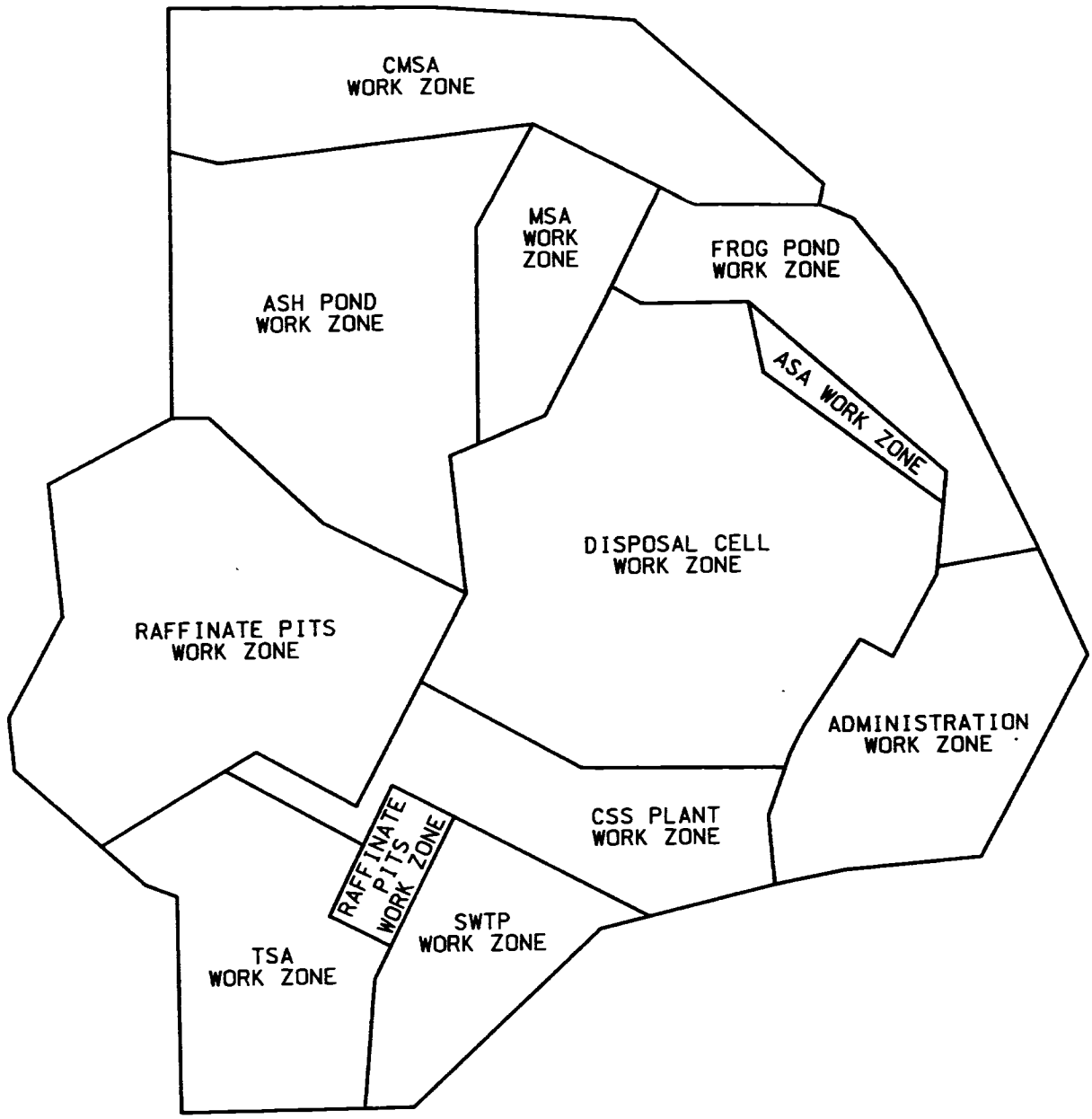
The 13-acre Frog Pond work zone included Frog Pond, Sedimentation Basin 1, and Retention Basins 1 and 2. Two small areas located within this work zone were previously confirmed during WP-399 to support construction of the sedimentation and retention basins, and most of those areas were reconfirmed as part of WP-437. Details can be found in the *Post Remedial Action Report for WP-399 Chemical Plant Drainage Control Facilities* (Ref. 8). The portions of the work zone requiring remediation and confirmation were subdivided into 15 confirmation units (CUs) that are collectively known as remedial unit (RU) 16 and are identified in Figure 1-2.

1.2 Scope

This report describes the remedial activities and confirmation surveying and sampling conducted on contaminated soils within RU016. Confirmation walkovers and soil sampling were conducted in accordance with the *Confirmation Sampling Plan Details for the Disposal Cell Facility (WP-437)* (Ref. 2). This plan was developed to ensure that the objectives identified in the *Chemical Plant Area Cleanup Attainment Confirmation Plan* (Ref. 3) were accomplished, and to ensure that established remediation requirements of the ROD were met.

1.3 Remediation and Confirmation Process

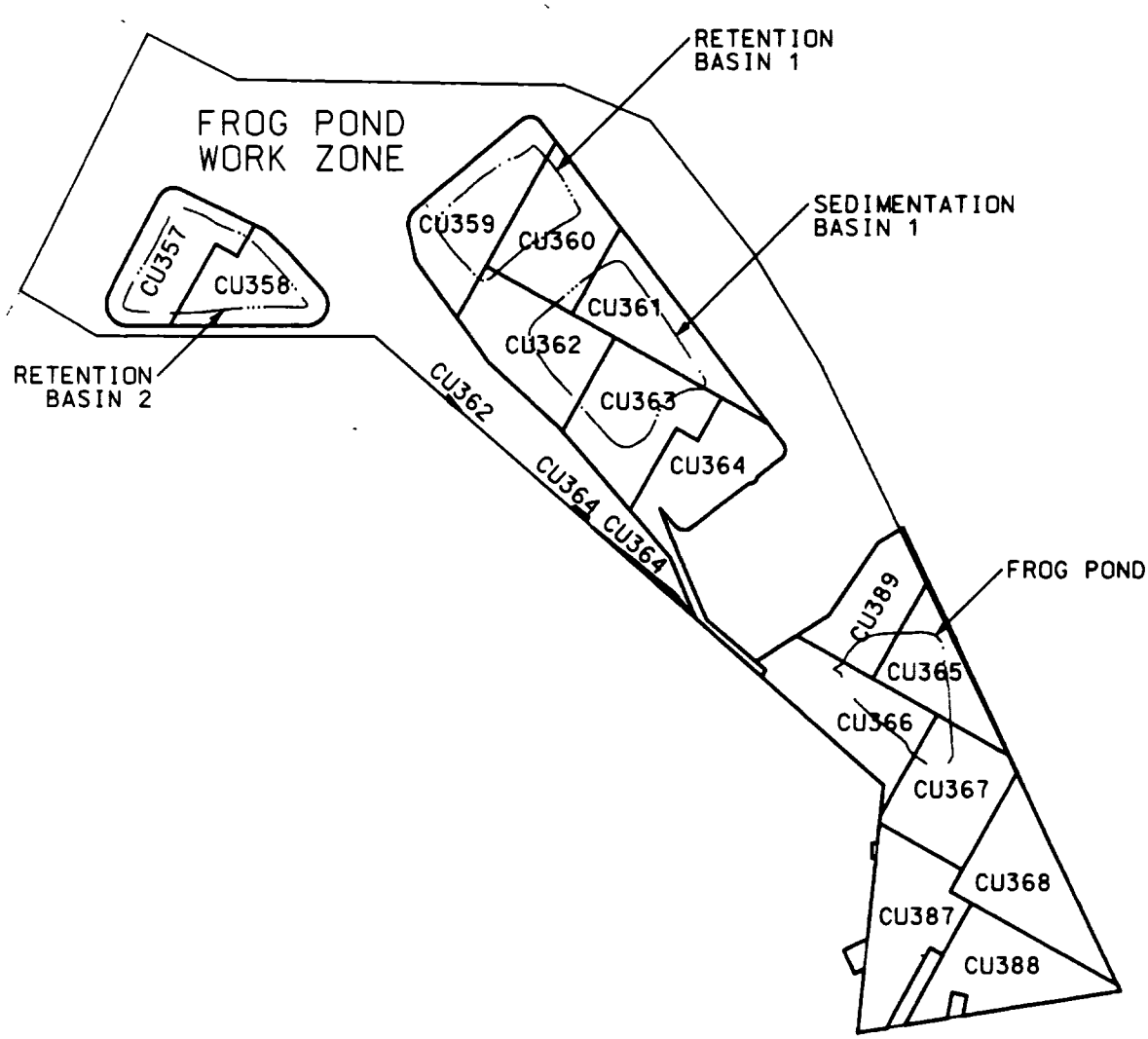
This report details the activities conducted to remediate the Frog Pond portion of WP-437, which consists of CUs 357 through 368, and CUs 387 through 389. Remediation consisted of excavation of contaminated soils, sediments, and debris. Following remediation, walkovers were conducted and confirmation samples were collected to ensure that all contaminated materials had been remediated.

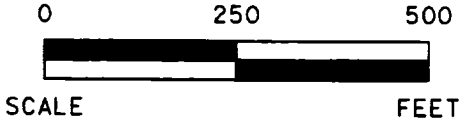


WP-437 WORK ZONE DESIGNATIONS

FIGURE 1-1

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.: A/CP/001/0101	
ORIGINATOR: LB	DRAWN BY: GLN	DATE: 2/7/01	





CONFIRMATION UNITS
IN
REMEDIAL UNIT 16

FIGURE 1-2

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.: A/CP/005/0101	
ORIGINATOR: LGB	DRAWN BY: GLN	DATE: 4/4/01	

The entire remediation process included characterization sampling, historical data review, contaminants of concern (COC) identification, confirmation plan development, contaminated soil excavation, radiological walkover surveys, confirmation soil sampling, preliminary and final data review, completion of disposition forms, quality assurance/quality control (QA/QC) review, summary of findings and conclusions, and closure report preparation.

2. PRE-REMEDIATION ACTIVITIES

2.1 Determining Contaminants of Concern

Contaminants of concern (COCs) determination was dependent upon historical information, characterization results, and visual observation during field activities, and not all COCs were required for all sample locations. The full process for identifying COCs is detailed in the *Confirmation Sampling Plan Details for the Disposal Cell Facility (WP-437)* (Ref. 2). Radiological COCs identified for RU016 were Radium-226 (Ra-226), Radium-228 (Ra-228), Thorium-230 (Th-230), Thorium-232 (Th-232), and Uranium-238 (U-238). Chemical COCs were polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), arsenic (As), chromium (Cr), lead (Pb), and thallium (Tl). Trinitrotoluene (TNT) contamination was visibly identified in the field during later remediation activities. Because of this, TNT was added as a COC in CUs 365 through 367. Additionally, Army waste material was mixed with sediment in Retention Basin 2. Because of this, dinitrotoluene (DNT) was added as a COC in the affected areas of CUs 357 and 358, which encompass the footprint of Retention Basin 2. (See Figure 1-2.)

2.2 Data Quality Objectives

Data Quality Objectives (DQOs) were identified to specify data quality and ensure that the data would be sufficient to support the decision making process throughout remedial activities, including the confirmation process. Confirmation DQOs were developed for sampling and analyzing soils during remediation and for the subsequent data evaluation. The DQOs were designed to make statistically defensible decisions regarding attainment of cleanup standards. Sampling and analytical programs for the WP-437 work zones were designed in accordance with DQOs stated in the *Chemical Plant Area Cleanup Attainment Confirmation Plan* (Ref. 3).

2.3 Cleanup Standards

The objective of the Department of Energy (DOE) ALARA process is to reduce exposures and risks associated with residual contamination. The ROD (Ref. 1) established two different sets of cleanup standards: risk-based cleanup criteria and As Low As Reasonably Achievable (ALARA) goals. Remedial activities for WP-437 were designed to remove soil where the COC concentrations were found by characterization or during remediation activities to exceed ALARA goals. Table 2-1 summarizes the cleanup criteria and ALARA goals established in the ROD that are applicable for COCs in the Frog Pond work zone. Throughout the remedial activities at RU016, COC concentrations were evaluated with the ALARA process.

2.4 Cleanup Confirmation Process

The cleanup confirmation process is used to determine, under the remedial guidelines, if remediation activities have achieved the cleanup standards. Figure 2-1 shows the cleanup confirmation process for remedial activities conducted at the WP-437 area.

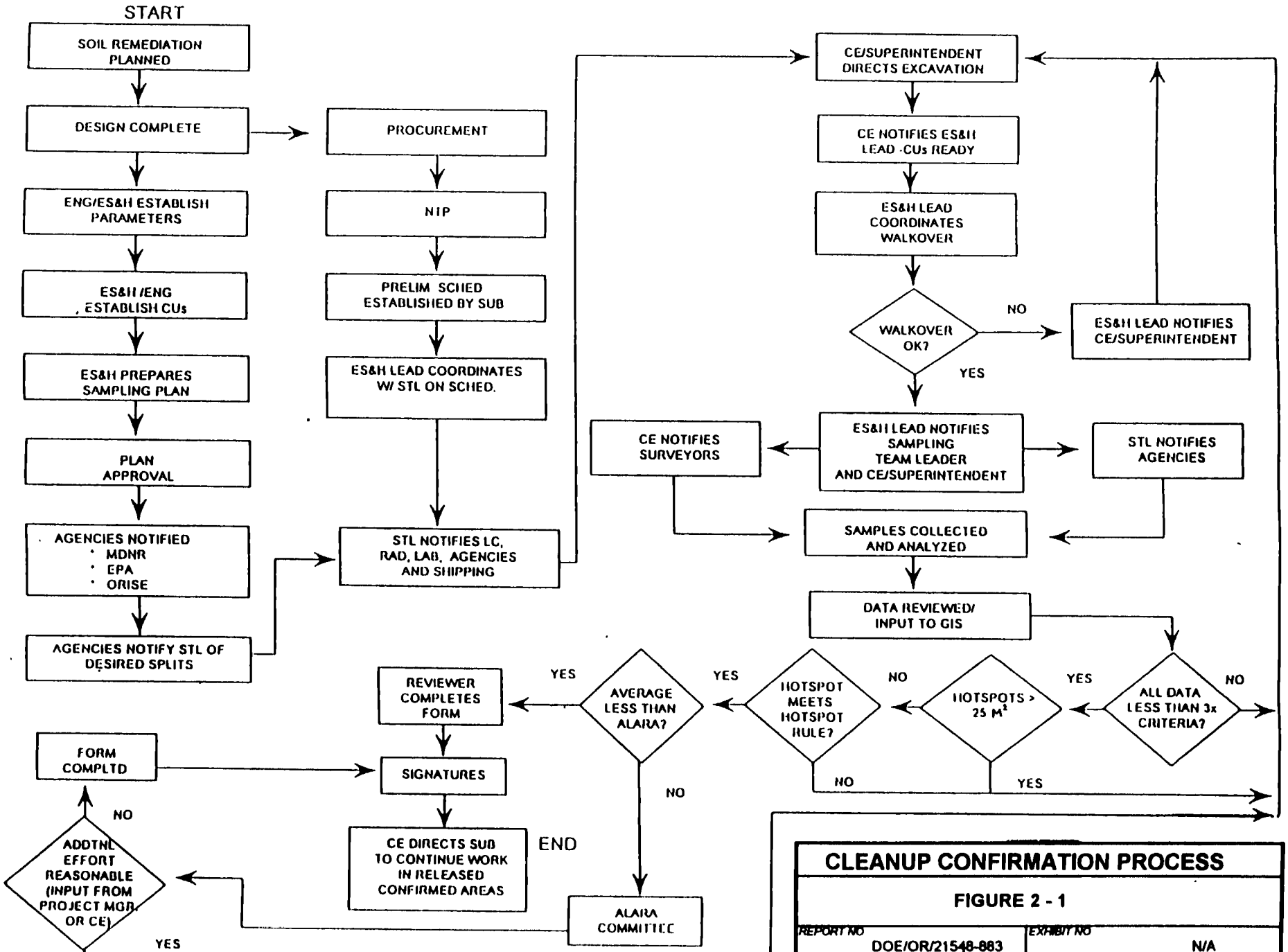
The decision-making process specifies how the data will be applied and evaluated within the cleanup confirmation process. The decision-making process includes provisions for any hot spots that may be encountered by applying a formula to determine the acceptable concentration for the COC.

Table 2-1 ROD Cleanup Standards for COCs within the WP-437 Frog Pond Work Zone

	SURFACE [a]		SUBSURFACE [b]	
RADIONUCLIDE (pCi/g)	**ALARA**	**CRITERIA**	**ALARA**	**CRITERIA**
Ra-226	5.0	6.2	5.0	16.2
Ra-228	5.0	6.2	5.0	16.2
Total Radium	5.0	6.2	5.0	16.2
Th-230	5.0	6.2	5.0	16.2
Th-232	5.0	6.2	5.0	16.2
U-238	30.0	120	30.0	120.0
CHEMICAL (mg/kg)				
As	45	75	75	750
Cr	90	110	110	1,110
Pb	240	450	450	4,500
Tl	16	20	20	200
PAH	0.44	5.6	5.6	~~26~~ 56
PCB	0.65	8	8	80
DNT	7.4	55	- -	- -
TNT	14	140	140	1,400

(a) Values listed for surface soils apply to contamination within the upper 15 cm (6 in.) of the soil column.
(b) Values for subsurface apply to contamination in soils below 15 cm (6 in.).

Source: *Record of Decision for Remedial Action at the Chemical Plant Area of the Weldon Spring Site* (Ref. 1)



CLEANUP CONFIRMATION PROCESS

FIGURE 2 - 1

REPORT NO	EXHIBIT NO	
DOE/OR/21548-883	N/A	
ORIGINATOR: LGB	DRAWN BY: N/A	DATE: 02/05/01

3. REMEDIAL ACTIVITIES

3.1 Excavation Activities

Contaminated soils and other debris from the Frog Pond work zone were first excavated to design depth as detailed in the Frog Pond work zone specifications (Ref. 6). After the initial excavation was complete, radiological walkover surveys were conducted to evaluate the need for additional excavation. The walkover surveys were conducted using a 2 in. x 2 in. sodium iodide (NaI) scintillation detector. When the surveys indicated no additional excavation was needed, confirmation soil samples were collected.

Confirmation results were then reviewed, and additional excavation and confirmation sampling was conducted in hot spot areas, if necessary. After cleanup standards were achieved, a disposition form was completed with preliminary analytical results. The form was reviewed and signed by authorized project personnel. The confirmation unit (CU) was then released back to the subcontractor for final grading.

3.2 Field Activities

Field activities completed during remediation, such as walkover surveys and soil sampling, were conducted in accordance with procedures specified in the *Confirmation Sampling Plan Details for the Disposal Cell Facility (WP-437)* (Ref. 2). Field activities were conducted to achieve and document sampling objectives specified in the *Chemical Plant Area Cleanup Attainment Confirmation Plan* (Ref. 3). All sampling and remedial action surveys were conducted and documented in accordance with Weldon Spring Site Remedial Action Project (WSSRAP) Environmental Safety and Health (ES&H) procedures.

3.2.1 Walkover Surveys

Radiological walkover surveys were conducted after remediation activities were completed to determine if confirmation sample collection could begin. The surveys were conducted using a 2 in. x 2 in. NaI scintillation detector. The survey readings were within an acceptable range (less than 1.5 times background) throughout the entire work zone. The ranges for each CU are listed in the CU Summary Forms in Section 4 of this report.

3.2.2 Soil Sampling

Once the walkovers were completed, soil sampling was conducted as part of the confirmation process. The sampling locations for CUs in RU016 are shown in the figures in Section 4. Analytical suites for the CUs were dependant upon the COC list developed from historical information, characterization data, and visual identification in the field as discussed in Section 2.

One PAH hot spot, one arsenic hot spot, and 11 Th-230 hot spots were encountered during confirmation of this RU. Eleven of these locations were further remediated in accordance with the guidelines established in the *Chemical Plant Area Cleanup Attainment Confirmation Plan* (Ref. 3). The remaining two hot spot locations, one Th-230 and one arsenic, met the hot spot rule as defined in the *Attainment Plan* (Ref. 3) and no additional excavation was required. Details can be found in the appropriate CU summary forms in Section 4 of this report.

The subsequent survey and confirmation sample results indicated that contaminants were below cleanup standards and the averages were less than ALARA; therefore, no further remediation was conducted for RU016. Disposition forms were completed following receipt of preliminary analytical data for all CUs within the Frog Pond work zone.

3.3 Laboratory Activities

Radiological analyses for RU016 were conducted at the on-site laboratory in accordance with the *Project Management Contractor Quality Assurance Program* (Ref. 4) and the *Environmental Quality Assurance Project Plan* (EQAPjP) (Ref. 5). CU releases were based on estimated Ra-226 results. In addition, the concentration of Th-232 was calculated based on the analytical results of Ra-228 and the calculated value was used for CU releases. Both of these calculations are explained in detail in interoffice correspondences (IOCs) presented in Appendix D.

Chemical analyses for RU016 were conducted at subcontracted off-site laboratories using Contract Laboratory Program (CLP) methodologies. Summaries of the analytical results for each CU can be found in Section 4 of this report. Analytical data were subjected to data evaluation and validation upon receipt from the laboratory.

3.4 Verification Activities

The Oak Ridge Institute for Science and Education (ORISE) was contracted by the U. S. Department of Energy (DOE) to verify confirmation soil sampling in the chemical plant area. Verification activities included independent walkover radiological surveys and collection and analysis of soil samples to verify proper disposition of CUs. Field verification activities were conducted in accordance with ORISE's final survey plan (Ref. 7). A table summarizing ORISE hot spot information is in Appendix E. Unbiased soil samples taken by ORISE are noted on the appropriate CU Summary Forms (Section 4).

A final verification report will be prepared by ORISE. This report will contain verification of walkover surveys and soil sampling results and will affirm that the remedial action objectives were achieved.

4. Confirmation Units Results Summary

This section summarizes the confirmation unit analytical results for the fifteen CUs in RU016. In total, 431 locations were sampled between August 1998 and September 2000. Preliminary results were below cleanup criteria with the exception of 13 hot spots as discussed in Section 3 of this report. Average COC concentrations of preliminary data for RU016 remained below ALARA goals with only one exception. The PAH average for preliminary data exceeded ALARA in CU 365, but all 100 m^2 averages from final data were less than criteria.

After the preliminary data were reviewed, disposition forms were completed and signed by authorized reviewers. Based on the preliminary confirmation data, all CUs in RU016 were fully released as complying with surface cleanup standards.

Note that the preliminary data were the initial results available immediately from the laboratory and were used for releases. These preliminary results could vary from the final results based upon laboratory quality checks or Weldon Spring Site Remedial Action Project (WSSRAP) verification activities. Upon receipt of the data packages, the final data were reviewed and compared to the preliminary data. The final analytical results agreed with the preliminary results and indicated that the remedial activities were completed. The final results met the cleanup standards as detailed in the *Chemical Plant Area Cleanup Area Attainment Confirmation Plan* (Ref. 3) for all CUs in RU016. Tables 4-1 through 4-15 and associated figures provide the confirmation details for each CU, and all data presented are final. Copies of the final walkover forms are in Appendix A. The final data are in Appendix B. The list of coordinates is in Appendix C.

Table 4 - 1 Summary of CU357

CU	357	RU	16
COC	Ra-226 X	As	X
	Ra-228 X	Cr	X
	Th-230 X	Pb	X
	Th-232 X	Tl	X
	U-238 X	PAH	X
	DNT X	PCB	X
Reference Figure:	4 - 1	TNT	X

DATE RELEASED FOR UNRESTRICTED USE: 9 / 27 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the NW portion of Retention Basin #2 within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *6,000 - 10,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *4/6/00 8/29/00 9/16/00 9/19/00 9/20/00 9/21/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS . *34*

TOTAL # OF UTILITY SAMPLES : *0*

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

ADDITIONAL EXCAVATION REQUIRED? [X] YES [ ] NO

GENERAL COMMENTS - *The boundary of this CU was enlarged to include the interior slopes of Retention Basin #2 Because of this revision, sample IDs in this CU have been renumbered One Total Radium/Th-230 hotspot and two Th-230 hotspots were identified during initial sampling. Areas were further excavated and resampled All final results are below criteria Army waste material was mixed in with Retention Basin #2 sediments therefore DNT was added as a COC to the affected area All final results are below criteria*

ORISE ACTION - *None*

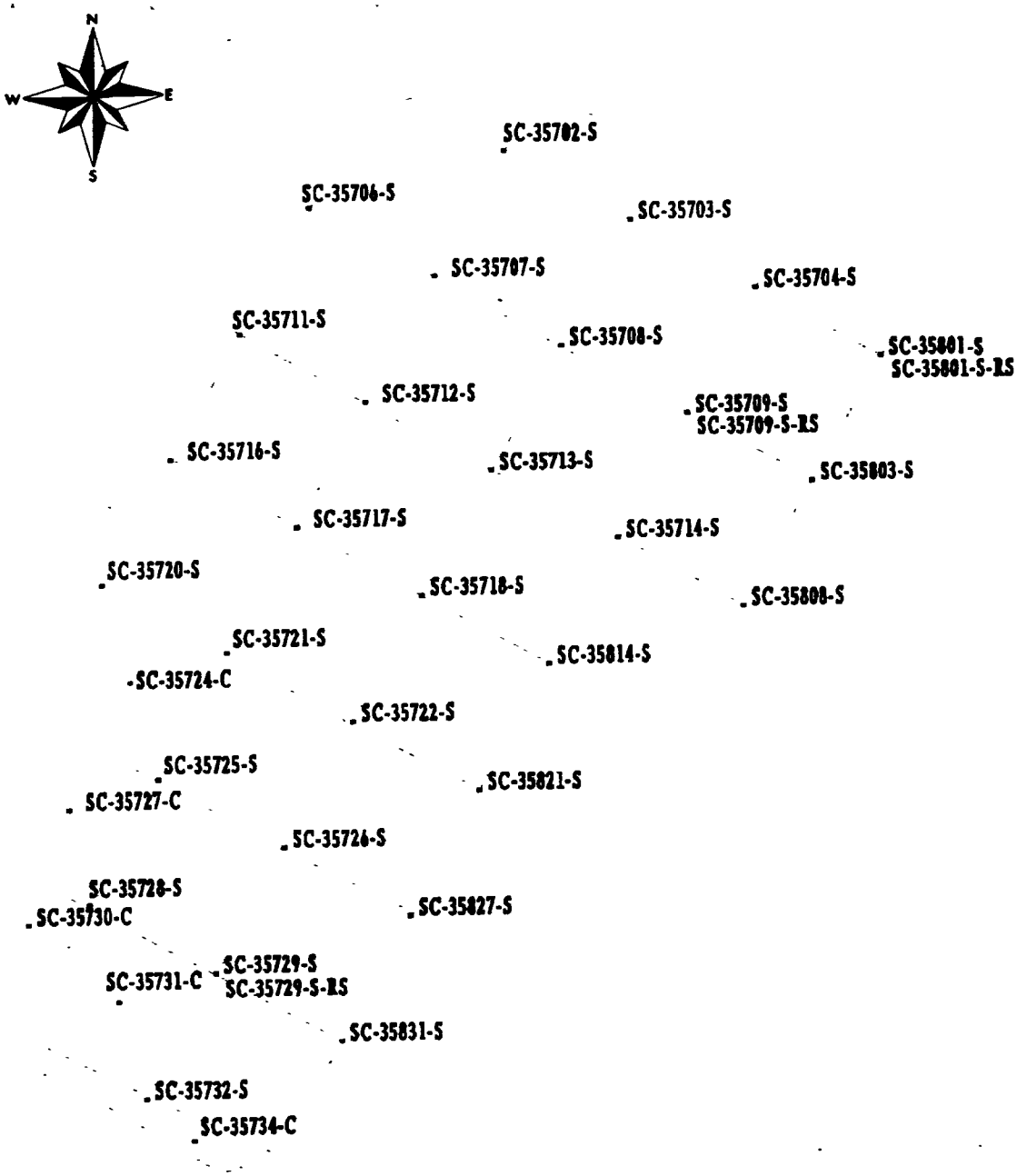
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]

Arsenic	26	4.2 - 11.1	8.11	45	75	0	0
Chromium	26	11.2 - 27.4	16.07	90	110	0	0
Lead	26	7.0 - 29.4	15.22	240	450	0	0
Thallium	26	0.34 - 2.1	0.98	16	20	0	0
Ra-226	26	0.24 - 1.03	0.58	5	6.2	0	0
Ra-228	26	0.34 - 1.31	0.94	5	6.2	0	0
Total Radium	26	0.78 - 2.20	1.52	5	6.2	0	0
Th-230	26	0.87 - 5.73	1.55	5	6.2	1	0
Th-232	26	0.35 - 1.34	0.97	5	6.2	0	0
U-238	34	0.90 - 5.21	1.85	30	120	0	0
PAH	26	0 - 0.30	0.07	0.44	5.6	0	0
PCB	26	0 - 0.13	0.01	0.65	8	0	0
TNT	26	0.13 - 0.15	0.14	14	140	0	0
DNT	26	0.13 - 0.15	0.14	7.4	55	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg. Nitro-aromatics are listed in ug/g



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU357

Figure: 4-1

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/05/01	

Table 4 -2 Summary of CU358

CU	358	RU	16
COC	Ra-226	X	As	X
	Ra-228	X	Cr	X
	Th-230	X	Pb	X
	Th-232	X	Tl	X
	U-238	X	PAH	X
	DNT	X	PCB	X
Reference Figure:	4 - 2		TNT	X

DATE RELEASED FOR UNRESTRICTED USE: 9 / 27 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the SE portion of Retention Basin #2 within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *10,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/29/00 9/9/00 9/11/00 9/16/00 9/17/00 9/18/00 9/19/00 9/20/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 37

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

TOTAL # OF UTILITY SAMPLES : 2

ADDITIONAL EXCAVATION REQUIRED? [X] YES [ ] NO

GENERAL COMMENTS - *The boundary of this CU was enlarged to include the interior slopes of Retention Basin #1 Because of this revision, sample IDs in this CU have been renumbered. Two utility samples were taken upon removal of a plugged drainage line at the SE corner of the basin. One Total Radium/Th-230 hotspot and five Th-230 hotspots were identified during initial sampling Areas were further excavated and resampled Army waste material was mixed with Retention Basin #2 sediments therefore DNT was added as a COC to the affected area All final results are below criteria*

ORISE ACTION - *None*

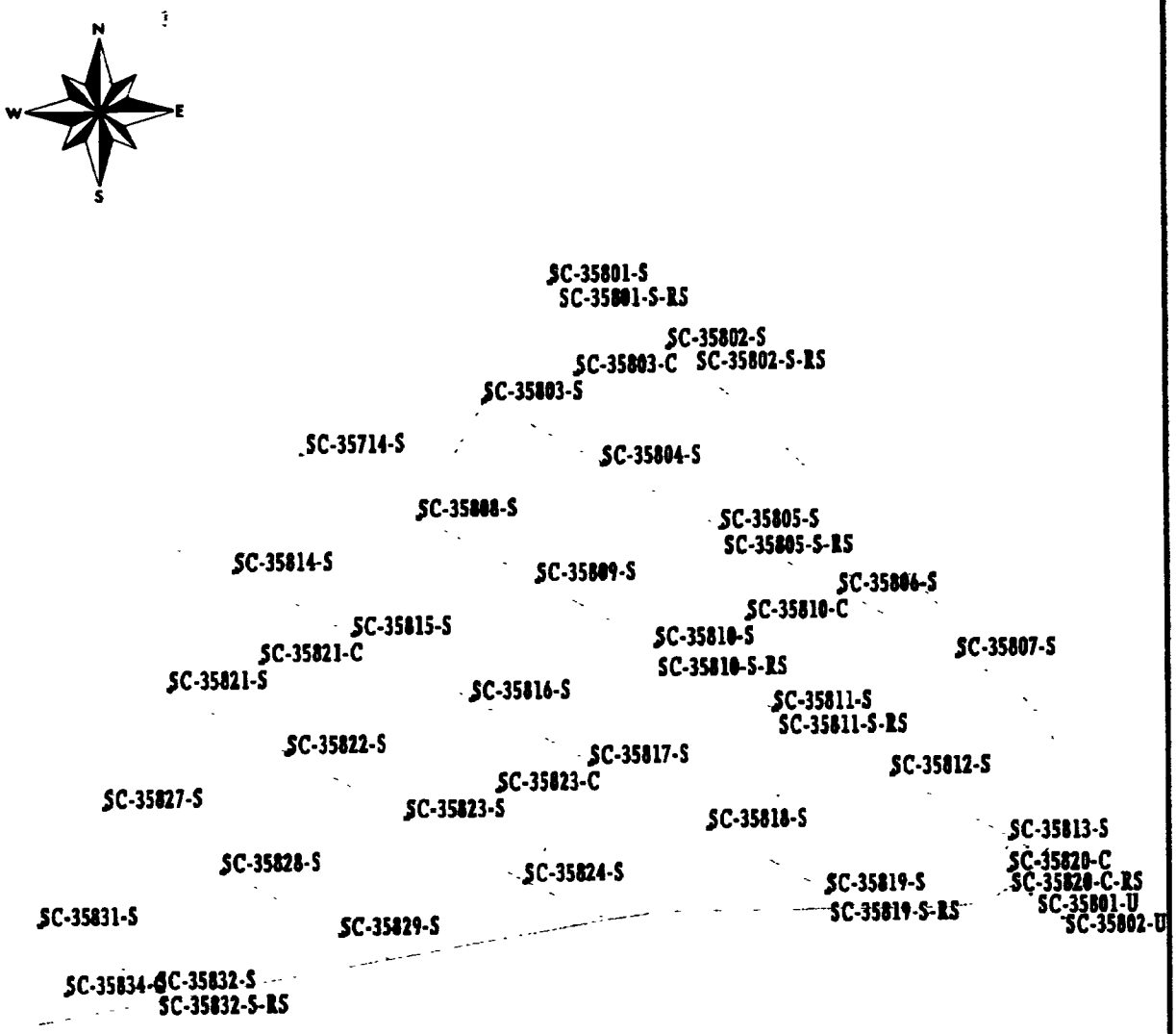
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]

Arsenic	35	4.2 - 16.0	8.46	45	75	0	0
Chromium	35	12.8 - 27.4	18.67	90	110	0	0
Lead	35	7.0 - 24.6	13.52	240	450	0	0
Thallium	35	0.34 - 3.3	1.6	16	20	0	0
Ra-226	37	0.23 - 4.09	0.79	5	6.2	0	0
Ra-228	37	0.34 - 1.95	0.94	5	6.2	0	0
Total Radium	37	0.74 - 6.04	1.73	5	6.2	2	0
Th-230	37	0.75 - 5.73	1.59	5	6.2	1	0
Th-232	37	0.35 - 2.00	0.96	5	6.2	0	0
U-238	37	0.91 - 5.68	1.67	30	120	0	0
PAH	35	0 - 0.43	0.03	0.44	5.6	0	0
PCB	35	0 - 0.10	0.02	0.65	8	0	0
TNT	35	0.15 - 0.17	0.15	14	140	0	0
DNT	35	0.13 - 0.17	0.15	7.4	55	0	0

NOTE. Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg Nitro-aromatics are listed in ug/g



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016
Confirmation Unit CU358

Figure: 4-2

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/19/01	

Table 4 - 3 Summary of CU359

CU	359	RU	16
COC	Ra-226	X	As X
	Ra-228	X	Cr X
	Th-230	X	Pb X
	Th-232	X	Tl X
	U-238	X	PAH X
			PCB X
Reference Figure:	4 - 3		TNT X

DATE RELEASED FOR UNRESTRICTED USE: 6 / 6 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the NW portion of Retention Basin #1 within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *4,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *5/16/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS . *31*

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

TOTAL # OF UTILITY SAMPLES : *0*

ADDITIONAL EXCAVATION REQUIRED? [X] YES [ ] NO

GENERAL COMMENTS - *One TNT hotspot and seven Th-230 hotspots were identified during initial sampling. Areas were further excavated and resampled. All final results are below criteria.*

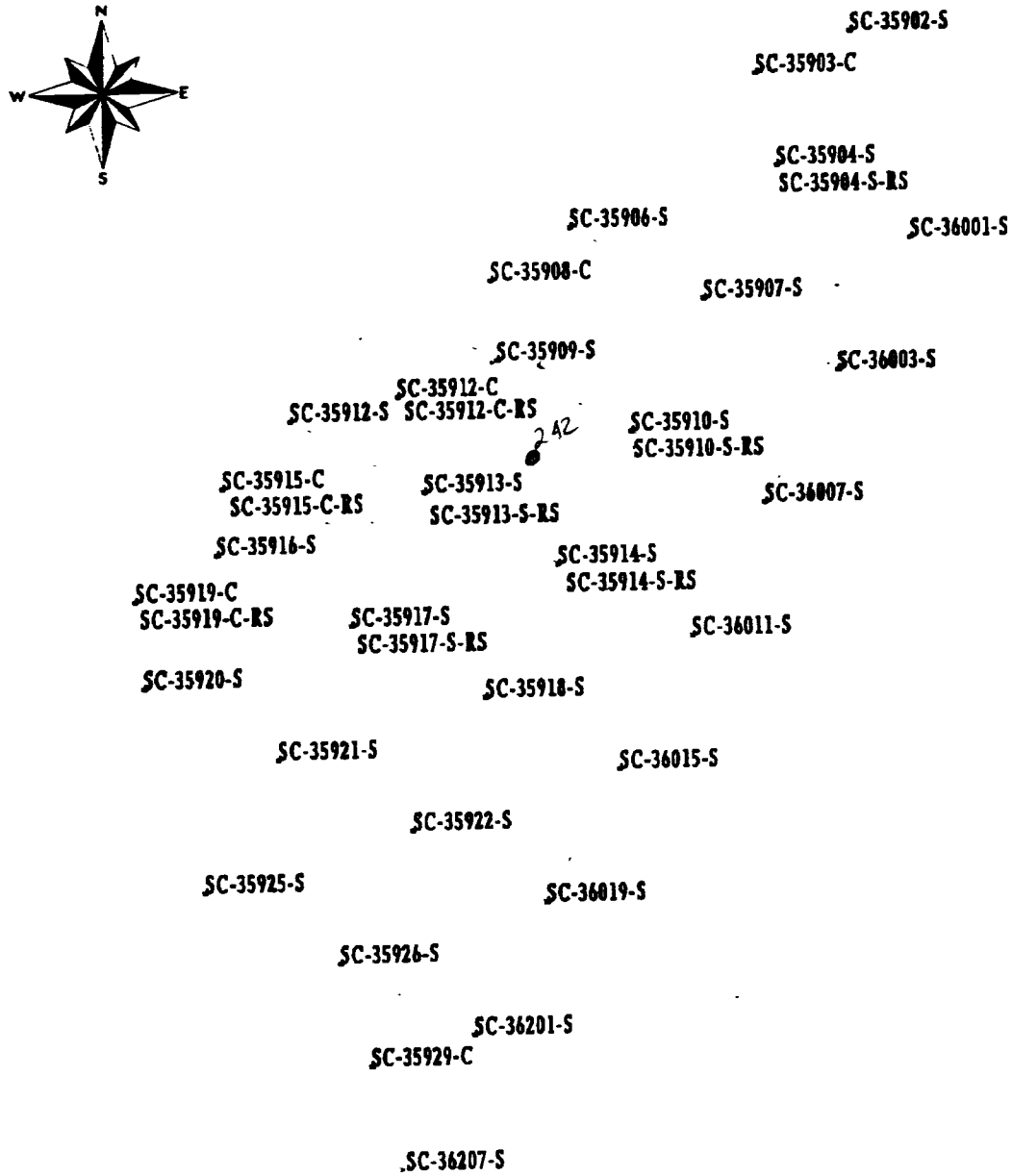
ORISE ACTION - *Unbiased samples taken during 5/23/00 visit.*

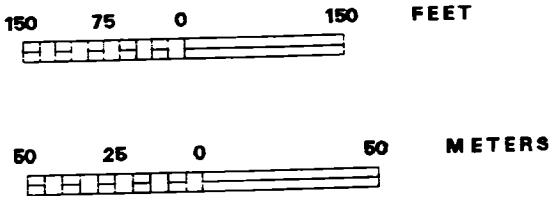
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

CONTAMINANT	NO. OF SAMPLES	CONCENTRATION RANGE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Arsenic	31	5.1 - 21.8	9.32	45	75	0	0
Chromium	31	14.9 - 23.1	17.7	90	110	0	0
Lead	31	8.4 - 63.4	17.82	240	450	0	0
Thallium	31	0.35 - 2.4	0.72	16	20	0	0
Ra-226	31	0.23 - 1.02	0.61	5	6.2	0	0
Ra-228	31	0.34 - 1.34	0.97	5	6.2	0	0
Total Radium	31	0.95 -2.3	1.58	5	6.2	0	0
Th-230	31	0.85 - 5.47	1.96	5	6.2	1	0
Th-232	31	0.35 - 1.37	0.97	5	6.2	0	0
U-238	31	1.01 - 11.5	1.49	30	120	0	0
PAH	31	results < detection limit	N/A	0.44	5.6	0	0
PCB	31	0 - 0.16	0.01	0.65	8	0	0
TNT	30	0.15 - 8.9	0.71	14	140	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg Nitro-aromatics are listed in ug/g





Sample Locations in Remedial Unit RU016 Confirmation Unit CU359

Figure: 4-3

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO :	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/13/01	

Table 4 - 4 Summary of CU360

CU 360 RU 16

COC				
	Ra-226	X	As	X
	Ra-228	X	Cr	X
	Th-230	X	Pb	X
	Th-232	X	Tl	X
	U-238	X	PAH	X
			PCB	X
			TNT	X

Reference Figure: 4 - 4

DATE RELEASED FOR UNRESTRICTED USE: 6 / 6 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the NE portion of Retention Basin #1 within the Frog Pond work zone*

WALKOVER SURVEY INFORMATION

BACKGROUND: *4,000 - 6,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *4/18/00 4/29/00 5/16/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 29

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

TOTAL # OF UTILITY SAMPLES : 1

ADDITIONAL EXCAVATION REQUIRED? [X] YES [ ] NO

GENERAL COMMENTS - *One utility sample was taken upon removal of the overflow line between Retention Basin #1 and Sedimentation Basin #1. Two Th-230 hotspots were identified during initial sampling. Areas were further excavated and resampled All final results are below criteria*

ORISE ACTION - *Four elevated readings were identified on 5/23/2000 visit (Ref. Appendix E) Final results are below ALARA*

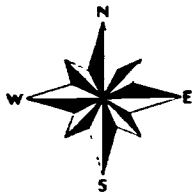
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]

Arsenic	17	2.90 - 21.8	8.9	45	75	0	0
Chromium	17	9.4 - 23.4	17.4	90	110	0	0
Lead	17	6.6 - 32.6	15.04	240	450	0	0
Thallium	17	0.37 - 1.6	0.85	16	20	0	0
Ra-226	29	0.23 - 1.47	0.69	5	6.2	0	0
Ra-228	29	0.39 - 1.29	0.96	5	6.2	0	0
Total Radium	29	0.61 - 2.76	1.65	5	6.2	0	0
Th-230	29	0.79 - 5.69	1.51	5	6.2	1	0
Th-232	29	0.39 - 1.32	0.99	5	6.2	0	0
U-238	29	0.87 - 11.5	1.84	30	120	0	0
PAH	21	results < detection limit	N/A	0.44	5.6	0	0
PCB	17	0 - 0.05	0	0.65	8	0	0
TNT	17	0.12 - 0.17	0.15	14	140	0	0

NOTE. Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg. Nitro-aromatics are listed in ug/g



SC-36001-S
SC-36001-C
SC-36002-S
SC-36003-S
SC-36004-S
SC-36007-S
SC-36005-S
SC-36008-S
SC-36006-S
SC-36011-S
SC-36009-S
SC-36013-S-HS02
SC-36013-S-RS02
SC-36101-S
SC-36012-S
SC-36010-S
SC-36015-S
SC-36013-S
SC-36013-S-HS01
SC-36013-S-RS01
SC-36102-S
SC-36012-S-HS01
SC-36016-S
SC-36012-S-RS01
SC-36016-S-HS01
SC-36014-S
SC-36016-S-RS01
SC-36019-S
SC-36017-S
SC-36105-S
SC-36020-S
SC-36018-S
SC-36021-S
SC-36001-U
SC-36110-S
SC-36022-S
SC-36117-S

150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU360

Figure: 4-4

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 3/29/01	

Table 4 - 5 Summary of CU361

CU	361	RU	16
COC	Ra-226	X	As
	Ra-228	X	Cr
	Th-230	X	Pb
	Th-232	X	Tl
	U-238	X	PAH X
			PCB
Reference Figure:	4 - 5		TNT

DATE RELEASED FOR UNRESTRICTED USE: 5 / 9 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the NW portion of Sedimentation Basin #1 within the Frog Pond work zone*

WALKOVER SURVEY INFORMATION

BACKGROUND: *4,500 - 6,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *4/6/00 4/18/00 4/29/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 26

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

TOTAL # OF UTILITY SAMPLES . 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Material from Raffinate Pits 1 and 2 was mixed in Sedimentation Basin #1. PAHs were a COC in the RPX-14 in-situ area, therefore PAHs were added as a COC to the affected locations in this CU. One Th-230 hotspot was identified at SC-36109-S which meets the hotspot rule. Concentration = 6.34 pCi/g Hotspot was sampled around to determine size Hotspot size < 25 sq. m. No additional excavation required*

ORISE ACTION - *None*

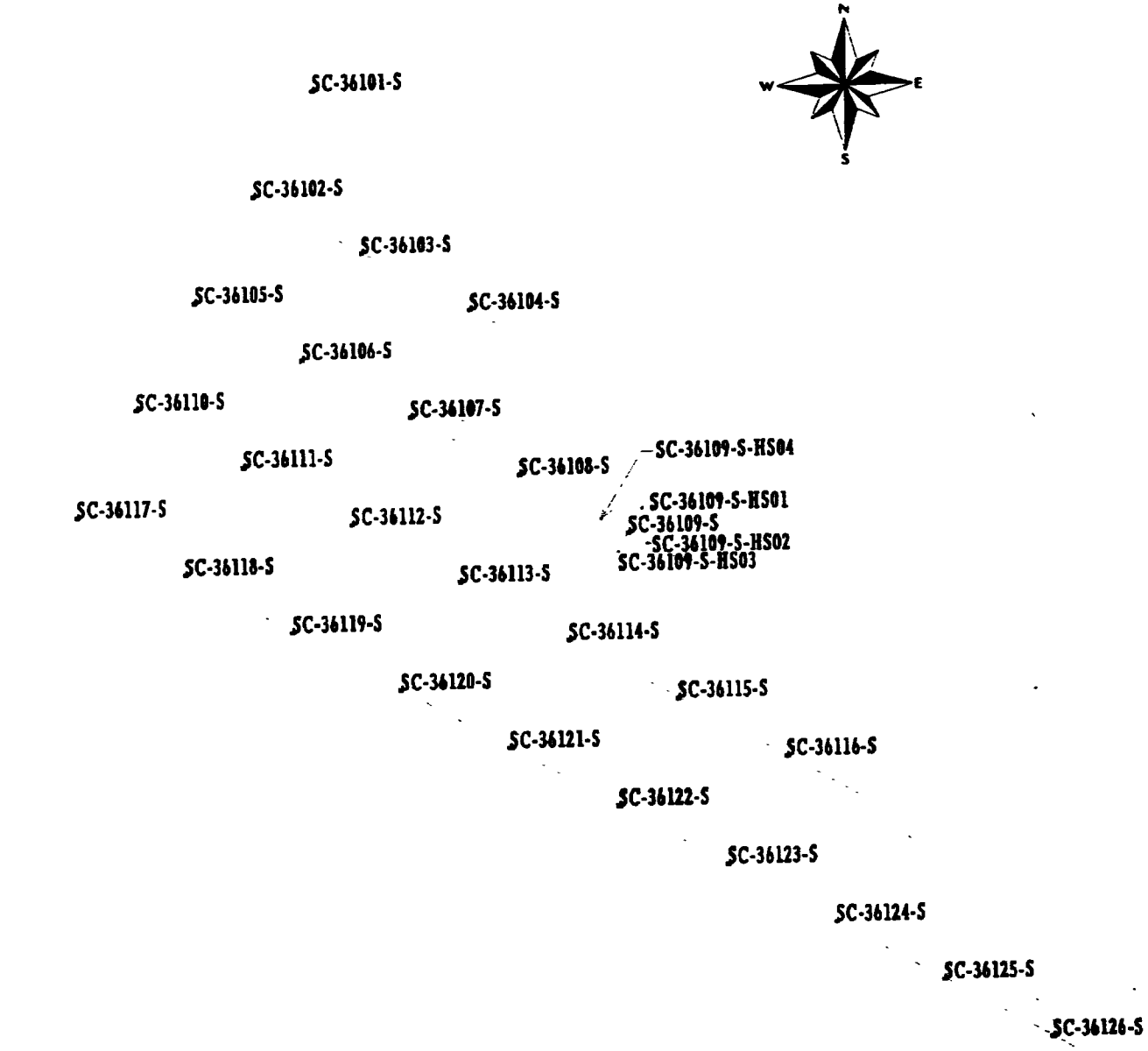
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]

Ra-226	26	0.26 - 0.95	0.63	5	6.2	0	0
Ra-228	26	0.33 - 1.36	0.92	5	6.2	0	0
Total Radium	26	0.59 - 2.31	1.55	5	6.2	0	0
Th-230	26	0.73 - 6.34	1.95	5	6.2	3	1
Th-232	26	0.34 - 1.39	0.95	5	6.2	0	0
U-238	26	0.98 - 5.18	1.68	30	120	0	0
PAH	12	results < detection limit	N/A	0.44	5.6	0	0

NOTE: Radiological contaminants are listed in pCi/g Chemical contaminants are listed in mg/kg



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU361

Figure: 4-5

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/15/01	

Table 4 - 6 Summary of CU362

CU	362	RU	16
COC	Ra-226	X	As X
	Ra-228	X	Cr X
	Th-230	X	Pb X
	Th-232	X	Tl X
	U-238	X	PAH X
			PCB X
Reference Figure:	4 - 6		TNT X

DATE RELEASED FOR UNRESTRICTED USE: 5 / 25 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the NW portion of Sedimentation Basin #1 within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *4,000 - 6,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *4/6/00 4/11/00 4/18/00 4/29/00 5/16/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS · 30

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

TOTAL # OF UTILITY SAMPLES · 0

ADDITIONAL EXCAVATION REQUIRED? [X] YES [ ] NO

GENERAL COMMENTS - *Material from Raffinate Pits 1 and 2 was mixed in Sedimentation Basin #1 PAHs were a COC in the RPX-14 in-situ area, therefore PAHs were added as a COC to the affected locations in this CU. One Th-230 hotspot was identified during initial sampling. Area was further excavated and resampled. All final results are below criteria*

ORISE ACTION - *None*

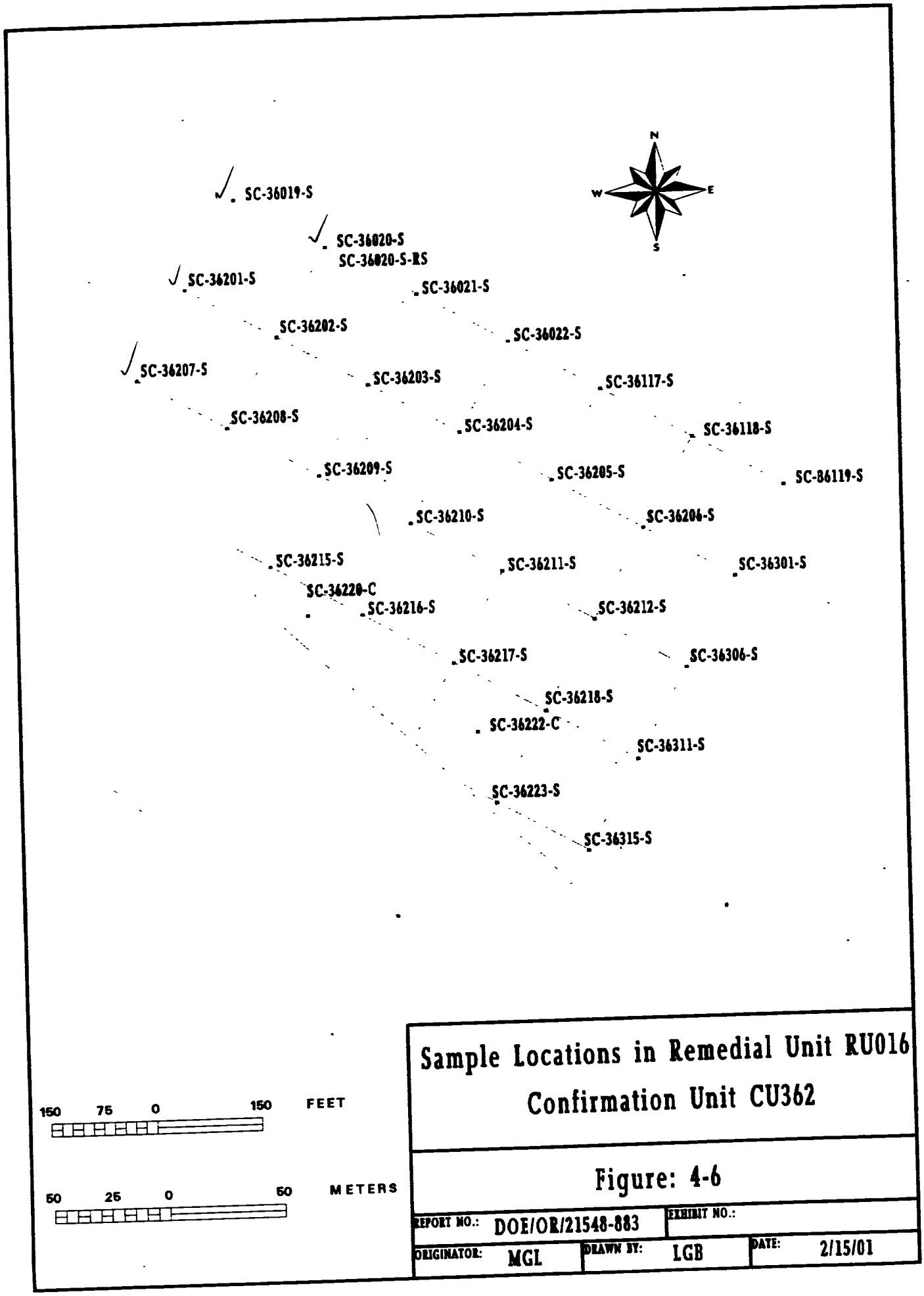
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]

Arsenic	4	6.8 - 17.8	10.75	45	75	0	0
Chromium	4	16.3 - 18.7	17.03	90	110	0	0
Lead	4	10.2 - 63.4	15.83	240	450	0	0
Thallium	4	0.40 - 2.4	1.52	16	20	0	0
Ra-226	30	0.24 - 1.47	0.68	5	6.2	0	0
Ra-228	30	0.30 - 1.29	0.88	5	6.2	0	0
Total Radium	30	0.53 - 2.76	1.57	5	6.2	0	0
Th-230	30	0.74 - 1.92	1.18	5	6.2	0	0
Th-232	30	0.30 - 1.32	0.9	5	6.2	0	0
U-238	30	0.89 - 5.31	1.54	30	120	0	0
PAH	11	results < detection limit	N/A	0.44	5.6	0	0
PCB	4	0 - 0.05	0.01	0.65	8	0	0
TNT	4	0.12 - 0.16	0.14	14	140	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg. Nitro-aromatics are listed in ug/g



Sample Locations in Remedial Unit RU016
Confirmation Unit CU362

Figure: 4-6

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/15/01	

Table 4 - 7 Summary of CU363

CU 363 RU 16

COC				
	Ra-226	X	As	
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	
	U-238	X	PAH	X
			PCB	
			TNT	

Reference Figure: 4 - 7

DATE RELEASED FOR UNRESTRICTED USE: 5 / 10 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m^2 < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the central portion of Sedimentation Basin #1 within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *4,300 - 4,500* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *4/6/00 4/11/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 32

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES : 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Material from Raffinate Pits 1 and 2 was mixed in Sedimentation Basin #1 PAHs were a COC in the RPX-14 in-situ area, therefore PAHs were added as a COC to the affected location in this CU.All final results are below criteria*

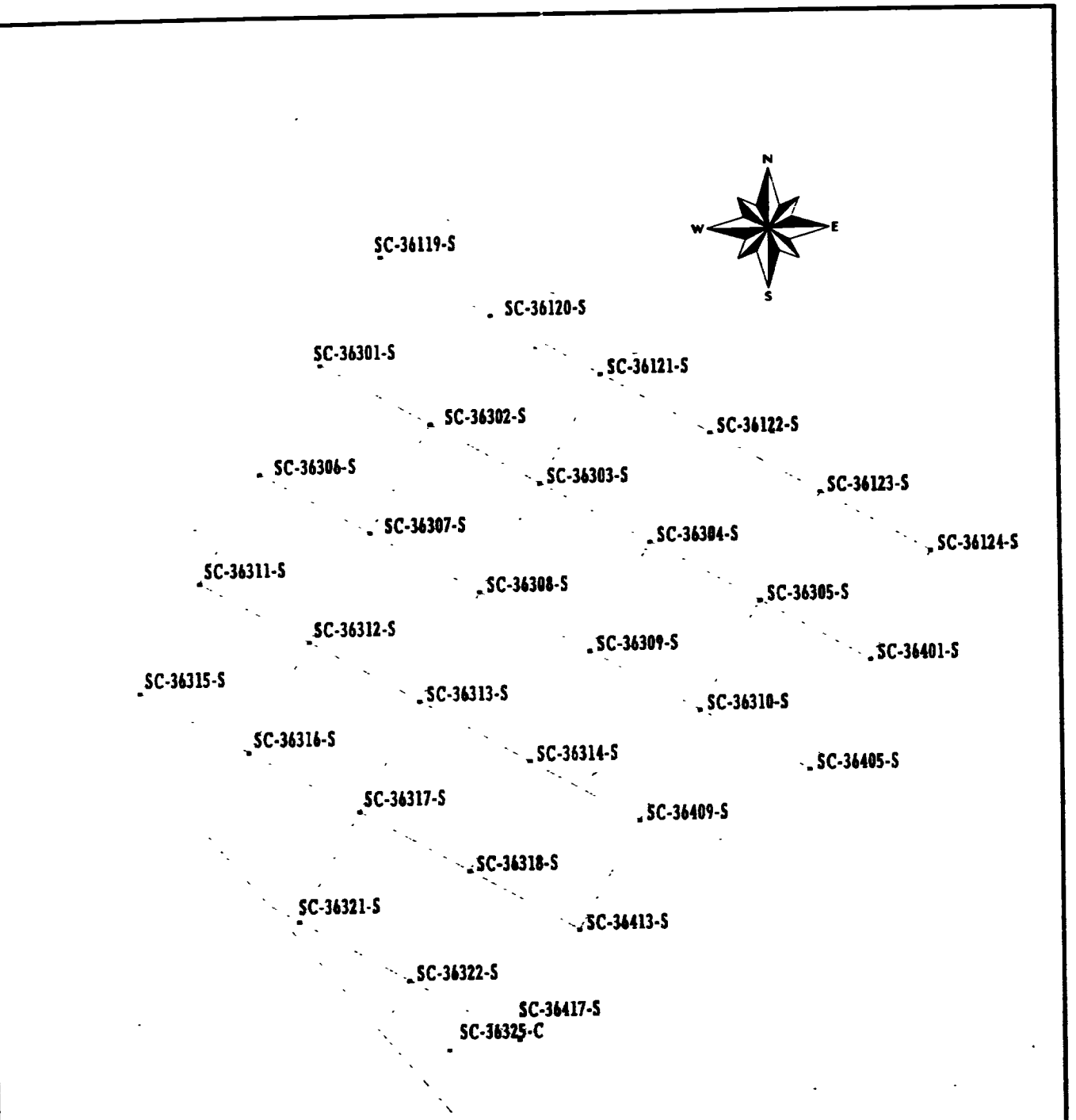
ORISE ACTION - *None*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

Ra-226	32	0.19 - 0.87	0.5	5	6.2	0	0
Ra-228	32	0.30 - 1.36	0.9	5	6.2	0	0
Total Radium	32	0.49 - 2.23	1.4	5	6.2	0	0
Th-230	32	0.73 - 6.17	1.43	5	6.2	2	0
Th-232	32	0.30 - 1.39	0.92	5	6.2	0	0
U-238	32	0.89 - 4.33	1.23	30	120	0	0
PAH	1	results < detection limit	N/A	0.44	5.6	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU363

Figure: 4-7

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/15/01	

Table 4 - 8 Summary of CU364

CU	364	RU	16

COC				
	Ra-226	X	As	
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	
	U-238	X	PAH	X
			PCB	X
			TNT	

Reference Figure: 4 - 8

DATE RELEASED FOR UNRESTRICTED USE: 4 / 13 / 00

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located in the SE portion of Retention Basin #1 within the Frog Pond work zone*

WALKOVER SURVEY INFORMATION

BACKGROUND: *4,300 - 12,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *9/3/98 4/6/00 4/11/00*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS: 38

TOTAL # OF UTILITY SAMPLES : 0

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [X] YES [ ] NO

ADDITIONAL EXCAVATION REQUIRED? [X] YES [ ] NO

GENERAL COMMENTS - *In-situ area FPX-7 is represented by sample SC-36426-C Radium and PAHs were added to the COC list in areas where cinders were visible One sample location was inadvertently analyzed for PCBs, those results are included in summary totals One PAH hotspot was identified at SC-36434-C. Area was further excavated and resampled. All results are below criteria.*

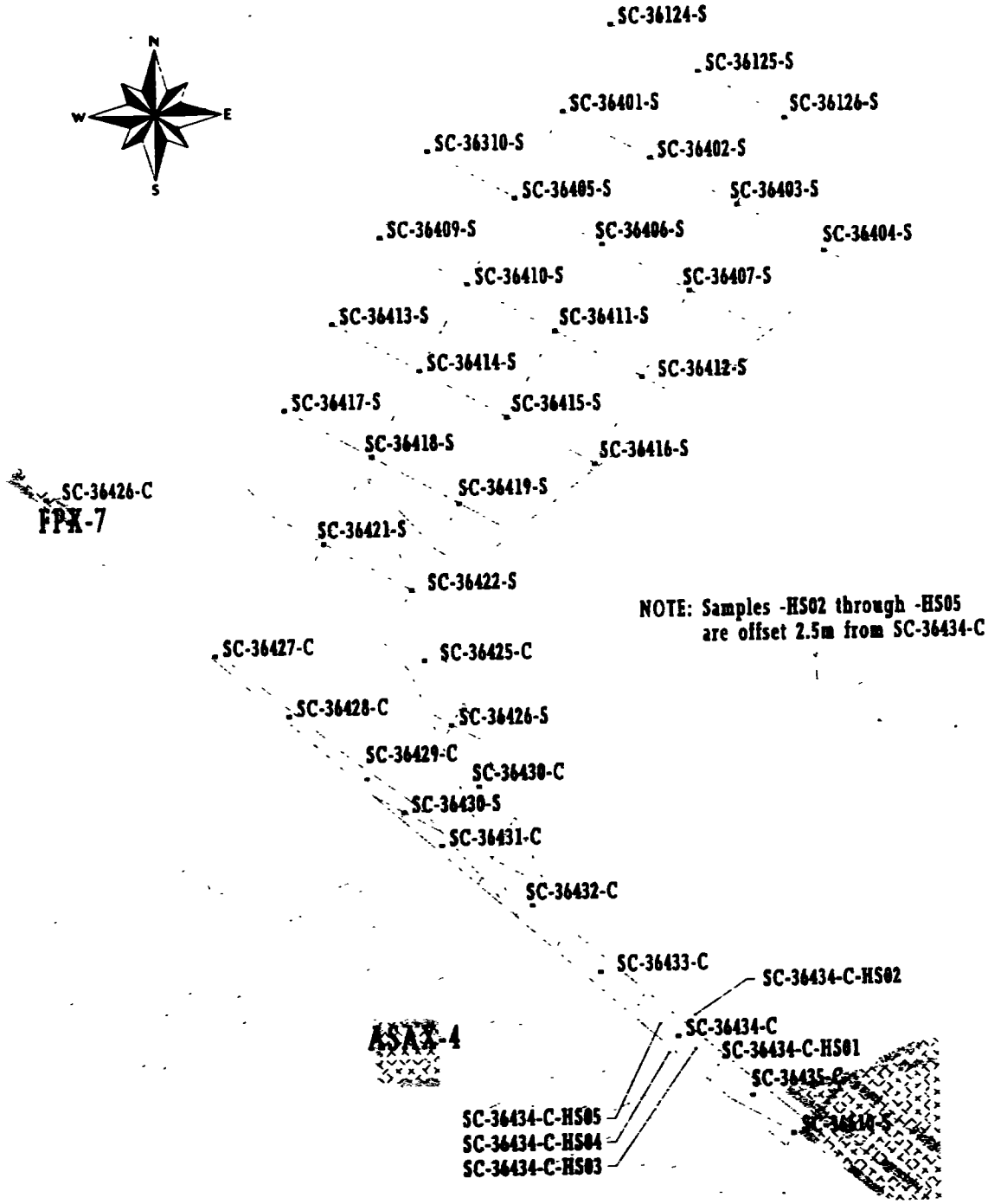
ORISE ACTION - *None*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]							
Ra-226	33	0.23 - 1.97	0.73	5	6.2	0	0
Ra-228	33	0.37 - 1.38	0.99	5	6.2	0	0
Total Radium	33	0.92 - 3.18	1.72	5	6.2	0	0
Th-230	24	0.39 - 5.69	1.3	5	6.2	1	0
Th-232	24	0.37 - 1.27	0.91	5	6.2	0	0
U-238	38	0.98 - 14.7	2.32	30	120	0	0
PAH	9	0 - 0.07	0.01	0.44	5.6	0	0
PCB	1	results < detection limit	N/A	0.65	8	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU364

Figure: 4-8

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/15/01	

Table 4 - 9 Summary of CU365

CU	365	RU	16
COC	Ra-226	X	As	X
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	X
	U-238	X	PAH	X
			PCB	X
Reference Figure:	4 - 9		TNT	X

DATE RELEASED FOR UNRESTRICTED USE: 9 / 9 / 98

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located along the eastern side of the chemical plant boundary within the Frog Pond work zone. This CU encompasses the NE portion of Frog Pond.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000 - 12,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/6/98 8/17/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 21

AVERAGES < ALARA? [ ] YES [X] NO

HOTSPOTS? [X] YES [ ] NO

TOTAL # OF UTILITY SAMPLES : 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Based on characterization available at the time the sampling plan was developed, COCs in the Frog Pond were to include the full suite of radiological and chemical parameters. Further characterization efforts occurred between 10/1/97 and 1/21/99. Results show no chromium or lead above ALARA and that thallium results exceeded ALARA (Reference DOE/OR/21548-841, Rev. 0). COCs in the Frog Pond have been revised accordingly. In-situ areas in this CU are represented by predetermined sample locations. One arsenic hotspot was identified at SC-36512-S which meets the hotspot rule. Concentration = 123 mg/kg. Hotspot was sampled around to determine size Hotspot size < 25 sq. m. No additional excavation required. All final results, with the exception of the arsenic hotspot mentioned above, are below criteria.*

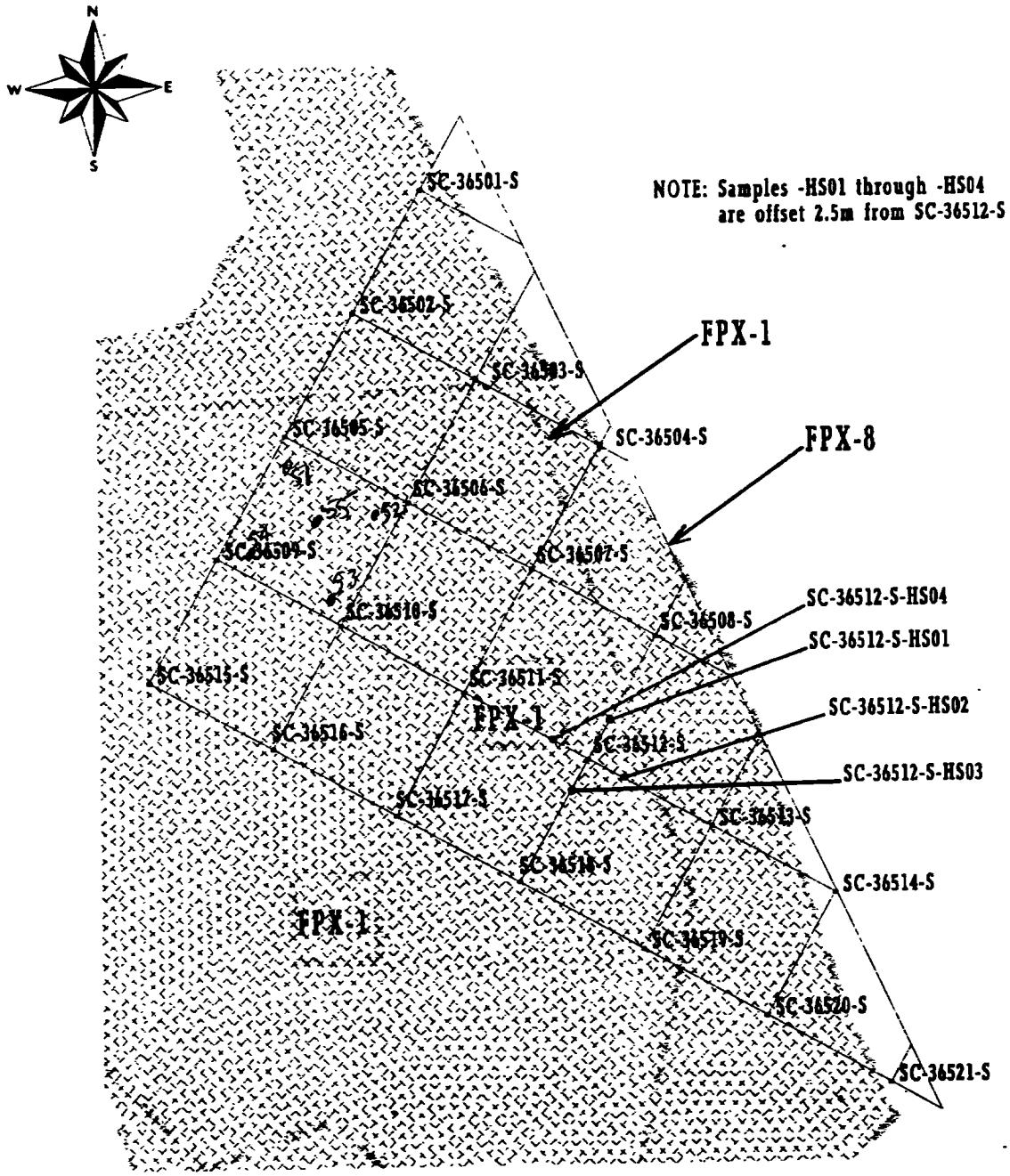
ORISE ACTION - *Unbiased samples taken during 8/20 – 8/21/98 visit.*

ALARA COMMITTEE ACTION - *Preliminary PAH data average exceeds ALARA for this CU. ALARA committee met on 8/28/98 The number of CUs having PAH averages below ALARA far outnumber CUs averaging above ALARA. Committee decision was to release the CU. Final PAH data for this CU show all results and average to be below criteria.*

CU SUMMARY DATA

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
As	12	5.2 - 123	18.24	45	75	1	1
Tl	12	1.2 - 19	3.83	16	20	1	0
Ra-226	21	0.29 - 1.56	1.17	5	6.2	0	0
Ra-228	21	0.70 - 2.63	1.54	5	6.2	0	0
Total Radium	21	1.21 - 3.86	2.71	5	6.2	0	0
Th-230	21	0.90 - 2.68	1.51	5	6.2	0	0
Th-232	21	0.49 - 2.70	1.49	5	6.2	0	0
U-238	21	1.46 - 53.7	13.24	30	120	4	0
PAH	12	0 - 1.61	0.37	0.44	5.6	0	0
PCB	12	results < detection limit	N/A	0.65	8	0	0
TNT	12	0.12 - 0.21	0.13	14	140	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg. Nitro-aromatics are listed in ug/g



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016
Confirmation Unit CU365

Figure: 4-9

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR MGL	DRAWN BY: LGB	DATE: 2/15/01	

Table 4 - 10 Summary of CU366

CU	366	RU	16

COC				
	Ra-226	X	As	X
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	X
	U-238	X	PAH	X
			PCB	X
Reference Figure:	4 - 10		TNT	X

DATE RELEASED FOR UNRESTRICTED USE: 9 / 9 / 98

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located on the eastern side of the chemical plant within the Frog Pond work zone. This CU encompasses the SW portion of Frog Pond.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/17/98 8/31/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 29

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES : 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Based on characterization data available at the time the sampling plan was developed, COCs in the Frog Pond were to include the full suite of radiological and chemical parameters. Further characterization efforts occurred between 10/1/97 and 1/21/99. Results show no chromium or lead above ALARA and that thallium results exceeded ALARA (Reference DOE/OR/21548-841, Rev. 0). COCs in the Frog Pond have been revised accordingly In-situ areas in this CU are represented by predetermined sample locations. All final results are below criteria.*

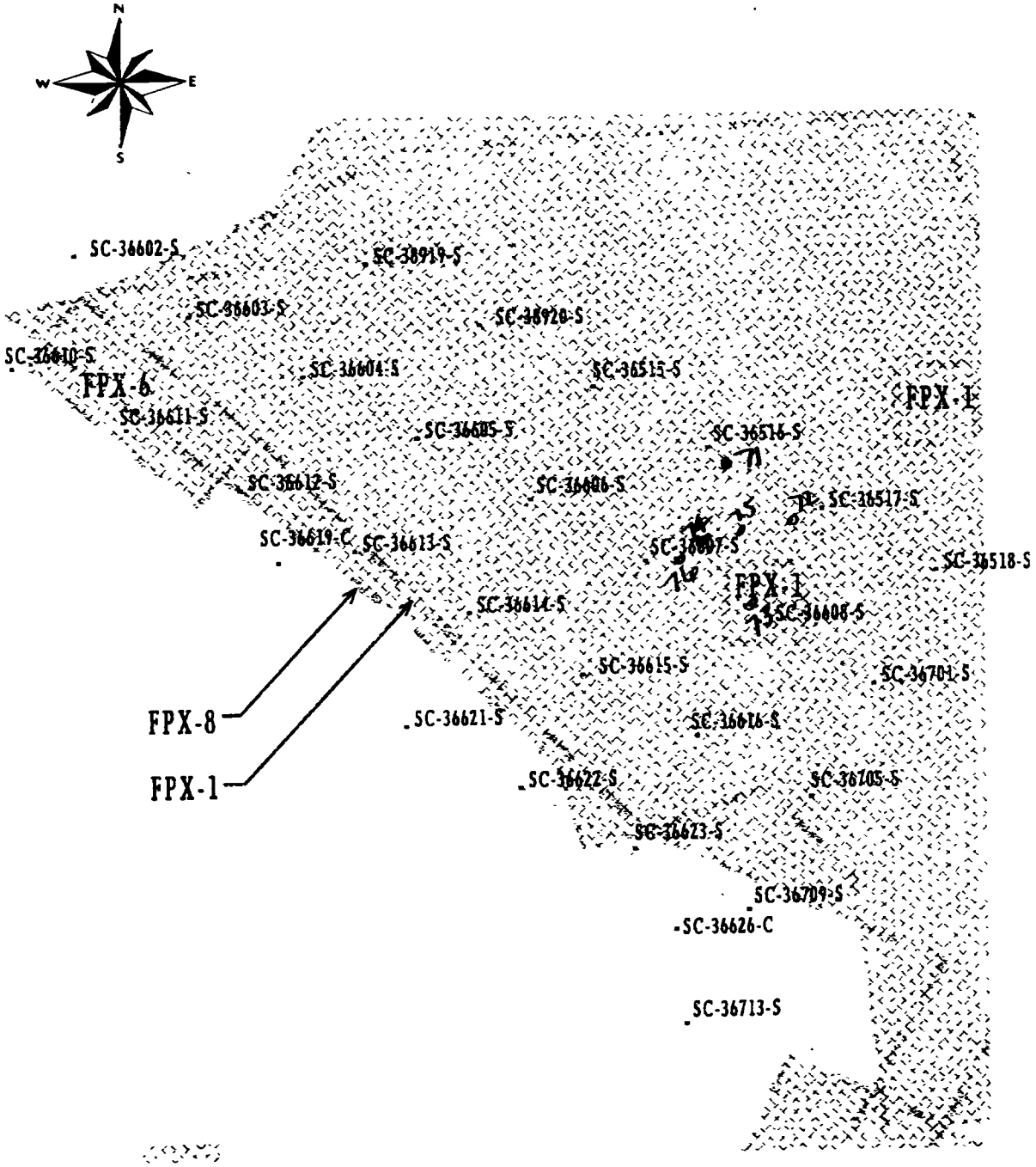
ORISE ACTION - *Unbiased samples taken during 8/20 ~ 8/21/98 visit.*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
As	17	4.9 - 19.7	9.8	45	75	0	0
Tl	17	0.37 - 3.9	2.07	16	20	0	0
Ra-226	29	0.13 - 1.34	0.78	5	6.2	0	0
Ra-228	29	0.85 - 2.63	1.3	5	6.2	0	0
Total Radium	29	1.36 - 3.86	2.08	5	6.2	0	0
Th-230	29	0.24 - 2.68	0.98	5	6.2	0	0
Th-232	29	0.38 - 2.70	0.96	5	6.2	0	0
U-238	29	0.78 - 53.7	7.6	30	120	3	0
PAH	17	0 - 1.61	0.2	0.44	5.6	0	0
PCB	17	0 - 0.06	0.01	0.65	8	0	0
TNT	17	0.07 - 0.21	0.11	14	140	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg. Nitro-aromatics are listed in ug/g



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU366

Figure: 4-10

REPORT NO: DOE/OR/21548-883		EXHIBIT NO.:	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE 2/20/01	

Table 4 - 11 Summary of CU367

CU	367	RU	16
COC	Ra-226	X	As	X
	Ra-228	X	Cr	X
	Th-230	X	Pb	X
	Th-232	X	Tl	X
	U-238	X	PAH	X
			PCB	X
Reference Figure:	4 - 11		TNT	X

DATE RELEASED FOR UNRESTRICTED USE: 9 / 9 / 98

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located on the eastern side of the chemical plant within the Frog Pond work zone. This CU encompasses the southern portion of Frog Pond*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000 - 12,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/6/98 8/17/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 28

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Based on characterization data available at the time the sampling plan was developed, COCs in the Frog Pond were to include the full suite of radiological and chemical parameters Further characterization efforts occurred between 10/1/97 and 1/21/99 Results show no chromium or lead above ALARA Additionally, results for thallium exceeded ALARA (Reference DOE/OR/21548-841, Rev. 0). COCs in the frog pond have been revised accordingly One sample location was analyzed for Cr and Pb prior to completion of characterization Those results are included in summary totals In-situ areas in this CU are represented by predetermined sample locations All final results are below criteria.*

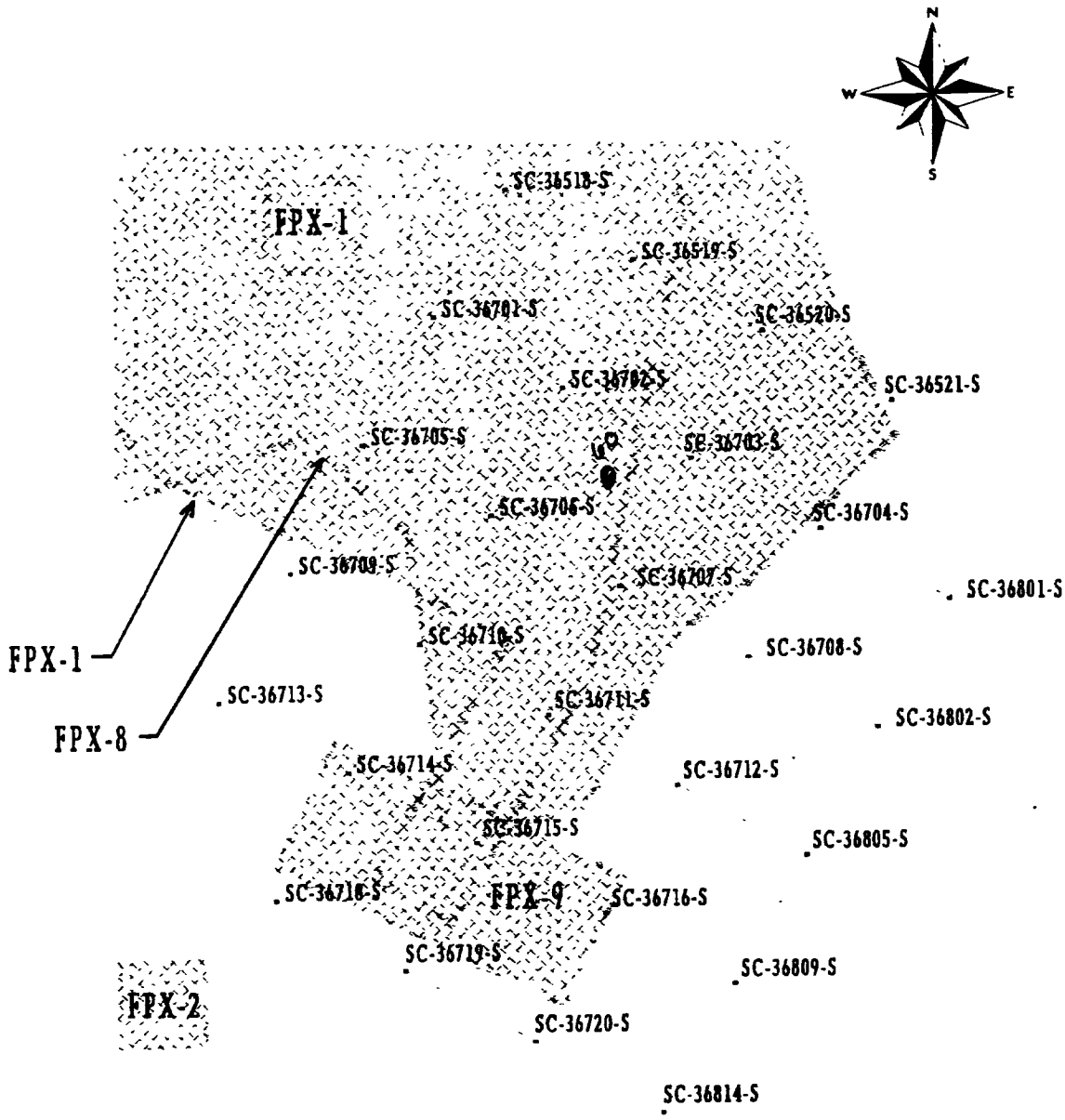
ORISE ACTION - *None*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

As	11	4.45 - 12.80	8.99	45	75	0	0
Cr	1	13.5	N/A	90	110	0	0
Pb	1	16.9	N/A	240	450	0	0
Tl	9	1.6 - 3.3	2.18	16	20	0	0
Ra-226	28	0.58 - 1.58	1.15	5	6.2	0	0
Ra-228	28	0.57 - 2.04	1.31	5	6.2	0	0
Total Radium	28	1.59 - 3.21	2.47	5	6.2	0	0
Th-230	28	0.58 - 2.25	1.21	5	6.2	0	0
Th-232	28	0.57 - 2.09	1.3	5	6.2	0	0
U-238	28	0.84 - 31.4	4.48	30	120	1	0
PAH	10	0 - 0.83	0.12	0.44	5.6	0	0
PCB	10	results < detection limit	N/A	0.65	8	0	0
TNT	9	0.12	0.12	14	140	0	0

NOTE: Radiological contaminants are listed in pCi/g Chemical contaminants are listed in mg/kg Nitro-aromatics are listed in ug/g



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016
Confirmation Unit CU367

Figure: 4-11

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO :	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE: 2/20/01	

Table 4 - 12 Summary of CU368

CU 368 RU 16

COC				
	Ra-226	X	As	
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	
	U-238	X	PAH	
			PCB	
			TNT	

Reference Figure: 4 - 12

DATE RELEASED FOR UNRESTRICTED USE: 4 / 15 / 99

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located on the eastern side of the chemical plant within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000 - 12,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/6/98 8/18/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 25

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES : 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Six of the original sample locations fell outside of the chemical plant fence line The locations were deleted from this CU and the new boundary is shown on Figure 4-12. In-situ excavations are represented by predetermined sample locations. All final results are below ALARA.*

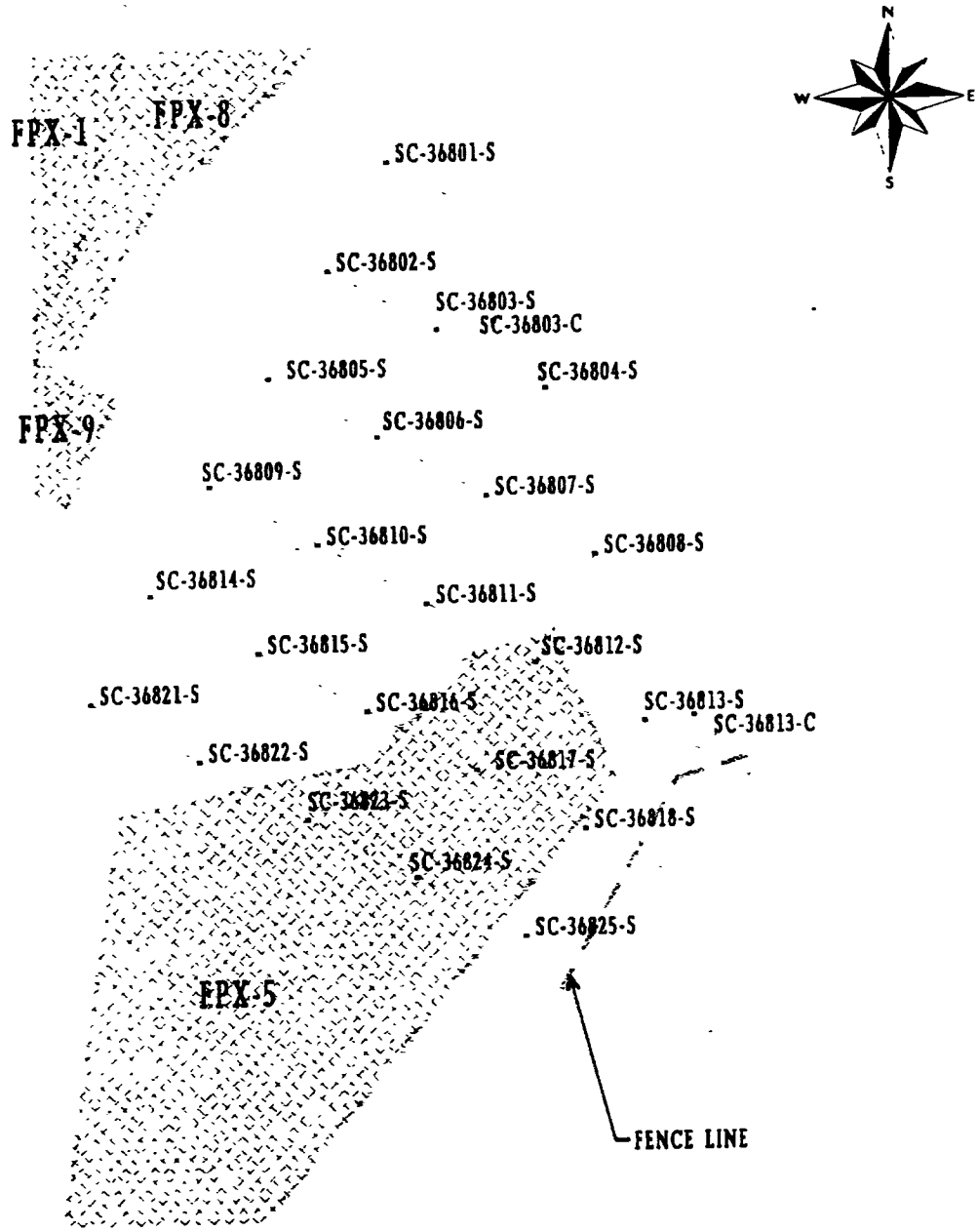
ORISE ACTION - *None*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

Ra-226	25	0.77 - 1.58	1.23	5	6.2	0	0
Ra-228	25	0.56 - 1.78	1.18	5	6.2	0	0
Total Radium	25	1.47 - 3.07	2.41	5	6.2	0	0
Th-230	25	0.79 - 1.37	1.15	5	6.2	0	0
Th-232	25	0.57 - 1.82	1.21	5	6.2	0	0
U-238	25	1.30 - 6.28	2.97	30	120	0	0

NOTE: Radiological contaminants are listed in pCi/g.



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016 Confirmation Unit CU368

Figure: 4-12

REPORT NO : DOE/OR/21548-883		EXHIBIT NO :	
ORIGINATOR MGL	DRAWN BY: LGB	DATE 3/14/01	

Table 4 - 13 Summary of CU387

CU 387 RU 16

COC				
	Ra-226	X	As	X
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	
	U-238	X	PAH	
			PCB	
Reference Figure:	4 - 13		TNT	

DATE RELEASED FOR UNRESTRICTED USE: 9 / 9 / 98

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located on the eastern side of the chemical plant within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000 - 12,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/6/98 8/21/98 8/26/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : *34*

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES . *0*

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *In-situ areas are represented by predetermined sample locations. All final results are below ALARA*

ORISE ACTION - *None*

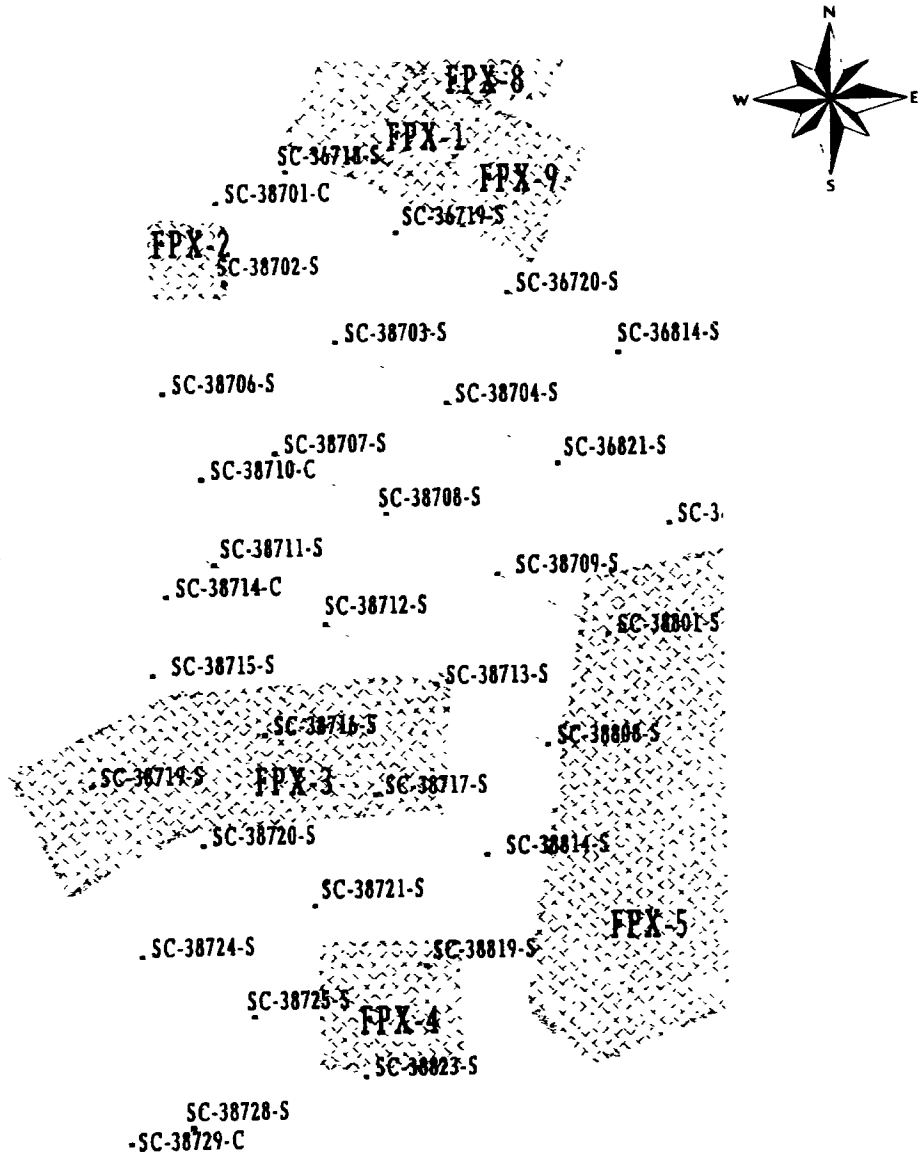
ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[redacted]

As	3	8.4 - 13.2	10.83	45	75	0	0
Ra-226	34	0.57 - 1.81	1.22	5	6.2	0	0
Ra-228	34	0.57 - 1.52	1.08	5	6.2	0	0
Total Radium	34	1.14 - 3.1	2.3	5	6.2	0	0
Th-230	34	0.72 - 1.99	1.16	5	6.2	0	0
Th-232	34	0.24 - 1.56	1.07	5	6.2	0	0
U-238	34	0.27 - 26.2	3.94	30	120	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016
Confirmation Unit CU387

Figure: 4-13

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO :	
ORIGINATOR MGL	DRAWN BY: LGB	DATE 3/14/01	

Table 4 - 14 Summary of CU388

CU 388 RU 16

COC				
	Ra-226	X	As	
	Ra-228	X	Cr	
	Th-230	X	Pb	
	Th-232	X	Tl	
	U-238	X	PAH	
			PCB	
			TNT	

Reference Figure: 4 - 14

DATE RELEASED FOR UNRESTRICTED USE: 8 / 26 / 98

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m^2 < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located on the eastern side of the chemical plant within the Frog Pond work zone.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/18/98 8/19/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : 22

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES : 0

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *Seven of the original sample locations fell outside of the chemical plant fence line. The locations were deleted from this CU and the new boundary is shown on Figure 4-14. In-situ excavations are represented by predetermined sample locations. All final results are below ALARA.*

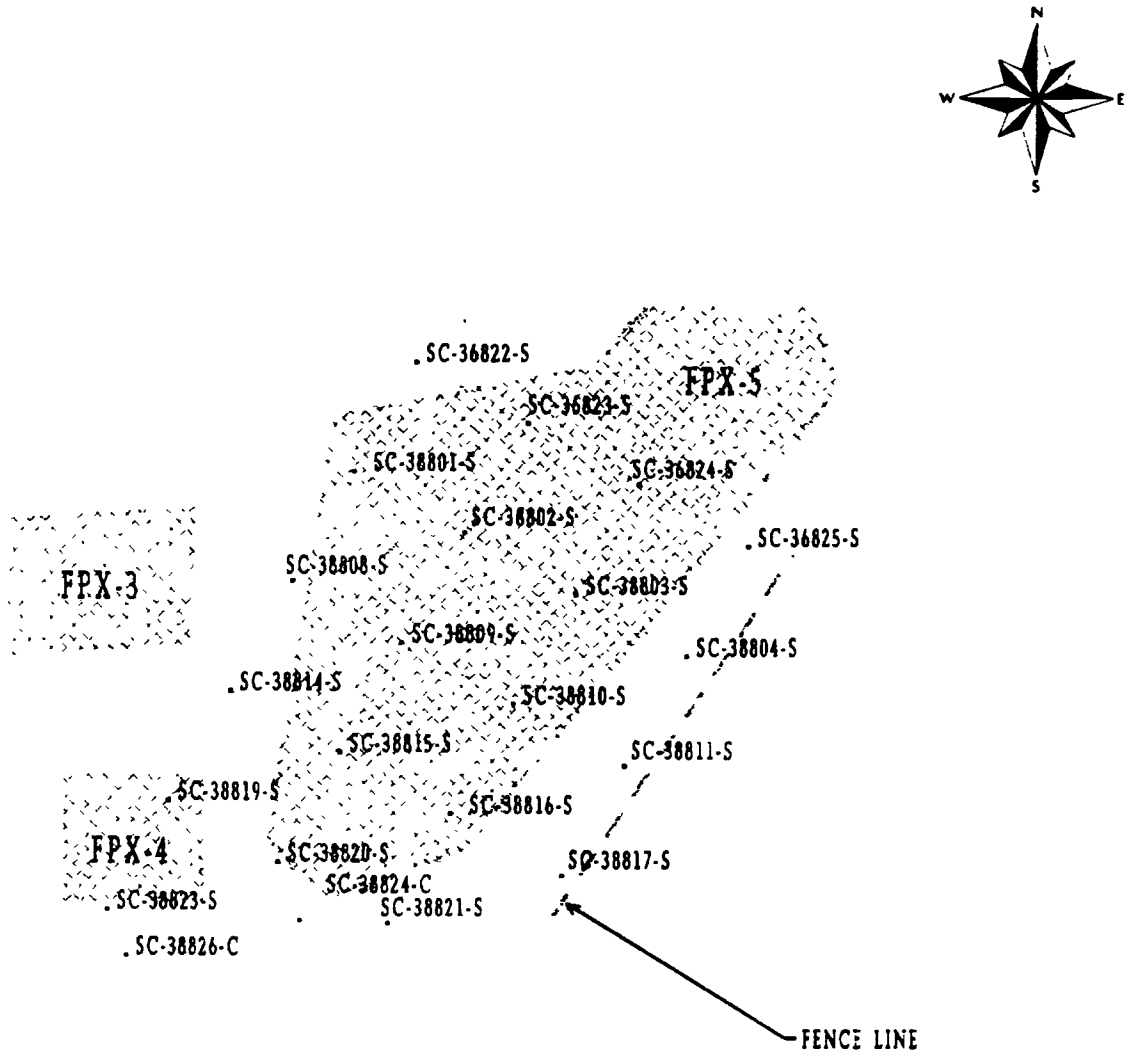
ORISE ACTION - *None*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

Ra-226	22	0.7 - 1.59	1.2	5	6.2	0	0
Ra-228	22	0.56 - 1.40	1.12	5	6.2	0	0
Total Radium	22	1.27 - 2.94	1.12	5	6.2	0	0
Th-230	22	0.95 - 1.6	1.18	5	6.2	0	0
Th-232	22	0.57 - 1.44	1.15	5	6.2	0	0
U-238	22	1.30 - 26.2	3.5	30	120	0	0

NOTE: Radiological contaminants are listed in pCi/g.



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016
Confirmation Unit CU388

Figure: 4-14

REPORT NO	DOE/OR/21548-883	EXHIBIT NO	
ORIGINATOR	MGL	DRAWN BY	LGB	DATE	3/14/01

Table 4 - 15 Summary of CU389

CU: 389 RU: 16

COC				
	Ra-226	X	As	X
	Ra-228	X	Cr	
	Th-230	X	Pb	X
	Th-232	X	Tl	X
	U-238	X	PAH	X
			PCB	X
			TNT	X

Reference Figure: 4 - 15

DATE RELEASED FOR UNRESTRICTED USE: 9 / 9 / 98

CLEANUP STANDARD [X] SURFACE [ ] SUBSURFACE

EACH 100m² < CRITERIA? [X] YES [ ] NO

LOCATION DESCRIPTION: *This CU is located on the eastern side of the chemical plant within the Frog Pond work zone. This CU encompasses the NW portion of Frog Pond.*

WALKOVER SURVEY INFORMATION

BACKGROUND: *11,000 - 12,500* cpm
(shielding may have been used on a case-by-case basis)

FINAL SURVEY(S) BELOW 1.5 X BACKGROUND ? [X] YES [ ] NO

DATE(S) SCANNED: *8/13/98 8/17/98*

CONFIRMATION SAMPLING INFORMATION

TOTAL # OF SAMPLE LOCATIONS : *21*

AVERAGES < ALARA? [X] YES [ ] NO

HOTSPOTS? [ ] YES [X] NO

TOTAL # OF UTILITY SAMPLES : *0*

ADDITIONAL EXCAVATION REQUIRED? [ ] YES [X] NO

GENERAL COMMENTS - *In-situ excavations are represented by predetermined sample locations. All final results are below ALARA.*

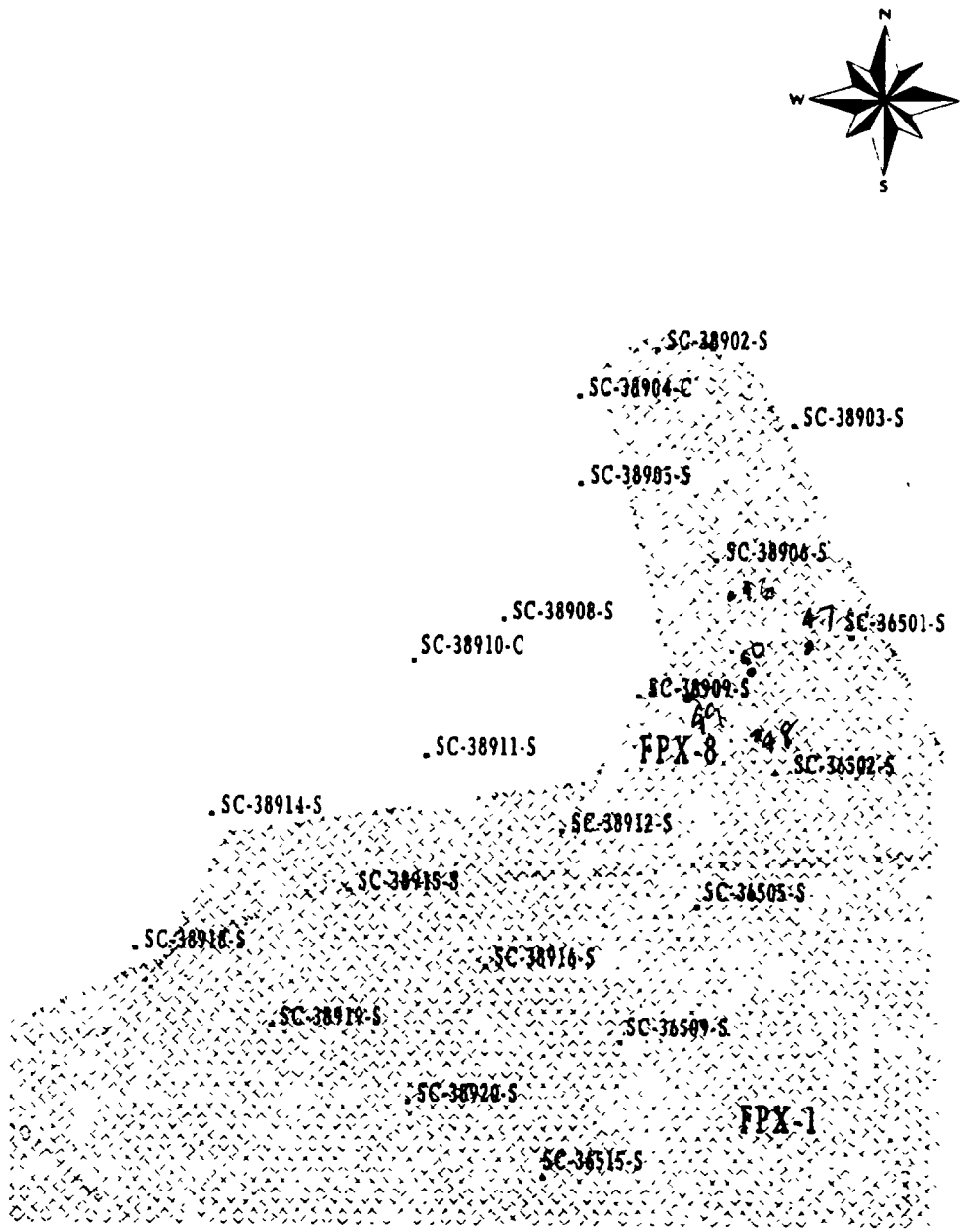
ORISE ACTION - *Unbiased samples taken during 8/20 ~ 8/21/98 visit.*

ALARA COMMITTEE ACTION - *None*

CU SUMMARY DATA

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
As	10	5.8 - 12.8	8.89	45	75	0	0
Pb	2	16.4 - 16.7	16.55	240	450	0	0
Tl	10	0.88 - 3.9	2.34	16	20	0	0
Ra-226	21	0.64 - 1.45	1.09	5	6.2	0	0
Ra-228	21	0.56 - 2.09	1.26	5	6.2	0	0
Total Radium	21	1.17 - 3.33	1.26	5	6.2	0	0
Th-230	21	0.33 - 1.58	1.12	5	6.2	0	0
Th-232	21	0.46 - 2.14	1.16	5	6.2	0	0
U-238	21	1.32 - 19.9	5.63	30	120	0	0
PAH	10	0 - 0.15	0.09	5	6.2	0	0
PCB	10	0 - 0.06	0.04	5	6.2	0	0
TNT	8	0.12	0.12	30	120	0	0

NOTE: Radiological contaminants are listed in pCi/g. Chemical contaminants are listed in mg/kg. Nitro-aromatics are listed in ug/g.



150 75 0 150 FEET

50 25 0 50 METERS

Sample Locations in Remedial Unit RU016
Confirmation Unit CU389

Figure: 4-15

REPORT NO.: DOE/OR/21548-883		EXHIBIT NO.	
ORIGINATOR: MGL	DRAWN BY: LGB	DATE 3/14/01	

5. Data Evaluation

Work Package-437 (WP-437) final analytical data were evaluated to determine whether data quality objectives developed for the WSSRAP had been met and to ensure that overall data quality results were generated from these remedial activities. The data were evaluated in accordance with the *Project Management Contractor Quality Assurance Program* (Ref. 4) and the *Environmental Quality Assurance Project Plan* (Ref. 5). The data evaluation process was completed by data verification, data review, data validation, and data management activities as stated in the *Chemical Plant Area Cleanup Area Attainment Confirmation Plan* (Ref. 3).

5.1 Data Verification

Data verification was conducted in accordance with ES&H 4.9.1, *Environmental Monitoring Data Verification*, to ensure that documentation and data were reported in compliance with established reporting requirements and standard operating procedures (SOPs), and to ensure that all analyses were performed. All analytical results received from the laboratory were reviewed to verify that samples were properly handled according to Weldon Spring Site Remedial Action Project (WSSRAP) protocol. The following factors were reviewed and evaluated: sample identification, chain of custody, holding times, sample preservation requirements, sample analysis request forms, data reviews, laboratory tracking, data reporting requirements, and the database transfer.

5.2 Data Review

Data packages were reviewed to ensure that final data were properly identified, analyzed, and reported, and that they met data quality requirements (DQRs). The data were also reviewed to check for inconsistencies with the field quality control (QC) samples. Final analytical results were also compared to the preliminary results to identify any changes in data.

During confirmation of WP-437 areas, which included RU016, soil samples were obtained in accordance with the details provided in the *Confirmation Sampling Plan Details for the Disposal Cell Facility* (WP-437) (Ref. 2). The plan indicated that quality control samples were to be taken at a frequency of 1 per 20 samples or 5%. The quality control samples collected included duplicates, field replicates, secondary duplicates, matrix spikes/matrix spike duplicates, and equipment blanks. Since the 5% requirement was based on all WP-437 confirmation sampling, the quality control data will be discussed in a separate report entitled *WP-437 Confirmation Quality Control Results Report*.

5.1 Data Validation

Data validation was performed on 10% of all analytical data generated from the confirmation sampling activities. Data validation was conducted in accordance with

ES&H 4.9.2, *Environmental Monitoring Data Validation.* Note that validation of 10% of the data is based upon all confirmation data collected for WP-437, and not 10% of each work zone. The percentage of confirmation validated will be discussed in the *WP-437 Confirmation Quality Control Results Report.*

6. SUMMARY OF CLOSURE REPORT FINDINGS

The Frog Pond work zone portion of WP-437 consisted of the 15 confirmation units within RU016. Summary information regarding the remedial activities is presented in Section 4 of this report.

6.1 Data Evaluation

Upon completion of remediation activities, preliminary results were used to complete disposition forms in accordance with ES&H 1.2.1, *Soil Remediation Disposition Process*. Based on the preliminary results, each CU was released when disposition forms were reviewed and signed by authorized project personnel.

6.2 Summary of WP-437 Confirmation Results

Table 6-1 summarizes the total number of samples collected and analyzed for each contaminant during remedial activities in RU016. The number of results and the minimum,

Table 6-1SUMMARY TOTALS FOR RU016

CONTAMINANT	NO. OF SAMPLES	CONCENTRATION RANGE	AVERAGE CONCENTRATION	SURFACE ALARA	SURFACE CRITERIA	RESULTS > ALARA
As (mg/kg)	134	2.9 - 123.0	9.75	45	75	1
Cr (mg/kg)	96	9.4 - 27.4	17.53	90	110	0
Pb (mg/kg)	98	6.6 - 63.4	15.71	240	450	0
Tl (mg/kg)	130	0.34 - 19.0	1.48	16	20	1
Ra-226 (pCi/g)	337	0.13 - 4.09	0.85	5.00	6.20	0
Ra-228 (pCi/g)	337	0.30 - 2.63	1.05	5.00	6.20	0
Total Radium (pCi/g)	337	0.49 - 6.04	1.90	5.00	6.20	2
Th-230 (pCi/g)	337	0.24 - 6.34	1.37	5.00	6.20	6
Th-232 (pCi/g)	337	0.30 - 2.70	1.08	5.00	6.20	0
U-238 (pCi/g)	350	0.27 - 53.7	3.14	30.00	120.00	4
PAH (mg/kg)	156	0.00 - 1.61	0.05	0.44	5.60	0
PCB (mg/kg)	132	0.00 - 0.16	0.01	0.65	8.00	0
DNT (mg/g)	53	0.13 - 0.17	0.15	7.4	55	0
TNT (mg/g)	128	0.07 - 8.90	0.27	14	40	0

maximum, and average concentrations are also provided for each contaminant. The table was generated using final data sets compiled from all samples that represented soils left in place.

Final analytical results generated from the remedial activities indicated that the RU016 average concentrations for each COC were below the ALARA goal. For each of the fifteen CUs, COC averages were also below ALARA. All 100 m^2 averages were less than criteria.

6.3 Summary of Chemical Plant Confirmation Results

To meet the requirements of the ROD, more than 50% of the results for each parameter had to be less than the ALARA goal. Table 6-2 summarizes the cumulative results to date.

Table 6-2 Summary Totals For Confirmation

CONTAMINANT	NO. OF SAMPLES	MINIMUM CONCENTRATION	MAXIMUM CONCENTRATION	AVERAGE CONCENTRATION	RESULTS > ALARA
Arsenic (mg/kg)	1010	0.48	123.00	7.74	1
Chromium (mg/kg)	1382	3.80	41.60	17.13	0
Pb (mg/kg)	1107	2.40	817.00	16.88	2
Thallium (mg/kg)	383	0.12	19.00	1.24	1
TNT (µg/g)	213	0.00	34.00	0.51	1
PAH (mg/kg)	817	0.00	6.65	0.16	80
PCB (mg/kg)	1617	0 00	6.00	0.04	21
Ra-226 (pCi/g)	2921	0.13	9.43	1.27	3
Ra-228 (pCi/g)	2730	0.30	6.60	1.22	2
Th-230 (pCi/g)	1979	0.09	23.10	1.55	36
Th-232 (pCi/g)	2207	0.30	6.77	1.27	2
Toluene (mg/kg)	4	0.00	3.40	0.85	0
U-238 (pCi/g)	4356	0.27	228.00	3.66	50

NOTE This table contains summary results from cumulative confirmation including WP-253, WP-399, WP-420, WP-458, WP-461, WP-471, WP-437 (RU016), WP-437 (RU17), and WP-437 (RU18).

6.4 Comparison of Standard Deviations

This section compares the estimated standard deviations calculated following U. S. Environmental Protection Agency (EPA) guidance with deviations calculated using confirmation

results. Since no existing remediation data were available to calculate the standard deviation (sigma), the *Chemical Plant Area Cleanup Area Attainment Confirmation Plan* (Ref. 3) estimated sigma using the range (assuming the average concentration remaining after remediation would not exceed cleanup criteria) divided by 6. To determine whether the specified level of precision was obtained, a comparison was made between the estimated sigma and the calculated sigma using the RU016 results.

The comparison indicated that the specified level of precision (a false positive = 0.05 and a false negative = 0.20) had been obtained. With the exception of Th-230, all of the calculations were less than estimated sigmas, indicating that the minimum specified precision was met. Table 6-3 presents the estimated sigma and calculated sigmas for each COC.

Table 6-3 Comparison of Standard Deviations

COC	Estimated Sigma(a)	RU016 Sigma (b)	Cumulative Sigma (c)
Arsenic (mg/kg)	12.5	10.28	5.06
Chromium (mg/kg)	18.3	3.51	4.91
Lead (mg/kg)	75	7.61	29.16
Thallium (mg/kg	3.3	1.48	1.43
PAH (mg/kg)	0.93	0.17	0.50
PCB (mg/kg)	1.33	0.03	0.29
TNT (µg/g)	23.3	0.90	2.67
Ra-226 (pCi/g)	1.03	0.45	0.40
Ra-228 (pCi/g)	1.03	0.34	0.35
Th-230 (pCi/g)	1.03	0.85	1.29
Th-232 (pCi/g)	1.03	0.35	0.37
U-238 (pCi/g)	20	5.29	8.42

(a) Sigma estimated in the Attainment Plan (Ref. 3).
(b) Sigma calculated using only the WP437 (RU016) confirmation results.
(c) Sigma calculated using cumulative confirmation results (WP-253, WP-399, WP-458, WP-461, WP-471, WP-437 (RU016), WP-437 (RU17), and WP-437 (RU18)).

While the RU016 calculated sigma for Th-230 did not exceed the estimated sigma, the cumulative sigma exceeded the estimated sigma. This is a factor of hot spots left in place based upon subsurface criteria in previous CUs. The estimated standard deviation, recalculated for

Th-230 using subsurface criteria, is 2.7. The cumulative sigma is less than the estimated subsurface sigma.

7. REFERENCES

1. Department of Energy. *Record of Decision for Remedial Action at the Chemical Plant Area of the Weldon Spring Site*. DOE/OR/21548-376. Oak Ridge Field Office. St. Charles, MO. September 1993.

2. MK-Ferguson and Jacobs Engineering Group. *Confirmation Sampling Plan Details for the Disposal Cell Facility (WP-437)*, Rev 0. DOE/OR/21548-706. Prepared for the U.S. Department of Energy, Oak Ridge Field Office. St. Charles, MO. January 1998.

3. MK-Ferguson and Jacobs Engineering Group. *Chemical Plant Area Cleanup Attainment Confirmation Plan,* Rev. 3. DOE/OR/21548-491. Prepared for the U.S. Department of Energy, Oak Ridge Field Office. St. Charles, MO. December 1995.

4. MK-Ferguson Company and Jacobs Engineering Group. *Project Management Contractor Quality Assurance Program*, Rev. 3. DOE/OR/21548-506. Prepared for the U.S. Department of Energy, Oak Ridge Operations Office. St. Charles, MO. November 2000.

5. MK-Ferguson and Jacobs Engineering Group. *Environmental Quality Assurance Project Plan*, Rev. 5. DOE/OR/21548-352. Prepared for the U.S. Department of Energy, Oak Ridge Field Office. St. Charles, MO. November 2000.

6. MK-Ferguson Company. *Frog Pond Work Zone Specifications*, Rev. 8. Specification Document No. 3840-7-437-02304. Prepared for the U.S. Department of Energy Weldon Spring Site Remedial Action Project. St. Charles, MO. August 1996.

7. Oak Ridge Institute for Science and Education. *Final Verification Survey Plan for the Chemical Plant Area Weldon Spring Site Remedial Action Project, Weldon Spring, Missouri.* Prepared by the Environmental Survey and Site Assessment Program, Energy/Environment Systems Division, for the U. S. Department of Energy. Weldon Spring, Missouri. December 7, 1995.

8. MK-Ferguson and Jacobs Engineering Group. *Post Remedial Action Report for WP-399 Chemical Plant Drainage Control Facilities*, Rev. 0. DOE/OR/21548-630. Prepared for the U.S. Department of Energy, Oak Ridge Field Office. St. Charles, MO. February 1997.

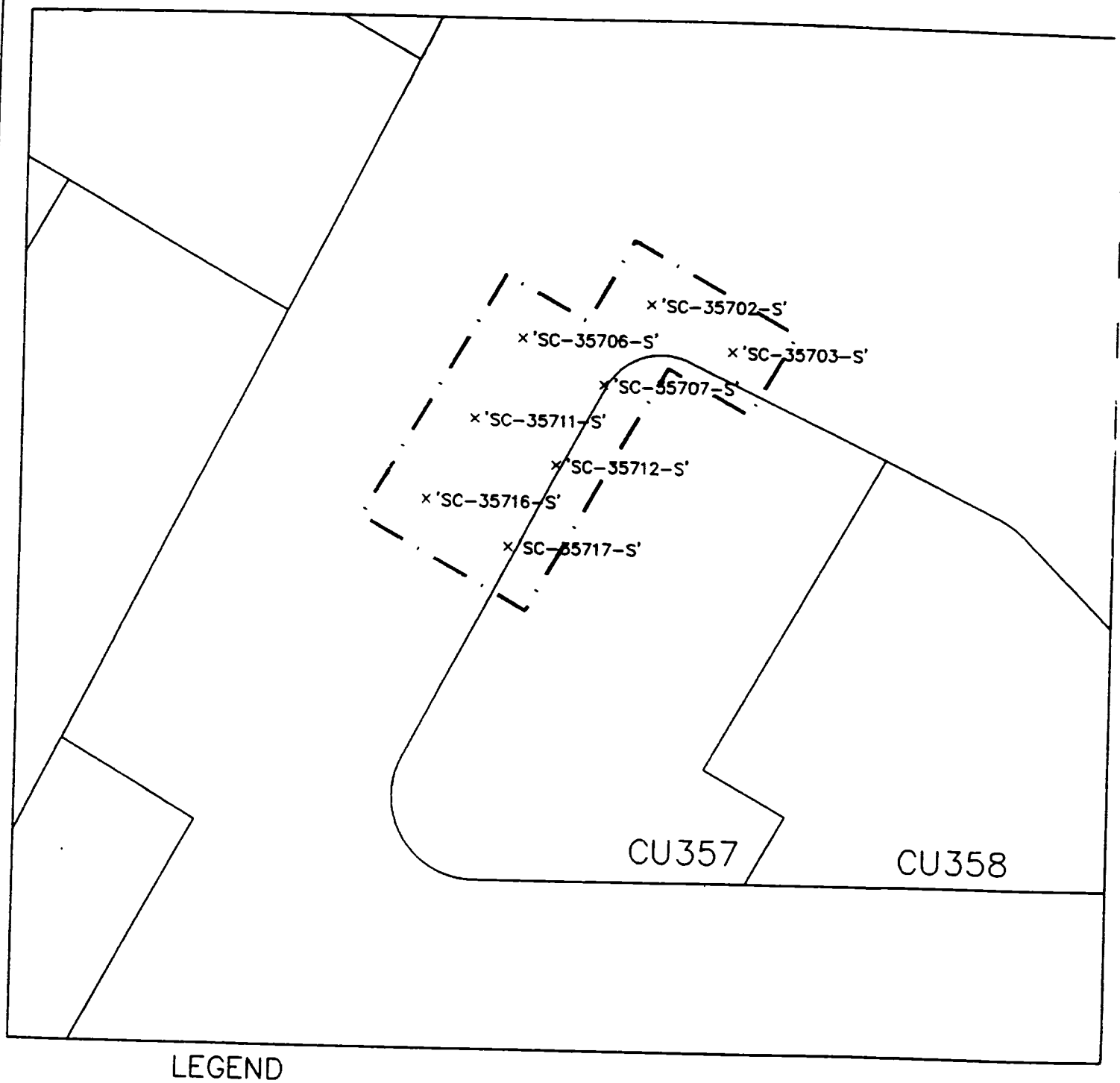
PROCEDURES

ES&H 1.2.1 *Soil Remediation Disposition Process*
ES&H 4.9.1 *Environmental Monitoring Data Verification*
ES&H 4.9.2 *Environmental Monitoring Data Validation*

ACRONYMS

ALARA	as low as reasonably achievable
CLP	Contract Laboratory Program
COC	contaminant of concern
Cr	chromium
CU	confirmation unit
DNT	dinitrotoluene
DOE	Department of Energy
DQO	Data Quality Objectives
DQR	Data Quality Requirements
EPA	Environmental Protection Agency
EQAPjP	Environmental Quality Assurance Project Plan
ES&H	Environmental Safety and Health
NaI	sodium iodide
ORISE	Oak Ridge Institute for Science and Education
Pb	lead
PAH	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyl
QA	quality assurance
QC	quality control
ROD	Record of Decision for Remedial Action at the Chemical Plant Area of the Weldon Spring Site
RU	remedial unit
SOP	standard operating procedure
Tl	thallium
TNT	trinitrotoluene
WP	work package
WSSRAP	Weldon Spring Site Remedial Action Project

APPENDIX A
Final Walkover Forms



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

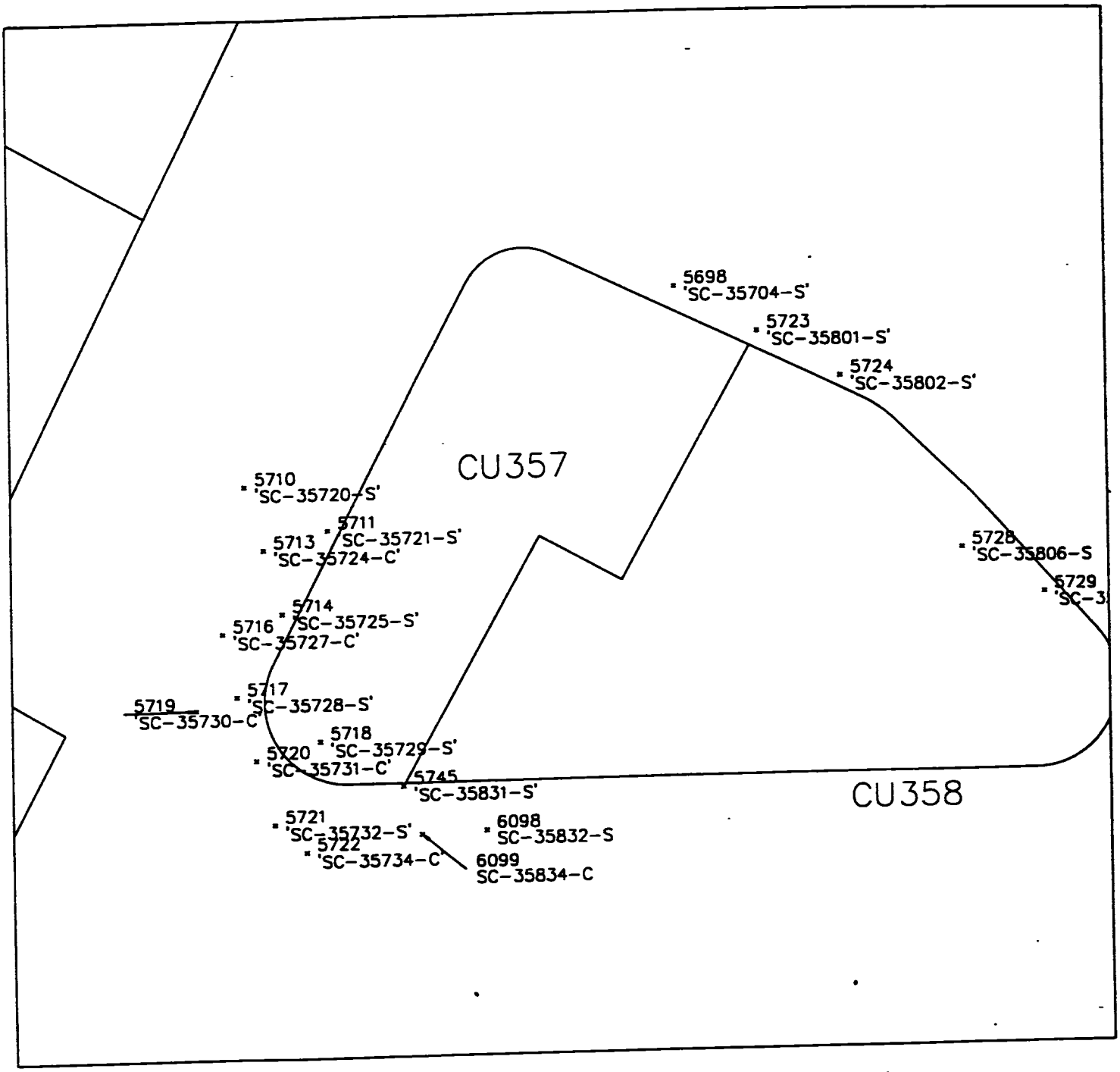
PINNING LIMITS

N

Radiation Survey Form WP 437, RU 16 CU 357

Date Plotted 4-6-00 REPLOT 4/10/00 DEO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Due:	11-12-00	Calibration Due:	9-24-00
Survey Date / Time:	4-6-00 / 1700	Field Bkg.:	6000 cpm
Surveyor(s):	Eric Hurtt		
Comments:	AREA found to be less than 1.5x background.		



Radiation Survey Form WP 437, RU 16 CU 357

Date Plotted 9/8/00

DFHO CAD

Meter Model #:	2221	Detector Model #:	44-10-2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4-28-01	Calibration Due:	1-21-01
Survey Date / Time:	8-29-00/1300	Field Bkg.:	10,000 cpm
Surveyor(s):	T. BROWDER		
Comments:	ALL READINGS <1.5 x BKG		

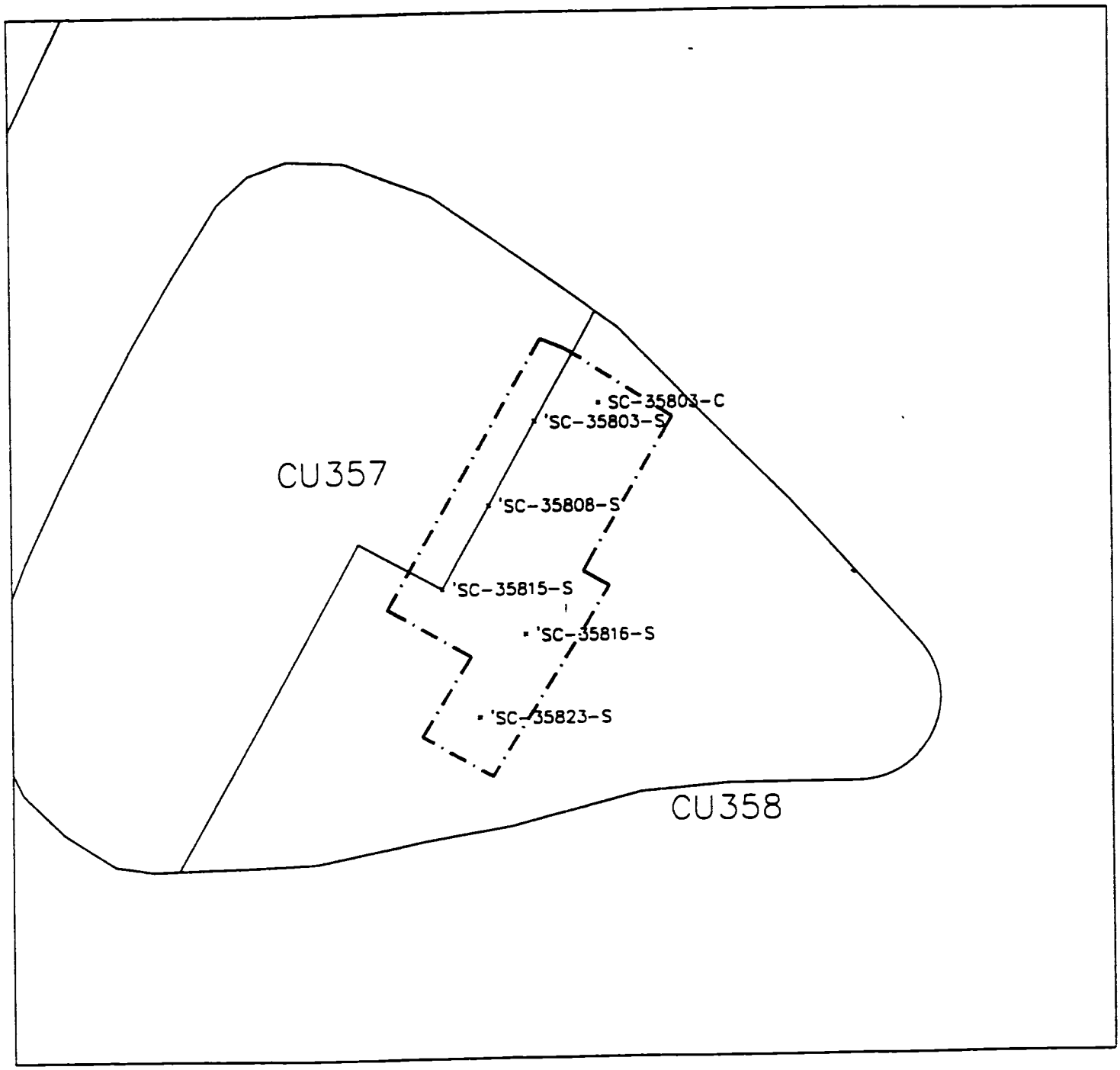
N

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft.



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

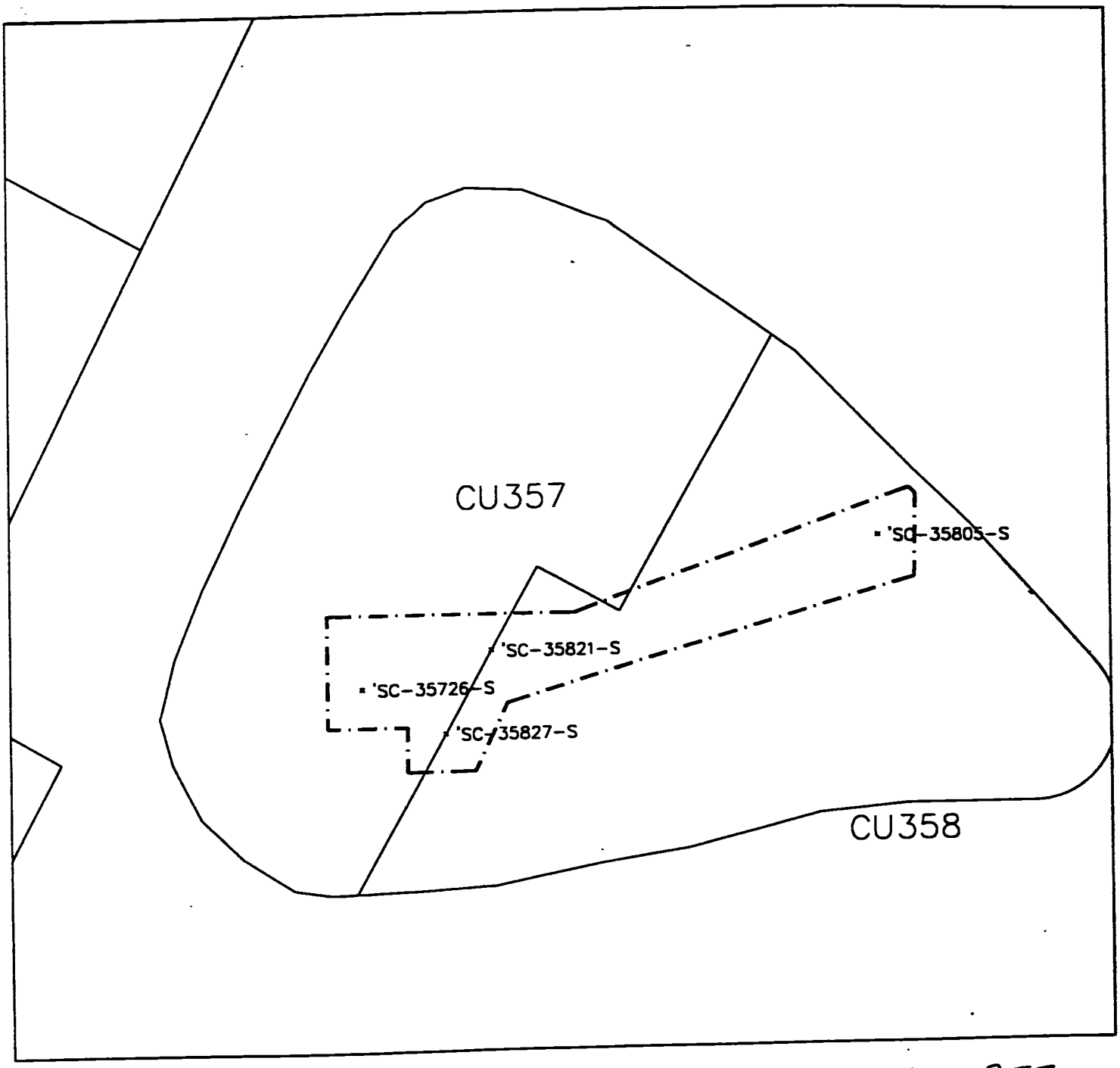
(IN FEET)
1 inch = 50 ft

Radiation Survey Form WP 437, RU 16 CU 357

Date Plotted 9/16/01

DBO CAD

Meter Model #:	2221	Detector Model #:	2x2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/16/00, 1500	Field Bkg.	10,000 CPM
Surveyor(s):	T. Brown		
Comments:	All readings <1.5 BKg		



LEGEND

Radiation Survey Form WP 437, RU 16 CU 357

Date Plotted 9/19/00

DBO CAD

Meter Model #:	2221	Detector Model #:	3x2 "x"
Meter Serial #:	154216	Detector Serial #:	22089
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/19/00 1030	Field Bkg.:	10,000 CPM
Surveyor(s):	T. Brown		
Comments:	All readings <1.5 Bkg		

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

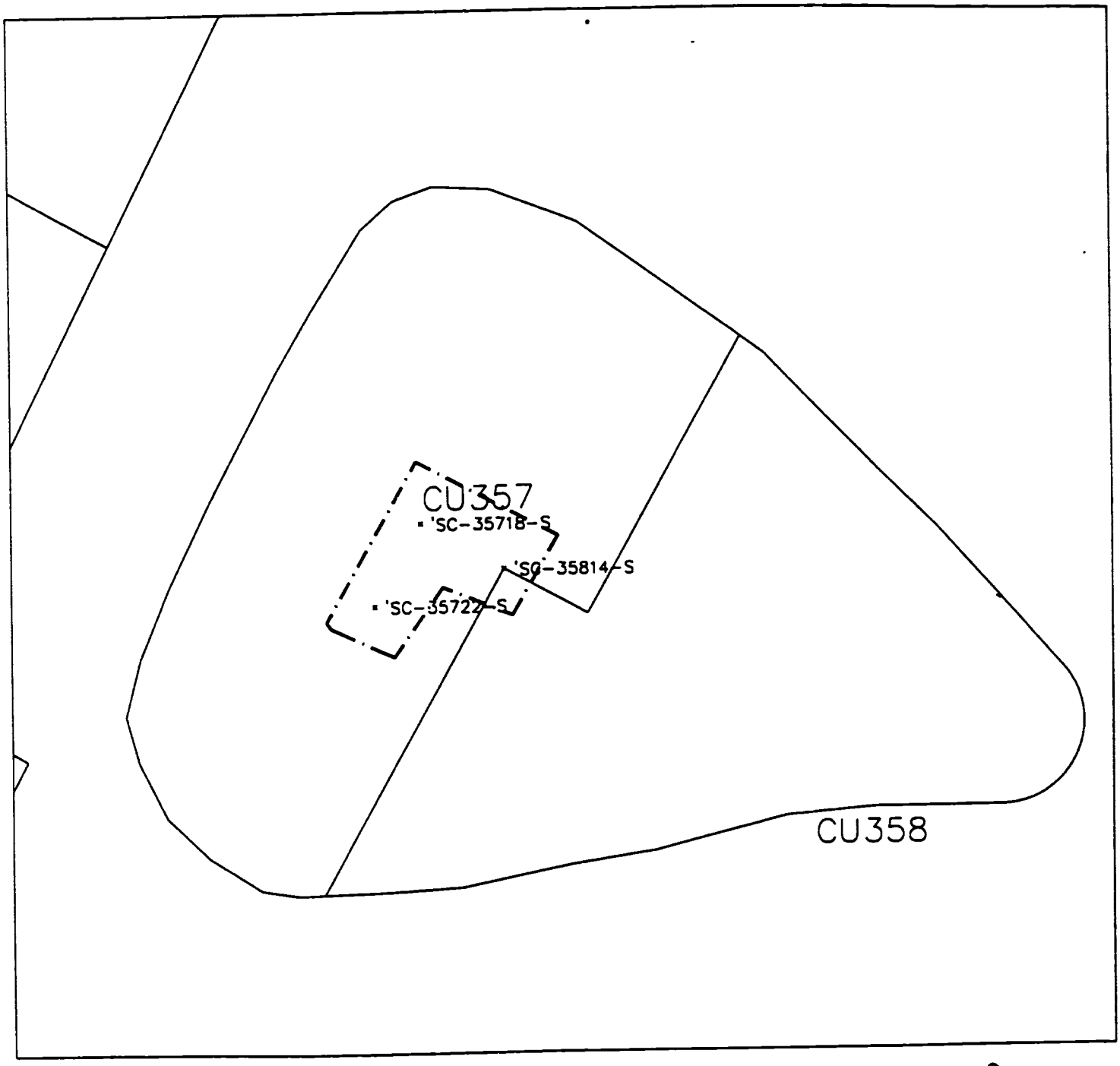
N

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft.



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 357

Date Plotted 9/19/00

DBO CAD

Meter Model #: 2221

Meter Serial #: 154216

Calibration Due: 4/28/01

Survey Date / Time: 9/20/00/0830

Surveyor(s): T. Brown

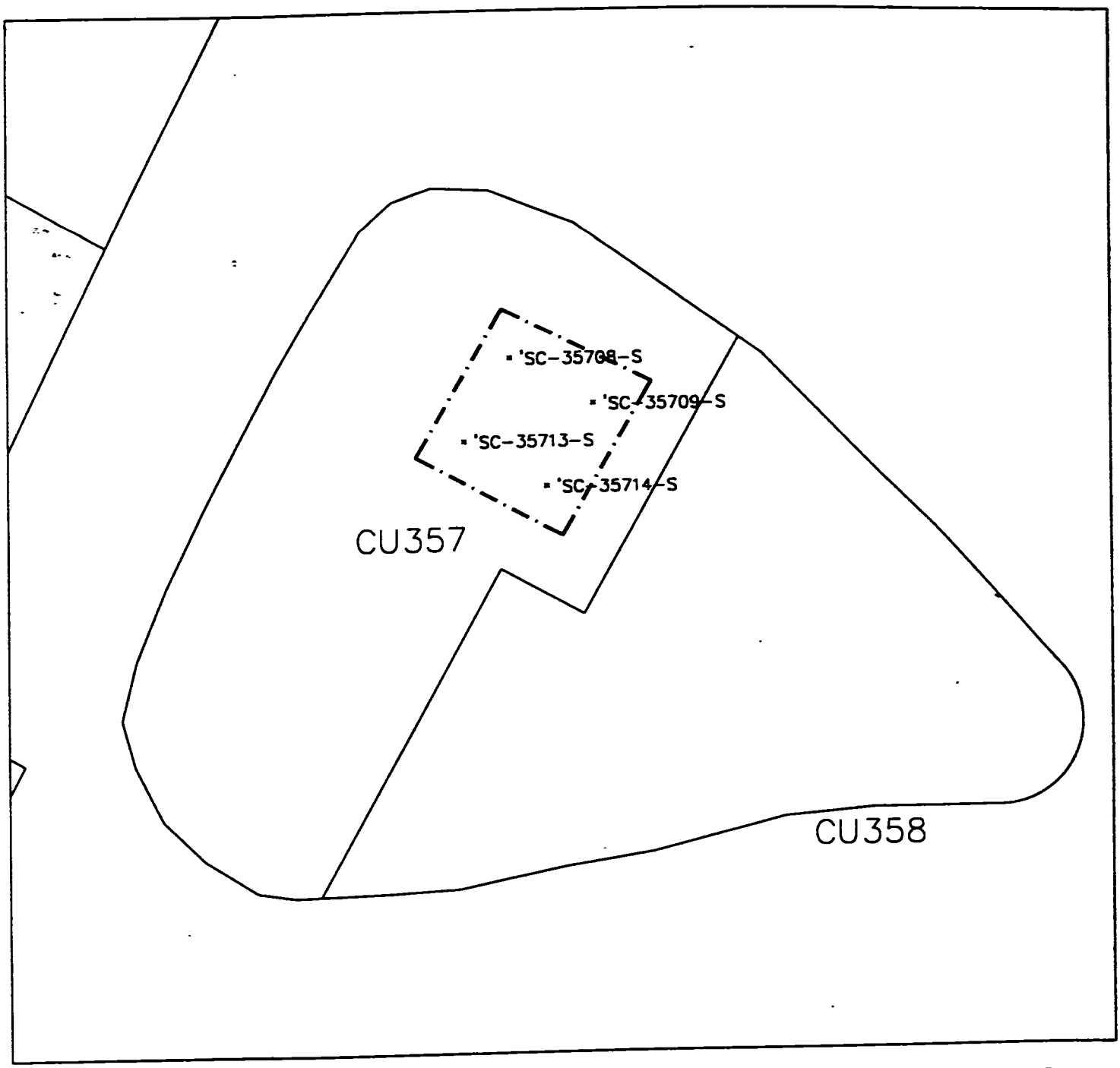
Comments: All readings <1.5 RKg

Detector Model #: 2x2 "X"

Detector Serial #: 22D84

Calibration Due: 11/21/01

Field Bkg. 10,000 cpm



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

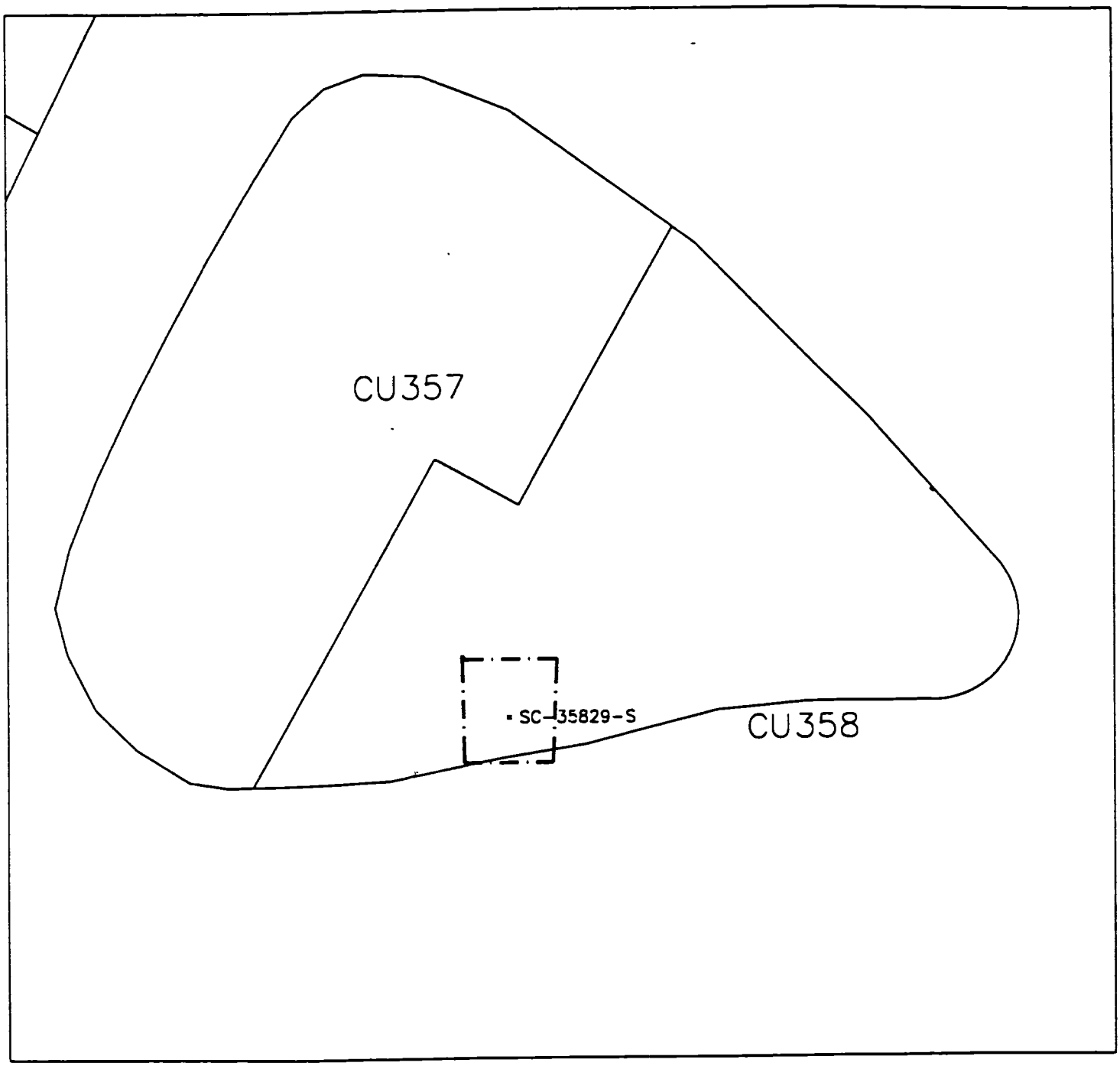
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 357

Date Plotted 9/21/00

DBO CAD

Meter Model #:	3221	Detector Model #:	2x2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4-28-01	Calibration Due:	1-21-01
Survey Date / Time:	9-21-00/0800	Field Bkg.:	10,000 cpm
Surveyor(s):	T. BROWER		
Comments:	ALL READINGS <1.5x BKG		



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

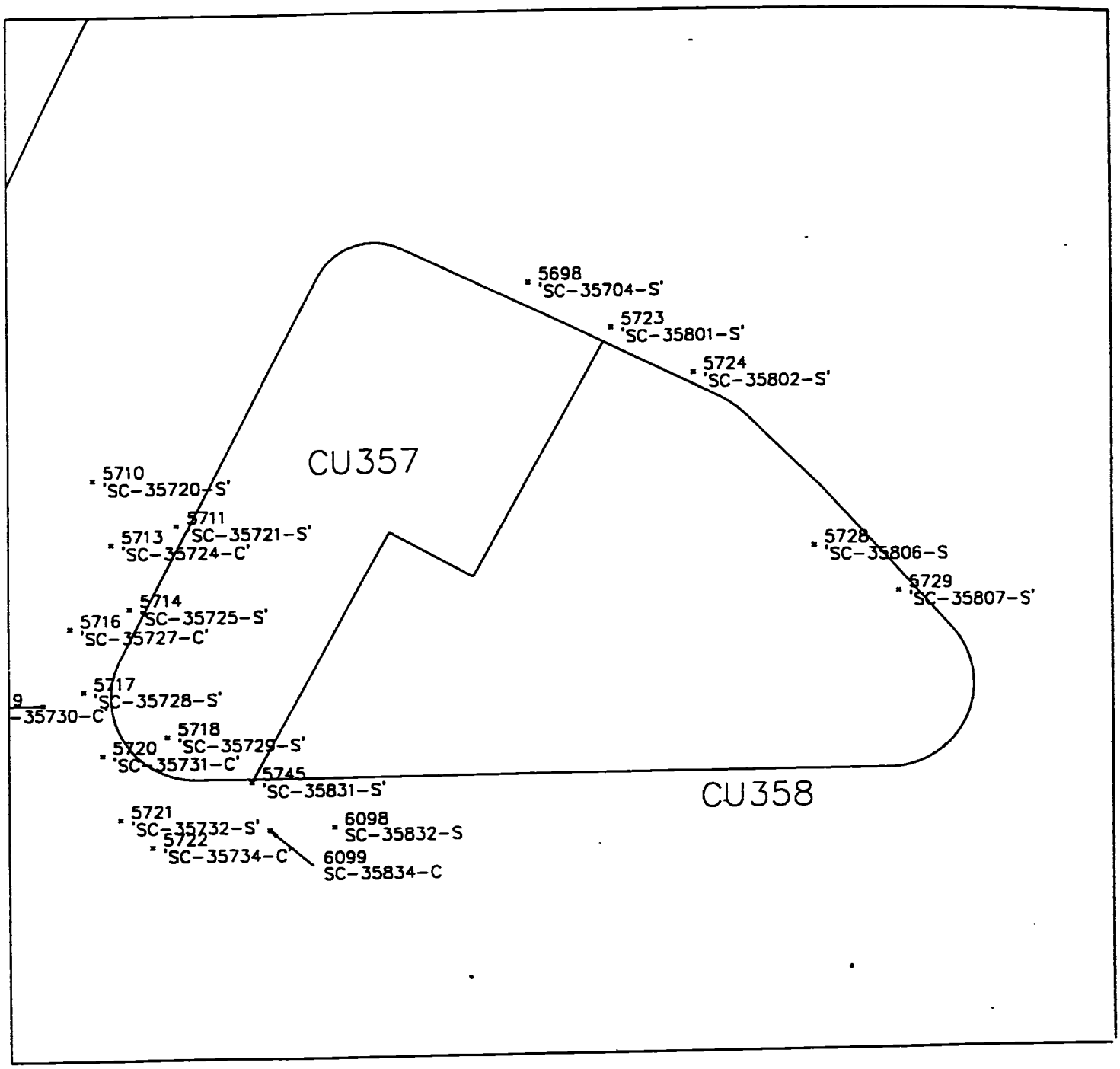
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/13/00

DBO CAD

Meter Model # :	2221	Detector Model #:	44-10-2 "X"
Meter Serial # :	154216	Detector Serial #:	22084
Calibration Due:	4-28-01	Calibration Due:	1-21-01
Survey Date / Time:	8-29-00/1300	Field Bkg.:	10,000 cpm
Surveyor(s):	T. BROWER		
Comments:	ALL READINGS <1.5x BKG		



Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/8/00

DHO CAD

Meter Model #:	2221	Detector Model #:	44-10-2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4-28-01	Calibration Due:	1-21-01
Survey Date / Time:	8-29-00/1300	Field Bkg.:	10,000 cpm
Surveyor(s):	T. BROWER		
Comments:	ALL READINGS <1.6 xBKG		

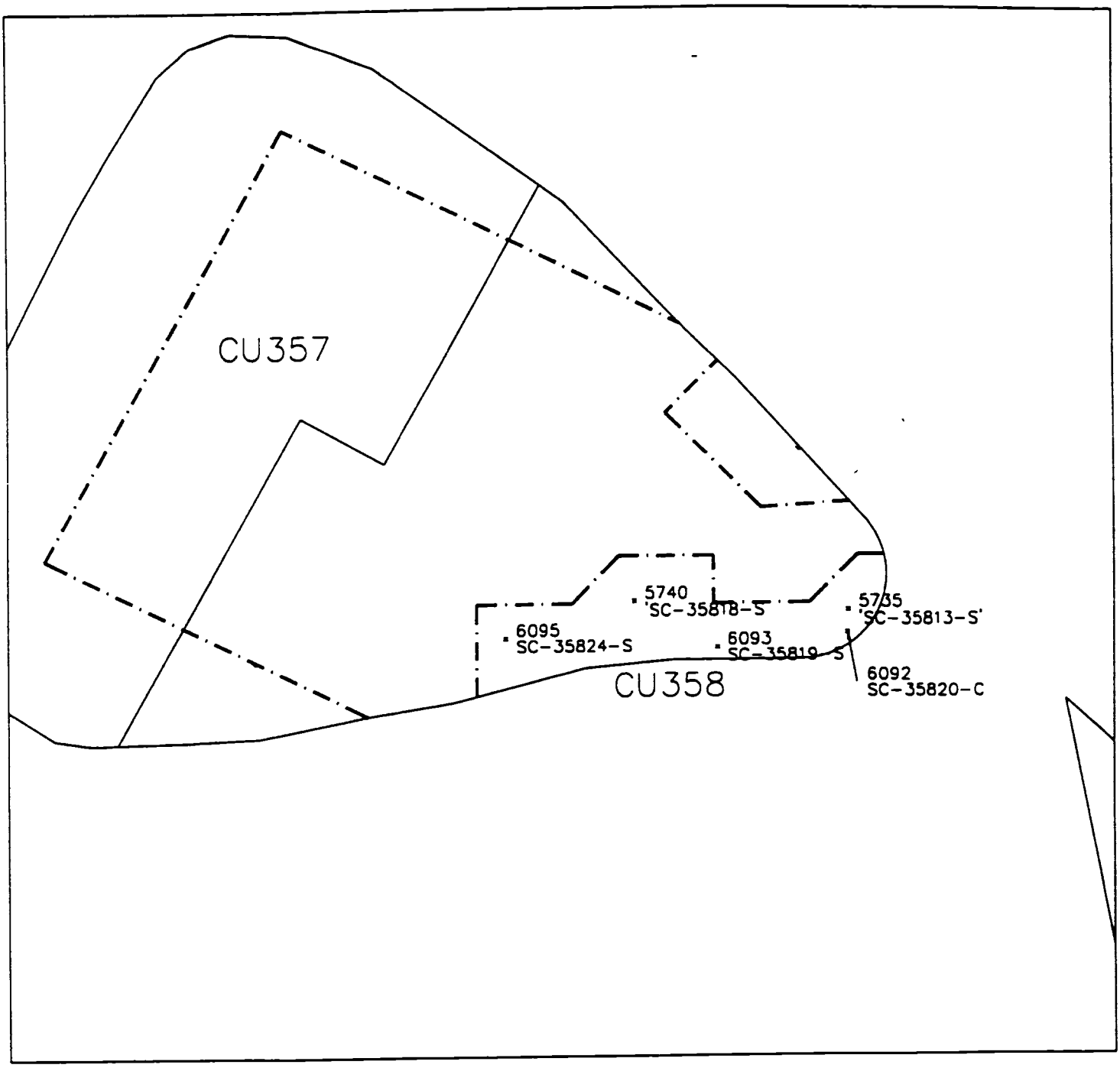
N

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft.



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

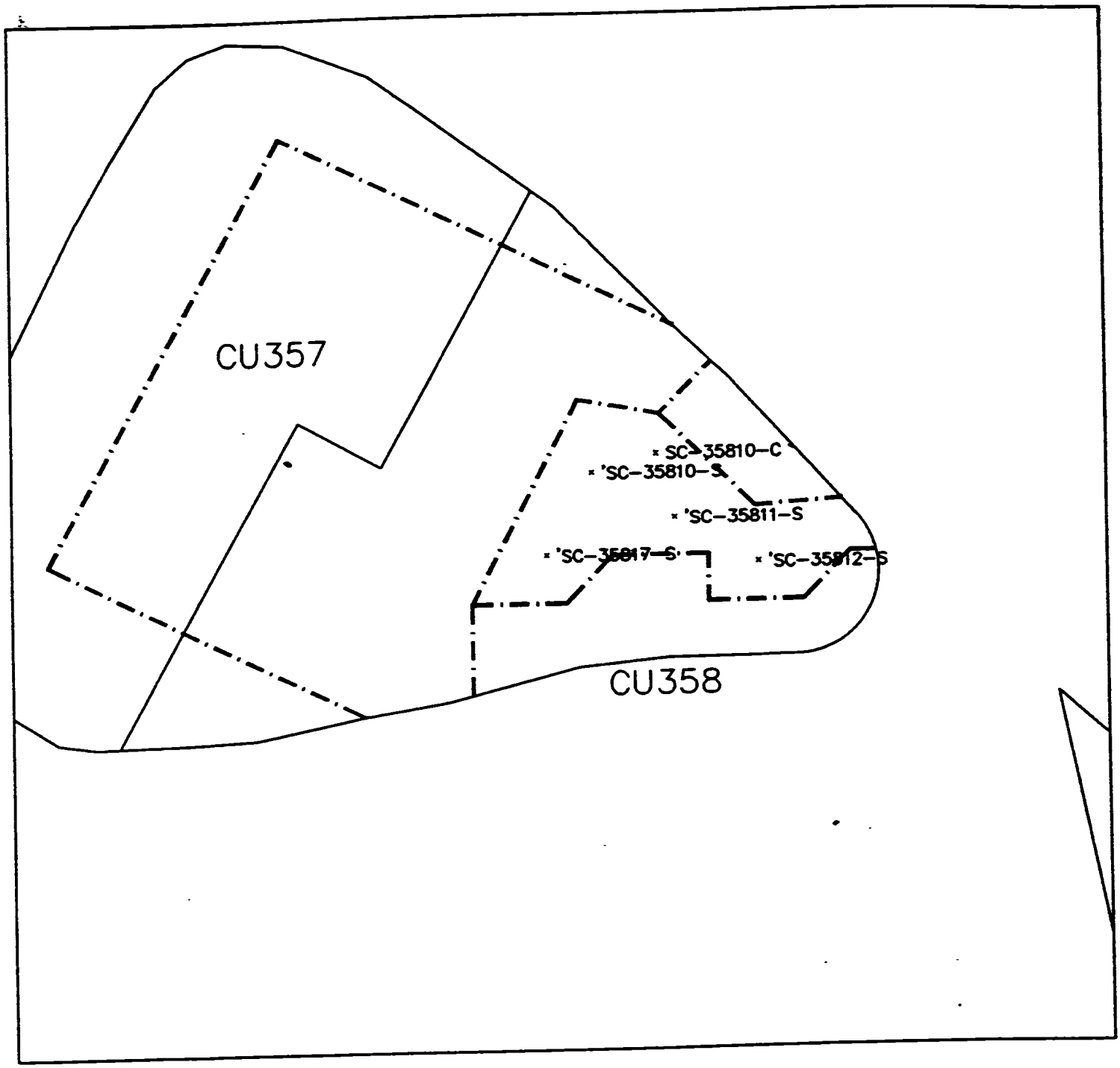
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/09/00

DHO CAD

Meter Model # :	2221	Detector Model #:	2x2 'X'
Meter Serial # .	154216	Detector Serial #:	22084
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/9/00	Field Bkg.:	10 000 CPM
Surveyor(s).	T. Brower		
Comments:	All readings <1.5 Bkg		



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

(IN FEET)

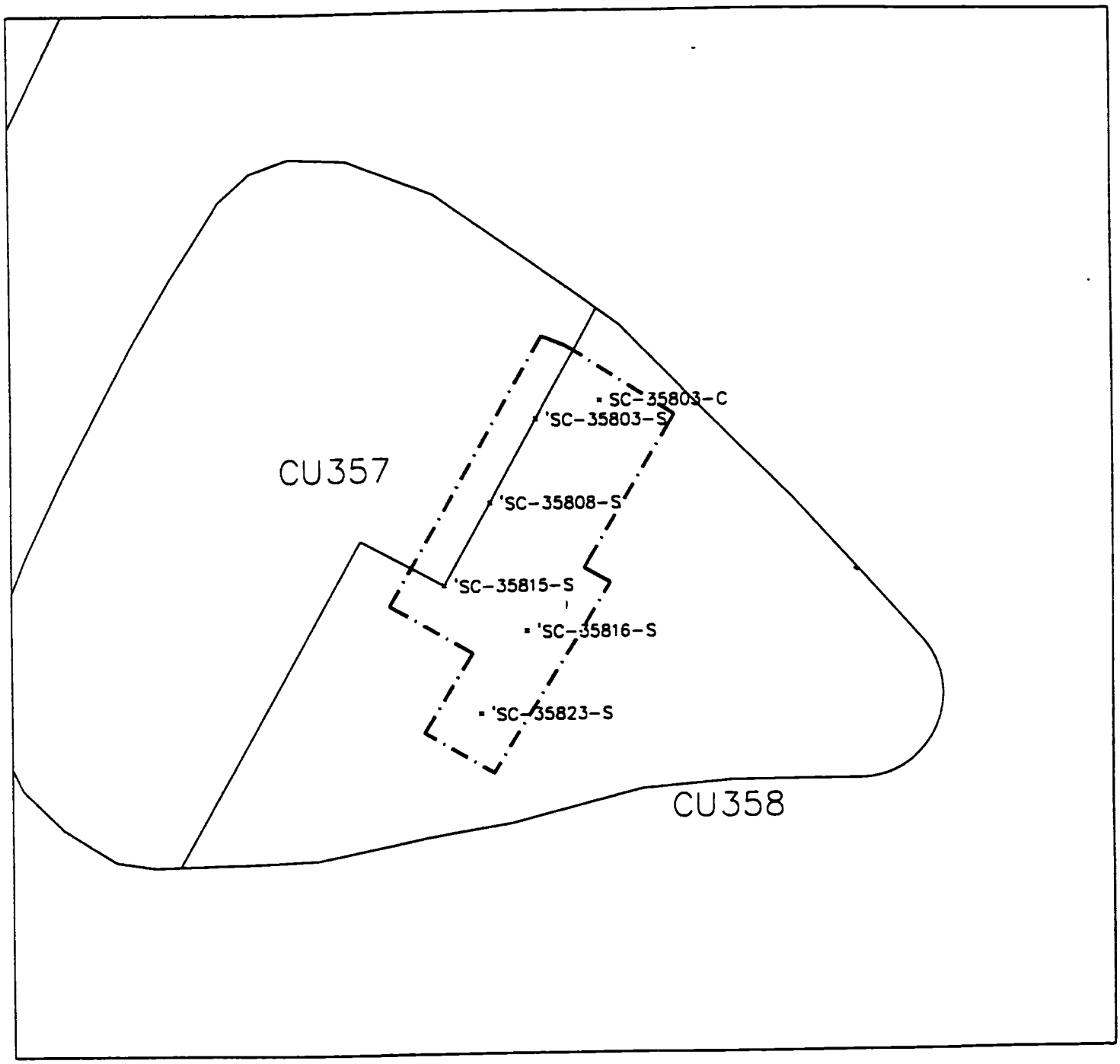
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/11/00

DBO CAD

Meter Model #:	2221	Detector Model #:	2x2 'x'
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Date:	4/28/01	Calibration Date:	1/21/01
Survey Date / Time:	9/11/00	Field Bkg.:	10,000 CPM
Surveyor(s):	T. Brower		
Comments:	All readings <1.5 Bkg		



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

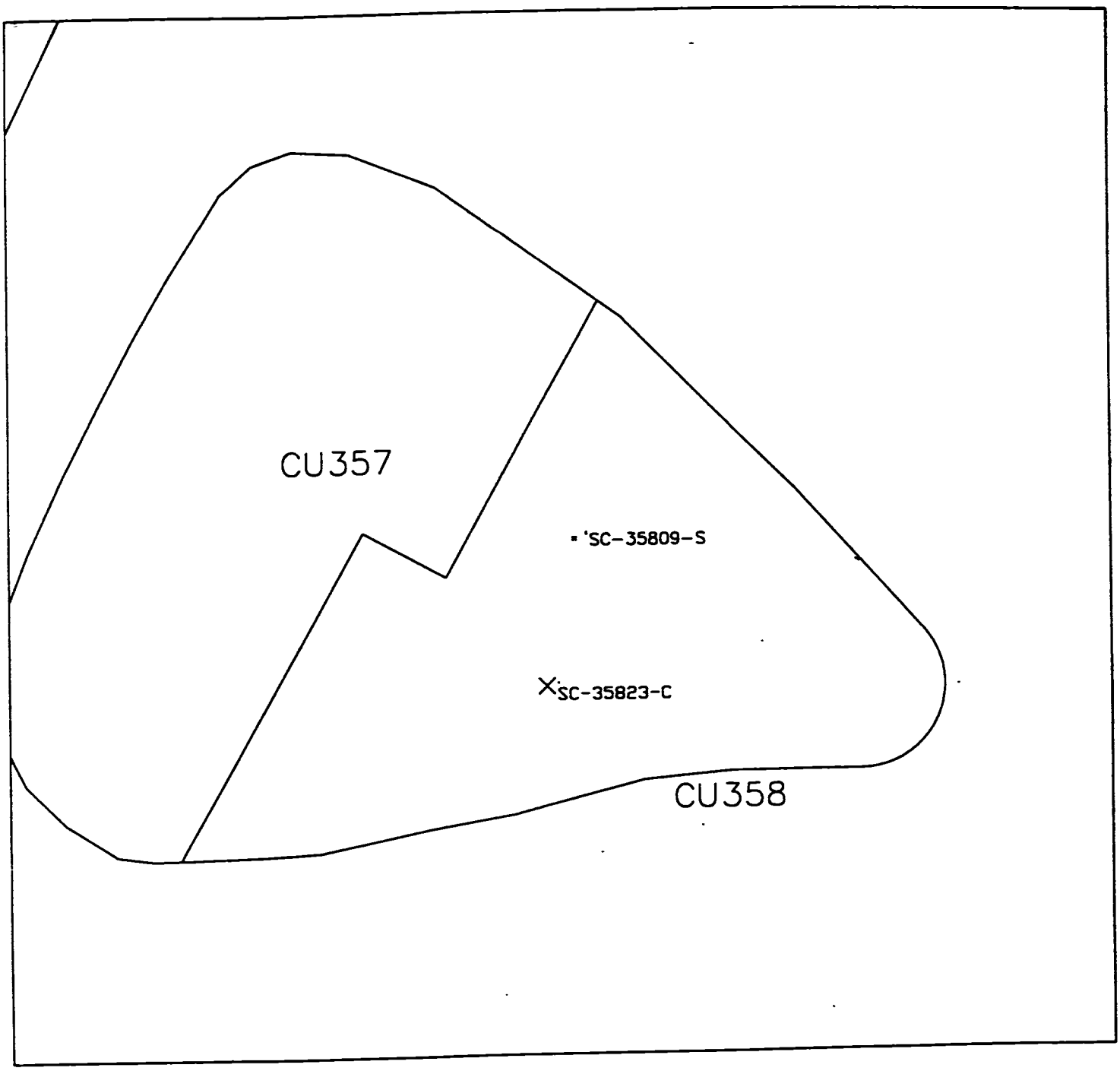
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/16/00

DBO CAD

Meter Model #:	2221	Detector Model #:	2x2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/16/00, 1500	Field Bkg.:	10,000 CPM
Surveyor(s):	T. Brown		
Comments:	All readings <1.5 BKg		



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

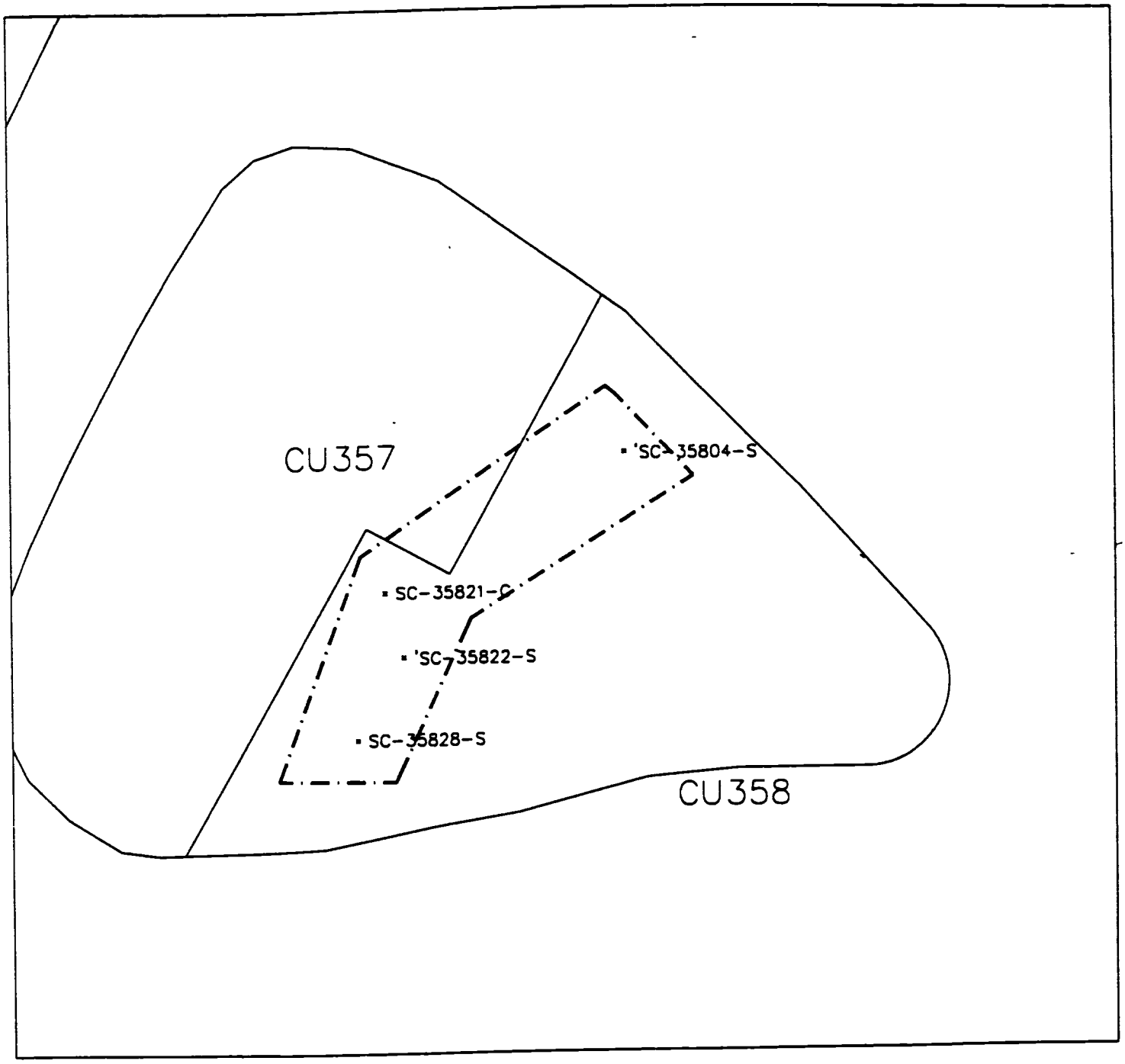
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/17/00

DHO CAD

Meter Model #:	2221	Detector Model #:	2X2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/17/00, 0900	Field Bkg.:	10,000 cpm
Surveyor(s):	T. Crowe		
Comments:	All readings <1.5 BKG		



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

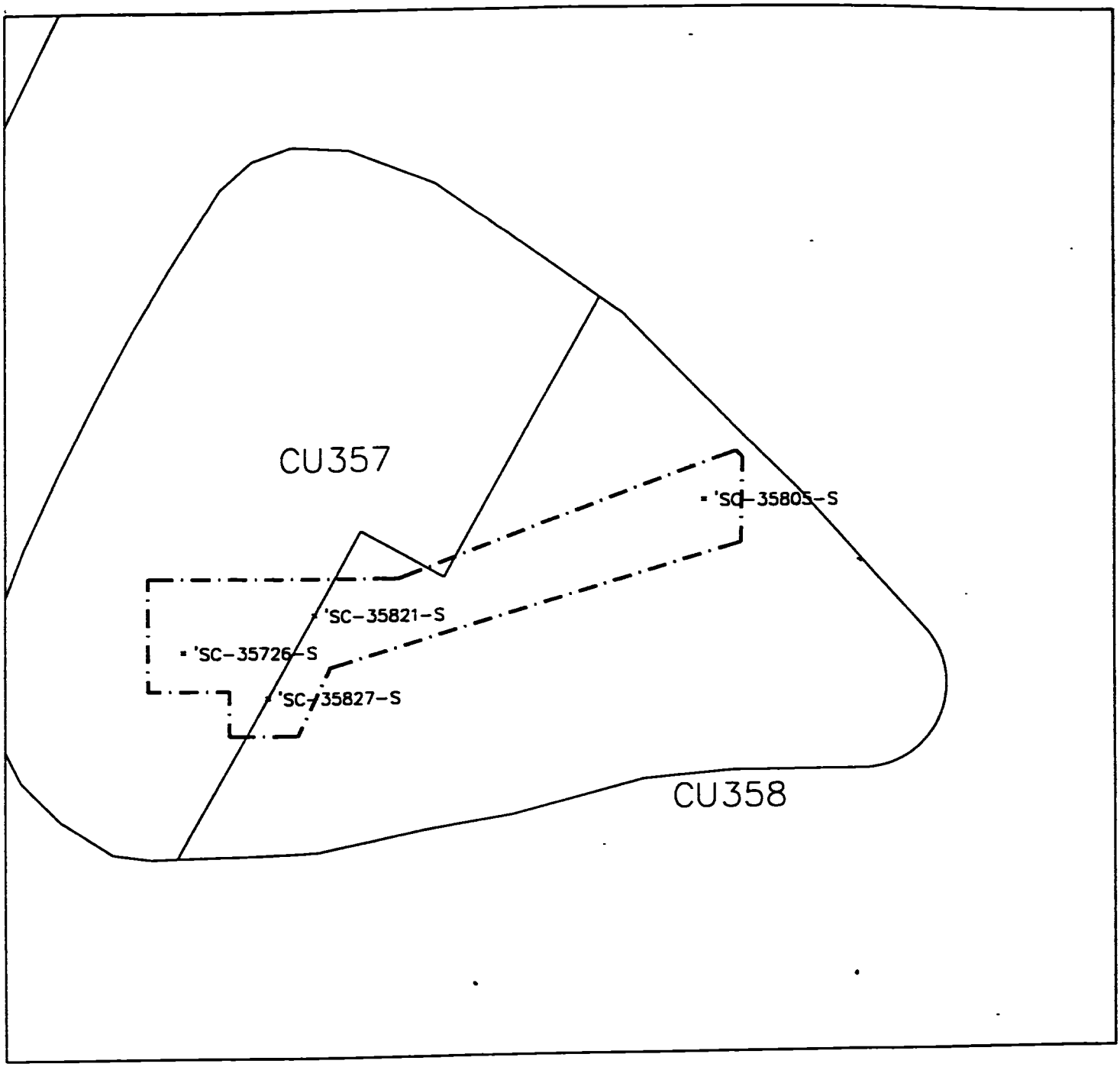
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/18/00

DBO CAD

Meter Model #:	2221	Detector Model #:	2x2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/18/00 1400	Field Bkg.:	10,000 CPM
Surveyor(s):	T. Brower		
Comments:	All readings <1.5 Bkg		



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

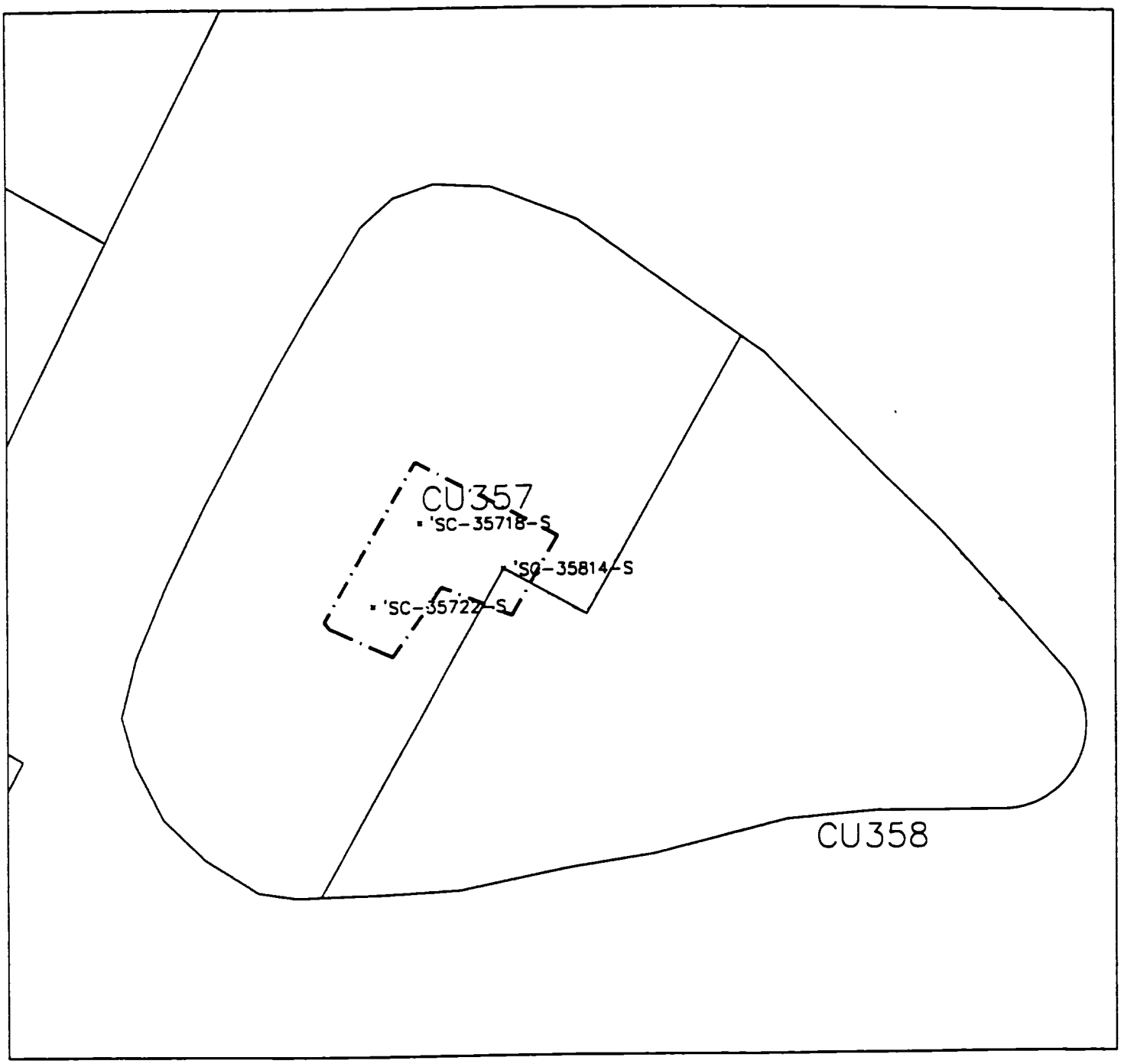
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/19/00

DBO CAD

Meter Model #:	2221	Detector Model #:	2x2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4/28/01 (08)	Calibration Due:	1/21/01
Survey Date / Time:	9/19/00 1030	Field Bkg.:	10,000cpm
Surveyor(s):	T. Brown		
Comments:	All readings <1.5 BKg		



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

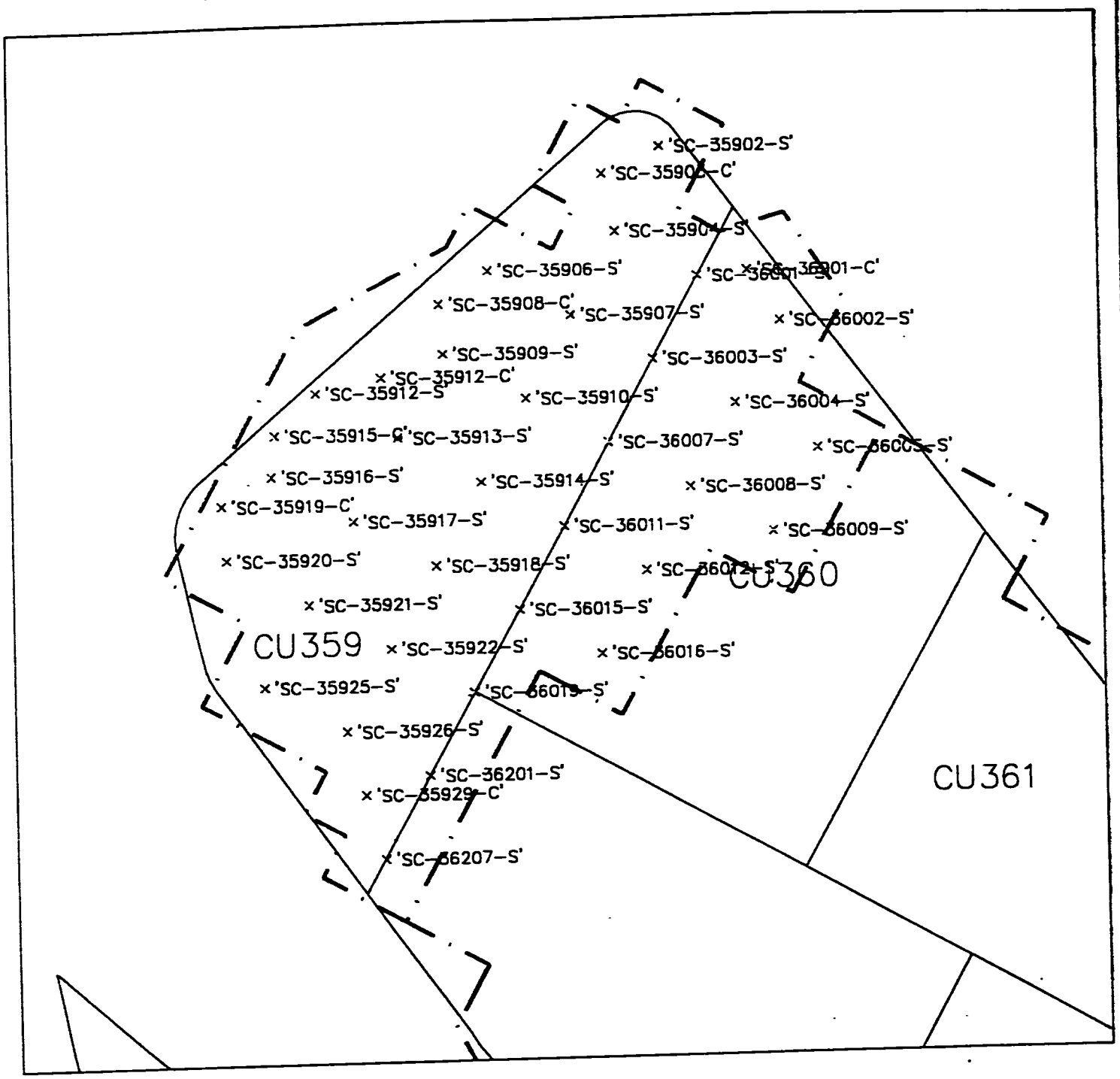
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 358

Date Plotted 9/19/00

DBO CAD

Meter Model #:	2221	Detector Model #:	2x2 "X"
Meter Serial #:	154216	Detector Serial #:	22084
Calibration Due:	4/28/01	Calibration Due:	1/21/01
Survey Date / Time:	9/20/00/0830	Field Bkg.	10,000 cpm
Surveyor(s):	T. Brower		
Comments:	All readings <1.5 Bkg		



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

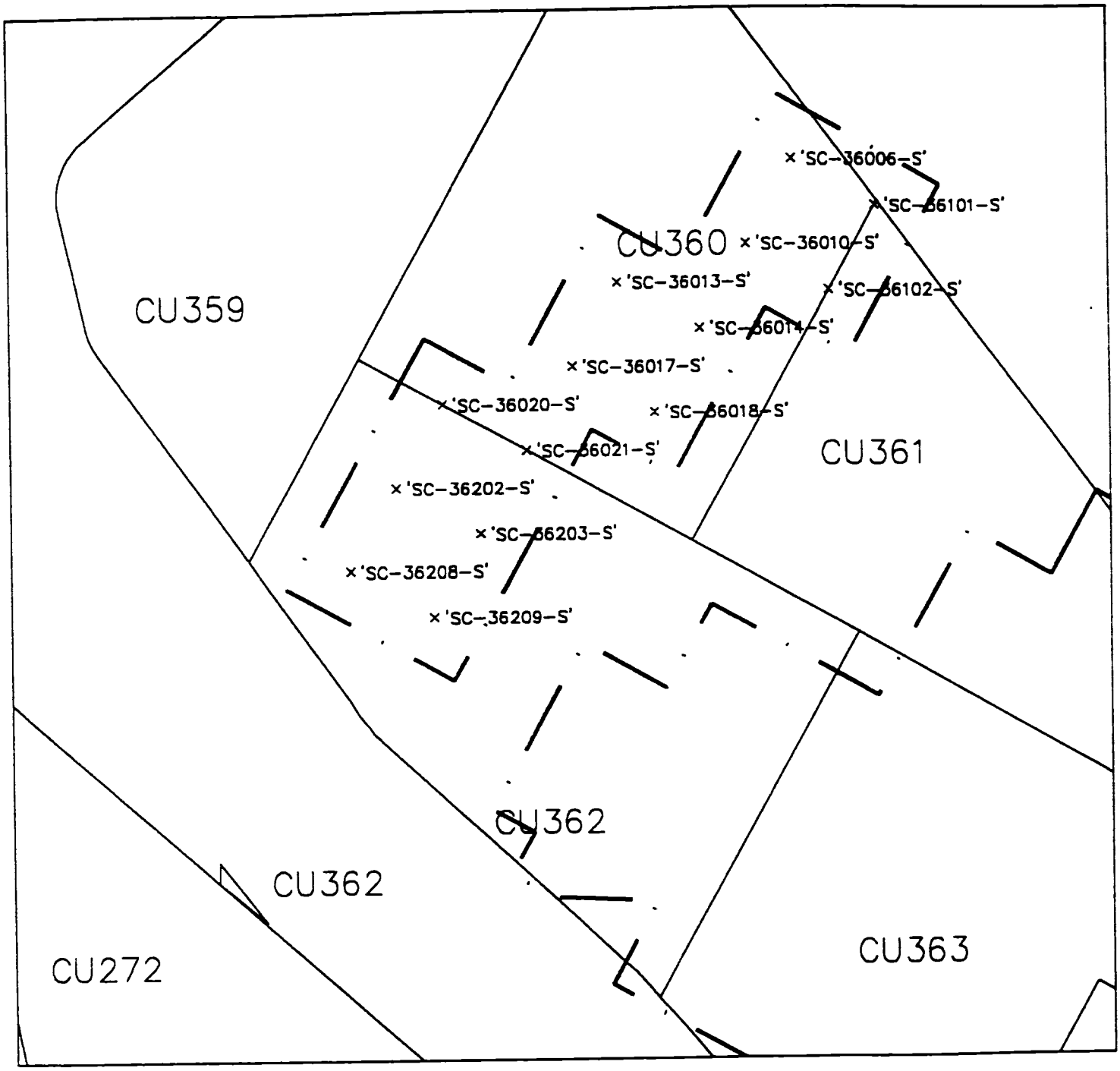
N

Radiation Survey Form WP 437, RU 16 CU 359

Date Plotted 5/16/00

DBD CAD

Meter Model #:	2221	Detector Model #:	2x2 "F"
Meter Serial #:	99158	Detector Serial #:	122191
Calibration Date:	7/24/00	Calibration Date:	9/24/00
Survey Date / Time:	5/16/00	Field Bkg.:	4,000 CPM
Surveyor(s):	T. Brewer		
Comments:	All readings <1.5 BKg		



LEGEND

• 'SC-32606-S' SAMPLE POINTS PINNED

— · — · — PINNING LIMITS

N

Radiation Survey Form WP 437, RU 16 CU 360

Date Plotted 4/20/00

DEO CAD

Meter Model #: 2221

Meter Serial #: 117617

Calibration Date: 10/13/00

Survey Date / Time: 4/18/00

Detector Model #: 2x2 NaI "m"

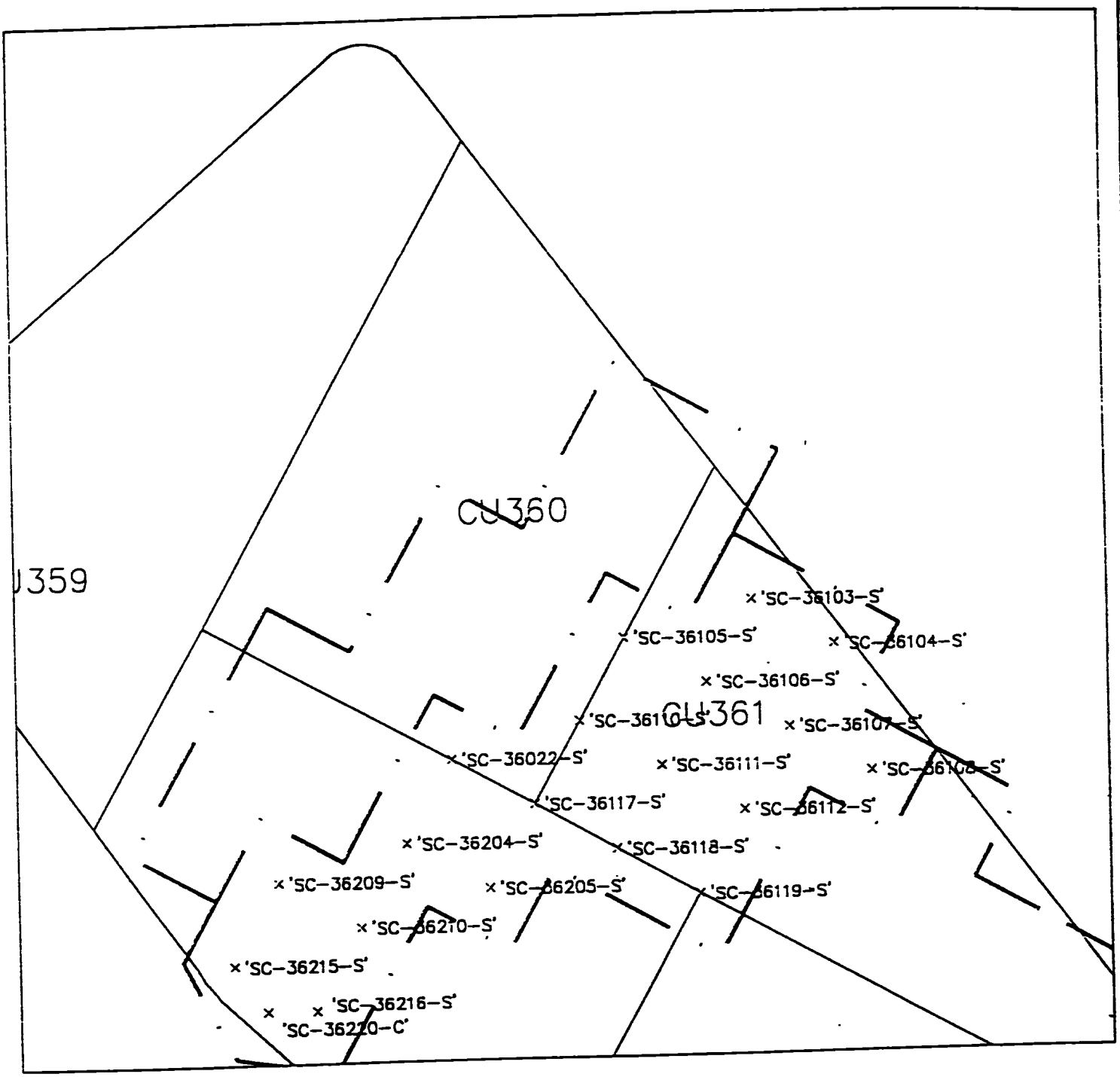
Detector Serial #: 130764

Calibration Date: 9/24/00

Field Bkg.: 6000 cpm

Surveyor(s): C. Hanner

Comments: Area was surveyed and found to be less than 1.5 times background



LEGEND

'SC-32506-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

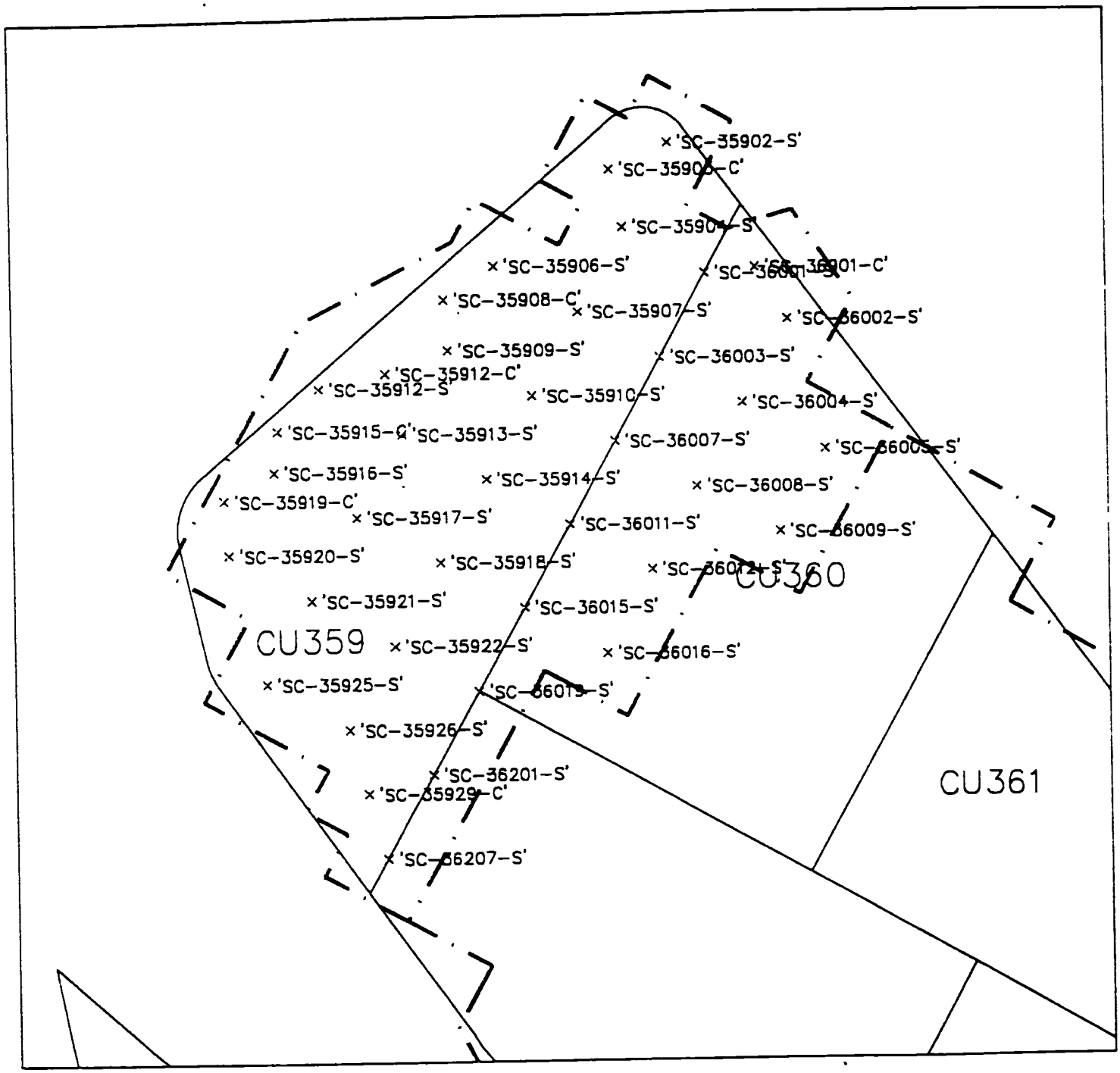
Radiation Survey Form WP 437, RU 16 CU 360

Date Plotted 4/29/00

DBD CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Date:	11-12-00	Calibration Date:	9-24-00
Survey Date / Time:	4-29-00/0810	Field Bkg.:	5000 cpm
Surveyor(s):	Eric Hurtt		

Comments: AREA WAS found to be less than 1.5x background.



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

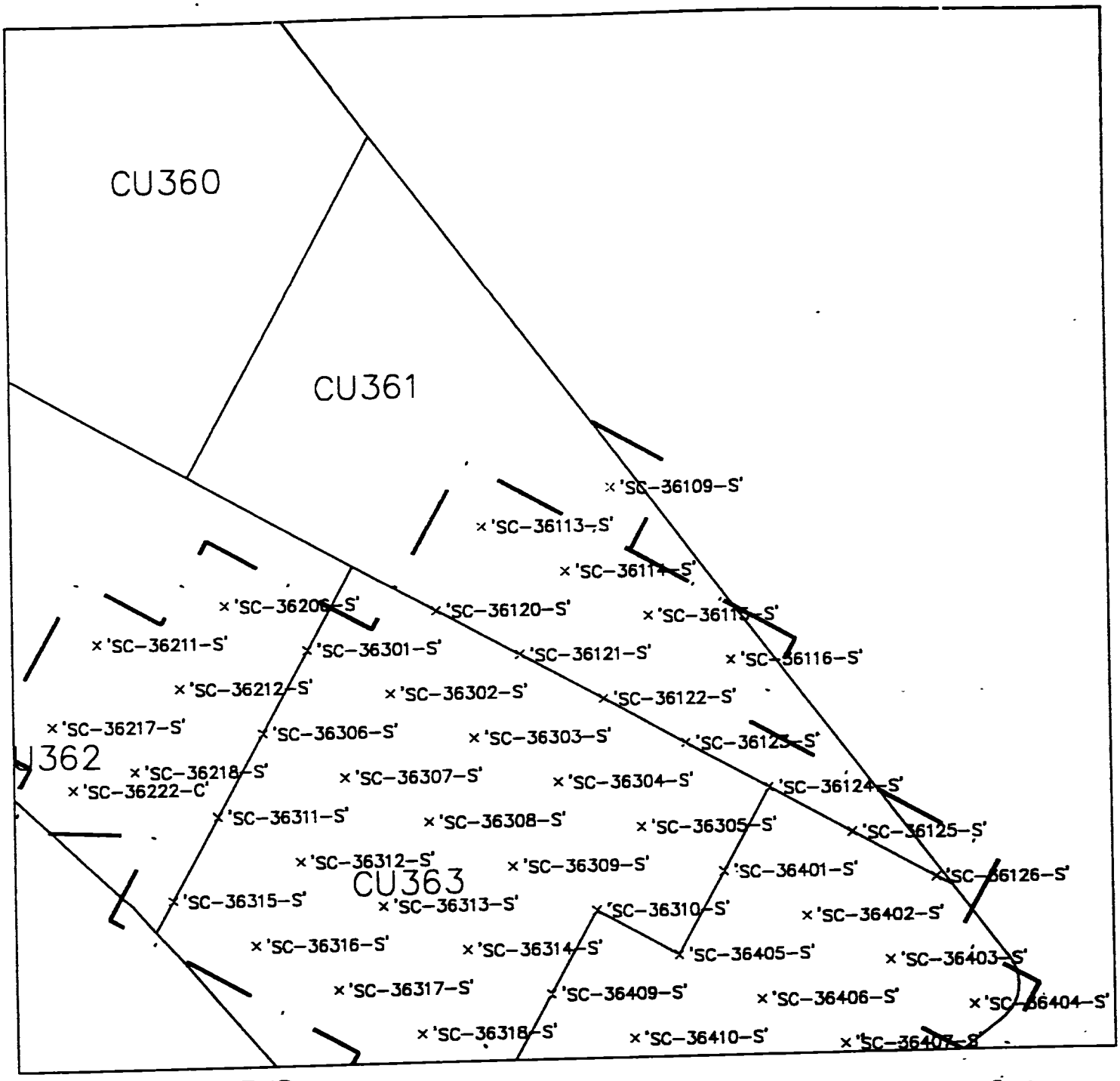
N

Radiation Survey Form WP 437, RU 16 CU 360

Date Plotted 5/16/00

DBD CAD

Meter Model #:	2221	Detector Model #:	2x2 "F"
Meter Serial #:	99158	Detector Serial #:	122191
Calibration Date:	7/24/00	Calibration Date:	9/24/00
Survey Date / Time:	5/16/00	Field Bkg.:	4,000 cpm
Surveyor(s):	T. Brown		
Comments:	All reading 41.5 Bkg		



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

— · — · — PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

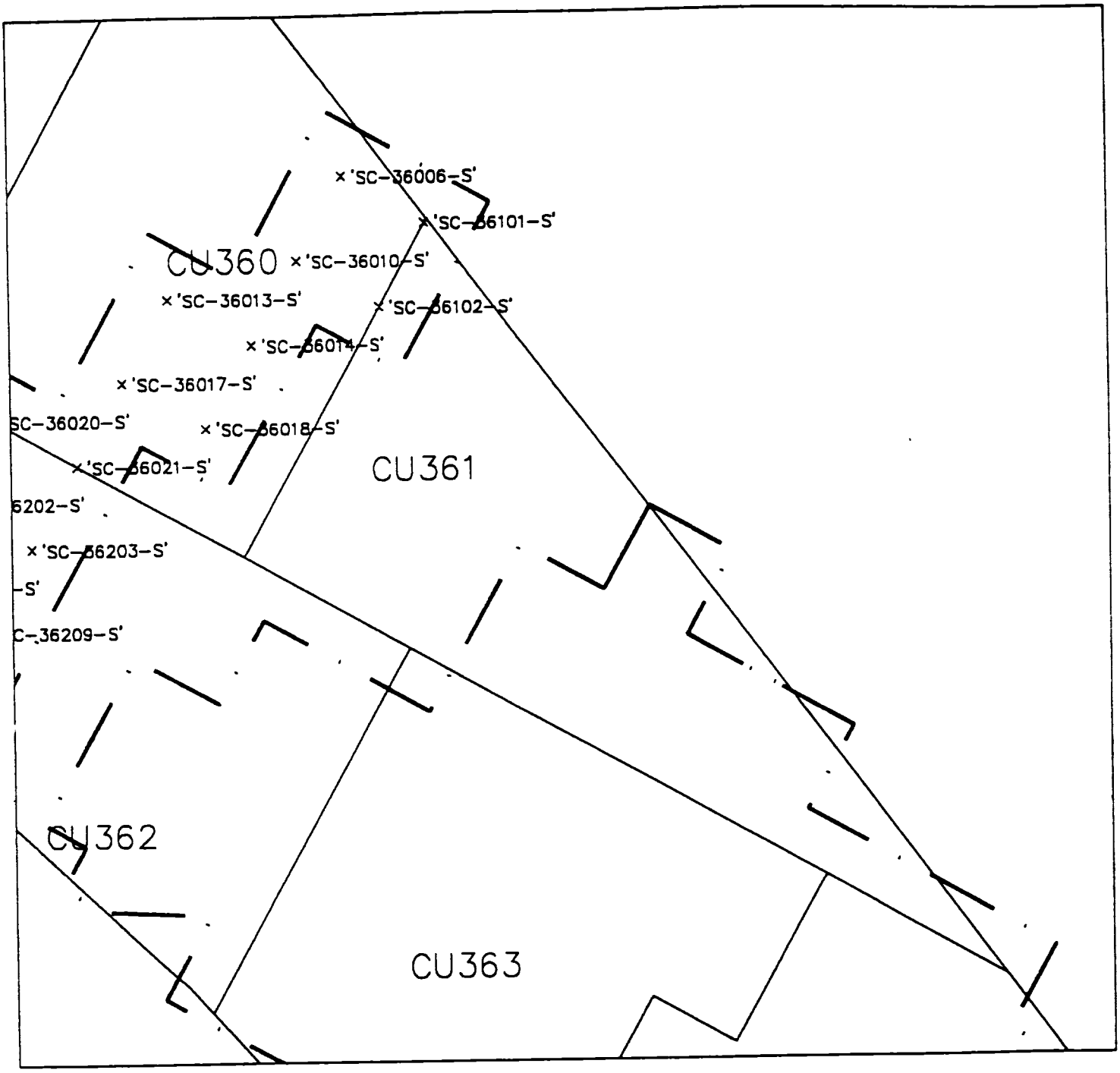
(IN FEET)
1 inch = 50 ft.

Radiation Survey Form WP 437, RU 16 CU 361

Date Plotted 4/10/00 DBD CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Date:	11-12-00	Calibration Date:	9-24-00
Survey Date / Time:	4-6-00 / 0830	Field Bkg.:	4500 cpm
Surveyor(s):	Eric Hurtt		

Comments: AREA found to be less than 1.5 x background.



LEGEND

· 'SC-32606-S' SAMPLE POINTS PINNED

— · — · — PINNING LIMITS

N

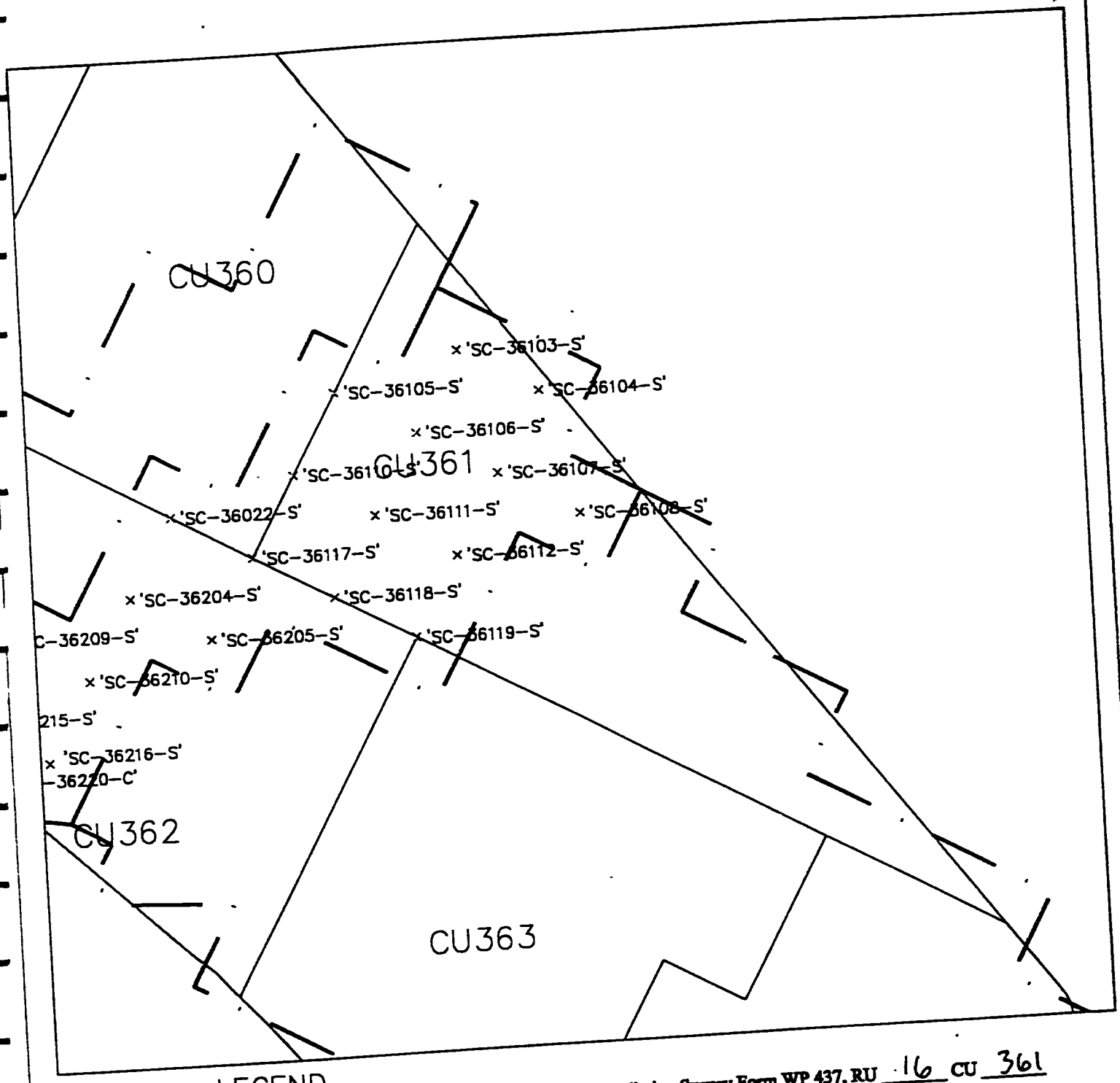
Radiation Survey Form WP 437, RU 16 CU 361

Date Plotted 4/20/00

DEO CAD

Meter Model #:	2221	Detector Model #:	2x2 NaI "M"
Meter Serial #:	117617	Detector Serial #:	130764
Calibration Date:	10/13/00	Calibration Date:	9/24/00
Survey Date / Time:	4/19/00	Field Bkg.:	6000 cpm
Surveyor(s):	C. Hoover		

Comments: Area was surveyed and found to be less than 1.5 times background



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

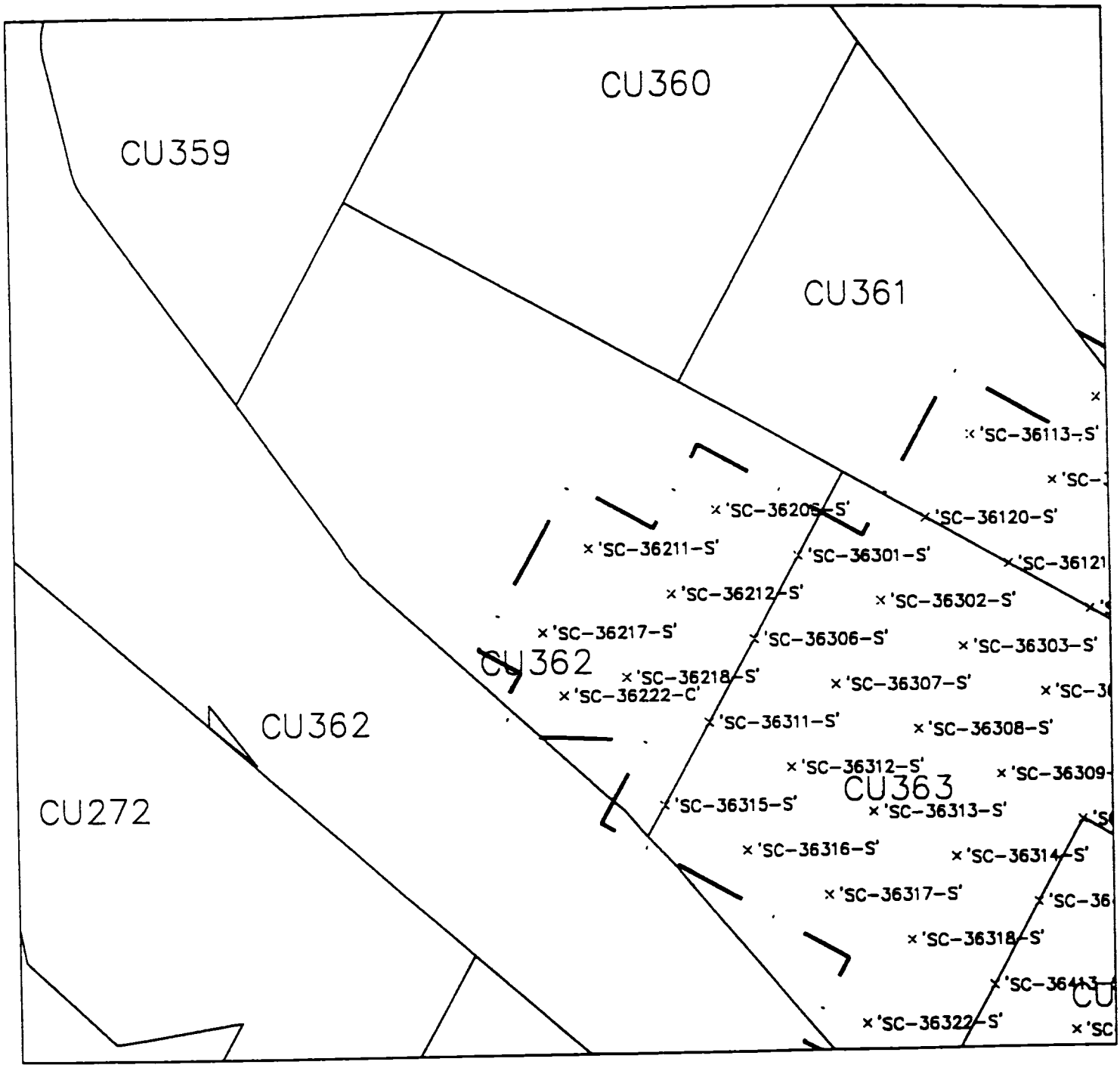
Radiation Survey Form WP 437, RU 16 CU 361

Date Plotted 4/29/00

DBO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Date:	11-12-00	Calibration Date:	9-24-00
Survey Date / Time:	4-29-00 / 0810	Field Bkg.:	5000 cpm
Surveyor(s):	Eric Hurtt		

Comments: AREA WAS found to be less than 1.5x background.



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft.

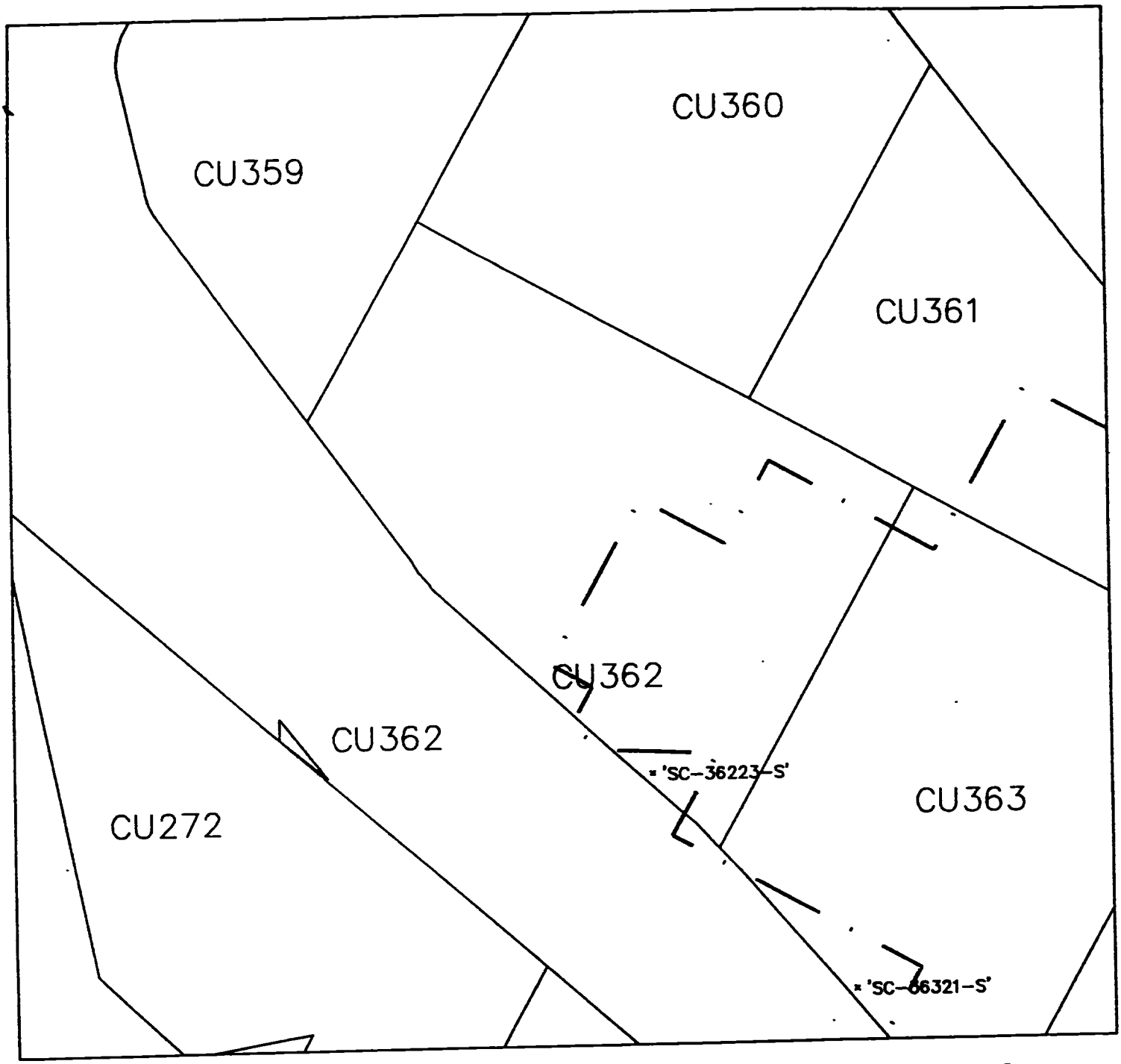
Radiation Survey Form WP 437, RU 16 CU 362

Date Plotted 4/10/00

DBD CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Date:	11-12-00	Calibration Date:	9-24-00
Survey Date / Time:	4-6-00 / 0830	Field Bkg.:	4500 cpm
Surveyor(s):	Eric Hurtt		

Comments: Area found to be less than 1.5 x background.



LEGEND

• 'SC-32606-S' SAMPLE POINTS PINNED

— · — · — PINNING LIMITS

N

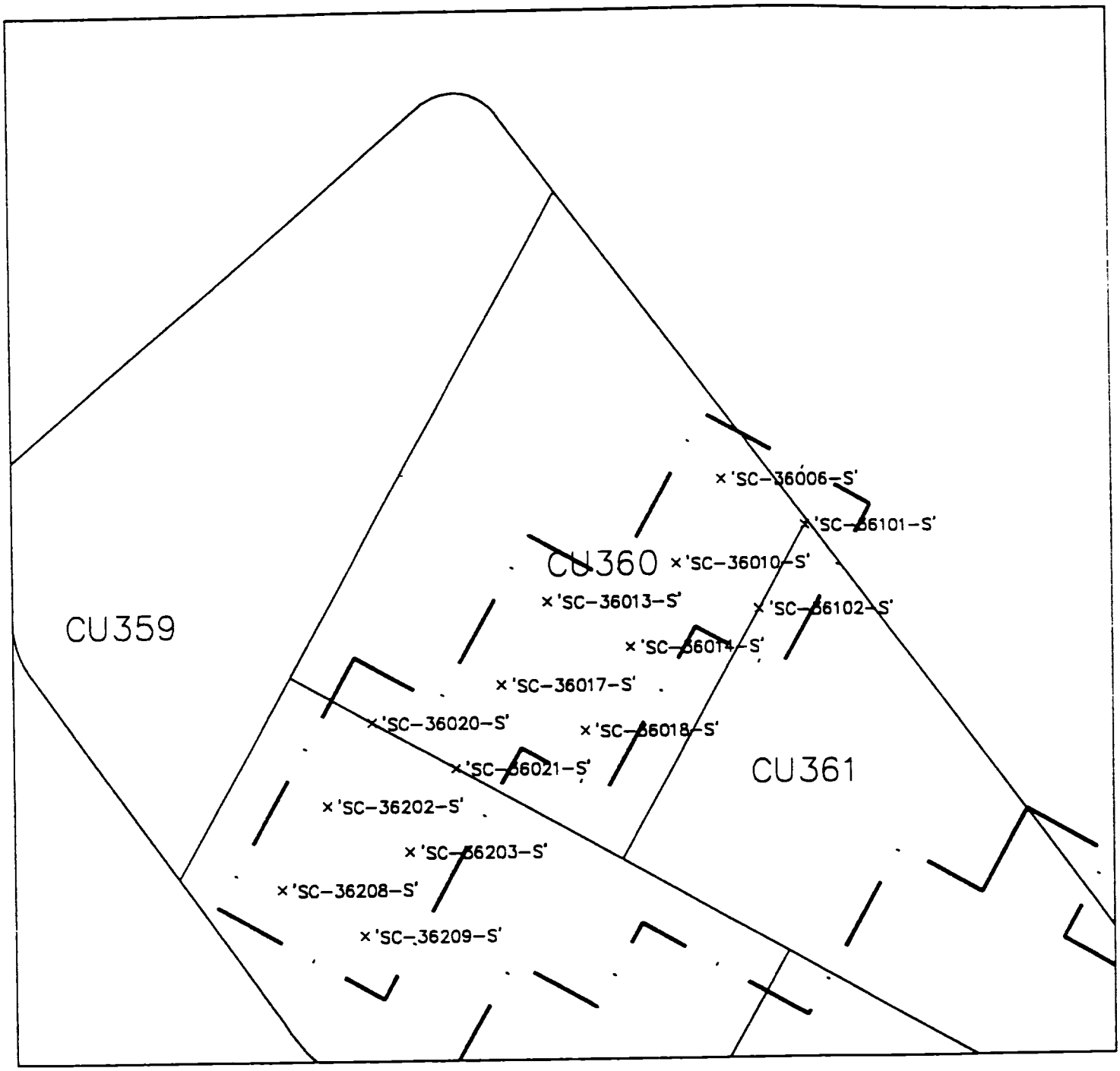
Radiation Survey Form WP 437, RU 16 CU 362

Date Plotted 4-11-00

DEO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Due:	11-12-00	Calibration Due:	9-24-00
Survey Date / Time:	4-11-00 / 1500	Field Bkg.:	4300 cpm
Surveyor(s):	Eric Hurtt		

Comments: AREA found to be less than 1.5 x background.



LEGEND

• 'SC-32606-S' SAMPLE POINTS PINNED

— · — · — PINNING LIMITS

N

Radiation Survey Form WP 437, RU 16 CU 362

Date Plotted 4/20/00 DRD CAD

Meter Model #: 2221 Detector Model #: 2x2 NaI "M"

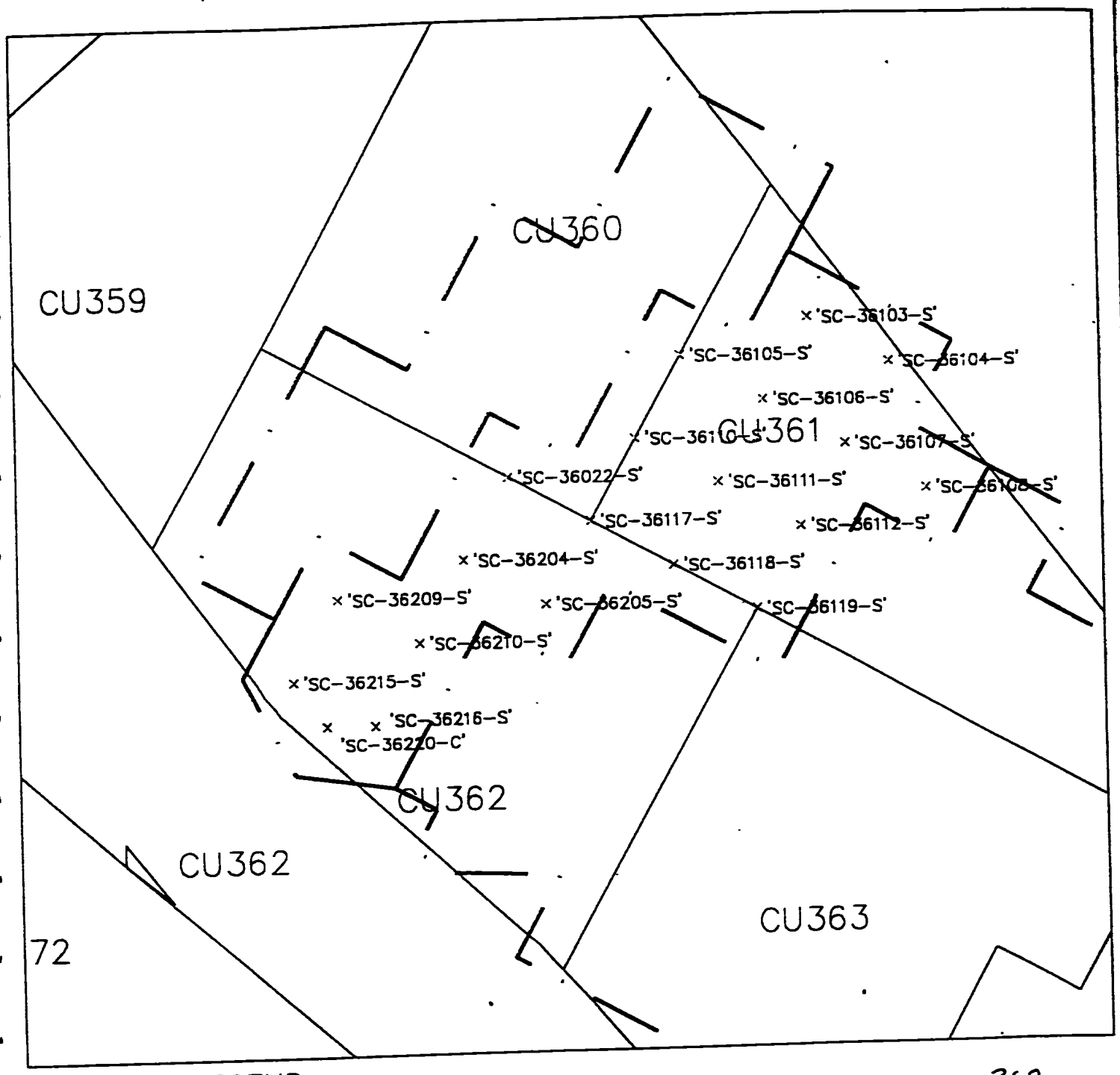
Meter Serial #: 117617 Detector Serial #: 130764

Calibration Due: 10/13/00 Calibration Due: 9/24/00

Survey Date / Time: 4/19/00 Field Bkg.: 6000 cpm

Surveyor(s): C. Hanner

Comments: Area was surveyed and found to be less than 1.5 times background



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

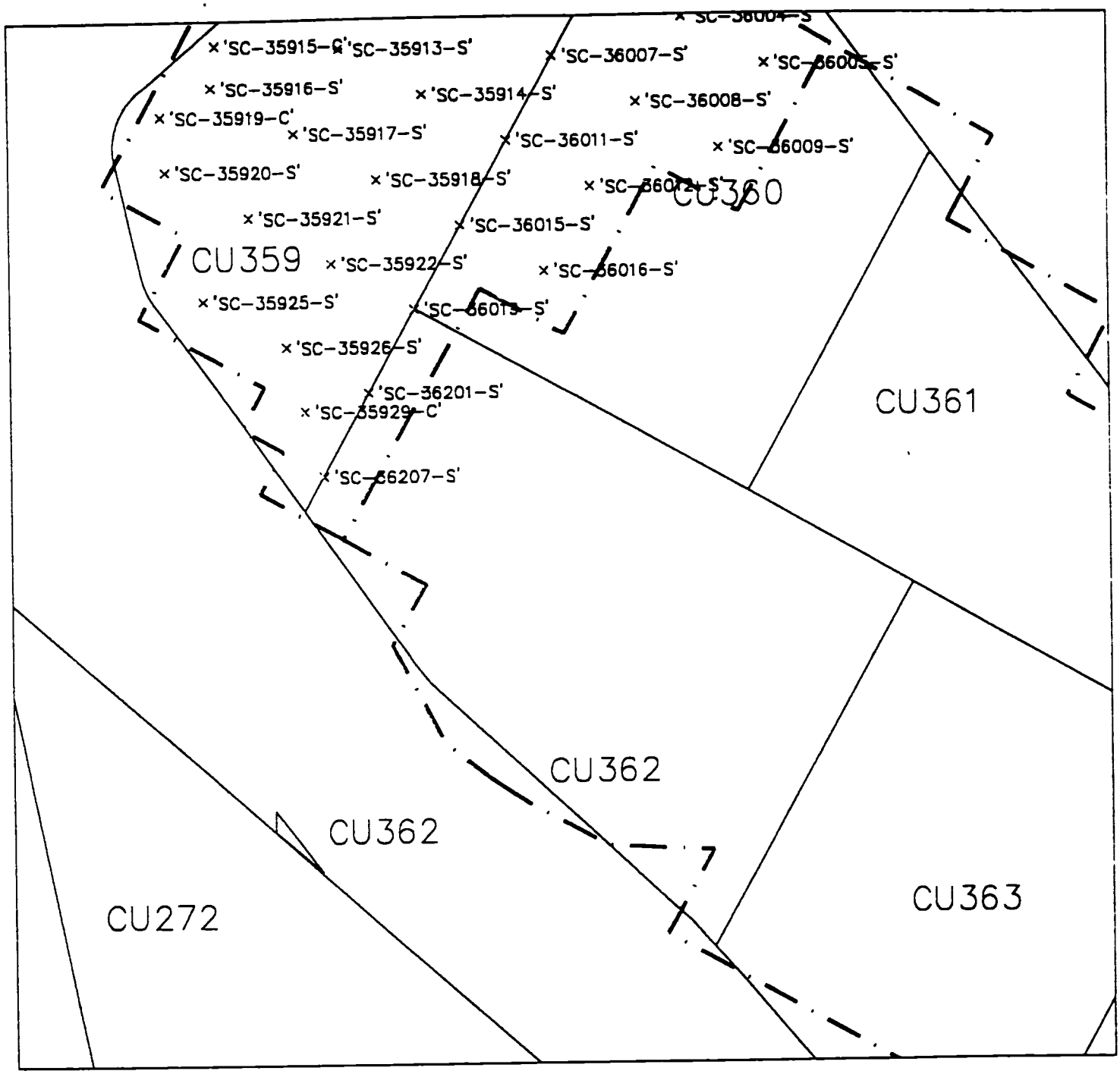
Radiation Survey Form WP 437, RU 16 CU 362

Date Plotted 4/29/00

DEO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Due:	11-12-00	Calibration Due:	9-24-00
Survey Date / Time:	4-29-00/0810	Field Stop:	5000 cpm
Surveyor(s):	Eric Huett		

Comments: Area was found to be less than 1.5x background.



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

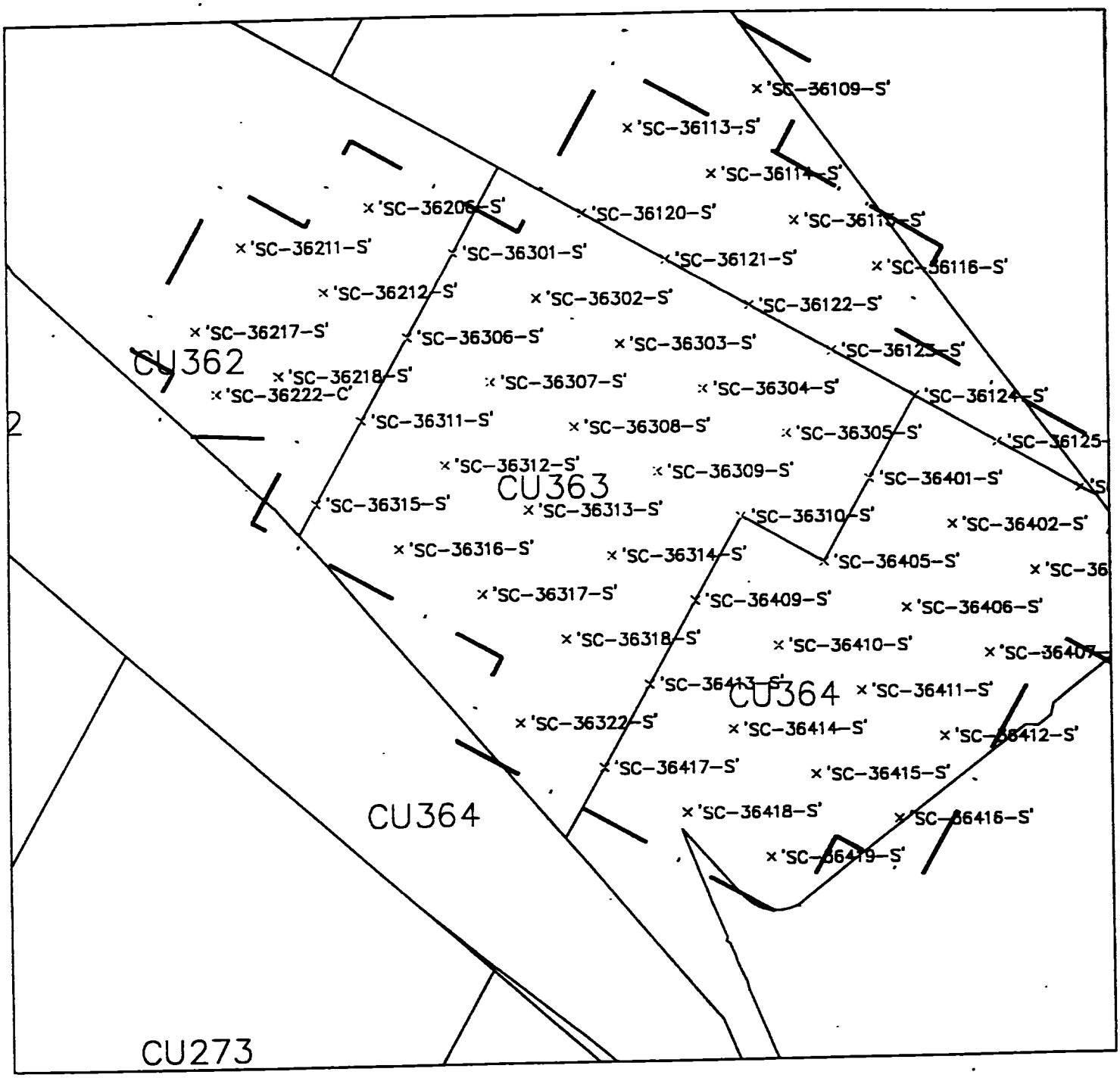
N

Radiation Survey Form WP 437, RU 16 CU 362

Date Plotted 5/16/00

DBD CAD

Meter Model #:	2221	Detector Model #:	2x2 "F"
Meter Serial #:	9958	Detector Serial #:	122191
Calibration Date:	7/24/00	Calibration Date:	9/24/00
Survey Date / Time:	5/16/00	Field Bkg:	4,000 CPM
Surveyor(s):	T. Brown		
Comments:	All readings w/.5 Bkg		



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft.

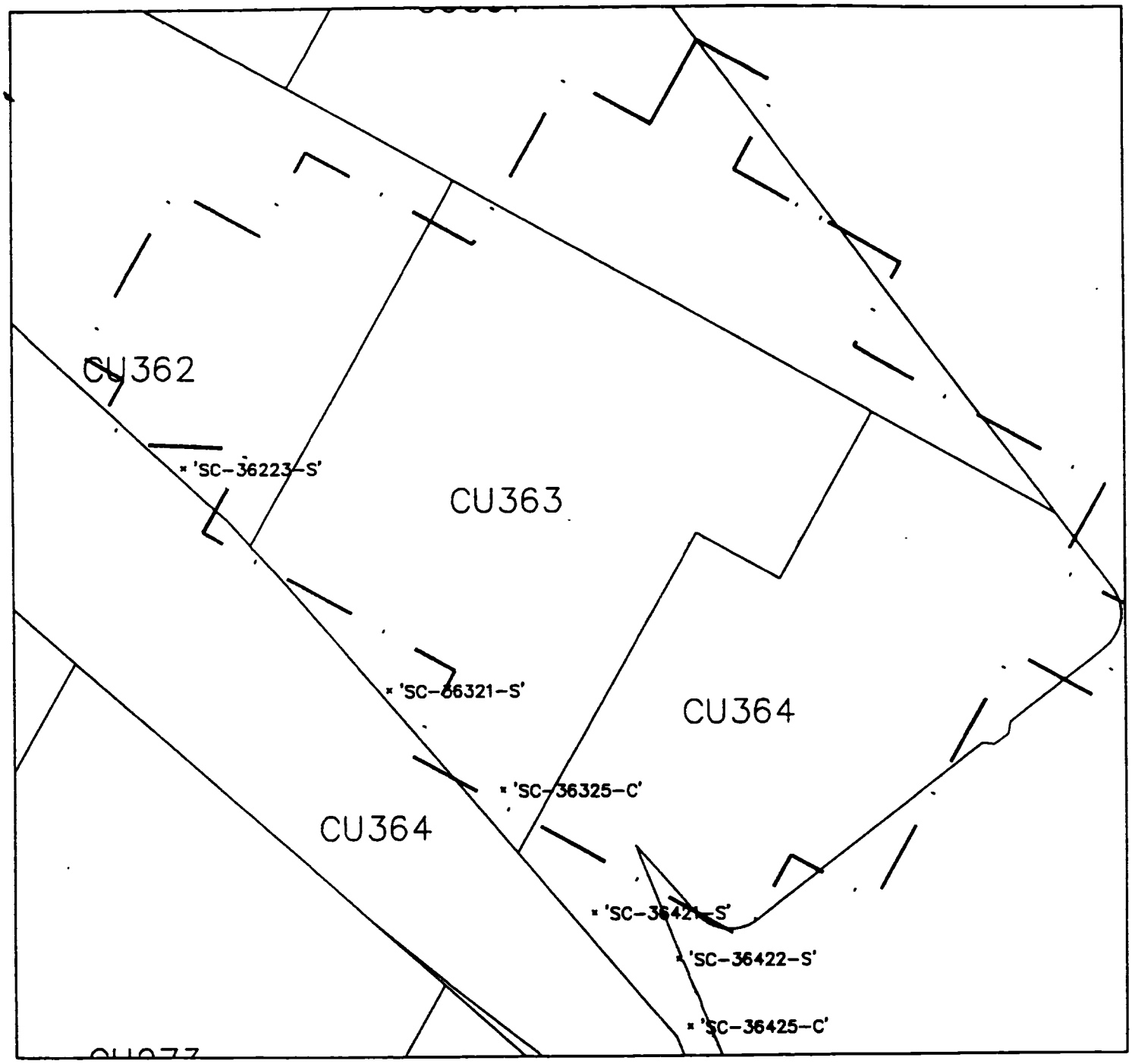
Radiation Survey Form WP 437, RU 16 CU 363

Date Plotted 4/10/00

DEO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Date:	11-12-00	Calibration Date:	9-24-00
Survey Date / Time:	4-6-00 / 0830	Field Bkg.:	4500 cpm
Surveyor(s):	Eric Hurtt		

Comments: Area found to be less than 1.5x background.



LEGEND

• 'SC-32606-S' SAMPLE POINTS PINNED

— · — · — PINNING LIMITS

N

Radiation Survey Form WP 437, RU 16 CU 363

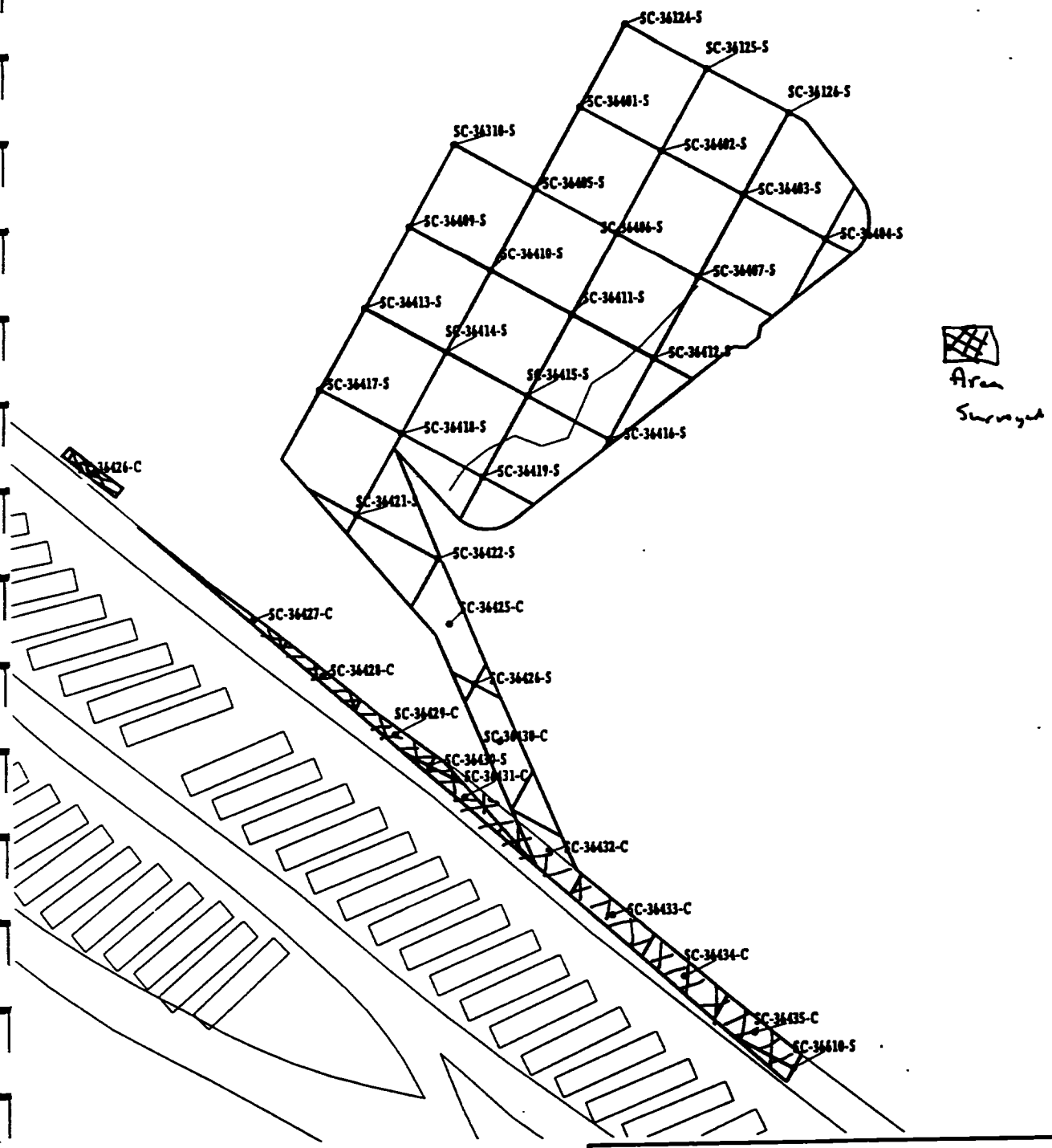
Date Plotted 4-11-00

DBO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Due:	11-12-00	Calibration Due:	9-24-00
Survey Date / Time:	4-11-00 / 1500	Field Bkg.:	4300 cpm
Surveyor(s):	Eric Hurtt		

Comments: AREA found to be less than 1.5 x background.

Radiation Survey Form WP 437, RU016 CU364



15 7.5 0 METERS

45 22.5 0 FEET

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 11-20-98

Survey Date/Time: 9-3-98

Detector Model#: 2x2 NaI "K"

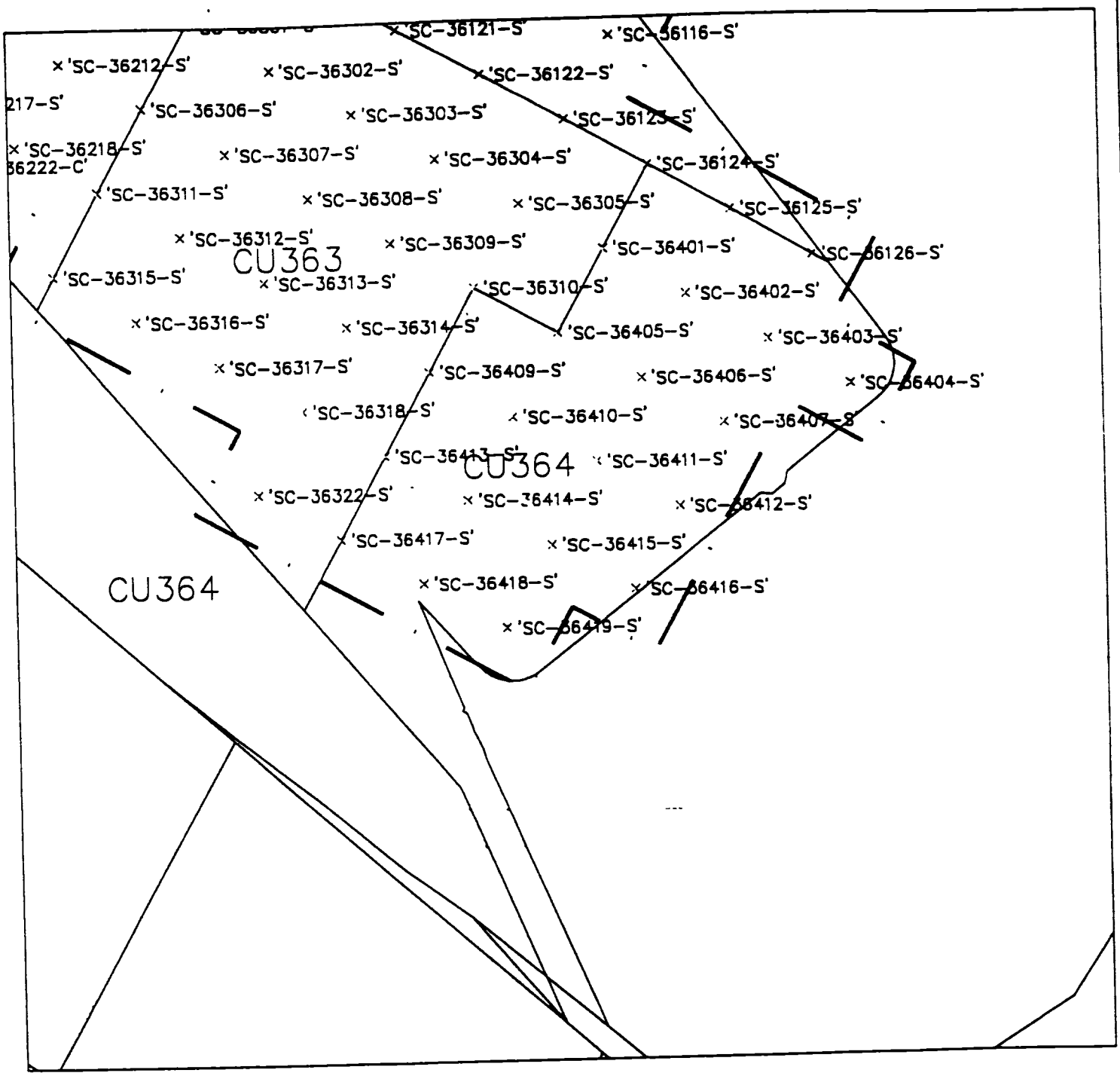
Detector Serial#: 126403

Calibration Due: 1-21-99

Field Bkg.: 12,000

Surveyor(s): C. Hanner & J. Rankins

Comments: Area was surveyed and found to be below 65 times background



LEGEND

• 'SC-32606-S' SAMPLE POINTS PINNED.

— · — · — PINNING LIMITS

N

GRAPHIC SCALE

50 0 50 100

(IN FEET)
1 inch = 50 ft.

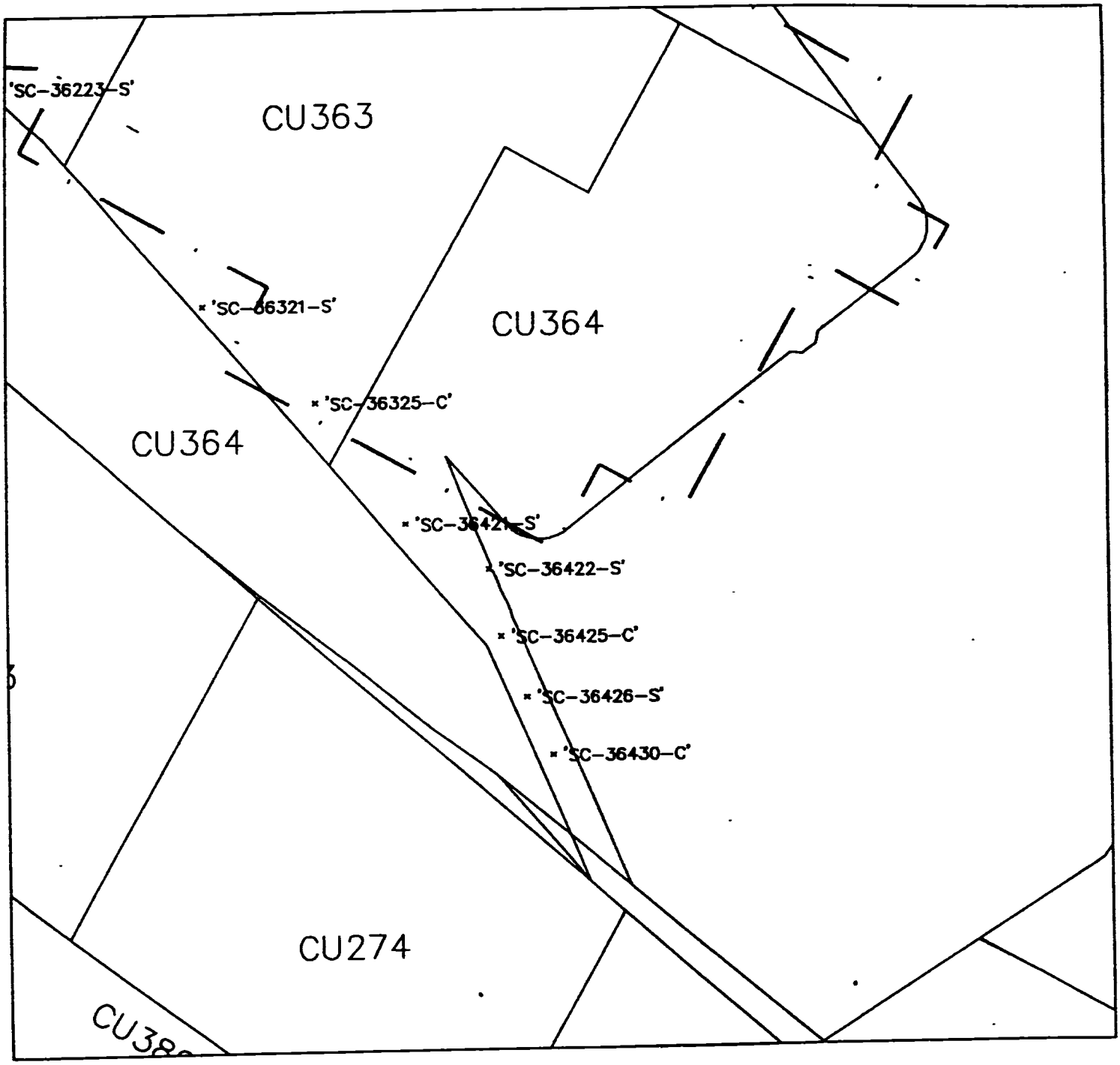
Radiation Survey Form WP 437, RU 16 CU 364

Date Plotted 4/10/00

DBO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Date:	11-12-00	Calibration Date:	9-24-00
Survey Date / Time:	4-6-00/0830	Field Bkg.:	4500 cpm
Surveyor(s):	Eric Hurtt		

Comments: Area found to be less than 1.5 x background.



LEGEND

'SC-32606-S' SAMPLE POINTS PINNED

PINNING LIMITS

N

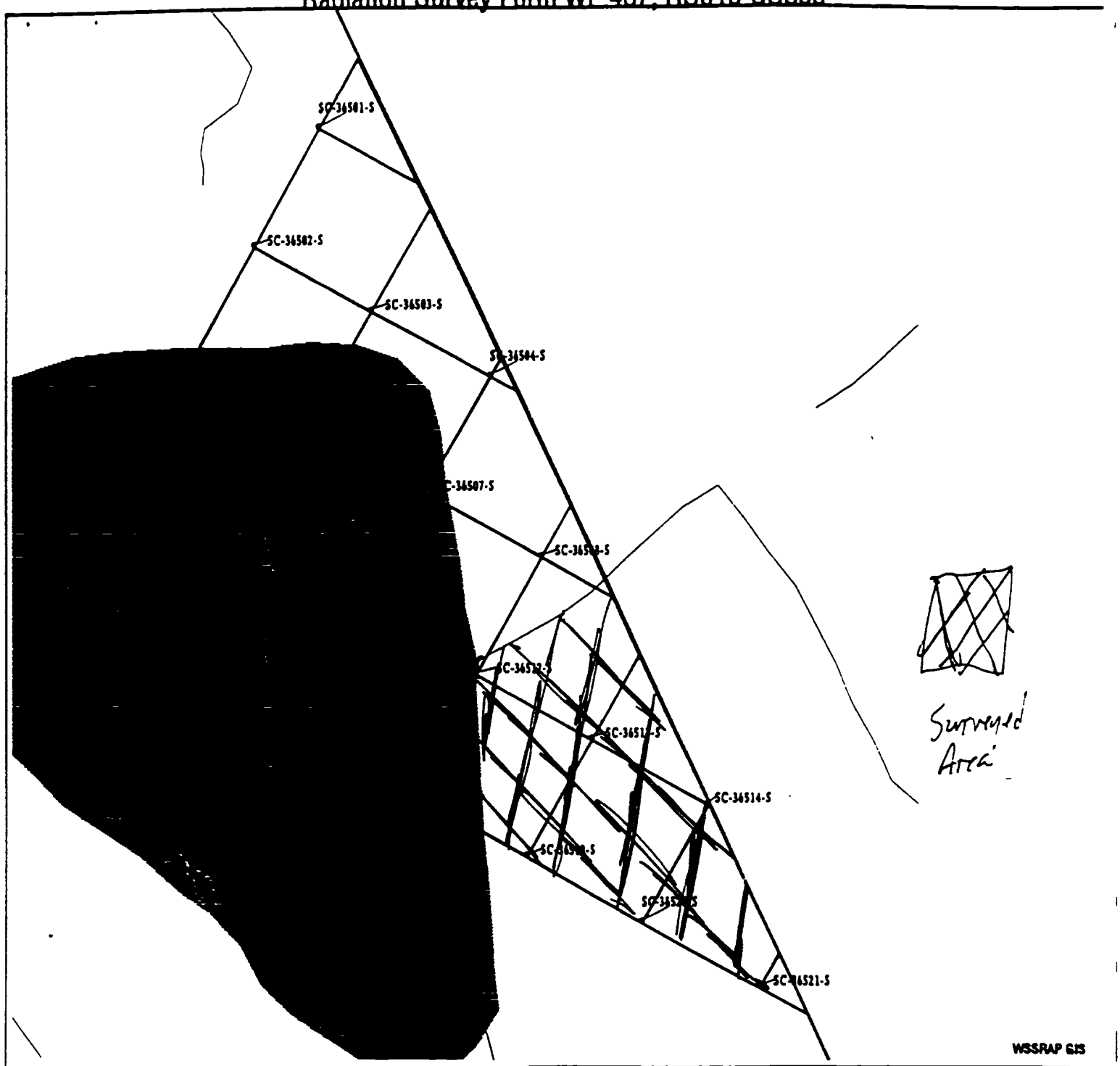
Radiation Survey Form WP 437, RU 16 CU 364

Date Plotted 4-11-00

DBO CAD

Meter Model #:	2221	Detector Model #:	44-10 "L"
Meter Serial #:	125434	Detector Serial #:	130763
Calibration Due:	11-12-00	Calibration Due:	9-24-00
Survey Date / Time:	4-11-00 / 1500	Field Bkg.:	4300 cpm
Surveyor(s):	Eric Hurtt		
Comments:	AREA found to be less than 1.5x background.		

Radiation Survey Form WP 437, RU016 CU365



15 7.5 0 METERS

45 22.5 0 FEET

Meter Model#: 2221 / 2221

Meter Serial#: 127247 / 89634

Calibration Due: 8-8-98 / 11-20-98

Survey Date/Time: 8/6/99

Surveyor(s): C. Hamer & J. Rankins

Detector Model#: 4329 / 4330

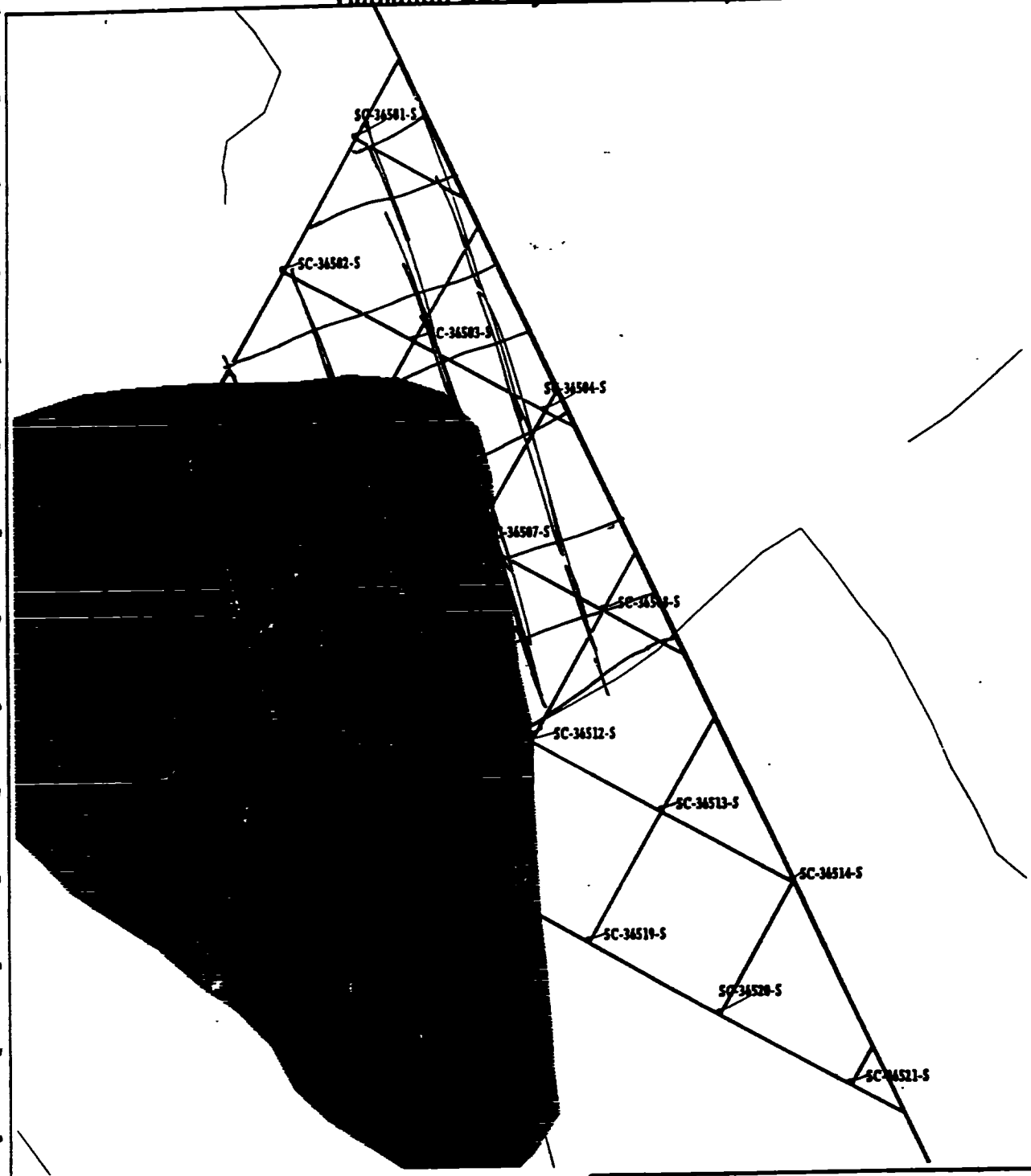
Detector Serial#: 126402 / 126403

Calibration Due: 1-22-98 / 1-21-99

Field Bkg.: 12,000 cpm

Comments: area was surveyed and found to be below 65 times background

Radiation Survey Form WP 437, RU016 CU365



15 7.5 0 METERS

45 22.5 0 FEET

N E S W

Meter Model#: 2221

Meter Serial#: 59636

Calibration Due: 10-20-99

Survey Date/Time: 8/17/99

Surveyor(s): C. Hanner, L. Hagoss, J. Rankins

Detector Model#: 3x2 NaI K

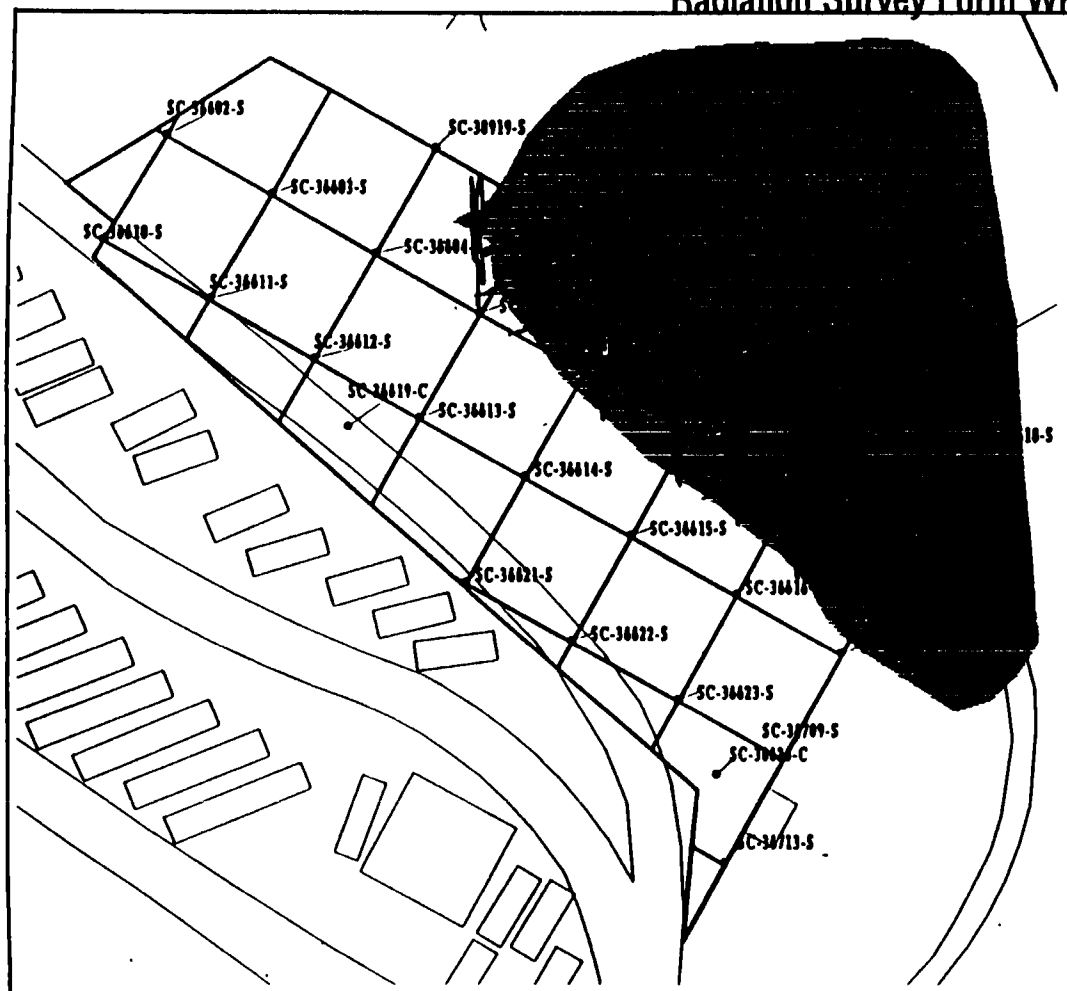
Detector Serial#: 126403

Calibration Due: 1-21-99

Field Bkg.: 11000 cpm

Comments: Area was surveyed and found to be below 1.5 times background

Radiation Survey Form WP 437, RU016CU366



15 7.5 0 15 METERS

45 22.5 0 45 FEET

N W E S

WSSRAP GI

Meter Model#: 2221 Detector Model#: 2x2 NaI K

Meter Serial#: 89636 Detector Serial#: 126403

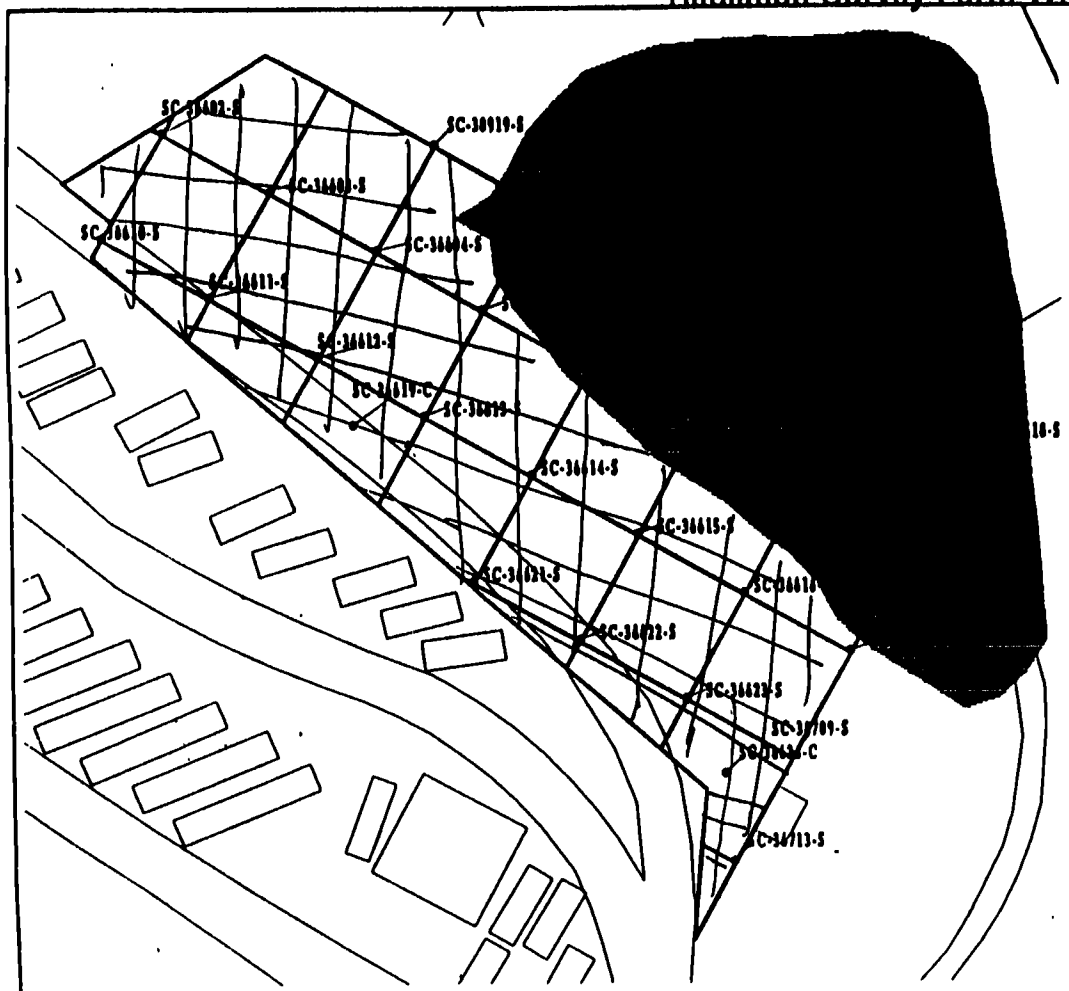
Calibration Due: 10/20/98 Calibration Due: 11/21/97

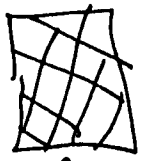
Survey Date/Time: 8/17/98 Field Bkg.: 11000 cpm

Surveyor(s): C. Hanover, L. Hagess, J. Jenkins

Comments: Area was surveyed and found to be below 1.5 times background

Radiation Survey Form WP 437, RU016CU366





Area Surveyed

15 7.5 0 15 METERS

45 22.5 0 45 FEET

N W E S

WSSRAP GI

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 10/20/99

Survey Date/Time: 8/31/98

Surveyor(s): C. Hamner & J. Rankins

Detector Model#: 2x2 NaI "K"

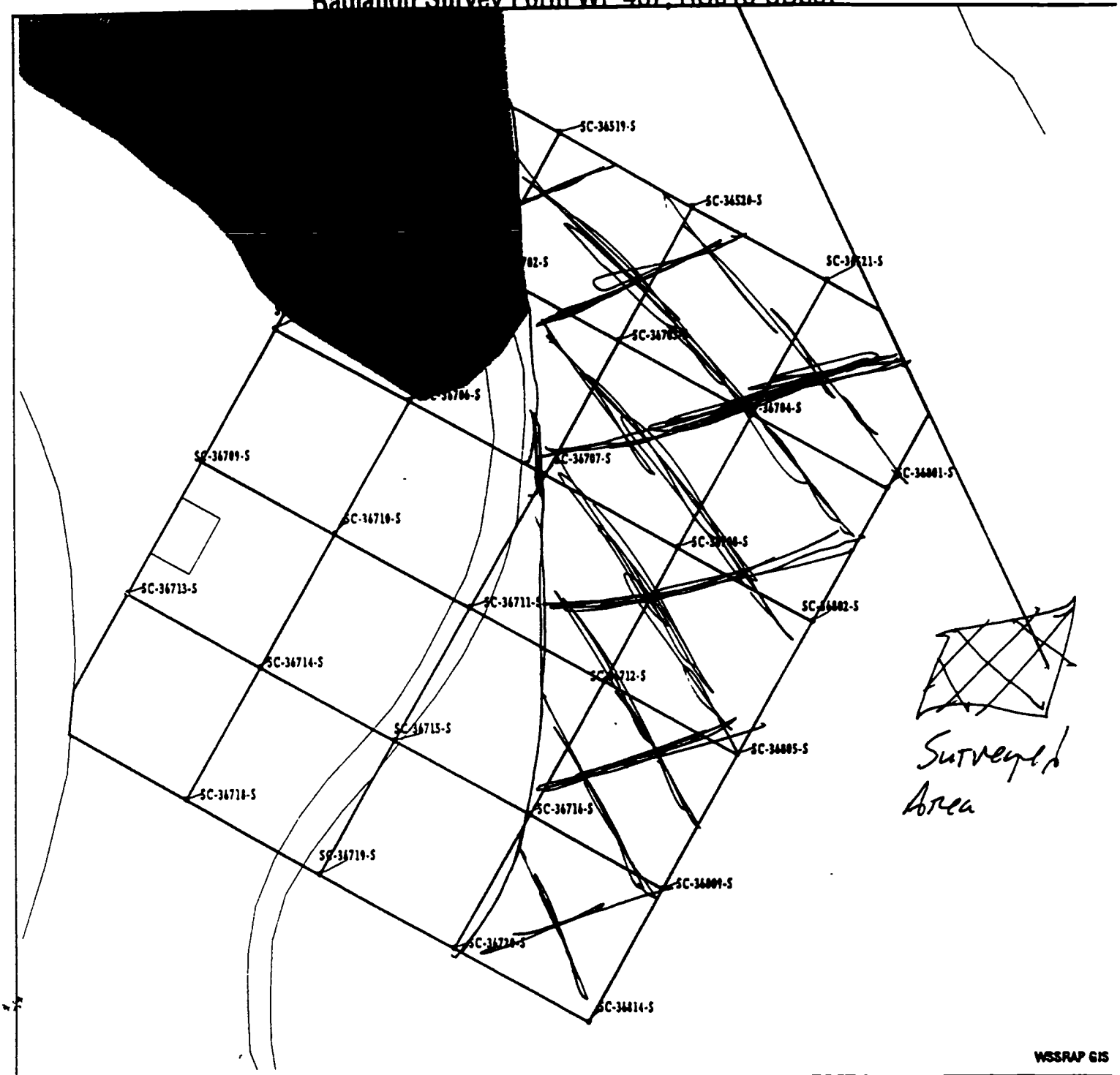
Detector Serial#: 126403

Calibration Due: 1/21/99

Field Bkg.: 11,000 cpm

Comments: Area surveyed and found to be below 1.5 times background

Radiation Survey Form WP 437, RU016 CU367



WSSRAP GIS

15 7.5 0 METERS

45 22.5 0 FEET

Meter Model#: 2221 / 2221

Meter Serial#: 127427 / 89636

Calibration Due: 8-8-98 / 11-20-98

Survey Date/Time: 8/6/98

Detector Model#: 4329 / 4330

Detector Serial#: 126402 / 126403

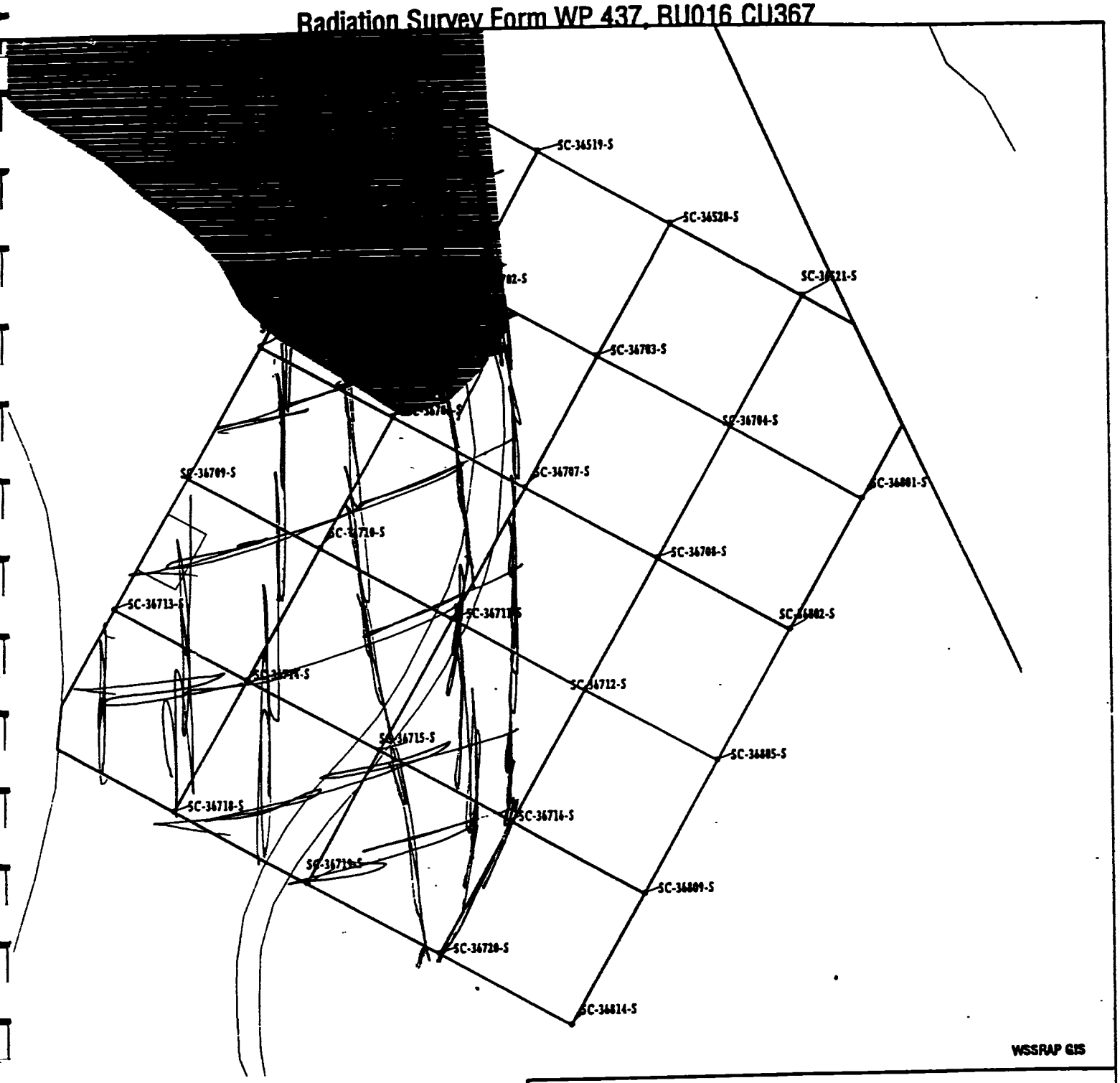
Calibration Due: 1-22-99 / 1-21-99

Field Bkg.: 12000 cpm

Surveyor(s): C. Hamner & J. Rankins

Comments: area was surveyed and found to be below 1.5 times background

Radiation Survey Form WP 437, BU016 CU367



15 7.5 0 METERS

45 22.5 0 FEET

N E S

Meter Model#: 2221

Meter Serial#: 99636

Calibration Due: 10-20-99

Survey Date/Time: 8/17/99

Surveyor(s): C Hamner, L. Hagess, J. Rankin

Detector Model#: 2x2 NaI K

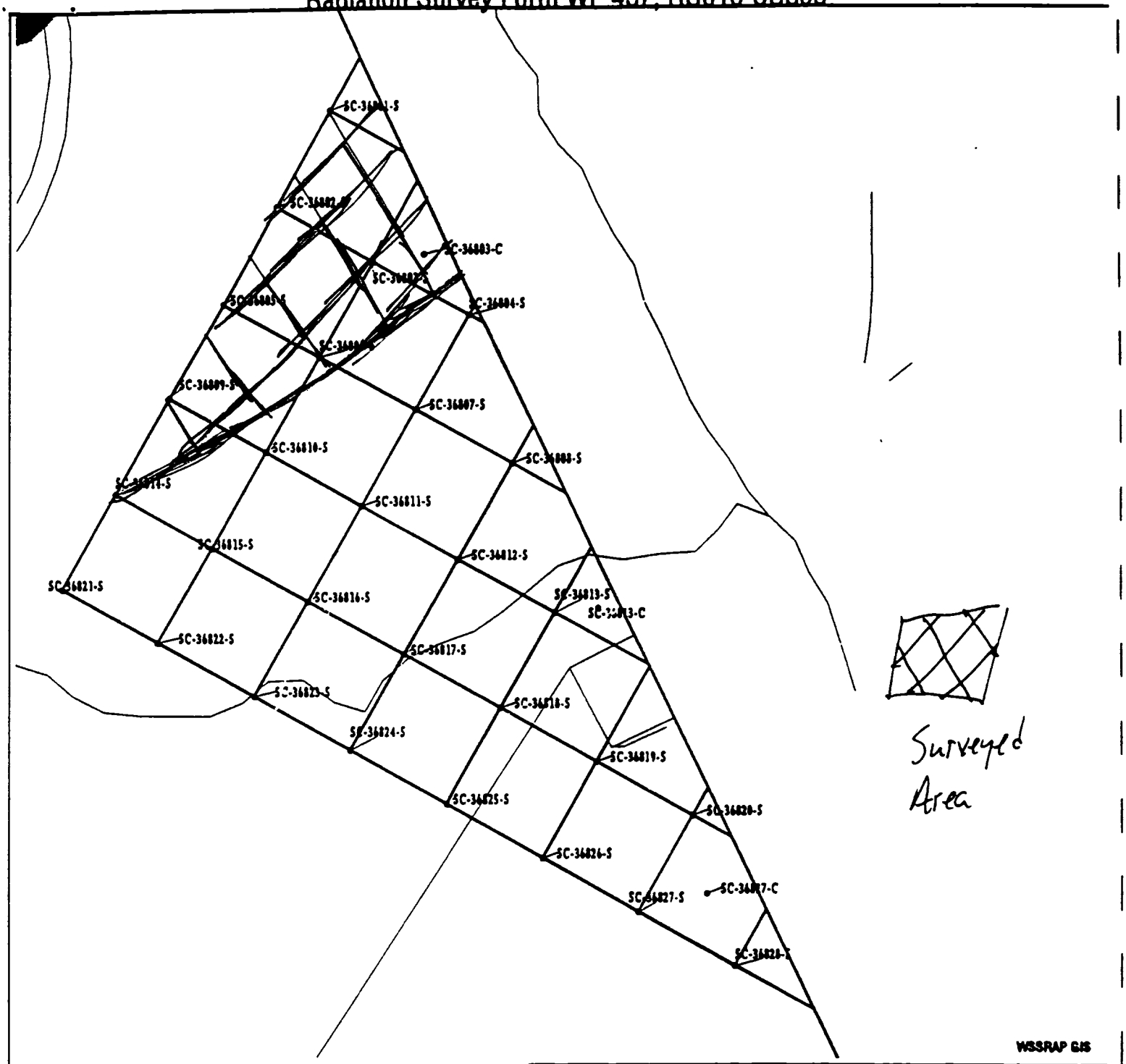
Detector Serial#: 126403

Calibration Due: 1-21-99

Field Bkg.: 11,000 cpm

Comments: Area was surveyed and found to be below 1.5 times background

Radiation Survey Form WP 437, RU016 CU368



WSSRAP GIS

15 7.5 0 METERS

45 22.5 0 FEET

Meter Model#: 2221 / 2221

Meter Serial#: 127247 / 89636

Calibration Due: 8/8/98 / 11/20/98

Survey Date/Time: 8/6/98 1100

Surveyor(s): J. Rankin, C. Hamner

Detector Model#: 4329 / 4330

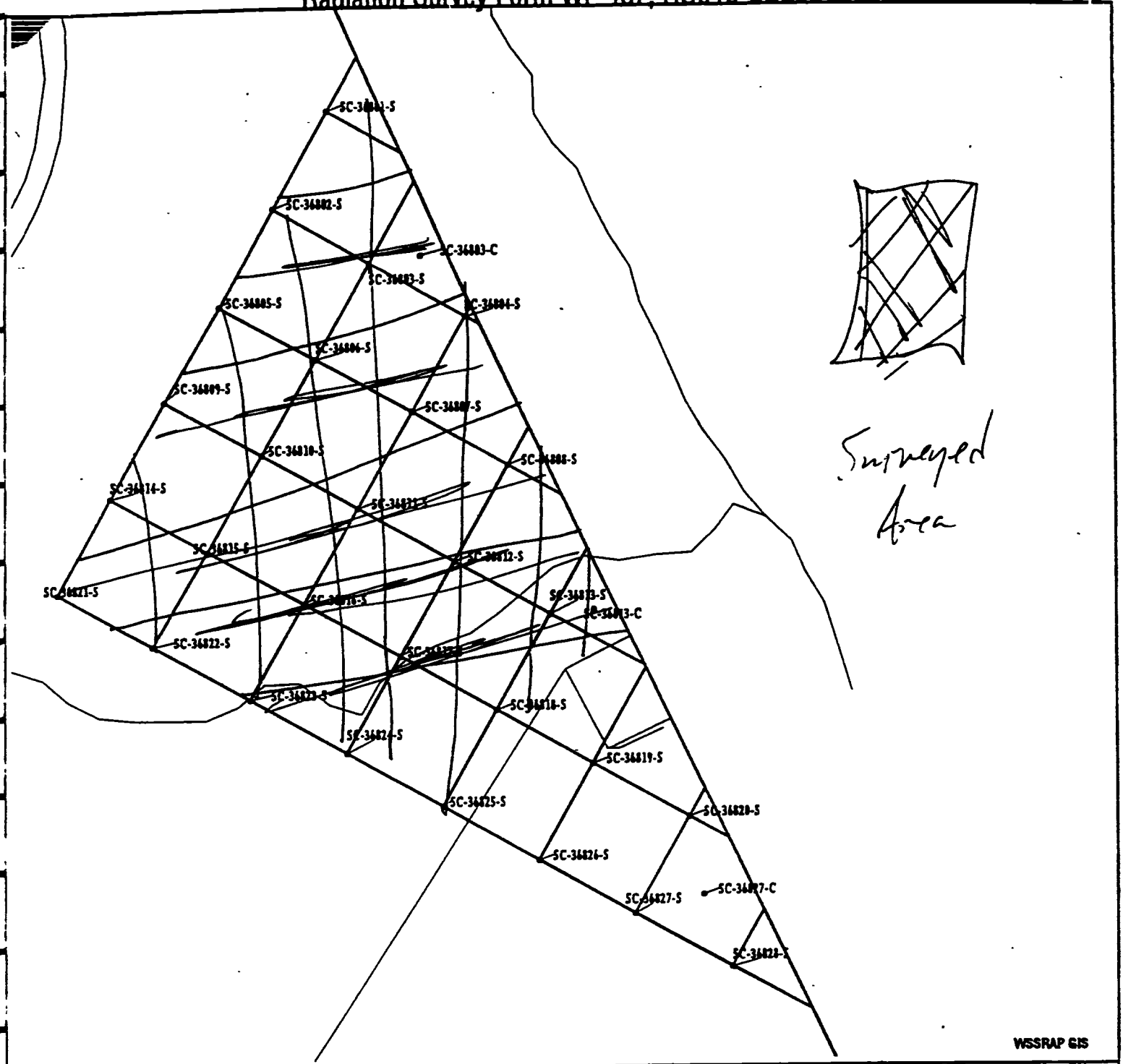
Detector Serial#: 126402 / 126403

Calibration Due: 1-22-99 / 1-21-99

Field Bkg.: 12 000 cpm

Comments: Surveyed Area Found to be less than 1.5 X Background.

Radiation Survey Form WP 437, RU016 CU368



15 7.5 0 METERS

45 22.5 0 FEET

N
S

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 11-20-98

Survey Date/Time: 8/18/98

Surveyor(s): C. Hanner

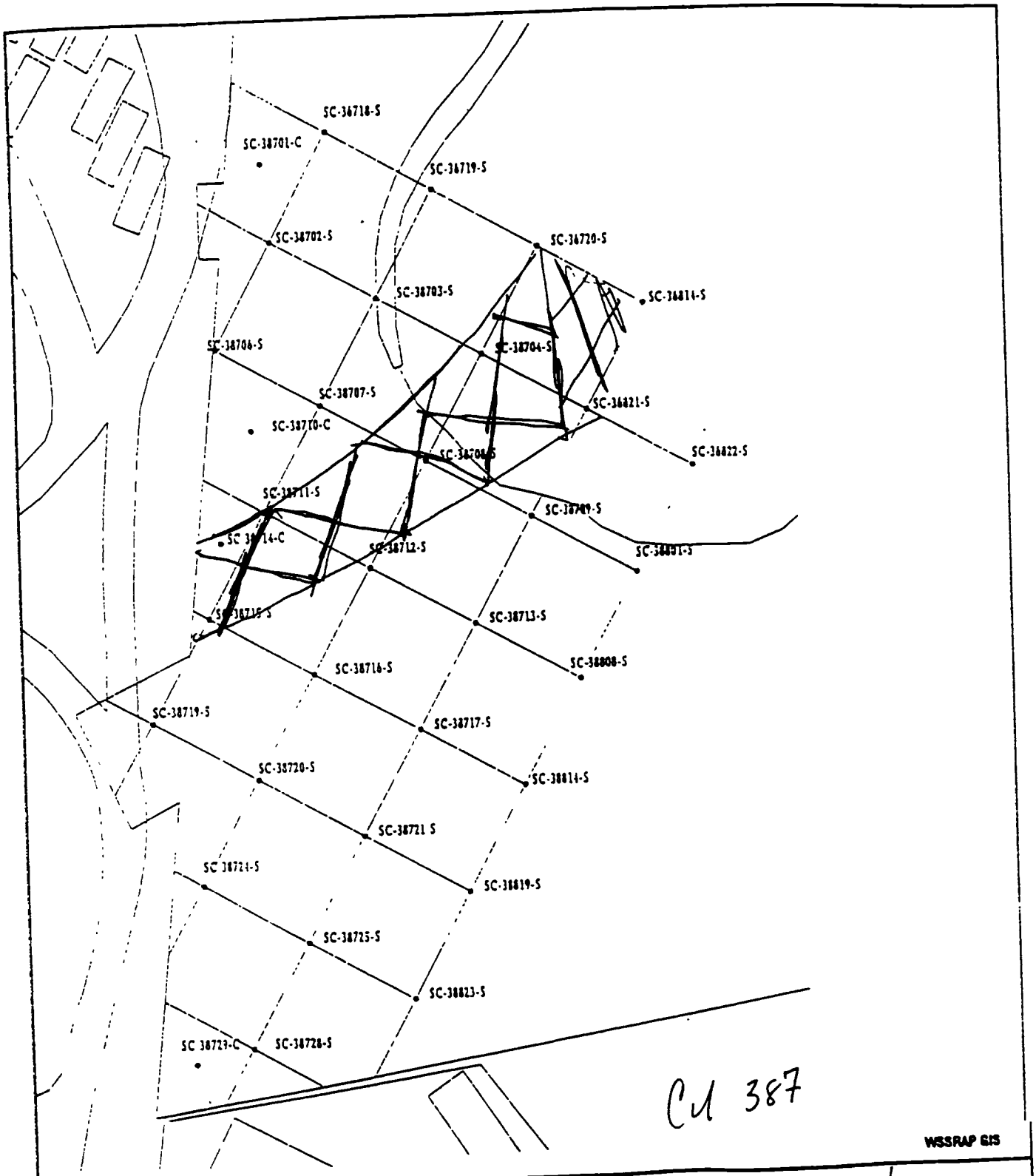
Detector Model#: 2x2 NaI "K"

Detector Serial#: 126403

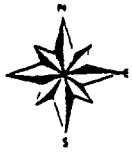
Calibration Due: 1-21-99

Field Bkg.: 11.00

Comments: Area was surveyed and found to be below 1.5 times background



WSSRAP GIS

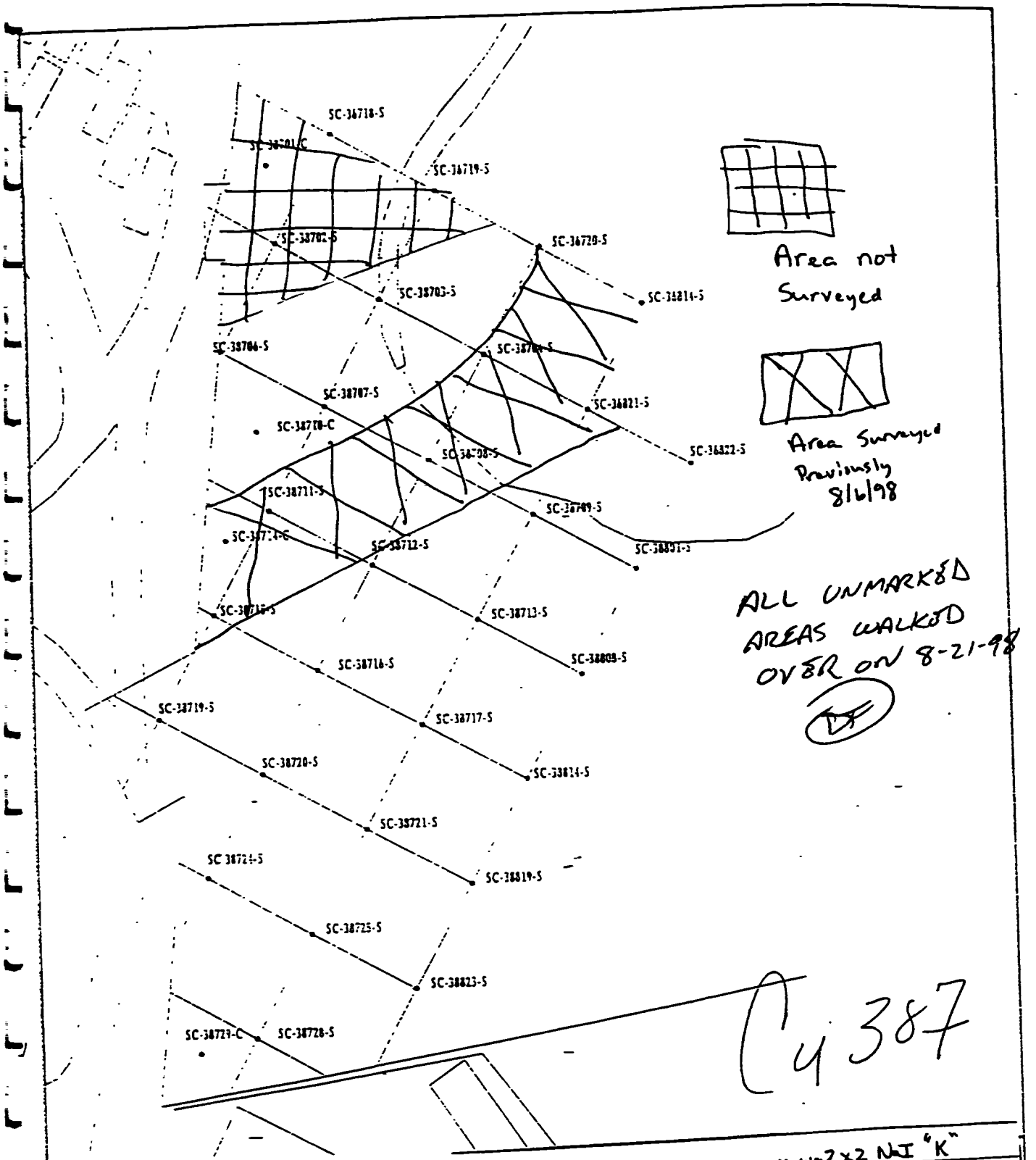


10 5 0 METERS

30 15 0 FEET

Meter Model#:	2221 / 2221	Detector Model#:	4329 / 4330
Meter Serial#:	127247 / 89636	Detector Serial#:	126402 / 126403
Calibration Due:	8-8-98 / 11-20-98	Calibration Due:	1-22-99 / 1-21-99
Survey Date/Time:	8/6/98	Field Bkg.:	12000 cpm
Surveyor(s):	C. Hanner & J. Rankins		

Comments: Area was surveyed and found to be below 1.5 times background



N
S

10 5 0 METERS

30 15 0 FEET

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 11-20-98

Survey Date/Time: 8/21/98

Detector Model#: 2x2 NaI "K"

Detector Serial#: 126403

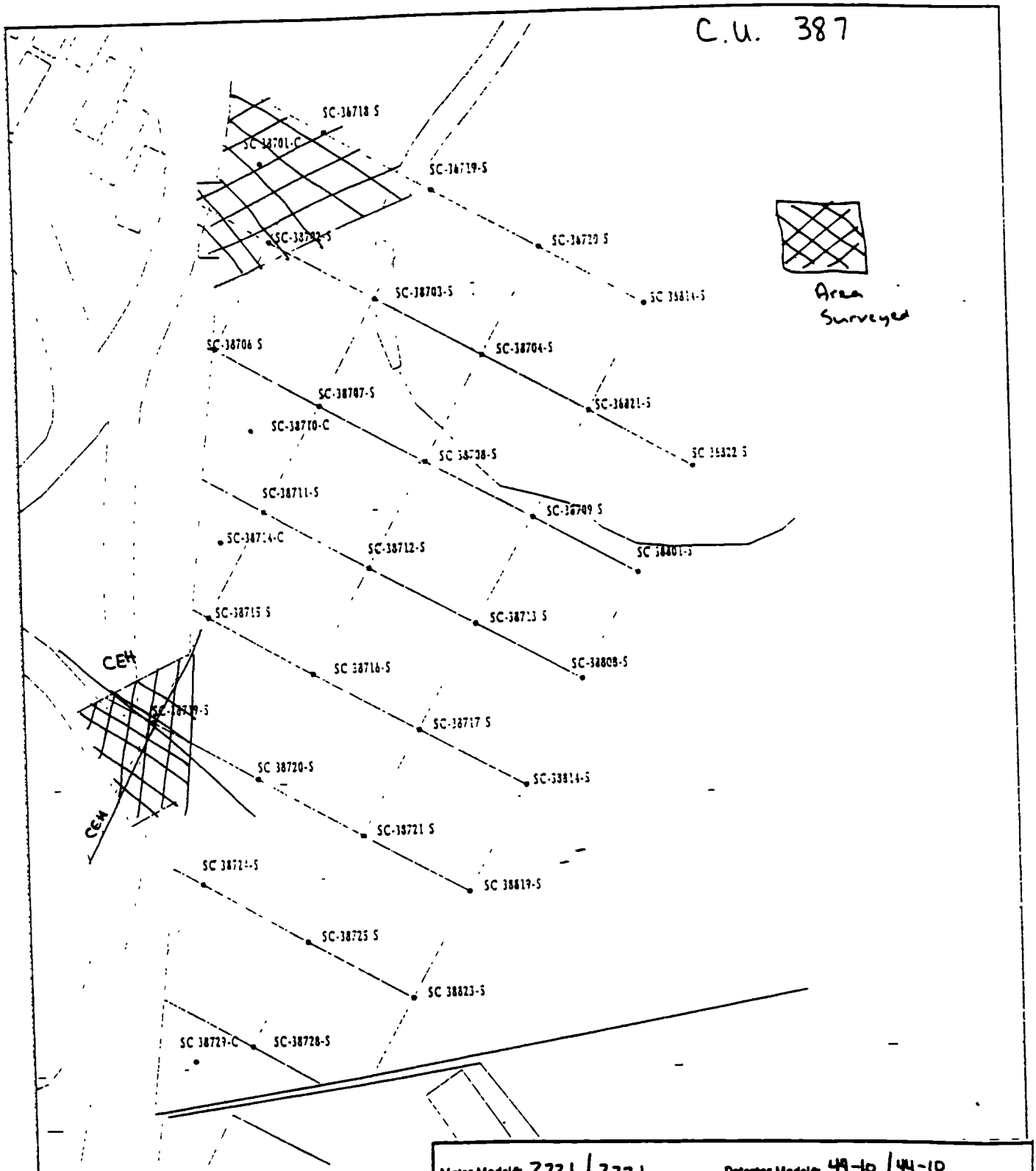
Calibration Due: 1-21-99

Field Bkg.: 11,000

Surveyor(s): C. Hanner & J. Rankins

Comments: Area was Surveyed and found to be below 1.5 times background

C.U. 387



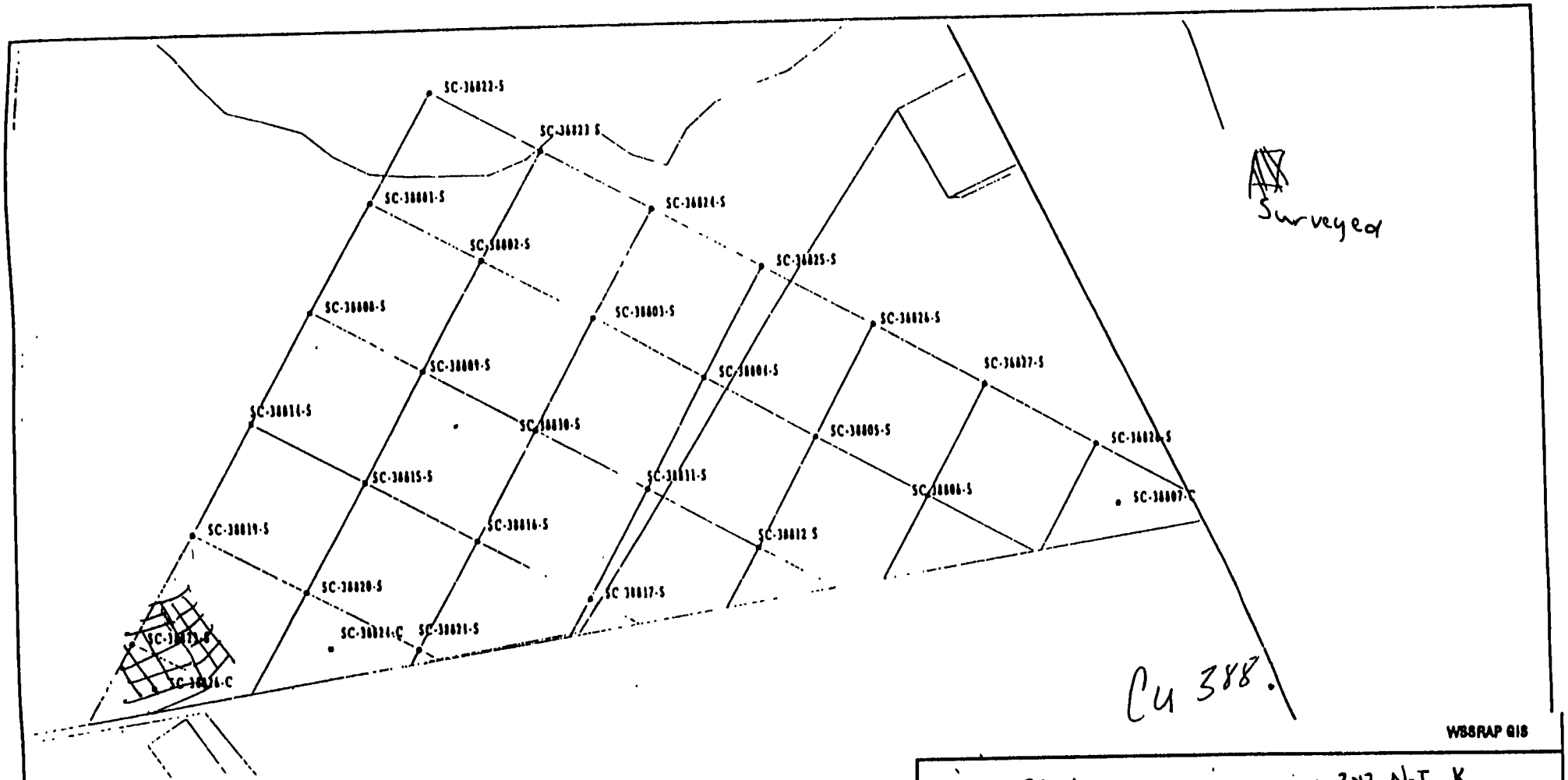
N

S

10 5 0 METERS

30 15 0 FEET

Meter Model#: 2221 / 2221	Detector Model#: 44-10 / 44-10
Meter Serial#: 89636 / 117611	Detector Serial#: 126403 / 126402
Calibration Due: 11-20-98 / 1-8-99	Calibration Due: 1-21-99 / 1-22-99
Survey Date/Time: 8/26/99	Field Bkg.: 11,000
Surveyor(s): C. Hanner & J. Rankins	
Comments: Area was surveyed & found to be below 1.5 Times background	



WSSRAP GIS

10 5 0 METERS

30 15 0 FEET

N W E S

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 10-20-98

Survey Date/Time: 8/19/98

Surveyor(s): C. Hanner

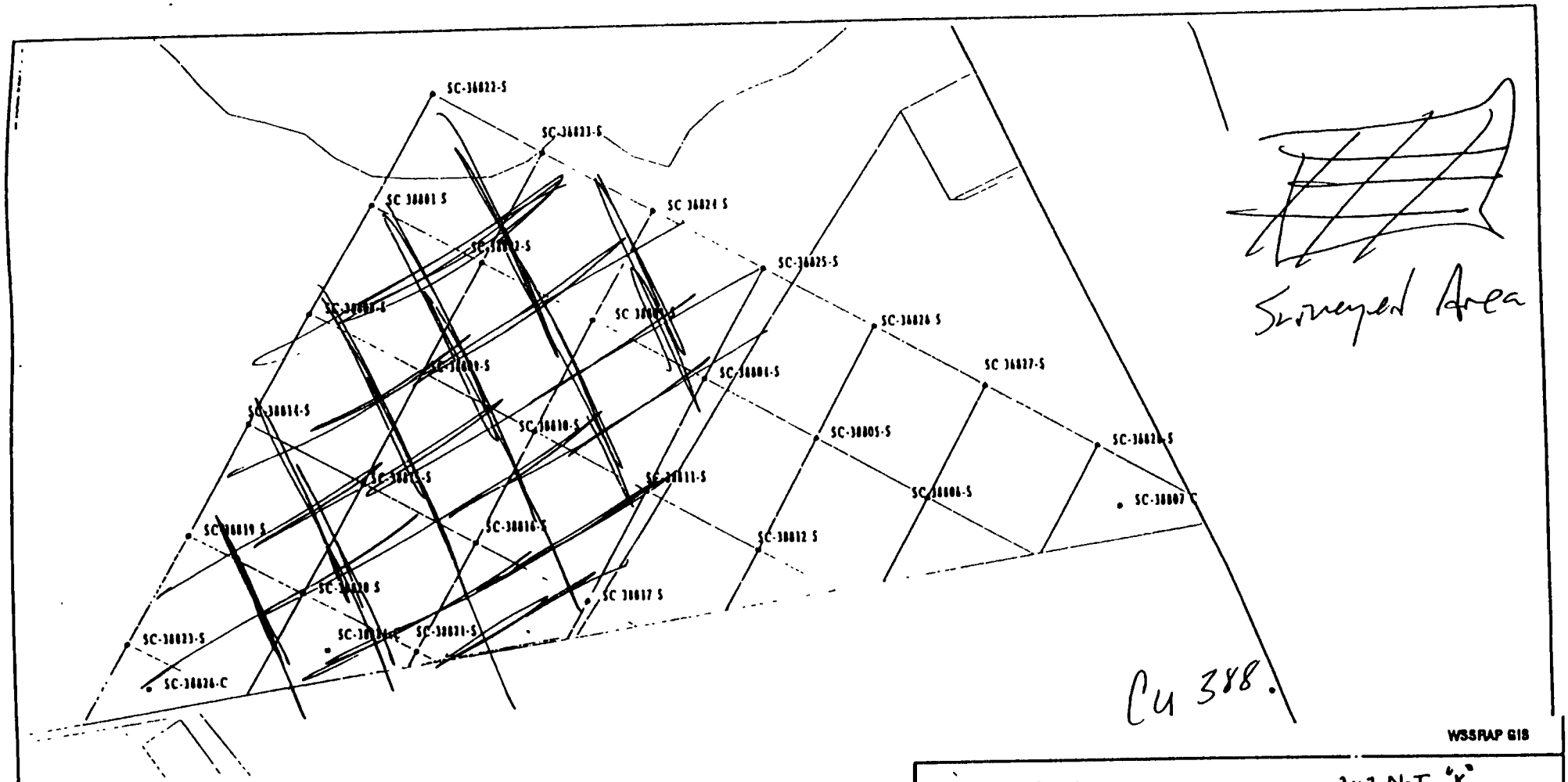
Detector Model#: 2x2 NaI K

Detector Serial#: 126403

Calibration Due: 1-21-99

Field Bkg.: 11,000

Comments: Area was surveyed and found to be below 1.5 times background



WSSRAP GIS

10 5 0 METERS

30 15 0 FEET

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 11-20-98

Survey Date/Time: 8/18/99

Surveyor(s): C. Hanger

Detector Model#: 2x2 NaI "K"

Detector Serial#: 126403

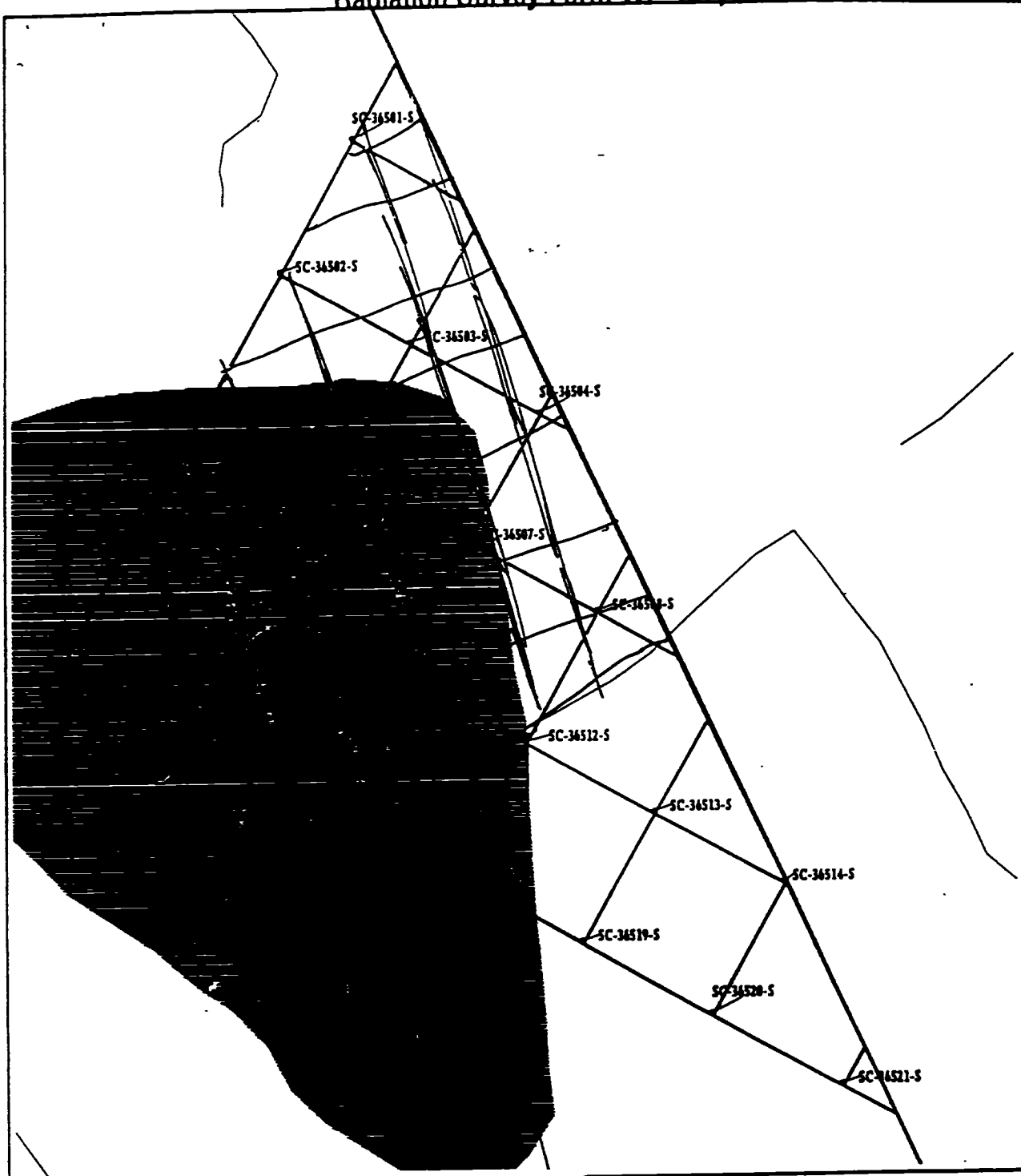
Calibration Due: 1-21-99

Field Bkg: 11,000

Comments: Area was surveyed and found to be below 1.5 times background

CU389

Radiation Survey Form WP 437, RU016 ~~CU365~~



WSSRAP GIS

15 7.5 0 METERS

45 22.5 0 FEET

Meter Model#: 2221

Meter Serial#: 89636

Calibration Due: 10-20-99

Survey Date/Time: 8/17/99

Detector Model#: 3x2 NaI K

Detector Serial#: 126403

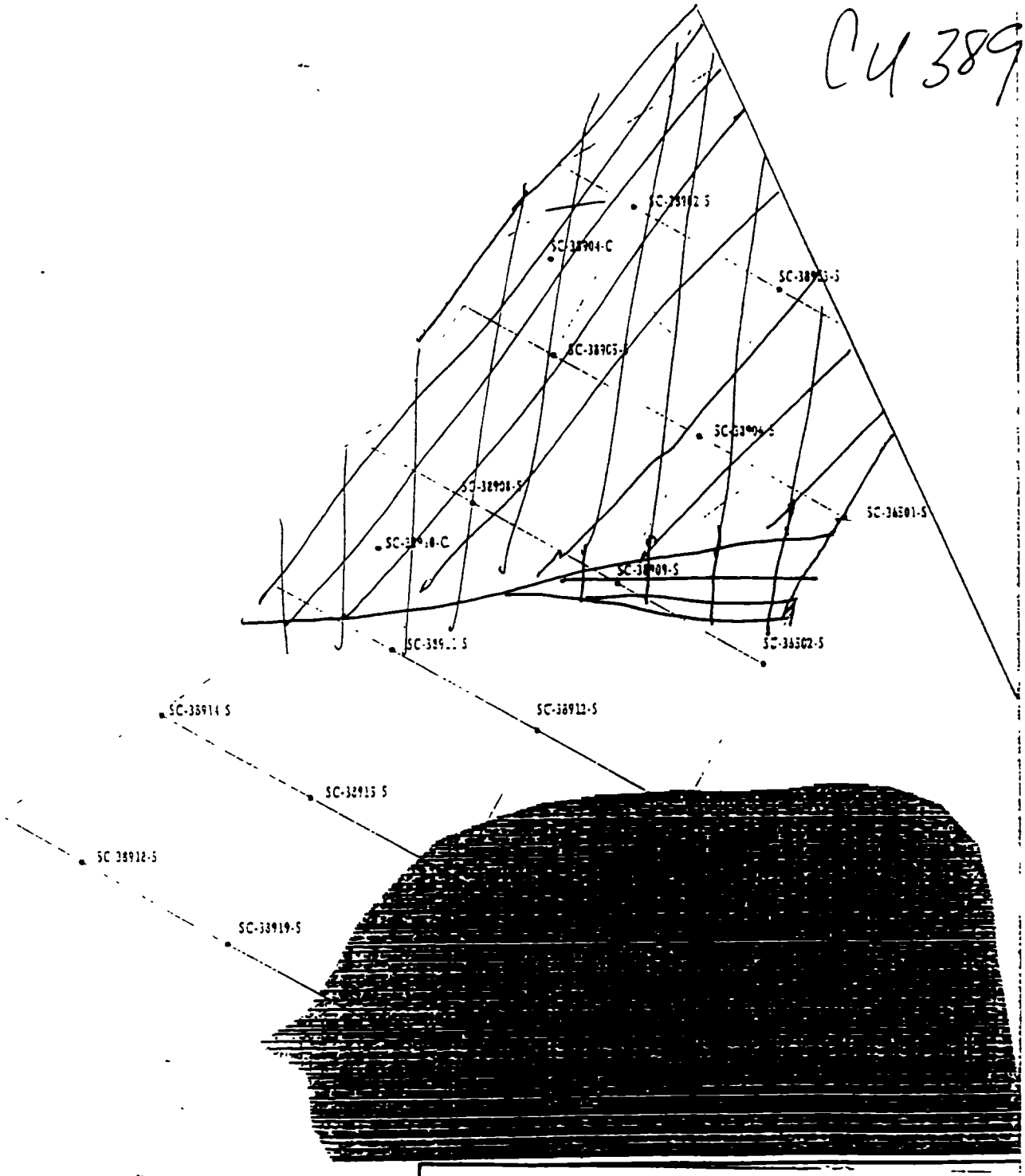
Calibration Due: 1-21-99

Field Bkg.: 11000 cpm

Surveyor(s): C. Hanner, L. Hagoss, J. Rankin-S

Comments: Area was surveyed and found to be below 1.5 times background

CU 389



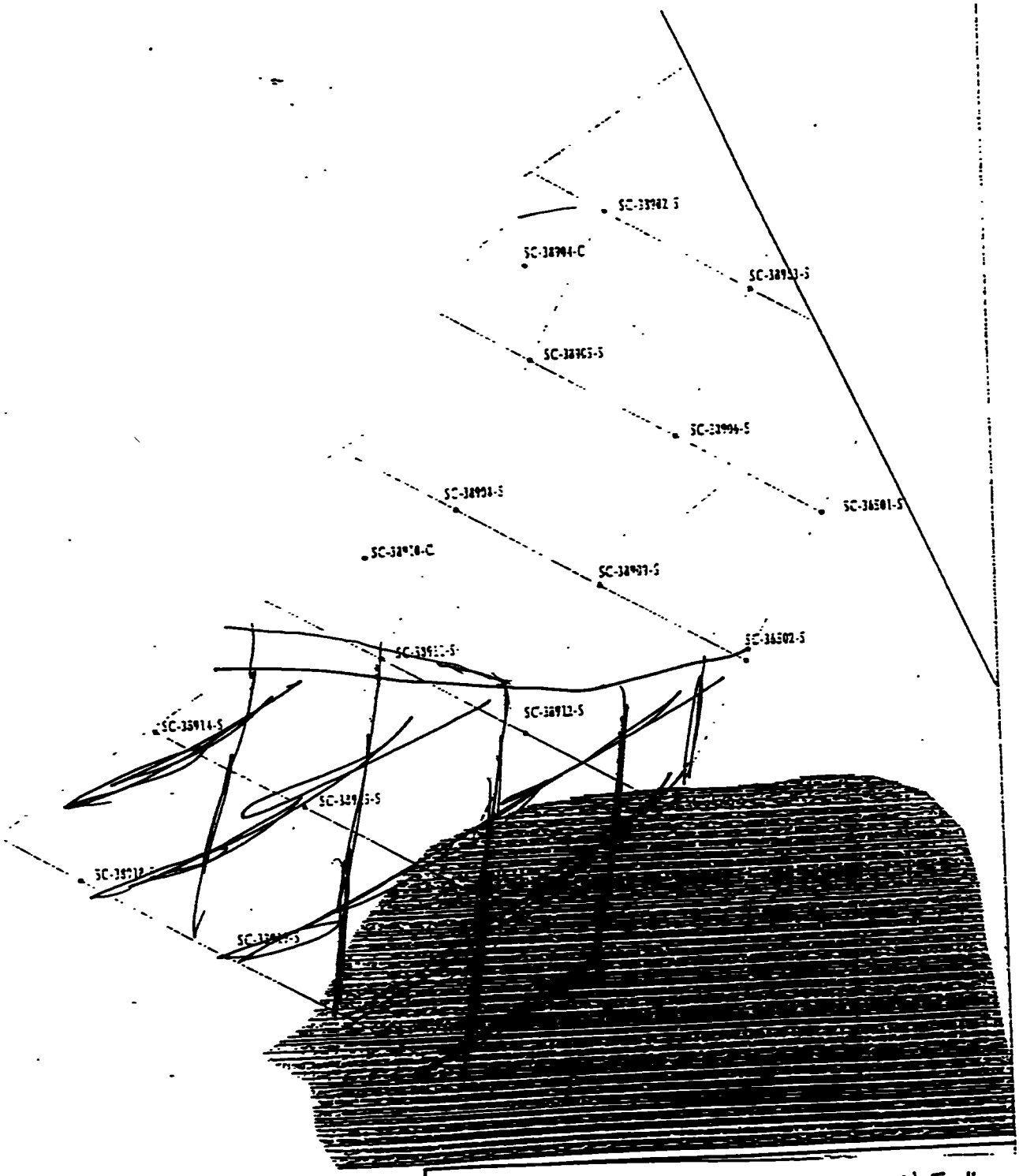
Meter Model#:	2221	Detector Model#:	4330
Meter Serial#:	89636	Detector Serial#:	126403
Calibration Due:	11-20-98	Calibration Due:	1-21-99
Survey Date/Time:	8-13-98	Field Bkg.:	1250 cpm
Surveyor(s):	Jon Rankins		
Comments:	Area below 1.5 times BKG!		

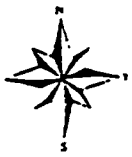
10 5 0 METERS

30 15 0 FEET

C4389

Delivered 8-17-98
1300





10 5 0 METERS

30 15 0 FEET

Meter Model#: 2221

Meter Serial#: 87636

Calibration Due: 10-20-98

Survey Date/Time: 8/17/98

Detector Model#: 2x2 NaI K

Detector Serial#: 126403

Calibration Due: 1-21-99

Field Bkg.: 11,000 cpm

Surveyor(s): C. Hanna, L. Hagoss, J. Reading

Comments: Area was surveyed and found to be below 1.5 times background

APPENDIX B
Final Data

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35704-S	9/8/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35708-S	9/21/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35709-S	9/21/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35713-S	9/21/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35714-S	9/21/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35718-S	9/20/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35720-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35721-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35722-S	9/20/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35724-C	9/7/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35725-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35726-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35727-C	9/7/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35728-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35729-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35730-C	9/7/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35731-C	9/7/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35732-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35734-C	9/7/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35801-S	9/8/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35802-S	9/8/2000	2,4,6-TRINITROTOLUENE	0.155	0.31	PCI/G
SC-35803-C	9/17/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35803-S	9/17/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35804-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35805-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35806-S	9/8/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35807-S	9/8/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35808-S	9/17/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35809-S	9/17/2000	2,4,6-TRINITROTOLUENE	0.155	0.31	UG/G
SC-35810-C	9/13/2000	2,4,6-TRINITROTOLUENE	0.16	0.32	UG/G
SC-35810-S	9/14/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35811-S	9/13/2000	2,4,6-TRINITROTOLUENE	0.155	0.31	UG/G
SC-35812-S	9/13/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35813-S	9/9/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35814-S	9/20/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35815-S	9/17/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35816-S	9/17/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35817-S	9/13/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35818-S	9/9/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35819-S	9/9/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35820-C	9/9/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35821-C	9/19/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35821-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35822-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.14	0.28	UG/G
SC-35823-C	9/17/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35823-S	9/17/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35824-S	9/9/2000	2,4,6-TRINITROTOLUENE	0.17	0.34	UG/G
SC-35827-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35828-S	9/19/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35829-S	9/14/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35831-S	9/7/2000	2,4,6-TRINITROTOLUENE	0.13	0.26	UG/G
SC-35832-S	9/8/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35834-C	9/8/2000	2,4,6-TRINITROTOLUENE	0.135	0.27	UG/G
SC-35902-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.145	0.29	UG/G
SC-35903-C	5/17/2000	2,4,6-TRINITROTOLUENE	0.15	0.3	UG/G
SC-35904-S	5/17/2000	2,4,6-TRINITROTOLUENE	4.8	0.31	UG/G
SC-35906-S	5/17/2000	2,4,6-TRINITROTOLUENE	2.8	0.29	UG/G
SC-35907-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.16	0.32	UG/G
SC-35908-C	5/17/2000	2,4,6-TRINITROTOLUENE	0 145	0.29	UG/G
SC-35909-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.58	0.32	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35910-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.16	0 32	UG/G
SC-35912-C	5/17/2000	2,4,6-TRINITROTOLUENE	430	300	UG/G
SC-35912-C-RS	5/25/2000	2,4,6-TRINITROTOLUENE	0 145	0 29	UG/G
SC-35912-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.15	0 3	UG/G
SC-35913-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 16	0 32	UG/G
SC-35914-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-35915-C	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-35916-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-35917-S	5/17/2000	2,4,6-TRINITROTOLUENE	8 9	2 9	UG/G
SC-35918-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 31	0 29	UG/G
SC-35919-C	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-35920-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0.3	UG/G
SC-35921-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.155	0 31	UG/G
SC-35922-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 155	0 31	UG/G
SC-35925-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.145	0 29	UG/G
SC-35926-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.155	0 31	UG/G
SC-35929-C	5/17/2000	2,4,6-TRINITROTOLUENE	0.155	0 31	UG/G
SC-36001-C	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-36001-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 16	0 32	UG/G
SC-36001-U	5/13/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-36002-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.155	0 31	UG/G
SC-36003-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-36004-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.165	0 33	UG/G
SC-36005-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.165	0 33	UG/G
SC-36007-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.145	0 29	UG/G
SC-36008-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 155	0 31	UG/G
SC-36009-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 155	0 31	UG/G
SC-36011-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 155	0 31	UG/G
SC-36012-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 165	0 33	UG/G
SC-36013-S	4/20/2000	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G
SC-36015-S	5/17/2000	2,4,6-TRINITROTOLUENE	0.145	0 29	UG/G
SC-36016-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 15	0 3	UG/G
SC-36019-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 145	0 29	UG/G
SC-36020-S	4/20/2000	2,4,6-TRINITROTOLUENE	0 115	0 23	UG/G
SC-36201-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 16	0 32	UG/G
SC-36207-S	5/17/2000	2,4,6-TRINITROTOLUENE	0 145	0 29	UG/G
SC-36505-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0.24	UG/G
SC-36506-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.115	0 23	UG/G
SC-36507-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 115	0 23	UG/G
SC-36509-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G
SC-36510-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 115	0 23	UG/G
SC-36511-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36512-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36515-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36516-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.21	0 42	UG/G
SC-36517-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G
SC-36518-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36519-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36603-S	8/31/1998	2,4,6-TRINITROTOLUENE	0 065	0 13	UG/G
SC-36604-S	8/31/1998	2,4,6-TRINITROTOLUENE	0 065	0 13	UG/G
SC-36605-S	8/31/1998	2,4,6-TRINITROTOLUENE	0 065	0 13	UG/G
SC-36606-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G
SC-36607-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36608-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G
SC-36614-S	8/31/1998	2,4,6-TRINITROTOLUENE	0 065	0 13	UG/G
SC-36615-S	8/31/1998	2,4,6-TRINITROTOLUENE	0 065	0 13	UG/G
SC-36616-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0 24	UG/G
SC-36701-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 115	0 23	UG/G
SC-36702-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G
SC-36705-S	8/17/1998	2,4,6-TRINITROTOLUENE	0 12	0 24	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36706-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-36707-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-36711-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-36715-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.115	0.23	UG/G
SC-38909-S	8/14/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-38911-S	8/14/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-38916-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-38919-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.12	0.24	UG/G
SC-38920-S	8/17/1998	2,4,6-TRINITROTOLUENE	0.115	0.23	UG/G
SC-35704-S	9/8/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35708-S	9/21/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35709-S	9/21/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35713-S	9/21/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35714-S	9/21/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35718-S	9/20/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35720-S	9/7/2000	2,4-DINITROTOLUENE	0.135	0.27	UG/G
SC-35721-S	9/7/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35722-S	9/20/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35724-C	9/7/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35725-S	9/7/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35726-S	9/19/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35727-C	9/7/2000	2,4-DINITROTOLUENE	0.135	0.27	UG/G
SC-35728-S	9/7/2000	2,4-DINITROTOLUENE	0.145	0 29	UG/G
SC-35729-S	9/7/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35730-C	9/7/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35731-C	9/7/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35732-S	9/7/2000	2,4-DINITROTOLUENE	0.135	0.27	UG/G
SC-35734-C	9/7/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35801-S	9/8/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35802-S	9/8/2000	2,4-DINITROTOLUENE	0.155	0.31	UG/G
SC-35803-C	9/17/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35803-S	9/17/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35804-S	9/19/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35805-S	9/19/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35806-S	9/8/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35807-S	9/8/2000	2,4-DINITROTOLUENE	0.14	0 28	UG/G
SC-35808-S	9/17/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35809-S	9/17/2000	2,4-DINITROTOLUENE	0.155	0.31	UG/G
SC-35810-C	9/13/2000	2,4-DINITROTOLUENE	0.16	0.32	UG/G
SC-35810-S	9/14/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35811-S	9/13/2000	2,4-DINITROTOLUENE	0.155	0.31	UG/G
SC-35812-S	9/13/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35813-S	9/9/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35814-S	9/20/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35815-S	9/17/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35816-S	9/17/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35817-S	9/13/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35818-S	9/9/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35819-S	9/9/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35820-C	9/9/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35821-C	9/19/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35821-S	9/19/2000	2,4-DINITROTOLUENE	0.15	0.3	UG/G
SC-35822-S	9/19/2000	2,4-DINITROTOLUENE	0.14	0.28	UG/G
SC-35823-C	9/17/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35823-S	9/17/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35824-S	9/9/2000	2,4-DINITROTOLUENE	0.17	0.34	UG/G
SC-35827-S	9/19/2000	2,4-DINITROTOLUENE	0.145	0.29	UG/G
SC-35828-S	9/19/2000	2,4-DINITROTOLUENE	0.135	0.27	UG/G
SC-35829-S	9/14/2000	2,4-DINITROTOLUENE	0.135	0.27	UG/G
SC-35831-S	9/7/2000	2,4-DINITROTOLUENE	0.13	0.26	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35832-S	9/8/2000	2,4-DINITROTOLUENE	0.135	0.27	UG/G
SC-35834-C	9/8/2000	2,4-DINITROTOLUENE	0.135	0 27	UG/G
SC-35810-C	9/13/2000	AROCLOR-1016	0	0 042	mg/kg
SC-36003-S	5/17/2000	AROCLOR-1016	0	0 04	mg/kg
SC-35704-S	9/8/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35708-S	9/21/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35709-S	9/21/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35713-S	9/21/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35714-S	9/21/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35718-S	9/20/2000	AROCLOR-1248	0	0 037	mg/kg
SC-35720-S	9/7/2000	AROCLOR-1248	0	0 035	mg/kg
SC-35721-S	9/7/2000	AROCLOR-1248	0	0 037	mg/kg
SC-35722-S	9/20/2000	AROCLOR-1248	0	0.038	mg/kg
SC-35724-C	9/7/2000	AROCLOR-1248	0	0.037	mg/kg
SC-35725-S	9/7/2000	AROCLOR-1248	0	0.038	mg/kg
SC-35726-S	9/19/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35727-C	9/7/2000	AROCLOR-1248	0	0 036	mg/kg
SC-35728-S	9/7/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35729-S	9/7/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35730-C	9/7/2000	AROCLOR-1248	0	0.037	mg/kg
SC-35731-C	9/7/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35732-S	9/7/2000	AROCLOR-1248	0	0 035	mg/kg
SC-35734-C	9/7/2000	AROCLOR-1248	0	0 037	mg/kg
SC-35801-S	9/8/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35802-S	9/8/2000	AROCLOR-1248	0	0 041	mg/kg
SC-35803-C	9/17/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35803-S	9/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35804-S	9/19/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35805-S	9/19/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35806-S	9/8/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35807-S	9/8/2000	AROCLOR-1248	0	0 037	mg/kg
SC-35808-S	9/17/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35809-S	9/17/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35810-C	9/13/2000	AROCLOR-1248	0	0 042	mg/kg
SC-35810-S	9/14/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35811-S	9/13/2000	AROCLOR-1248	0	0 041	mg/kg
SC-35812-S	9/13/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35813-S	9/9/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35814-S	9/20/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35815-S	9/17/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35816-S	9/17/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35817-S	9/13/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35818-S	9/9/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35819-S	9/9/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35820-C	9/9/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35821-C	9/19/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35821-S	9/19/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35822-S	9/19/2000	AROCLOR-1248	0	0 037	mg/kg
SC-35823-C	9/17/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35823-S	9/17/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35824-S	9/9/2000	AROCLOR-1248	0	0 045	mg/kg
SC-35827-S	9/19/2000	AROCLOR-1248	0	0 038	mg/kg
SC-35828-S	9/19/2000	AROCLOR-1248	0	0 036	mg/kg
SC-35829-S	9/14/2000	AROCLOR-1248	0	0 035	mg/kg
SC-35831-S	9/7/2000	AROCLOR-1248	0	0 034	mg/kg
SC-35832-S	9/8/2000	AROCLOR-1248	0	0 035	mg/kg
SC-35834-C	9/8/2000	AROCLOR-1248	0	0 036	mg/kg
SC-35902-S	5/17/2000	AROCLOR-1248	0	0 039	mg/kg
SC-35903-C	5/17/2000	AROCLOR-1248	0	0 04	mg/kg
SC-35904-S	5/17/2000	AROCLOR-1248	0	0 041	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35906-S	5/17/2000	AROCLOR-1248	0	0.038	mg/kg
SC-35907-S	5/17/2000	AROCLOR-1248	0	0.042	mg/kg
SC-35908-C	5/17/2000	AROCLOR-1248	0	0.038	mg/kg
SC-35909-S	5/17/2000	AROCLOR-1248	0	0.043	mg/kg
SC-35910-S	5/17/2000	AROCLOR-1248	0	0.042	mg/kg
SC-35912-C	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-35912-S	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35913-S	5/17/2000	AROCLOR-1248	0	0.042	mg/kg
SC-35914-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-35915-C	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-35916-S	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35917-S	5/17/2000	AROCLOR-1248	0	0.038	mg/kg
SC-35918-S	5/17/2000	AROCLOR-1248	0	0.038	mg/kg
SC-35919-C	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35920-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-35921-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-35922-S	5/17/2000	AROCLOR-1248	0	0.041	mg/kg
SC-35925-S	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-35926-S	5/17/2000	AROCLOR-1248	0	0.041	mg/kg
SC-35929-C	5/17/2000	AROCLOR-1248	0	0.041	mg/kg
SC-36001-C	5/17/2000	AROCLOR-1248	0	0 04	mg/kg
SC-36001-S	5/17/2000	AROCLOR-1248	0	0.042	mg/kg
SC-36001-U	5/13/2000	AROCLOR-1248	0	0.04	mg/kg
SC-36002-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-36003-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-36004-S	5/17/2000	AROCLOR-1248	0	0.043	mg/kg
SC-36005-S	5/17/2000	AROCLOR-1248	0	0.044	mg/kg
SC-36007-S	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-36008-S	5/17/2000	AROCLOR-1248	0	0.041	mg/kg
SC-36009-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-36011-S	5/17/2000	AROCLOR-1248	0	0.041	mg/kg
SC-36012-S	5/17/2000	AROCLOR-1248	0	0.043	mg/kg
SC-36013-S	4/20/2000	AROCLOR-1248	0	0.04	mg/kg
SC-36015-S	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-36016-S	5/17/2000	AROCLOR-1248	0	0.04	mg/kg
SC-36019-S	5/17/2000	AROCLOR-1248	0	0.039	mg/kg
SC-36020-S	4/20/2000	AROCLOR-1248	0	0.039	mg/kg
SC-36201-S	5/17/2000	AROCLOR-1248	0	0.042	mg/kg
SC-36207-S	5/17/2000	AROCLOR-1248	0	0.038	mg/kg
SC-36428-C	9/3/1998	AROCLOR-1248	0	0.043	mg/kg
SC-36505-S	8/17/1998	AROCLOR-1248	0	0.04	mg/kg
SC-36506-S	8/17/1998	AROCLOR-1248	0	0.039	mg/kg
SC-36507-S	8/17/1998	AROCLOR-1248	0	0.042	mg/kg
SC-36509-S	8/17/1998	AROCLOR-1248	0	0.04	mg/kg
SC-36510-S	8/17/1998	AROCLOR-1248	0	0.04	mg/kg
SC-36511-S	8/17/1998	AROCLOR-1248	0	0.042	mg/kg
SC-36512-S	8/17/1998	AROCLOR-1248	0	0.052	mg/kg
SC-36515-S	8/17/1998	AROCLOR-1248	0	0.04	mg/kg
SC-36516-S	8/17/1998	AROCLOR-1248	0	0.042	mg/kg
SC-36517-S	8/17/1998	AROCLOR-1248	0	0.039	mg/kg
SC-36518-S	8/17/1998	AROCLOR-1248	0	0.045	mg/kg
SC-36519-S	8/17/1998	AROCLOR-1248	0	0.037	mg/kg
SC-36603-S	8/31/1998	AROCLOR-1248	0	0.044	mg/kg
SC-36604-S	8/31/1998	AROCLOR-1248	0	0.039	mg/kg
SC-36605-S	8/31/1998	AROCLOR-1248	0	0.043	mg/kg
SC-36606-S	8/17/1998	AROCLOR-1248	0	0.04	mg/kg
SC-36607-S	8/17/1998	AROCLOR-1248	0	0.041	mg/kg
SC-36608-S	8/17/1998	AROCLOR-1248	0	0.04	mg/kg
SC-36614-S	8/31/1998	AROCLOR-1248	0	0.042	mg/kg
SC-36615-S	8/31/1998	AROCLOR-1248	0	0.039	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36616-S	8/17/1998	AROCLOR-1248	0	0 041	mg/kg
SC-36701-S	8/17/1998	AROCLOR-1248	0	0 044	mg/kg
SC-36702-S	8/17/1998	AROCLOR-1248	0	0 041	mg/kg
SC-36703-S	8/6/1998	AROCLOR-1248	0	0.039	mg/kg
SC-36705-S	8/17/1998	AROCLOR-1248	0	0 039	mg/kg
SC-36706-S	8/17/1998	AROCLOR-1248	0	0 035	mg/kg
SC-36707-S	8/17/1998	AROCLOR-1248	0	0 036	mg/kg
SC-36711-S	8/17/1998	AROCLOR-1248	0	0.038	mg/kg
SC-36715-S	8/17/1998	AROCLOR-1248	0	0.039	mg/kg
SC-38909-S	8/14/1998	AROCLOR-1248	0	0 039	mg/kg
SC-38911-S	8/14/1998	AROCLOR-1248	0	0.039	mg/kg
SC-38912-S	8/28/1998	AROCLOR-1248	0	0.038	mg/kg
SC-38915-S	8/28/1998	AROCLOR-1248	0	0 038	mg/kg
SC-38916-S	8/17/1998	AROCLOR-1248	0	0 036	mg/kg
SC-38919-S	8/17/1998	AROCLOR-1248	0	0 039	mg/kg
SC-38920-S	8/17/1998	AROCLOR-1248	0	0.039	mg/kg
SC-35704-S	9/8/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35708-S	9/21/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35709-S	9/21/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35713-S	9/21/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35714-S	9/21/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35718-S	9/20/2000	AROCLOR-1254	0	0 037	mg/kg
SC-35720-S	9/7/2000	AROCLOR-1254	0	0 035	mg/kg
SC-35721-S	9/7/2000	AROCLOR-1254	0	0 037	mg/kg
SC-35722-S	9/20/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35724-C	9/7/2000	AROCLOR-1254	0	0 037	mg/kg
SC-35725-S	9/7/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35726-S	9/19/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35727-C	9/7/2000	AROCLOR-1254	0	0 036	mg/kg
SC-35728-S	9/7/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35729-S	9/7/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35730-C	9/7/2000	AROCLOR-1254	0	0 037	mg/kg
SC-35731-C	9/7/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35732-S	9/7/2000	AROCLOR-1254	0	0 035	mg/kg
SC-35734-C	9/7/2000	AROCLOR-1254	0	0 037	mg/kg
SC-35801-S	9/8/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35802-S	9/8/2000	AROCLOR-1254	0	0 041	mg/kg
SC-35803-C	9/17/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35803-S	9/17/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35804-S	9/19/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35805-S	9/19/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35806-S	9/8/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35807-S	9/8/2000	AROCLOR-1254	0	0 037	mg/kg
SC-35808-S	9/17/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35809-S	9/17/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35810-C	9/13/2000	AROCLOR-1254	0	0 042	mg/kg
SC-35810-S	9/14/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35811-S	9/13/2000	AROCLOR-1254	0	0 041	mg/kg
SC-35812-S	9/13/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35813-S	9/9/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35814-S	9/20/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35815-S	9/17/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35816-S	9/17/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35817-S	9/13/2000	AROCLOR-1254	0	0 04	mg/kg
SC-35818-S	9/9/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35819-S	9/9/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35820-C	9/9/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35821-C	9/19/2000	AROCLOR-1254	0	0 038	mg/kg
SC-35821-S	9/19/2000	AROCLOR-1254	0	0 039	mg/kg
SC-35822-S	9/19/2000	AROCLOR-1254	0	0 037	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35823-C	9/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-35823-S	9/17/2000	AROCLOR-1254	0	0.038	mg/kg
SC-35824-S	9/9/2000	AROCLOR-1254	0	0.045	mg/kg
SC-35827-S	9/19/2000	AROCLOR-1254	0	0.038	mg/kg
SC-35828-S	9/19/2000	AROCLOR-1254	0	0.036	mg/kg
SC-35829-S	9/14/2000	AROCLOR-1254	0	0.035	mg/kg
SC-35831-S	9/7/2000	AROCLOR-1254	0	0.034	mg/kg
SC-35832-S	9/8/2000	AROCLOR-1254	0	0.035	mg/kg
SC-35834-C	9/8/2000	AROCLOR-1254	0	0.036	mg/kg
SC-35902-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-35903-C	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-35904-S	5/17/2000	AROCLOR-1254	0	0.041	mg/kg
SC-35906-S	5/17/2000	AROCLOR-1254	0	0.038	mg/kg
SC-35907-S	5/17/2000	AROCLOR-1254	0	0.042	mg/kg
SC-35908-C	5/17/2000	AROCLOR-1254	0	0.038	mg/kg
SC-35909-S	5/17/2000	AROCLOR-1254	0	0.043	mg/kg
SC-35910-S	5/17/2000	AROCLOR-1254	0	0.042	mg/kg
SC-35912-C	5/17/2000	AROCLOR-1254	0.16	0.04	mg/kg
SC-35912-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-35913-S	5/17/2000	AROCLOR-1254	0	0.042	mg/kg
SC-35914-S	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-35915-C	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-35916-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-35917-S	5/17/2000	AROCLOR-1254	0	0.038	mg/kg
SC-35918-S	5/17/2000	AROCLOR-1254	0	0.038	mg/kg
SC-35919-C	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-35920-S	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-35921-S	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-35922-S	5/17/2000	AROCLOR-1254	0	0.041	mg/kg
SC-35925-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-35926-S	5/17/2000	AROCLOR-1254	0	0.041	mg/kg
SC-35929-C	5/17/2000	AROCLOR-1254	0	0.041	mg/kg
SC-36001-C	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-36001-S	5/17/2000	AROCLOR-1254	0	0.042	mg/kg
SC-36001-U	5/13/2000	AROCLOR-1254	0	0.04	mg/kg
SC-36002-S	5/17/2000	AROCLOR-1254	0	0 04	mg/kg
SC-36003-S	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-36004-S	5/17/2000	AROCLOR-1254	0	0.043	mg/kg
SC-36005-S	5/17/2000	AROCLOR-1254	0	0.044	mg/kg
SC-36007-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-36008-S	5/17/2000	AROCLOR-1254	0	0.041	mg/kg
SC-36009-S	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-36011-S	5/17/2000	AROCLOR-1254	0	0.041	mg/kg
SC-36012-S	5/17/2000	AROCLOR-1254	0	0.043	mg/kg
SC-36013-S	4/20/2000	AROCLOR-1254	0	0.04	mg/kg
SC-36015-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-36016-S	5/17/2000	AROCLOR-1254	0	0.04	mg/kg
SC-36019-S	5/17/2000	AROCLOR-1254	0	0.039	mg/kg
SC-36020-S	4/20/2000	AROCLOR-1254	0	0.039	mg/kg
SC-36201-S	5/17/2000	AROCLOR-1254	0	0.042	mg/kg
SC-36207-S	5/17/2000	AROCLOR-1254	0	0.038	mg/kg
SC-36428-C	9/3/1998	AROCLOR-1254	0	0.043	mg/kg
SC-36505-S	8/17/1998	AROCLOR-1254	0	0.04	mg/kg
SC-36506-S	8/17/1998	AROCLOR-1254	0	0.039	mg/kg
SC-36507-S	8/17/1998	AROCLOR-1254	0	0.042	mg/kg
SC-36509-S	8/17/1998	AROCLOR-1254	0	0.04	mg/kg
SC-36510-S	8/17/1998	AROCLOR-1254	0	0.04	mg/kg
SC-36511-S	8/17/1998	AROCLOR-1254	0	0.042	mg/kg
SC-36512-S	8/17/1998	AROCLOR-1254	0	0.052	mg/kg
SC-36515-S	8/17/1998	AROCLOR-1254	0	0.04	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36516-S	8/17/1998	AROCLOR-1254	0	0 042	mg/kg
SC-36517-S	8/17/1998	AROCLOR-1254	0	0 039	mg/kg
SC-36518-S	8/17/1998	AROCLOR-1254	0	0.045	mg/kg
SC-36519-S	8/17/1998	AROCLOR-1254	0	0 037	mg/kg
SC-36603-S	8/31/1998	AROCLOR-1254	0	0 044	mg/kg
SC-36604-S	8/31/1998	AROCLOR-1254	0	0 039	mg/kg
SC-36605-S	8/31/1998	AROCLOR-1254	0	0 043	mg/kg
SC-36606-S	8/17/1998	AROCLOR-1254	0	0 04	mg/kg
SC-36607-S	8/17/1998	AROCLOR-1254	0	0 041	mg/kg
SC-36608-S	8/17/1998	AROCLOR-1254	0	0 04	mg/kg
SC-36614-S	8/31/1998	AROCLOR-1254	0	0 042	mg/kg
SC-36615-S	8/31/1998	AROCLOR-1254	0	0 039	mg/kg
SC-36616-S	8/17/1998	AROCLOR-1254	0	0 041	mg/kg
SC-36701-S	8/17/1998	AROCLOR-1254	0	0 044	mg/kg
SC-36702-S	8/17/1998	AROCLOR-1254	0	0 041	mg/kg
SC-36703-S	8/6/1998	AROCLOR-1254	0	0 039	mg/kg
SC-36705-S	8/17/1998	AROCLOR-1254	0	0 039	mg/kg
SC-36706-S	8/17/1998	AROCLOR-1254	0	0 035	mg/kg
SC-36707-S	8/17/1998	AROCLOR-1254	0	0 036	mg/kg
SC-36711-S	8/17/1998	AROCLOR-1254	0	0 038	mg/kg
SC-36715-S	8/17/1998	AROCLOR-1254	0	0 039	mg/kg
SC-38909-S	8/14/1998	AROCLOR-1254	0	0 039	mg/kg
SC-38911-S	8/14/1998	AROCLOR-1254	0	0 039	mg/kg
SC-38912-S	8/28/1998	AROCLOR-1254	0	0 038	mg/kg
SC-38915-S	8/28/1998	AROCLOR-1254	0	0 038	mg/kg
SC-38916-S	8/17/1998	AROCLOR-1254	0	0 036	mg/kg
SC-38919-S	8/17/1998	AROCLOR-1254	0	0 039	mg/kg
SC-38920-S	8/17/1998	AROCLOR-1254	0	0 039	mg/kg
SC-35704-S	9/8/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35708-S	9/21/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35709-S	9/21/2000	AROCLOR-1260	0	0 04	mg/kg
SC-35713-S	9/21/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35714-S	9/21/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35718-S	9/20/2000	AROCLOR-1260	0	0 037	mg/kg
SC-35720-S	9/7/2000	AROCLOR-1260	0	0 035	mg/kg
SC-35721-S	9/7/2000	AROCLOR-1260	0 076	0 037	mg/kg
SC-35722-S	9/20/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35724-C	9/7/2000	AROCLOR-1260	0	0 037	mg/kg
SC-35725-S	9/7/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35726-S	9/19/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35727-C	9/7/2000	AROCLOR-1260	0	0 036	mg/kg
SC-35728-S	9/7/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35729-S	9/7/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35730-C	9/7/2000	AROCLOR-1260	0 13	0 037	mg/kg
SC-35731-C	9/7/2000	AROCLOR-1260	0	0 038	mg/kg
SC-35732-S	9/7/2000	AROCLOR-1260	0	0 035	mg/kg
SC-35734-C	9/7/2000	AROCLOR-1260	0 043	0 037	mg/kg
SC-35801-S	9/8/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35802-S	9/8/2000	AROCLOR-1260	0	0 041	mg/kg
SC-35803-C	9/17/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35803-S	9/17/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35804-S	9/19/2000	AROCLOR-1260	0	0 04	mg/kg
SC-35805-S	9/19/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35806-S	9/8/2000	AROCLOR-1260	0	0 04	mg/kg
SC-35807-S	9/8/2000	AROCLOR-1260	0 089	0 037	mg/kg
SC-35808-S	9/17/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35809-S	9/17/2000	AROCLOR-1260	0	0 04	mg/kg
SC-35810-C	9/13/2000	AROCLOR-1260	0	0 042	mg/kg
SC-35810-S	9/14/2000	AROCLOR-1260	0	0 039	mg/kg
SC-35811-S	9/13/2000	AROCLOR-1260	0	0 041	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35812-S	9/13/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35813-S	9/9/2000	AROCLOR-1260	0.052	0.039	mg/kg
SC-35814-S	9/20/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35815-S	9/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35816-S	9/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35817-S	9/13/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35818-S	9/9/2000	AROCLOR-1260	0.046	0.039	mg/kg
SC-35819-S	9/9/2000	AROCLOR-1260	0.05	0.038	mg/kg
SC-35820-C	9/9/2000	AROCLOR-1260	0.057	0.038	mg/kg
SC-35821-C	9/19/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35821-S	9/19/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35822-S	9/19/2000	AROCLOR-1260	0	0.037	mg/kg
SC-35823-C	9/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35823-S	9/17/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35824-S	9/9/2000	AROCLOR-1260	0.097	0.045	mg/kg
SC-35827-S	9/19/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35828-S	9/19/2000	AROCLOR-1260	0	0.036	mg/kg
SC-35829-S	9/14/2000	AROCLOR-1260	0	0.035	mg/kg
SC-35831-S	9/7/2000	AROCLOR-1260	0.035	0.034	mg/kg
SC-35832-S	9/8/2000	AROCLOR-1260	0.072	0.035	mg/kg
SC-35834-C	9/8/2000	AROCLOR-1260	0	0.036	mg/kg
SC-35902-S	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35903-C	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35904-S	5/17/2000	AROCLOR-1260	0	0.041	mg/kg
SC-35906-S	5/17/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35907-S	5/17/2000	AROCLOR-1260	0	0.042	mg/kg
SC-35908-C	5/17/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35909-S	5/17/2000	AROCLOR-1260	0	0.043	mg/kg
SC-35910-S	5/17/2000	AROCLOR-1260	0	0.042	mg/kg
SC-35912-C	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35912-S	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35913-S	5/17/2000	AROCLOR-1260	0	0.042	mg/kg
SC-35914-S	5/17/2000	AROCLOR-1260	0	0 04	mg/kg
SC-35915-C	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35916-S	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35917-S	5/17/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35918-S	5/17/2000	AROCLOR-1260	0	0.038	mg/kg
SC-35919-C	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35920-S	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35921-S	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-35922-S	5/17/2000	AROCLOR-1260	0	0.041	mg/kg
SC-35925-S	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-35926-S	5/17/2000	AROCLOR-1260	0	0.041	mg/kg
SC-35929-C	5/17/2000	AROCLOR-1260	0	0.041	mg/kg
SC-36001-C	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36001-S	5/17/2000	AROCLOR-1260	0	0.042	mg/kg
SC-36001-U	5/13/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36002-S	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36003-S	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36004-S	5/17/2000	AROCLOR-1260	0	0.043	mg/kg
SC-36005-S	5/17/2000	AROCLOR-1260	0	0.044	mg/kg
SC-36007-S	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-36008-S	5/17/2000	AROCLOR-1260	0	0.041	mg/kg
SC-36009-S	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36011-S	5/17/2000	AROCLOR-1260	0	0.041	mg/kg
SC-36012-S	5/17/2000	AROCLOR-1260	0	0.043	mg/kg
SC-36013-S	4/20/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36015-S	5/17/2000	AROCLOR-1260	0	0.039	mg/kg
SC-36016-S	5/17/2000	AROCLOR-1260	0	0.04	mg/kg
SC-36019-S	5/17/2000	AROCLOR-1260	0.053	0.039	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36020-S	4/20/2000	AROCLOR-1260	0	0.039	mg/kg
SC-36201-S	5/17/2000	AROCLOR-1260	0	0.042	mg/kg
SC-36207-S	5/17/2000	AROCLOR-1260	0	0 038	mg/kg
SC-36428-C	9/3/1998	AROCLOR-1260	0	0.043	mg/kg
SC-36505-S	8/17/1998	AROCLOR-1260	0	0 04	mg/kg
SC-36506-S	8/17/1998	AROCLOR-1260	0	0 039	mg/kg
SC-36507-S	8/17/1998	AROCLOR-1260	0	0.042	mg/kg
SC-36509-S	8/17/1998	AROCLOR-1260	0	0 04	mg/kg
SC-36510-S	8/17/1998	AROCLOR-1260	0	0 04	mg/kg
SC-36511-S	8/17/1998	AROCLOR-1260	0	0.042	mg/kg
SC-36512-S	8/17/1998	AROCLOR-1260	0	0.052	mg/kg
SC-36515-S	8/17/1998	AROCLOR-1260	0	0 04	mg/kg
SC-36516-S	8/17/1998	AROCLOR-1260	0	0.042	mg/kg
SC-36517-S	8/17/1998	AROCLOR-1260	0	0 039	mg/kg
SC-36518-S	8/17/1998	AROCLOR-1260	0	0 045	mg/kg
SC-36519-S	8/17/1998	AROCLOR-1260	0	0 037	mg/kg
SC-36603-S	8/31/1998	AROCLOR-1260	0	0 044	mg/kg
SC-36604-S	8/31/1998	AROCLOR-1260	0	0 039	mg/kg
SC-36605-S	8/31/1998	AROCLOR-1260	0	0 043	mg/kg
SC-36606-S	8/17/1998	AROCLOR-1260	0	0 04	mg/kg
SC-36607-S	8/17/1998	AROCLOR-1260	0	0 041	mg/kg
SC-36608-S	8/17/1998	AROCLOR-1260	0	0 04	mg/kg
SC-36614-S	8/31/1998	AROCLOR-1260	0	0 042	mg/kg
SC-36615-S	8/31/1998	AROCLOR-1260	0	0 039	mg/kg
SC-36616-S	8/17/1998	AROCLOR-1260	0	0 041	mg/kg
SC-36701-S	8/17/1998	AROCLOR-1260	0	0 044	mg/kg
SC-36702-S	8/17/1998	AROCLOR-1260	0	0 041	mg/kg
SC-36703-S	8/6/1998	AROCLOR-1260	0	0 039	mg/kg
SC-36705-S	8/17/1998	AROCLOR-1260	0	0 039	mg/kg
SC-36706-S	8/17/1998	AROCLOR-1260	0	0 035	mg/kg
SC-36707-S	8/17/1998	AROCLOR-1260	0	0 036	mg/kg
SC-36711-S	8/17/1998	AROCLOR-1260	0	0 038	mg/kg
SC-36715-S	8/17/1998	AROCLOR-1260	0	0 039	mg/kg
SC-38909-S	8/14/1998	AROCLOR-1260	0	0 039	mg/kg
SC-38911-S	8/14/1998	AROCLOR-1260	0	0 039	mg/kg
SC-38912-S	8/28/1998	AROCLOR-1260	0	0 038	mg/kg
SC-38915-S	8/28/1998	AROCLOR-1260	0	0 038	mg/kg
SC-38916-S	8/17/1998	AROCLOR-1260	0	0 036	mg/kg
SC-38919-S	8/17/1998	AROCLOR-1260	0	0 039	mg/kg
SC-38920-S	8/17/1998	AROCLOR-1260	0	0 039	mg/kg
SC-35704-S	9/8/2000	ARSENIC	8 8	0 32	UG/G
SC-35708-S	9/21/2000	ARSENIC	9 7	0 33	UG/G
SC-35709-S	9/21/2000	ARSENIC	5 9	0 34	UG/G
SC-35713-S	9/21/2000	ARSENIC	7.2	0 33	UG/G
SC-35714-S	9/21/2000	ARSENIC	4 2	0 33	UG/G
SC-35718-S	9/20/2000	ARSENIC	7 1	0 31	UG/G
SC-35720-S	9/7/2000	ARSENIC	7 8	0 3	UG/G
SC-35721-S	9/7/2000	ARSENIC	9 3	0 31	UG/G
SC-35722-S	9/20/2000	ARSENIC	9.1	0 33	UG/G
SC-35724-C	9/7/2000	ARSENIC	10.2	0 31	UG/G
SC-35725-S	9/7/2000	ARSENIC	10 7	0 32	UG/G
SC-35726-S	9/19/2000	ARSENIC	7.9	0 33	UG/G
SC-35727-C	9/7/2000	ARSENIC	9.4	0 31	UG/G
SC-35728-S	9/7/2000	ARSENIC	9 7	0 32	UG/G
SC-35729-S	9/7/2000	ARSENIC	8 5	0 33	UG/G
SC-35730-C	9/7/2000	ARSENIC	11 1	0 32	UG/G
SC-35731-C	9/7/2000	ARSENIC	6.5	0 32	UG/G
SC-35732-S	9/7/2000	ARSENIC	7 6	0 3	UG/G
SC-35734-C	9/7/2000	ARSENIC	8 5	0 31	UG/G
SC-35801-S	9/8/2000	ARSENIC	7 5	0 34	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35802-S	9/8/2000	ARSENIC	5.4	0.35	UG/G
SC-35803-C	9/17/2000	ARSENIC	6.1	0.33	UG/G
SC-35803-S	9/17/2000	ARSENIC	5.9	0.33	UG/G
SC-35804-S	9/19/2000	ARSENIC	9.9	0.34	UG/G
SC-35805-S	9/19/2000	ARSENIC	10	0.33	UG/G
SC-35806-S	9/8/2000	ARSENIC	6.6	0.34	UG/G
SC-35807-S	9/8/2000	ARSENIC	8.6	0.31	UG/G
SC-35808-S	9/17/2000	ARSENIC	8.4	0.33	UG/G
SC-35809-S	9/17/2000	ARSENIC	7.6	0.34	UG/G
SC-35810-C	9/13/2000	ARSENIC	12.3	1.4	UG/G
SC-35810-S	9/14/2000	ARSENIC	6.3	0.33	UG/G
SC-35811-S	9/13/2000	ARSENIC	7.7	1.4	UG/G
SC-35812-S	9/13/2000	ARSENIC	11.5	1.4	UG/G
SC-35813-S	9/9/2000	ARSENIC	10.5	0.33	UG/G
SC-35814-S	9/20/2000	ARSENIC	6.2	0.33	UG/G
SC-35815-S	9/17/2000	ARSENIC	5.1	0.34	UG/G
SC-35816-S	9/17/2000	ARSENIC	10	0.33	UG/G
SC-35817-S	9/13/2000	ARSENIC	5.9	1.4	UG/G
SC-35818-S	9/9/2000	ARSENIC	13.9	0.33	UG/G
SC-35819-S	9/9/2000	ARSENIC	8.3	0.32	UG/G
SC-35820-C	9/9/2000	ARSENIC	10.2	0.33	UG/G
SC-35821-C	9/19/2000	ARSENIC	8	0.32	UG/G
SC-35821-S	9/19/2000	ARSENIC	7.3	0.33	UG/G
SC-35822-S	9/19/2000	ARSENIC	12.5	0.32	UG/G
SC-35823-C	9/17/2000	ARSENIC	16	0.33	UG/G
SC-35823-S	9/17/2000	ARSENIC	4.7	0.32	UG/G
SC-35824-S	9/9/2000	ARSENIC	8.1	0.38	UG/G
SC-35827-S	9/19/2000	ARSENIC	8.7	0.32	UG/G
SC-35828-S	9/19/2000	ARSENIC	10	0.3	UG/G
SC-35829-S	9/14/2000	ARSENIC	5.8	0.3	UG/G
SC-35831-S	9/7/2000	ARSENIC	7.6	0.29	UG/G
SC-35832-S	9/8/2000	ARSENIC	9.6	0.3	UG/G
SC-35834-C	9/8/2000	ARSENIC	10	0.3	UG/G
SC-35902-S	5/17/2000	ARSENIC	7.7	0.51	UG/G
SC-35903-C	5/17/2000	ARSENIC	7.7	0.54	UG/G
SC-35904-S	5/17/2000	ARSENIC	9.6	0.54	UG/G
SC-35906-S	5/17/2000	ARSENIC	6.8	0.5	UG/G
SC-35907-S	5/17/2000	ARSENIC	8.9	0.56	UG/G
SC-35908-C	5/17/2000	ARSENIC	13.7	0.51	UG/G
SC-35909-S	5/17/2000	ARSENIC	7	0.57	UG/G
SC-35910-S	5/17/2000	ARSENIC	9.7	0.57	UG/G
SC-35912-C	5/17/2000	ARSENIC	9.5	0.53	UG/G
SC-35912-S	5/17/2000	ARSENIC	9.7	0.53	UG/G
SC-35913-S	5/17/2000	ARSENIC	6.6	0.56	UG/G
SC-35914-S	5/17/2000	ARSENIC	8.3	0.53	UG/G
SC-35915-C	5/17/2000	ARSENIC	10	0.53	UG/G
SC-35916-S	5/17/2000	ARSENIC	15.3	0.52	UG/G
SC-35917-S	5/17/2000	ARSENIC	9.6	0.5	UG/G
SC-35918-S	5/17/2000	ARSENIC	5.4	0.51	UG/G
SC-35919-C	5/17/2000	ARSENIC	8.7	0.52	UG/G
SC-35920-S	5/17/2000	ARSENIC	12.6	0.53	UG/G
SC-35921-S	5/17/2000	ARSENIC	7	0.54	UG/G
SC-35922-S	5/17/2000	ARSENIC	7.9	0.55	UG/G
SC-35925-S	5/17/2000	ARSENIC	8	0.52	UG/G
SC-35926-S	5/17/2000	ARSENIC	7.1	0.54	UG/G
SC-35929-C	5/17/2000	ARSENIC	8.5	0.54	UG/G
SC-36001-C	5/17/2000	ARSENIC	9.7	0.54	UG/G
SC-36001-S	5/17/2000	ARSENIC	5.1	0.56	UG/G
SC-36001-U	5/13/2000	ARSENIC	2.9	0.53	UG/G
SC-36002-S	5/17/2000	ARSENIC	8	0.54	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36003-S	5/17/2000	ARSENIC	8.2	0 53	UG/G
SC-36004-S	5/17/2000	ARSENIC	5.7	0 57	UG/G
SC-36005-S	5/17/2000	ARSENIC	7.2	0 58	UG/G
SC-36007-S	5/17/2000	ARSENIC	9.1	0 52	UG/G
SC-36008-S	5/17/2000	ARSENIC	5.3	0 55	UG/G
SC-36009-S	5/17/2000	ARSENIC	9.7	0 54	UG/G
SC-36011-S	5/17/2000	ARSENIC	5.3	0 55	UG/G
SC-36012-S	5/17/2000	ARSENIC	15 4	0.58	UG/G
SC-36013-S	4/20/2000	ARSENIC	7.6	0 68	UG/G
SC-36015-S	5/17/2000	ARSENIC	21 8	0 52	UG/G
SC-36016-S	5/17/2000	ARSENIC	14 7	0 53	UG/G
SC-36019-S	5/17/2000	ARSENIC	6.8	0.51	UG/G
SC-36020-S	4/20/2000	ARSENIC	8.8	0 62	UG/G
SC-36201-S	5/17/2000	ARSENIC	9.6	0 56	UG/G
SC-36207-S	5/17/2000	ARSENIC	17 8	0 51	UG/G
SC-36505-S	8/17/1998	ARSENIC	8	0 59	UG/G
SC-36506-S	8/17/1998	ARSENIC	9.6	0 54	UG/G
SC-36507-S	8/17/1998	ARSENIC	7	0 57	UG/G
SC-36509-S	8/17/1998	ARSENIC	9.3	0 45	UG/G
SC-36510-S	8/17/1998	ARSENIC	5 2	0 62	UG/G
SC-36511-S	8/17/1998	ARSENIC	9	0 44	UG/G
SC-36512-S	8/17/1998	ARSENIC	123	0 8	UG/G
SC-36512-S-HS01	8/26/1998	ARSENIC	6.2	0 48	UG/G
SC-36512-S-HS02	8/26/1998	ARSENIC	12 7	0 52	UG/G
SC-36512-S-HS03	8/26/1998	ARSENIC	5 2	0 44	UG/G
SC-36512-S-HS04	8/26/1998	ARSENIC	7 3	0 43	UG/G
SC-36515-S	8/17/1998	ARSENIC	12 8	0 56	UG/G
SC-36516-S	8/17/1998	ARSENIC	9 9	0 57	UG/G
SC-36517-S	8/17/1998	ARSENIC	8 2	0 55	UG/G
SC-36518-S	8/17/1998	ARSENIC	9 8	0 55	UG/G
SC-36519-S	8/17/1998	ARSENIC	7.1	0 53	UG/G
SC-36603-S	8/31/1998	ARSENIC	10	0 52	UG/G
SC-36604-S	8/31/1998	ARSENIC	5 3	0 45	UG/G
SC-36605-S	8/31/1998	ARSENIC	19 7	0 55	UG/G
SC-36606-S	8/17/1998	ARSENIC	8 8	0 59	UG/G
SC-36607-S	8/17/1998	ARSENIC	7 6	0 62	UG/G
SC-36608-S	8/17/1998	ARSENIC	4 9	0 52	UG/G
SC-36614-S	8/31/1998	ARSENIC	12.4	0 53	UG/G
SC-36615-S	8/31/1998	ARSENIC	7 8	0 49	UG/G
SC-36616-S	8/17/1998	ARSENIC	13 3	0 5	UG/G
SC-36701-S	8/17/1998	ARSENIC	12 8	0 66	UG/G
SC-36702-S	8/17/1998	ARSENIC	10 3	0 57	UG/G
SC-36703-S	8/6/1998	ARSENIC	4 45	8 9	UG/G
SC-36705-S	8/17/1998	ARSENIC	8 5	0 53	UG/G
SC-36706-S	8/17/1998	ARSENIC	10 8	0 39	UG/G
SC-36707-S	8/17/1998	ARSENIC	7 5	0 55	UG/G
SC-36711-S	8/17/1998	ARSENIC	8 4	0 6	UG/G
SC-36715-S	8/17/1998	ARSENIC	8 3	0 43	UG/G
SC-36718-S	8/27/1998	ARSENIC	10 9	0 45	UG/G
SC-38701-C	8/27/1998	ARSENIC	8.4	0 44	UG/G
SC-38702-S	8/27/1998	ARSENIC	13 2	0.53	UG/G
SC-38909-S	8/14/1998	ARSENIC	11.5	0 51	UG/G
SC-38911-S	8/14/1998	ARSENIC	5 9	0 52	UG/G
SC-38912-S	8/28/1998	ARSENIC	8 4	0.46	UG/G
SC-38915-S	8/28/1998	ARSENIC	8 1	0.46	UG/G
SC-38916-S	8/17/1998	ARSENIC	10 1	0 5	UG/G
SC-38919-S	8/17/1998	ARSENIC	9	0 53	UG/G
SC-38920-S	8/17/1998	ARSENIC	5 8	0 53	UG/G
SC-35704-S	9/8/2000	BENZO(A)ANTHRACENE	0	0 017	mg/kg
SC-35708-S	9/21/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35709-S	9/21/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35713-S	9/21/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35714-S	9/21/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35718-S	9/20/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35720-S	9/7/2000	BENZO(A)ANTHRACENE	0	0.016	mg/kg
SC-35721-S	9/7/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35722-S	9/20/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35724-C	9/7/2000	BENZO(A)ANTHRACENE	0.027	0.017	mg/kg
SC-35725-S	9/7/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35726-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35727-C	9/7/2000	BENZO(A)ANTHRACENE	0.02	0.016	mg/kg
SC-35728-S	9/7/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35729-S	9/7/2000	BENZO(A)ANTHRACENE	0.026	0.017	mg/kg
SC-35730-C	9/7/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35731-C	9/7/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35732-S	9/7/2000	BENZO(A)ANTHRACENE	0	0.016	mg/kg
SC-35734-C	9/7/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35801-S	9/8/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35802-S	9/8/2000	BENZO(A)ANTHRACENE	0	0.019	mg/kg
SC-35803-C	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35803-S	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35804-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35805-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35806-S	9/8/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35807-S	9/8/2000	BENZO(A)ANTHRACENE	0.027	0.017	mg/kg
SC-35808-S	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35809-S	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35810-C	9/13/2000	BENZO(A)ANTHRACENE	0	0.019	mg/kg
SC-35810-S	9/14/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35811-S	9/13/2000	BENZO(A)ANTHRACENE	0	0.019	mg/kg
SC-35812-S	9/13/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35813-S	9/9/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35814-S	9/20/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35815-S	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35816-S	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35817-S	9/13/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35818-S	9/9/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35819-S	9/9/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35820-C	9/9/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35821-C	9/19/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35821-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35822-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35823-C	9/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35823-S	9/17/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35824-S	9/9/2000	BENZO(A)ANTHRACENE	0	0.02	mg/kg
SC-35827-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35828-S	9/19/2000	BENZO(A)ANTHRACENE	0	0.016	mg/kg
SC-35829-S	9/14/2000	BENZO(A)ANTHRACENE	0	0.016	mg/kg
SC-35831-S	9/7/2000	BENZO(A)ANTHRACENE	0.022	0.015	mg/kg
SC-35832-S	9/8/2000	BENZO(A)ANTHRACENE	0	0.016	mg/kg
SC-35834-C	9/8/2000	BENZO(A)ANTHRACENE	0	0.016	mg/kg
SC-35902-S	5/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35903-C	5/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35904-S	5/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg
SC-35906-S	5/17/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35907-S	5/17/2000	BENZO(A)ANTHRACENE	0	0.019	mg/kg
SC-35908-C	5/17/2000	BENZO(A)ANTHRACENE	0	0.017	mg/kg
SC-35909-S	5/17/2000	BENZO(A)ANTHRACENE	0	0.019	mg/kg
SC-35910-S	5/17/2000	BENZO(A)ANTHRACENE	0	0.019	mg/kg
SC-35912-C	5/17/2000	BENZO(A)ANTHRACENE	0	0.018	mg/kg

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35912-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35913-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 019	mg/kg
SC-35914-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35915-C	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35916-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35917-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 017	mg/kg
SC-35918-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 017	mg/kg
SC-35919-C	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35920-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35921-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35922-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 019	mg/kg
SC-35925-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35926-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-35929-C	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36001-C	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36001-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 019	mg/kg
SC-36001-U	5/13/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36002-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36003-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36004-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 02	mg/kg
SC-36005-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 02	mg/kg
SC-36007-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36008-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 019	mg/kg
SC-36009-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36011-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 019	mg/kg
SC-36012-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 02	mg/kg
SC-36013-S	4/20/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36015-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36016-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36019-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 018	mg/kg
SC-36020-S	4/20/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36022-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36103-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36104-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36105-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36106-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36107-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36108-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36110-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36111-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36112-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36117-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36118-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 013	mg/kg
SC-36119-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36201-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 019	mg/kg
SC-36204-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36205-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36207-S	5/17/2000	BENZO(A)ANTHRACENE	0	0 017	mg/kg
SC-36210-S	4/29/2000	BENZO(A)ANTHRACENE	0	0 012	mg/kg
SC-36426-C	9/3/1998	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36427-C	9/3/1998	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36429-C	9/3/1998	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36430-S	9/3/1998	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36431-C	9/3/1998	BENZO(A)ANTHRACENE	0.013	0 011	mg/kg
SC-36432-C	9/3/1998	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36433-C	9/3/1998	BENZO(A)ANTHRACENE	0	0 01	mg/kg
SC-36434-C	9/3/1998	BENZO(A)ANTHRACENE	15	1	mg/kg
SC-36434-C-RS01	9/11/1998	BENZO(A)ANTHRACENE	0	0 011	mg/kg
SC-36434-C-RS02	9/11/1998	BENZO(A)ANTHRACENE	0	0 01	mg/kg
SC-36434-C-RS03	9/11/1998	BENZO(A)ANTHRACENE	0	0 01	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36434-C-RS04	9/11/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36434-C-RS05	9/11/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-36435-C	9/3/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36505-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36506-S	8/17/1998	BENZO(A)ANTHRACENE	0.032	0.011	mg/kg
SC-36507-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36509-S	8/17/1998	BENZO(A)ANTHRACENE	0.013	0.011	mg/kg
SC-36510-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36511-S	8/17/1998	BENZO(A)ANTHRACENE	0.064	0.011	mg/kg
SC-36512-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.014	mg/kg
SC-36515-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36516-S	8/17/1998	BENZO(A)ANTHRACENE	0.025	0.011	mg/kg
SC-36517-S	8/17/1998	BENZO(A)ANTHRACENE	0.32	0.05	mg/kg
SC-36518-S	8/17/1998	BENZO(A)ANTHRACENE	0.078	0.011	mg/kg
SC-36519-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-36603-S	8/31/1998	BENZO(A)ANTHRACENE	0	0.012	mg/kg
SC-36604-S	8/31/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36605-S	8/31/1998	BENZO(A)ANTHRACENE	0	0.012	mg/kg
SC-36606-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36607-S	8/17/1998	BENZO(A)ANTHRACENE	0.012	0.011	mg/kg
SC-36608-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36614-S	8/31/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36615-S	8/31/1998	BENZO(A)ANTHRACENE	0.013	0.011	mg/kg
SC-36616-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36701-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.012	mg/kg
SC-36702-S	8/17/1998	BENZO(A)ANTHRACENE	0.017	0.011	mg/kg
SC-36703-S	8/6/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36705-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-36706-S	8/17/1998	BENZO(A)ANTHRACENE	0.0095	0.0096	mg/kg
SC-36707-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.0096	mg/kg
SC-36711-S	8/17/1998	BENZO(A)ANTHRACENE	0.013	0.01	mg/kg
SC-36715-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-38909-S	8/14/1998	BENZO(A)ANTHRACENE	0	0.011	mg/kg
SC-38911-S	8/14/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-38912-S	8/28/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-38915-S	8/28/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-38916-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.0097	mg/kg
SC-38919-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-38920-S	8/17/1998	BENZO(A)ANTHRACENE	0	0.01	mg/kg
SC-35704-S	9/8/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35708-S	9/21/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35709-S	9/21/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35713-S	9/21/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35714-S	9/21/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35718-S	9/20/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35720-S	9/7/2000	BENZO(A)PYRENE	0	0.016	mg/kg
SC-35721-S	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35722-S	9/20/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35724-C	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35725-S	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35726-S	9/19/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35727-C	9/7/2000	BENZO(A)PYRENE	0	0.016	mg/kg
SC-35728-S	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35729-S	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35730-C	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35731-C	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35732-S	9/7/2000	BENZO(A)PYRENE	0	0.016	mg/kg
SC-35734-C	9/7/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-35801-S	9/8/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35802-S	9/8/2000	BENZO(A)PYRENE	0	0.019	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35803-C	9/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35803-S	9/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35804-S	9/19/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35805-S	9/19/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35806-S	9/8/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35807-S	9/8/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35808-S	9/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35809-S	9/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35810-C	9/13/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35810-S	9/14/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35811-S	9/13/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35812-S	9/13/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35813-S	9/9/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35814-S	9/20/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35815-S	9/17/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-35816-S	9/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35817-S	9/13/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35818-S	9/9/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35819-S	9/9/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35820-C	9/9/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35821-C	9/19/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35821-S	9/19/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35822-S	9/19/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35823-C	9/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35823-S	9/17/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35824-S	9/9/2000	BENZO(A)PYRENE	0	0 02	mg/kg
SC-35827-S	9/19/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35828-S	9/19/2000	BENZO(A)PYRENE	0	0 016	mg/kg
SC-35829-S	9/14/2000	BENZO(A)PYRENE	0	0 016	mg/kg
SC-35831-S	9/7/2000	BENZO(A)PYRENE	0	0 015	mg/kg
SC-35832-S	9/8/2000	BENZO(A)PYRENE	0	0 016	mg/kg
SC-35834-C	9/8/2000	BENZO(A)PYRENE	0	0 016	mg/kg
SC-35902-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35903-C	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35904-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35906-S	5/17/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35907-S	5/17/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35908-C	5/17/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35909-S	5/17/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35910-S	5/17/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35912-C	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35912-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35913-S	5/17/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35914-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35915-C	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35916-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35917-S	5/17/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35918-S	5/17/2000	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35919-C	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35920-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35921-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35922-S	5/17/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-35925-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35926-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-35929-C	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36001-C	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36001-S	5/17/2000	BENZO(A)PYRENE	0	0 019	mg/kg
SC-36001-U	5/13/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36002-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36003-S	5/17/2000	BENZO(A)PYRENE	0	0 018	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36004-S	5/17/2000	BENZO(A)PYRENE	0	0.02	mg/kg
SC-36005-S	5/17/2000	BENZO(A)PYRENE	0	0.02	mg/kg
SC-36007-S	5/17/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36008-S	5/17/2000	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36009-S	5/17/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36011-S	5/17/2000	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36012-S	5/17/2000	BENZO(A)PYRENE	0	0.02	mg/kg
SC-36013-S	4/20/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36015-S	5/17/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36016-S	5/17/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36019-S	5/17/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36020-S	4/20/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36022-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36103-S	4/29/2000	BENZO(A)PYRENE	0	0.016	mg/kg
SC-36104-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36105-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36106-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36107-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36108-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36110-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36111-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36112-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36117-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36118-S	4/29/2000	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36119-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36201-S	5/17/2000	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36204-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36205-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36207-S	5/17/2000	BENZO(A)PYRENE	0	0.017	mg/kg
SC-36210-S	4/29/2000	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36426-C	9/3/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36427-C	9/3/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36429-C	9/3/1998	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36430-S	9/3/1998	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36431-C	9/3/1998	BENZO(A)PYRENE	0.018	0.017	mg/kg
SC-36432-C	9/3/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36433-C	9/3/1998	BENZO(A)PYRENE	0	0.017	mg/kg
SC-36434-C	9/3/1998	BENZO(A)PYRENE	0	1.6	mg/kg
SC-36434-C-RS01	9/11/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36434-C-RS02	9/11/1998	BENZO(A)PYRENE	0	0.017	mg/kg
SC-36434-C-RS03	9/11/1998	BENZO(A)PYRENE	0	0.017	mg/kg
SC-36434-C-RS04	9/11/1998	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36434-C-RS05	9/11/1998	BENZO(A)PYRENE	0	0.017	mg/kg
SC-36435-C	9/3/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36505-S	8/17/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36506-S	8/17/1998	BENZO(A)PYRENE	0.058	0.018	mg/kg
SC-36507-S	8/17/1998	BENZO(A)PYRENE	0.02	0.018	mg/kg
SC-36509-S	8/17/1998	BENZO(A)PYRENE	0.028	0.018	mg/kg
SC-36510-S	8/17/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36511-S	8/17/1998	BENZO(A)PYRENE	0.12	0.018	mg/kg
SC-36512-S	8/17/1998	BENZO(A)PYRENE	0	0.023	mg/kg
SC-36515-S	8/17/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36516-S	8/17/1998	BENZO(A)PYRENE	0.49	0.019	mg/kg
SC-36517-S	8/17/1998	BENZO(A)PYRENE	0.57	0.085	mg/kg
SC-36518-S	8/17/1998	BENZO(A)PYRENE	0.14	0.019	mg/kg
SC-36519-S	8/17/1998	BENZO(A)PYRENE	0	0.017	mg/kg
SC-36603-S	8/31/1998	BENZO(A)PYRENE	0	0.02	mg/kg
SC-36604-S	8/31/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36605-S	8/31/1998	BENZO(A)PYRENE	0	0.019	mg/kg
SC-36606-S	8/17/1998	BENZO(A)PYRENE	0	0.018	mg/kg

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36607-S	8/17/1998	BENZO(A)PYRENE	0 018	0 018	mg/kg
SC-36608-S	8/17/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-36614-S	8/31/1998	BENZO(A)PYRENE	0	0 019	mg/kg
SC-36615-S	8/31/1998	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36616-S	8/17/1998	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36701-S	8/17/1998	BENZO(A)PYRENE	0	0 02	mg/kg
SC-36702-S	8/17/1998	BENZO(A)PYRENE	0.034	0 018	mg/kg
SC-36703-S	8/6/1998	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36705-S	8/17/1998	BENZO(A)PYRENE	0	0 018	mg/kg
SC-36706-S	8/17/1998	BENZO(A)PYRENE	0 018	0 016	mg/kg
SC-36707-S	8/17/1998	BENZO(A)PYRENE	0	0 016	mg/kg
SC-36711-S	8/17/1998	BENZO(A)PYRENE	0 028	0 017	mg/kg
SC-36715-S	8/17/1998	BENZO(A)PYRENE	0	0 018	mg/kg
SC-38909-S	8/14/1998	BENZO(A)PYRENE	0	0.018	mg/kg
SC-38911-S	8/14/1998	BENZO(A)PYRENE	0	0 017	mg/kg
SC-38912-S	8/28/1998	BENZO(A)PYRENE	0	0 017	mg/kg
SC-38915-S	8/28/1998	BENZO(A)PYRENE	0	0 017	mg/kg
SC-38916-S	8/17/1998	BENZO(A)PYRENE	0	0 016	mg/kg
SC-38919-S	8/17/1998	BENZO(A)PYRENE	0	0 017	mg/kg
SC-38920-S	8/17/1998	BENZO(A)PYRENE	0	0 017	mg/kg
SC-35704-S	9/8/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35708-S	9/21/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35709-S	9/21/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35713-S	9/21/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35714-S	9/21/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35718-S	9/20/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35720-S	9/7/2000	BENZO(B)FLUORANTHENE	0	0 016	mg/kg
SC-35721-S	9/7/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35722-S	9/20/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35724-C	9/7/2000	BENZO(B)FLUORANTHENE	0 019	0 017	mg/kg
SC-35725-S	9/7/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35726-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35727-C	9/7/2000	BENZO(B)FLUORANTHENE	0	0 016	mg/kg
SC-35728-S	9/7/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35729-S	9/7/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35730-C	9/7/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35731-C	9/7/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35732-S	9/7/2000	BENZO(B)FLUORANTHENE	0	0 016	mg/kg
SC-35734-C	9/7/2000	BENZO(B)FLUORANTHENE	0 018	0 017	mg/kg
SC-35801-S	9/8/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35802-S	9/8/2000	BENZO(B)FLUORANTHENE	0	0 019	mg/kg
SC-35803-C	9/17/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35803-S	9/17/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35804-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35805-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35806-S	9/8/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35807-S	9/8/2000	BENZO(B)FLUORANTHENE	0.019	0 017	mg/kg
SC-35808-S	9/17/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35809-S	9/17/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35810-C	9/13/2000	BENZO(B)FLUORANTHENE	0	0 019	mg/kg
SC-35810-S	9/14/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35811-S	9/13/2000	BENZO(B)FLUORANTHENE	0	0 019	mg/kg
SC-35812-S	9/13/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35813-S	9/9/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35814-S	9/20/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-35815-S	9/17/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35816-S	9/17/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35817-S	9/13/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35818-S	9/9/2000	BENZO(B)FLUORANTHENE	0	0 018	mg/kg
SC-35819-S	9/9/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35820-C	9/9/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35821-C	9/19/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35821-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35822-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35823-C	9/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35823-S	9/17/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35824-S	9/9/2000	BENZO(B)FLUORANTHENE	0	0.02	mg/kg
SC-35827-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35828-S	9/19/2000	BENZO(B)FLUORANTHENE	0	0.016	mg/kg
SC-35829-S	9/14/2000	BENZO(B)FLUORANTHENE	0	0.016	mg/kg
SC-35831-S	9/7/2000	BENZO(B)FLUORANTHENE	0.023	0.015	mg/kg
SC-35832-S	9/8/2000	BENZO(B)FLUORANTHENE	0	0.016	mg/kg
SC-35834-C	9/8/2000	BENZO(B)FLUORANTHENE	0	0.016	mg/kg
SC-35902-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35903-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35904-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35906-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35907-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-35908-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35909-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-35910-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-35912-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35912-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35913-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-35914-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35915-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35916-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35917-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35918-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.017	mg/kg
SC-35919-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35920-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35921-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35922-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-35925-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35926-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-35929-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36001-C	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36001-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-36001-U	5/13/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36002-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36003-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36004-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.02	mg/kg
SC-36005-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.02	mg/kg
SC-36007-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36008-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-36009-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36011-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-36012-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.02	mg/kg
SC-36013-S	4/20/2000	BENZO(B)FLUORANTHENE	0	0.015	mg/kg
SC-36015-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36016-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36019-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0.018	mg/kg
SC-36020-S	4/20/2000	BENZO(B)FLUORANTHENE	0	0.015	mg/kg
SC-36022-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.015	mg/kg
SC-36103-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.013	mg/kg
SC-36104-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.014	mg/kg
SC-36105-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.014	mg/kg
SC-36106-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.014	mg/kg
SC-36107-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.014	mg/kg
SC-36108-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0.014	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36110-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36111-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36112-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36117-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36118-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36119-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36201-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0 019	mg/kg
SC-36204-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36205-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36207-S	5/17/2000	BENZO(B)FLUORANTHENE	0	0 017	mg/kg
SC-36210-S	4/29/2000	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36426-C	9/3/1998	BENZO(B)FLUORANTHENE	0	0.015	mg/kg
SC-36427-C	9/3/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36429-C	9/3/1998	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36430-S	9/3/1998	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36431-C	9/3/1998	BENZO(B)FLUORANTHENE	0 028	0 015	mg/kg
SC-36432-C	9/3/1998	BENZO(B)FLUORANTHENE	0 015	0 014	mg/kg
SC-36433-C	9/3/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36434-C	9/3/1998	BENZO(B)FLUORANTHENE	0	1 2	mg/kg
SC-36434-C-RS01	9/11/1998	BENZO(B)FLUORANTHENE	0 016	0.014	mg/kg
SC-36434-C-RS02	9/11/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36434-C-RS03	9/11/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36434-C-RS04	9/11/1998	BENZO(B)FLUORANTHENE	0 016	0 014	mg/kg
SC-36434-C-RS05	9/11/1998	BENZO(B)FLUORANTHENE	0	0 013	mg/kg
SC-36435-C	9/3/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36505-S	8/17/1998	BENZO(B)FLUORANTHENE	0 042	0 014	mg/kg
SC-36506-S	8/17/1998	BENZO(B)FLUORANTHENE	0 085	0 014	mg/kg
SC-36507-S	8/17/1998	BENZO(B)FLUORANTHENE	0 046	0 014	mg/kg
SC-36509-S	8/17/1998	BENZO(B)FLUORANTHENE	0 045	0 014	mg/kg
SC-36510-S	8/17/1998	BENZO(B)FLUORANTHENE	0 025	0 014	mg/kg
SC-36511-S	8/17/1998	BENZO(B)FLUORANTHENE	0 17	0 014	mg/kg
SC-36512-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0.019	mg/kg
SC-36515-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36516-S	8/17/1998	BENZO(B)FLUORANTHENE	0.059	0 015	mg/kg
SC-36517-S	8/17/1998	BENZO(B)FLUORANTHENE	0 72	0 07	mg/kg
SC-36518-S	8/17/1998	BENZO(B)FLUORANTHENE	0 16	0 015	mg/kg
SC-36519-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 013	mg/kg
SC-36603-S	8/31/1998	BENZO(B)FLUORANTHENE	0	0 016	mg/kg
SC-36604-S	8/31/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36605-S	8/31/1998	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36606-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36607-S	8/17/1998	BENZO(B)FLUORANTHENE	0 06	0 015	mg/kg
SC-36608-S	8/17/1998	BENZO(B)FLUORANTHENE	0 016	0 014	mg/kg
SC-36614-S	8/31/1998	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36615-S	8/31/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36616-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 015	mg/kg
SC-36701-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 016	mg/kg
SC-36702-S	8/17/1998	BENZO(B)FLUORANTHENE	0 043	0 015	mg/kg
SC-36703-S	8/6/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-36705-S	8/17/1998	BENZO(B)FLUORANTHENE	0.02	0 014	mg/kg
SC-36706-S	8/17/1998	BENZO(B)FLUORANTHENE	0 019	0 013	mg/kg
SC-36707-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 013	mg/kg
SC-36711-S	8/17/1998	BENZO(B)FLUORANTHENE	0 033	0 014	mg/kg
SC-36715-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0.014	mg/kg
SC-38909-S	8/14/1998	BENZO(B)FLUORANTHENE	0 019	0 014	mg/kg
SC-38911-S	8/14/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-38912-S	8/28/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-38915-S	8/28/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg
SC-38916-S	8/17/1998	BENZO(B)FLUORANTHENE	0 017	0 013	mg/kg
SC-38919-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0 014	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-38920-S	8/17/1998	BENZO(B)FLUORANTHENE	0	0.014	mg/kg
SC-35704-S	9/8/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35708-S	9/21/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35709-S	9/21/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35713-S	9/21/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35714-S	9/21/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35718-S	9/20/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35720-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35721-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35722-S	9/20/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35724-C	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35725-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35726-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35727-C	9/7/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35728-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35729-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35730-C	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35731-C	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35732-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35734-C	9/7/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35801-S	9/8/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35802-S	9/8/2000	BENZO(K)FLUORANTHENE	0	0.019	mg/kg
SC-35803-C	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35803-S	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35804-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35805-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35806-S	9/8/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35807-S	9/8/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35808-S	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35809-S	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35810-C	9/13/2000	BENZO(K)FLUORANTHENE	0	0.019	mg/kg
SC-35810-S	9/14/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35811-S	9/13/2000	BENZO(K)FLUORANTHENE	0	0.019	mg/kg
SC-35812-S	9/13/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35813-S	9/9/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35814-S	9/20/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35815-S	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35816-S	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35817-S	9/13/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35818-S	9/9/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35819-S	9/9/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35820-C	9/9/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35821-C	9/19/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35821-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35822-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35823-C	9/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35823-S	9/17/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35824-S	9/9/2000	BENZO(K)FLUORANTHENE	0	0.02	mg/kg
SC-35827-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35828-S	9/19/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35829-S	9/14/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35831-S	9/7/2000	BENZO(K)FLUORANTHENE	0	0.015	mg/kg
SC-35832-S	9/8/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35834-C	9/8/2000	BENZO(K)FLUORANTHENE	0	0.016	mg/kg
SC-35902-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35903-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35904-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35906-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35907-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.019	mg/kg
SC-35908-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35909-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-35910-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.019	mg/kg
SC-35912-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35912-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35913-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-35914-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35915-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35916-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35917-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-35918-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 017	mg/kg
SC-35919-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35920-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35921-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0.018	mg/kg
SC-35922-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-35925-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35926-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-35929-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36001-C	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36001-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-36001-U	5/13/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36002-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36003-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36004-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 02	mg/kg
SC-36005-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 02	mg/kg
SC-36007-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36008-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-36009-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36011-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-36012-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 02	mg/kg
SC-36013-S	4/20/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36015-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36016-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36019-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 018	mg/kg
SC-36020-S	4/20/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36022-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 012	mg/kg
SC-36103-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 012	mg/kg
SC-36104-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36105-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36106-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36107-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36108-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36110-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36111-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36112-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36117-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36118-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 014	mg/kg
SC-36119-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36201-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 019	mg/kg
SC-36204-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36205-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36207-S	5/17/2000	BENZO(K)FLUORANTHENE	0	0 017	mg/kg
SC-36210-S	4/29/2000	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36426-C	9/3/1998	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36427-C	9/3/1998	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36429-C	9/3/1998	BENZO(K)FLUORANTHENE	0	0 014	mg/kg
SC-36430-S	9/3/1998	BENZO(K)FLUORANTHENE	0	0 014	mg/kg
SC-36431-C	9/3/1998	BENZO(K)FLUORANTHENE	0.014	0 013	mg/kg
SC-36432-C	9/3/1998	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36433-C	9/3/1998	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36434-C	9/3/1998	BENZO(K)FLUORANTHENE	0	1 1	mg/kg

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36434-C-RS01	9/11/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36434-C-RS02	9/11/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36434-C-RS03	9/11/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36434-C-RS04	9/11/1998	BENZO(K)FLUORANTHENE	0	0.014	mg/kg
SC-36434-C-RS05	9/11/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-36435-C	9/3/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36505-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36506-S	8/17/1998	BENZO(K)FLUORANTHENE	0.034	0.013	mg/kg
SC-36507-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36509-S	8/17/1998	BENZO(K)FLUORANTHENE	0.017	0.013	mg/kg
SC-36510-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36511-S	8/17/1998	BENZO(K)FLUORANTHENE	0.075	0.013	mg/kg
SC-36512-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.017	mg/kg
SC-36515-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36516-S	8/17/1998	BENZO(K)FLUORANTHENE	0.029	0.014	mg/kg
SC-36517-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.064	mg/kg
SC-36518-S	8/17/1998	BENZO(K)FLUORANTHENE	0.082	0.014	mg/kg
SC-36519-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-36603-S	8/31/1998	BENZO(K)FLUORANTHENE	0	0.015	mg/kg
SC-36604-S	8/31/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36605-S	8/31/1998	BENZO(K)FLUORANTHENE	0	0.014	mg/kg
SC-36606-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36607-S	8/17/1998	BENZO(K)FLUORANTHENE	0.016	0.014	mg/kg
SC-36608-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36614-S	8/31/1998	BENZO(K)FLUORANTHENE	0	0.014	mg/kg
SC-36615-S	8/31/1998	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36616-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0 013	mg/kg
SC-36701-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.014	mg/kg
SC-36702-S	8/17/1998	BENZO(K)FLUORANTHENE	0.021	0 013	mg/kg
SC-36703-S	8/6/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36705-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-36706-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-36707-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-36711-S	8/17/1998	BENZO(K)FLUORANTHENE	0.015	0.013	mg/kg
SC-36715-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-38909-S	8/14/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-38911-S	8/14/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-38912-S	8/28/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-38915-S	8/28/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-38916-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.012	mg/kg
SC-38919-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-38920-S	8/17/1998	BENZO(K)FLUORANTHENE	0	0.013	mg/kg
SC-35704-S	9/8/2000	CHROMIUM	14.3	0.25	UG/G
SC-35708-S	9/21/2000	CHROMIUM	17.1	0.26	UG/G
SC-35709-S	9/21/2000	CHROMIUM	15.7	0.27	UG/G
SC-35713-S	9/21/2000	CHROMIUM	15.6	0.26	UG/G
SC-35714-S	9/21/2000	CHROMIUM	13.5	0.26	UG/G
SC-35718-S	9/20/2000	CHROMIUM	15.3	0.25	UG/G
SC-35720-S	9/7/2000	CHROMIUM	11.2	0.24	UG/G
SC-35721-S	9/7/2000	CHROMIUM	13.6	0.25	UG/G
SC-35722-S	9/20/2000	CHROMIUM	13.6	0.26	UG/G
SC-35724-C	9/7/2000	CHROMIUM	14.9	0.25	UG/G
SC-35725-S	9/7/2000	CHROMIUM	14.8	0.25	UG/G
SC-35726-S	9/19/2000	CHROMIUM	13.7	0.26	UG/G
SC-35727-C	9/7/2000	CHROMIUM	13.8	0.24	UG/G
SC-35728-S	9/7/2000	CHROMIUM	14.5	0.25	UG/G
SC-35729-S	9/7/2000	CHROMIUM	16.2	0.26	UG/G
SC-35730-C	9/7/2000	CHROMIUM	16.3	0.25	UG/G
SC-35731-C	9/7/2000	CHROMIUM	21	0.26	UG/G
SC-35732-S	9/7/2000	CHROMIUM	16.8	0.24	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36001-U	5/13/2000	CHROMIUM	9 4	0 27	UG/G
SC-36002-S	5/17/2000	CHROMIUM	18 1	0 27	UG/G
SC-36003-S	5/17/2000	CHROMIUM	17.8	0 27	UG/G
SC-36004-S	5/17/2000	CHROMIUM	19 8	0 29	UG/G
SC-36005-S	5/17/2000	CHROMIUM	23 4	0 29	UG/G
SC-36007-S	5/17/2000	CHROMIUM	18.7	0 26	UG/G
SC-36008-S	5/17/2000	CHROMIUM	16	0 27	UG/G
SC-36009-S	5/17/2000	CHROMIUM	17.7	0 27	UG/G
SC-36011-S	5/17/2000	CHROMIUM	15 3	0 27	UG/G
SC-36012-S	5/17/2000	CHROMIUM	20 8	0 29	UG/G
SC-36013-S	4/20/2000	CHROMIUM	16 9	0 14	UG/G
SC-36015-S	5/17/2000	CHROMIUM	15 7	0 26	UG/G
SC-36016-S	5/17/2000	CHROMIUM	15 6	0 26	UG/G
SC-36019-S	5/17/2000	CHROMIUM	18 7	0 26	UG/G
SC-36020-S	4/20/2000	CHROMIUM	16.5	0 13	UG/G
SC-36201-S	5/17/2000	CHROMIUM	16.3	0 28	UG/G
SC-36207-S	5/17/2000	CHROMIUM	16 6	0 26	UG/G
SC-36703-S	8/6/1998	CHROMIUM	13 5	1 3	UG/G
SC-35704-S	9/8/2000	CHRYSENE	0 11	0 017	mg/kg
SC-35708-S	9/21/2000	CHRYSENE	0	0 018	mg/kg
SC-35709-S	9/21/2000	CHRYSENE	0.048	0 018	mg/kg
SC-35713-S	9/21/2000	CHRYSENE	0	0 017	mg/kg
SC-35714-S	9/21/2000	CHRYSENE	0	0 018	mg/kg
SC-35718-S	9/20/2000	CHRYSENE	0	0 017	mg/kg
SC-35720-S	9/7/2000	CHRYSENE	0	0 016	mg/kg
SC-35721-S	9/7/2000	CHRYSENE	0 17	0 017	mg/kg
SC-35722-S	9/20/2000	CHRYSENE	0.028	0 017	mg/kg
SC-35724-C	9/7/2000	CHRYSENE	0 14	0 017	mg/kg
SC-35725-S	9/7/2000	CHRYSENE	0 072	0 017	mg/kg
SC-35726-S	9/19/2000	CHRYSENE	0	0 018	mg/kg
SC-35727-C	9/7/2000	CHRYSENE	0 25	0 016	mg/kg
SC-35728-S	9/7/2000	CHRYSENE	0 13	0 017	mg/kg
SC-35729-S	9/7/2000	CHRYSENE	0 24	0 017	mg/kg
SC-35730-C	9/7/2000	CHRYSENE	0.057	0 017	mg/kg
SC-35731-C	9/7/2000	CHRYSENE	0	0 017	mg/kg
SC-35732-S	9/7/2000	CHRYSENE	0	0 016	mg/kg
SC-35734-C	9/7/2000	CHRYSENE	0 03	0 017	mg/kg
SC-35801-S	9/8/2000	CHRYSENE	0	0 018	mg/kg
SC-35802-S	9/8/2000	CHRYSENE	0	0 019	mg/kg
SC-35803-C	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35803-S	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35804-S	9/19/2000	CHRYSENE	0	0 018	mg/kg
SC-35805-S	9/19/2000	CHRYSENE	0	0 018	mg/kg
SC-35806-S	9/8/2000	CHRYSENE	0	0 018	mg/kg
SC-35807-S	9/8/2000	CHRYSENE	0 38	0 017	mg/kg
SC-35808-S	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35809-S	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35810-C	9/13/2000	CHRYSENE	0	0 019	mg/kg
SC-35810-S	9/14/2000	CHRYSENE	0	0 018	mg/kg
SC-35811-S	9/13/2000	CHRYSENE	0	0 019	mg/kg
SC-35812-S	9/13/2000	CHRYSENE	0	0 018	mg/kg
SC-35813-S	9/9/2000	CHRYSENE	0 14	0 018	mg/kg
SC-35814-S	9/20/2000	CHRYSENE	0	0 017	mg/kg
SC-35815-S	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35816-S	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35817-S	9/13/2000	CHRYSENE	0	0 018	mg/kg
SC-35818-S	9/9/2000	CHRYSENE	0	0 018	mg/kg
SC-35819-S	9/9/2000	CHRYSENE	0	0 017	mg/kg
SC-35820-C	9/9/2000	CHRYSENE	0.067	0 017	mg/kg
SC-35821-C	9/19/2000	CHRYSENE	0	0 017	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35734-C	9/7/2000	CHROMIUM	15	0.25	UG/G
SC-35801-S	9/8/2000	CHROMIUM	21.1	0.26	UG/G
SC-35802-S	9/8/2000	CHROMIUM	14.5	0.27	UG/G
SC-35803-C	9/17/2000	CHROMIUM	25.8	0.26	UG/G
SC-35803-S	9/17/2000	CHROMIUM	27.4	0.26	UG/G
SC-35804-S	9/19/2000	CHROMIUM	14.6	0.26	UG/G
SC-35805-S	9/19/2000	CHROMIUM	17.9	0.26	UG/G
SC-35806-S	9/8/2000	CHROMIUM	14	0.26	UG/G
SC-35807-S	9/8/2000	CHROMIUM	14.9	0.25	UG/G
SC-35808-S	9/17/2000	CHROMIUM	24.9	0.26	UG/G
SC-35809-S	9/17/2000	CHROMIUM	22.8	0.27	UG/G
SC-35810-C	9/13/2000	CHROMIUM	20.7	1.1	UG/G
SC-35810-S	9/14/2000	CHROMIUM	12.8	0.26	UG/G
SC-35811-S	9/13/2000	CHROMIUM	17	1.1	UG/G
SC-35812-S	9/13/2000	CHROMIUM	18.1	1.1	UG/G
SC-35813-S	9/9/2000	CHROMIUM	20	0.26	UG/G
SC-35814-S	9/20/2000	CHROMIUM	13.3	0.26	UG/G
SC-35815-S	9/17/2000	CHROMIUM	25.1	0.26	UG/G
SC-35816-S	9/17/2000	CHROMIUM	27.4	0.26	UG/G
SC-35817-S	9/13/2000	CHROMIUM	19.6	1.1	UG/G
SC-35818-S	9/9/2000	CHROMIUM	18.4	0.26	UG/G
SC-35819-S	9/9/2000	CHROMIUM	21	0.25	UG/G
SC-35820-C	9/9/2000	CHROMIUM	20.1	0.26	UG/G
SC-35821-C	9/19/2000	CHROMIUM	15	0.25	UG/G
SC-35821-S	9/19/2000	CHROMIUM	14.3	0.26	UG/G
SC-35822-S	9/19/2000	CHROMIUM	15.8	0.25	UG/G
SC-35823-C	9/17/2000	CHROMIUM	24.9	0.26	UG/G
SC-35823-S	9/17/2000	CHROMIUM	24.1	0.26	UG/G
SC-35824-S	9/9/2000	CHROMIUM	22.7	0 3	UG/G
SC-35827-S	9/19/2000	CHROMIUM	16.9	0.25	UG/G
SC-35828-S	9/19/2000	CHROMIUM	15.2	0.24	UG/G
SC-35829-S	9/14/2000	CHROMIUM	19.2	0.24	UG/G
SC-35831-S	9/7/2000	CHROMIUM	13	0.23	UG/G
SC-35832-S	9/8/2000	CHROMIUM	13.1	0.24	UG/G
SC-35834-C	9/8/2000	CHROMIUM	14.3	0.24	UG/G
SC-35902-S	5/17/2000	CHROMIUM	15.3	0.26	UG/G
SC-35903-C	5/17/2000	CHROMIUM	18	0.27	UG/G
SC-35904-S	5/17/2000	CHROMIUM	17.1	0.27	UG/G
SC-35906-S	5/17/2000	CHROMIUM	15.2	0.25	UG/G
SC-35907-S	5/17/2000	CHROMIUM	18.4	0.28	UG/G
SC-35908-C	5/17/2000	CHROMIUM	19.3	0.25	UG/G
SC-35909-S	5/17/2000	CHROMIUM	20.9	0.29	UG/G
SC-35910-S	5/17/2000	CHROMIUM	17.9	0.28	UG/G
SC-35912-C	5/17/2000	CHROMIUM	23.1	0.27	UG/G
SC-35912-S	5/17/2000	CHROMIUM	20.8	0.26	UG/G
SC-35913-S	5/17/2000	CHROMIUM	16.8	0.28	UG/G
SC-35914-S	5/17/2000	CHROMIUM	14.9	0.27	UG/G
SC-35915-C	5/17/2000	CHROMIUM	18.1	0.27	UG/G
SC-35916-S	5/17/2000	CHROMIUM	17	0.26	UG/G
SC-35917-S	5/17/2000	CHROMIUM	18.9	0.25	UG/G
SC-35918-S	5/17/2000	CHROMIUM	16.1	0.26	UG/G
SC-35919-C	5/17/2000	CHROMIUM	17.8	0.26	UG/G
SC-35920-S	5/17/2000	CHROMIUM	19.4	0.26	UG/G
SC-35921-S	5/17/2000	CHROMIUM	17.8	0 27	UG/G
SC-35922-S	5/17/2000	CHROMIUM	17.4	0.27	UG/G
SC-35925-S	5/17/2000	CHROMIUM	16.2	0.26	UG/G
SC-35926-S	5/17/2000	CHROMIUM	19.5	0.27	UG/G
SC-35929-C	5/17/2000	CHROMIUM	17.7	0.27	UG/G
SC-36001-C	5/17/2000	CHROMIUM	19.3	0.27	UG/G
SC-36001-S	5/17/2000	CHROMIUM	16.1	0.28	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35821-S	9/19/2000	CHRYSENE	0	0 018	mg/kg
SC-35822-S	9/19/2000	CHRYSENE	0	0 017	mg/kg
SC-35823-C	9/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35823-S	9/17/2000	CHRYSENE	0	0 017	mg/kg
SC-35824-S	9/9/2000	CHRYSENE	0	0.02	mg/kg
SC-35827-S	9/19/2000	CHRYSENE	0 022	0 017	mg/kg
SC-35828-S	9/19/2000	CHRYSENE	0.048	0 016	mg/kg
SC-35829-S	9/14/2000	CHRYSENE	0	0 016	mg/kg
SC-35831-S	9/7/2000	CHRYSENE	0.25	0 015	mg/kg
SC-35832-S	9/8/2000	CHRYSENE	0	0 016	mg/kg
SC-35834-C	9/8/2000	CHRYSENE	0 03	0 016	mg/kg
SC-35902-S	5/17/2000	CHRYSENE	0	0.018	mg/kg
SC-35903-C	5/17/2000	CHRYSENE	0	0.018	mg/kg
SC-35904-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35906-S	5/17/2000	CHRYSENE	0	0 017	mg/kg
SC-35907-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-35908-C	5/17/2000	CHRYSENE	0	0 017	mg/kg
SC-35909-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-35910-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-35912-C	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35912-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35913-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-35914-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35915-C	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35916-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35917-S	5/17/2000	CHRYSENE	0	0 017	mg/kg
SC-35918-S	5/17/2000	CHRYSENE	0	0 017	mg/kg
SC-35919-C	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35920-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35921-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35922-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-35925-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35926-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-35929-C	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36001-C	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36001-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-36001-U	5/13/2000	CHRYSENE	0	0 018	mg/kg
SC-36002-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36003-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36004-S	5/17/2000	CHRYSENE	0	0 02	mg/kg
SC-36005-S	5/17/2000	CHRYSENE	0	0 02	mg/kg
SC-36007-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36008-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-36009-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36011-S	5/17/2000	CHRYSENE	0	0 019	mg/kg
SC-36012-S	5/17/2000	CHRYSENE	0	0 02	mg/kg
SC-36013-S	4/20/2000	CHRYSENE	0	0 12	mg/kg
SC-36015-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36016-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36019-S	5/17/2000	CHRYSENE	0	0 018	mg/kg
SC-36020-S	4/20/2000	CHRYSENE	0	0 12	mg/kg
SC-36022-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36103-S	4/29/2000	CHRYSENE	0	0 11	mg/kg
SC-36104-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36105-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36106-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36107-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36108-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36110-S	4/29/2000	CHRYSENE	0	0 12	mg/kg
SC-36111-S	4/29/2000	CHRYSENE	0	0 12	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36112-S	4/29/2000	CHRYSENE	0	0.12	mg/kg
SC-36117-S	4/29/2000	CHRYSENE	0	0.12	mg/kg
SC-36118-S	4/29/2000	CHRYSENE	0	0.13	mg/kg
SC-36119-S	4/29/2000	CHRYSENE	0	0.12	mg/kg
SC-36201-S	5/17/2000	CHRYSENE	0	0.019	mg/kg
SC-36204-S	4/29/2000	CHRYSENE	0	0.12	mg/kg
SC-36205-S	4/29/2000	CHRYSENE	0	0.12	mg/kg
SC-36207-S	5/17/2000	CHRYSENE	0	0.017	mg/kg
SC-36210-S	4/29/2000	CHRYSENE	0	0.12	mg/kg
SC-36426-C	9/3/1998	CHRYSENE	0	0.12	mg/kg
SC-36427-C	9/3/1998	CHRYSENE	0	0.12	mg/kg
SC-36429-C	9/3/1998	CHRYSENE	0	0.13	mg/kg
SC-36430-S	9/3/1998	CHRYSENE	0	0.13	mg/kg
SC-36431-C	9/3/1998	CHRYSENE	0	0.12	mg/kg
SC-36432-C	9/3/1998	CHRYSENE	0	0.12	mg/kg
SC-36433-C	9/3/1998	CHRYSENE	0	0.11	mg/kg
SC-36434-C	9/3/1998	CHRYSENE	0	10	mg/kg
SC-36434-C-RS01	9/11/1998	CHRYSENE	0	0.12	mg/kg
SC-36434-C-RS02	9/11/1998	CHRYSENE	0	0.11	mg/kg
SC-36434-C-RS03	9/11/1998	CHRYSENE	0	0.12	mg/kg
SC-36434-C-RS04	9/11/1998	CHRYSENE	0	0.12	mg/kg
SC-36434-C-RS05	9/11/1998	CHRYSENE	0	0.11	mg/kg
SC-36435-C	9/3/1998	CHRYSENE	0	0.12	mg/kg
SC-36505-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36506-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36507-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36509-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36510-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36511-S	8/17/1998	CHRYSENE	0.2	0.12	mg/kg
SC-36512-S	8/17/1998	CHRYSENE	0	0.15	mg/kg
SC-36515-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36516-S	8/17/1998	CHRYSENE	0	0.13	mg/kg
SC-36517-S	8/17/1998	CHRYSENE	0	0.58	mg/kg
SC-36518-S	8/17/1998	CHRYSENE	0.21	0.13	mg/kg
SC-36519-S	8/17/1998	CHRYSENE	0	0.11	mg/kg
SC-36603-S	8/31/1998	CHRYSENE	0	0.13	mg/kg
SC-36604-S	8/31/1998	CHRYSENE	0	0 12	mg/kg
SC-36605-S	8/31/1998	CHRYSENE	0	0.13	mg/kg
SC-36606-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36607-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36608-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36614-S	8/31/1998	CHRYSENE	0	0.13	mg/kg
SC-36615-S	8/31/1998	CHRYSENE	0	0.12	mg/kg
SC-36616-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36701-S	8/17/1998	CHRYSENE	0	0.13	mg/kg
SC-36702-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36703-S	8/6/1998	CHRYSENE	0	0.12	mg/kg
SC-36705-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36706-S	8/17/1998	CHRYSENE	0	0.11	mg/kg
SC-36707-S	8/17/1998	CHRYSENE	0	0.11	mg/kg
SC-36711-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-36715-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-38909-S	8/14/1998	CHRYSENE	0	0.12	mg/kg
SC-38911-S	8/14/1998	CHRYSENE	0	0.12	mg/kg
SC-38912-S	8/28/1998	CHRYSENE	0	0.11	mg/kg
SC-38915-S	8/28/1998	CHRYSENE	0	0.11	mg/kg
SC-38916-S	8/17/1998	CHRYSENE	0	0 11	mg/kg
SC-38919-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-38920-S	8/17/1998	CHRYSENE	0	0.12	mg/kg
SC-35704-S	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35708-S	9/21/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35709-S	9/21/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35713-S	9/21/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35714-S	9/21/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35718-S	9/20/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35720-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35721-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35722-S	9/20/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-35724-C	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-35725-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-35726-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35727-C	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35728-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35729-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35730-C	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35731-C	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35732-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35734-C	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-35801-S	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35802-S	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0 019	mg/kg
SC-35803-C	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35803-S	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35804-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35805-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35806-S	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35807-S	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35808-S	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35809-S	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35810-C	9/13/2000	INDENO(1,2,3-CD)PYRENE	0	0 019	mg/kg
SC-35810-S	9/14/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35811-S	9/13/2000	INDENO(1,2,3-CD)PYRENE	0	0 019	mg/kg
SC-35812-S	9/13/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35813-S	9/9/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35814-S	9/20/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35815-S	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35816-S	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35817-S	9/13/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35818-S	9/9/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35819-S	9/9/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35820-C	9/9/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35821-C	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35821-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35822-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35823-C	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35823-S	9/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35824-S	9/9/2000	INDENO(1,2,3-CD)PYRENE	0	0 02	mg/kg
SC-35827-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35828-S	9/19/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35829-S	9/14/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35831-S	9/7/2000	INDENO(1,2,3-CD)PYRENE	0	0 015	mg/kg
SC-35832-S	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35834-C	9/8/2000	INDENO(1,2,3-CD)PYRENE	0	0 016	mg/kg
SC-35902-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35903-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35904-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 018	mg/kg
SC-35906-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35907-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 019	mg/kg
SC-35908-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 017	mg/kg
SC-35909-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 019	mg/kg
SC-35910-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0 019	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35912-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35912-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35913-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.019	mg/kg
SC-35914-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35915-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35916-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35917-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-35918-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-35919-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35920-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35921-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35922-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.019	mg/kg
SC-35925-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35926-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-35929-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36001-C	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36001-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.019	mg/kg
SC-36001-U	5/13/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36002-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36003-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36004-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.02	mg/kg
SC-36005-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.02	mg/kg
SC-36007-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36008-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.019	mg/kg
SC-36009-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36011-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.019	mg/kg
SC-36012-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.02	mg/kg
SC-36013-S	4/20/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36015-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36016-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36019-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.018	mg/kg
SC-36020-S	4/20/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36022-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36103-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.032	mg/kg
SC-36104-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36105-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36106-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36107-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36108-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36110-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36111-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36112-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36117-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36118-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.036	mg/kg
SC-36119-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36201-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.019	mg/kg
SC-36204-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-36205-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36207-S	5/17/2000	INDENO(1,2,3-CD)PYRENE	0	0.017	mg/kg
SC-36210-S	4/29/2000	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36426-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36427-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36429-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.037	mg/kg
SC-36430-S	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.036	mg/kg
SC-36431-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36432-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36433-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0.033	mg/kg
SC-36434-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	3	mg/kg
SC-36434-C-RS01	9/11/1998	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36434-C-RS02	9/11/1998	INDENO(1,2,3-CD)PYRENE	0	0.033	mg/kg

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36434-C-RS03	9/11/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-36434-C-RS04	9/11/1998	INDENO(1,2,3-CD)PYRENE	0	0 036	mg/kg
SC-36434-C-RS05	9/11/1998	INDENO(1,2,3-CD)PYRENE	0	0 032	mg/kg
SC-36435-C	9/3/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-36505-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 035	mg/kg
SC-36506-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0 075	0 035	mg/kg
SC-36507-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 036	mg/kg
SC-36509-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0 047	0 035	mg/kg
SC-36510-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 035	mg/kg
SC-36511-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0.15	0 035	mg/kg
SC-36512-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 045	mg/kg
SC-36515-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 035	mg/kg
SC-36516-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0.067	0 037	mg/kg
SC-36517-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 17	mg/kg
SC-36518-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0 16	0 037	mg/kg
SC-36519-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 032	mg/kg
SC-36603-S	8/31/1998	INDENO(1,2,3-CD)PYRENE	0	0 038	mg/kg
SC-36604-S	8/31/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-36605-S	8/31/1998	INDENO(1,2,3-CD)PYRENE	0	0 037	mg/kg
SC-36606-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 035	mg/kg
SC-36607-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 036	mg/kg
SC-36608-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0.035	mg/kg
SC-36614-S	8/31/1998	INDENO(1,2,3-CD)PYRENE	0	0 036	mg/kg
SC-36615-S	8/31/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-36616-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 035	mg/kg
SC-36701-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 038	mg/kg
SC-36702-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0 047	0 036	mg/kg
SC-36703-S	8/6/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-36705-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-36706-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 031	mg/kg
SC-36707-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 031	mg/kg
SC-36711-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0 04	0 033	mg/kg
SC-36715-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-38909-S	8/14/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-38911-S	8/14/1998	INDENO(1,2,3-CD)PYRENE	0	0.034	mg/kg
SC-38912-S	8/28/1998	INDENO(1,2,3-CD)PYRENE	0	0 033	mg/kg
SC-38915-S	8/28/1998	INDENO(1,2,3-CD)PYRENE	0	0 033	mg/kg
SC-38916-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 031	mg/kg
SC-38919-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-38920-S	8/17/1998	INDENO(1,2,3-CD)PYRENE	0	0 034	mg/kg
SC-35704-S	9/8/2000	LEAD	19 7	0 44	UG/G
SC-35708-S	9/21/2000	LEAD	12	0 44	UG/G
SC-35709-S	9/21/2000	LEAD	8.3	0 46	UG/G
SC-35713-S	9/21/2000	LEAD	8 5	0 44	UG/G
SC-35714-S	9/21/2000	LEAD	9.8	0 45	UG/G
SC-35718-S	9/20/2000	LEAD	10.2	0 42	UG/G
SC-35720-S	9/7/2000	LEAD	12 1	0 41	UG/G
SC-35721-S	9/7/2000	LEAD	23 2	0 43	UG/G
SC-35722-S	9/20/2000	LEAD	9 3	0 44	UG/G
SC-35724-C	9/7/2000	LEAD	22 3	0 43	UG/G
SC-35725-S	9/7/2000	LEAD	29 4	0 44	UG/G
SC-35726-S	9/19/2000	LEAD	10 7	0 45	UG/G
SC-35727-C	9/7/2000	LEAD	22.9	0 42	UG/G
SC-35728-S	9/7/2000	LEAD	23.9	0 44	UG/G
SC-35729-S	9/7/2000	LEAD	17 4	0 44	UG/G
SC-35730-C	9/7/2000	LEAD	18 1	0 43	UG/G
SC-35731-C	9/7/2000	LEAD	14 1	0.44	UG/G
SC-35732-S	9/7/2000	LEAD	11 1	0 41	UG/G
SC-35734-C	9/7/2000	LEAD	19.5	0 43	UG/G
SC-35801-S	9/8/2000	LEAD	11 8	0 46	UG/G

.APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35802-S	9 8 2000	LEAD	9.8	0.47	UG/G
SC-35803-C	9/17/2000	LEAD	10.8	0.45	UG/G
SC-35803-S	9/17/2000	LEAD	7	0 45	UG/G
SC-35804-S	9/19/2000	LEAD	11.4	0 46	UG/G
SC-35805-S	9/19/2000	LEAD	14.1	0 45	UG/G
SC-35806-S	9/8/2000	LEAD	9.6	0 46	UG/G
SC-35807-S	9/8/2000	LEAD	19 6	0.43	UG/G
SC-35808-S	9/17/2000	LEAD	14 4	0.45	UG/G
SC-35809-S	9/17/2000	LEAD	9.3	0.46	UG/G
SC-35810-C	9/13/2000	LEAD	10.2	1.9	UG/G
SC-35810-S	9/14/2000	LEAD	9 5	0 44	UG/G
SC-35811-S	9/13/2000	LEAD	8 4	1.9	UG/G
SC-35812-S	9/13/2000	LEAD	11.5	1.9	UG/G
SC-35813-S	9.9 2000	LEAD	19.4	0 44	UG/G
SC-35814-S	9/20/2000	LEAD	13	0.44	UG/G
SC-35815-S	9/17/2000	LEAD	10 4	0 46	UG/G
SC-35816-S	9/17/2000	LEAD	14	0.45	UG/G
SC-35817-S	9/13/2000	LEAD	8.7	1.9	UG/G
SC-35818-S	9/9/2000	LEAD	24.6	0.45	UG/G
SC-35819-S	9/9/2000	LEAD	13.3	0 43	UG/G
SC-35820-C	9/9/2000	LEAD	18 9	0.44	UG/G
SC-35821-C	9/19/2000	LEAD	14.5	0 44	UG/G
SC-35821-S	9/19/2000	LEAD	11 4	0.45	UG/G
SC-35822-S	9/19/2000	LEAD	10 5	0 43	UG/G
SC-35823-C	9/17/2000	LEAD	11.4	0.44	UG/G
SC-35823-S	9/17/2000	LEAD	11.2	0.44	UG/G
SC-35824-S	9/9/2000	LEAD	12 9	0.51	UG/G
SC-35827-S	9/19/2000	LEAD	17.8	0.44	UG/G
SC-35828-S	9/19/2000	LEAD	24.4	0 41	UG/G
SC-35829-S	9/14/2000	LEAD	9 5	0.41	UG/G
SC-35831-S	9/7/2000	LEAD	17.7	0 39	UG/G
SC-35832-S	9/8/2000	LEAD	21 9	0.41	UG/G
SC-35834-C	9/8/2000	LEAD	20 6	0.41	UG/G
SC-35902-S	5/17/2000	LEAD	19.5	0 65	UG/G
SC-35903-C	5/17/2000	LEAD	17.9	0.68	UG/G
SC-35904-S	5/17/2000	LEAD	17 7	0.69	UG/G
SC-35906-S	5/17/2000	LEAD	8 4	0.64	UG/G
SC-35907-S	5/17/2000	LEAD	13 7	0.72	UG/G
SC-35908-C	5/17/2000	LEAD	26.7	0.65	UG/G
SC-35909-S	5/17/2000	LEAD	10.3	0 73	UG/G
SC-35910-S	5/17/2000	LEAD	22.6	0 72	UG/G
SC-35912-C	5/17/2000	LEAD	39.8	0.68	UG/G
SC-35912-S	5/17/2000	LEAD	23 1	0 67	UG/G
SC-35913-S	5/17/2000	LEAD	10.5	0 71	UG/G
SC-35914-S	5/17/2000	LEAD	20.4	0.68	UG/G
SC-35915-C	5/17/2000	LEAD	21.9	0.68	UG/G
SC-35916-S	5/17/2000	LEAD	12.2	0.67	UG/G
SC-35917-S	5/17/2000	LEAD	18	0.64	UG/G
SC-35918-S	5/17/2000	LEAD	9.8	0 65	UG/G
SC-35919-C	5/17/2000	LEAD	15.4	0.66	UG/G
SC-35920-S	5/17/2000	LEAD	19.7	0 67	UG/G
SC-35921-S	5/17/2000	LEAD	13 3	0 68	UG/G
SC-35922-S	5/17/2000	LEAD	11.3	0.7	UG/G
SC-35925-S	5/17/2000	LEAD	11.2	0.66	UG/G
SC-35926-S	5/17/2000	LEAD	12	0.69	UG/G
SC-35929-C	5/17/2000	LEAD	13.2	0 59	UG/G
SC-36001-C	5/17/2000	LEAD	14.2	0.68	UG/G
SC-36001-S	5/17/2000	LEAD	13 4	0 71	UG/G
SC-36001-U	5/13/2000	LEAD	6 6	0 68	UG/G
SC-36002-S	5/17/2000	LEAD	12.1	0.69	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36003-S	5/17/2000	LEAD	14 8	0 68	UG/G
SC-36004-S	5/17/2000	LEAD	10 8	0 73	UG/G
SC-36005-S	5/17/2000	LEAD	7 9	0 74	UG/G
SC-36007-S	5/17/2000	LEAD	15 1	0 66	UG/G
SC-36008-S	5/17/2000	LEAD	10 8	0 69	UG/G
SC-36009-S	5/17/2000	LEAD	32 6	0 69	UG/G
SC-36011-S	5/17/2000	LEAD	14 7	0 7	UG/G
SC-36012-S	5/17/2000	LEAD	17 4	0 74	UG/G
SC-36013-S	4/20/2000	LEAD	16 4	0 54	UG/G
SC-36015-S	5/17/2000	LEAD	16 7	0 66	UG/G
SC-36016-S	5/17/2000	LEAD	20 2	0 67	UG/G
SC-36019-S	5/17/2000	LEAD	10 2	0 65	UG/G
SC-36020-S	4/20/2000	LEAD	21 7	0 49	UG/G
SC-36201-S	5/17/2000	LEAD	15 6	0 71	UG/G
SC-36207-S	5/17/2000	LEAD	63 4	0 65	UG/G
SC-36703-S	8/6/1998	LEAD	16 9	8 7	UG/G
SC-38912-S	8/28/1998	LEAD	16 7	0 37	UG/G
SC-38915-S	8/28/1998	LEAD	16 4	0 36	UG/G
SC-35704-S	9/8/2000	RADIUM-226	0 66	0 28	PCI/G
SC-35708-S	9/21/2000	RADIUM-226	0 49	0 22	PCI/G
SC-35709-S	9/21/2000	RADIUM-226	1 03	0 25	PCI/G
SC-35713-S	9/21/2000	RADIUM-226	0 39	0 24	PCI/G
SC-35714-S	9/21/2000	RADIUM-226	0 47	0 23	PCI/G
SC-35718-S	9/20/2000	RADIUM-226	0 44	0 44	PCI/G
SC-35720-S	9/7/2000	RADIUM-226	0 44	0 25	PCI/G
SC-35721-S	9/7/2000	RADIUM-226	0 69	0 23	PCI/G
SC-35722-S	9/20/2000	RADIUM-226	0 53	0 22	PCI/G
SC-35724-C	9/7/2000	RADIUM-226	0 24	0 48	PCI/G
SC-35725-S	9/7/2000	RADIUM-226	0 5	0 24	PCI/G
SC-35726-S	9/19/2000	RADIUM-226	0 47	0 29	PCI/G
SC-35727-C	9/7/2000	RADIUM-226	0 65	0 25	PCI/G
SC-35728-S	9/7/2000	RADIUM-226	0 61	0 23	PCI/G
SC-35729-S	9/7/2000	RADIUM-226	0 72	0 28	PCI/G
SC-35730-C	9/7/2000	RADIUM-226	0 49	0 24	PCI/G
SC-35731-C	9/7/2000	RADIUM-226	0 53	0 26	PCI/G
SC-35732-S	9/7/2000	RADIUM-226	0 72	0 22	PCI/G
SC-35734-C	9/7/2000	RADIUM-226	0 64	0 23	PCI/G
SC-35801-S	9/8/2000	RADIUM-226	4 37	0 33	PCI/G
SC-35801-S-RS	9/19/2000	RADIUM-226	0 86	0 23	PCI/G
SC-35801-U	9/22/2000	RADIUM-226	0 71	0 28	PCI/G
SC-35802-S	9/8/2000	RADIUM-226	1 37	0 26	PCI/G
SC-35802-U	9/22/2000	RADIUM-226	0 93	0 24	PCI/G
SC-35803-C	9/17/2000	RADIUM-226	0 225	0 45	PCI/G
SC-35803-S	9/17/2000	RADIUM-226	0 54	0 21	PCI/G
SC-35804-S	9/19/2000	RADIUM-226	0 48	0 25	PCI/G
SC-35805-S	9/19/2000	RADIUM-226	0 61	0 24	PCI/G
SC-35806-S	9/8/2000	RADIUM-226	0 79	0 24	PCI/G
SC-35807-S	9/8/2000	RADIUM-226	0 72	0.25	PCI/G
SC-35808-S	9/17/2000	RADIUM-226	0 58	0.28	PCI/G
SC-35809-S	9/17/2000	RADIUM-226	0 5	0 21	PCI/G
SC-35810-C	9/13/2000	RADIUM-226	0 52	0 25	PCI/G
SC-35810-S	9/14/2000	RADIUM-226	0 48	0 23	PCI/G
SC-35811-S	9/13/2000	RADIUM-226	0 46	0 23	PCI/G
SC-35812-S	9/13/2000	RADIUM-226	0 44	0 26	PCI/G
SC-35813-S	9/9/2000	RADIUM-226	0 68	0 24	PCI/G
SC-35814-S	9/20/2000	RADIUM-226	0 47	0 23	PCI/G
SC-35815-S	9/17/2000	RADIUM-226	0 6	0 25	PCI/G
SC-35816-S	9/17/2000	RADIUM-226	0 39	0 24	PCI/G
SC-35817-S	9/13/2000	RADIUM-226	0 5	0 21	PCI/G
SC-35818-S	9/9/2000	RADIUM-226	0 78	0 27	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35819-S	9/9/2000	RADIUM-226	1.27	0.33	PCI/G
SC-35820-C	9/9/2000	RADIUM-226	3.89	0.34	PCI/G
SC-35821-C	9/19/2000	RADIUM-226	0.5	0.24	PCI/G
SC-35821-S	9/19/2000	RADIUM-226	0.48	0.26	PCI/G
SC-35822-S	9/19/2000	RADIUM-226	0.225	0.45	PCI/G
SC-35823-C	9/17/2000	RADIUM-226	0.62	0.22	PCI/G
SC-35823-S	9/17/2000	RADIUM-226	0.43	0.26	PCI/G
SC-35824-S	9/9/2000	RADIUM-226	0.7	0.27	PCI/G
SC-35827-S	9/19/2000	RADIUM-226	0.71	0.23	PCI/G
SC-35828-S	9/19/2000	RADIUM-226	0.36	0.24	PCI/G
SC-35829-S	9/14/2000	RADIUM-226	0.51	0.25	PCI/G
SC-35831-S	9/7/2000	RADIUM-226	0.92	0.26	PCI/G
SC-35832-S	9/8/2000	RADIUM-226	4.09	0.36	PCI/G
SC-35834-C	9/8/2000	RADIUM-226	0.69	0.27	PCI/G
SC-35902-S	5/17/2000	RADIUM-226	0.61	0.28	PCI/G
SC-35903-C	5/17/2000	RADIUM-226	0.58	0.28	PCI/G
SC-35904-S	5/17/2000	RADIUM-226	0.93	0.28	PCI/G
SC-35906-S	5/17/2000	RADIUM-226	0.65	0.27	PCI/G
SC-35907-S	5/17/2000	RADIUM-226	0.57	0.26	PCI/G
SC-35908-C	5/17/2000	RADIUM-226	0.63	0.25	PCI/G
SC-35909-S	5/17/2000	RADIUM-226	0.27	0.54	PCI/G
SC-35910-S	5/17/2000	RADIUM-226	0.79	0.26	PCI/G
SC-35912-C	5/17/2000	RADIUM-226	0.255	0.51	PCI/G
SC-35912-S	5/17/2000	RADIUM-226	0.56	0.26	PCI/G
SC-35913-S	5/17/2000	RADIUM-226	0.68	0.31	PCI/G
SC-35914-S	5/17/2000	RADIUM-226	0.96	0.25	PCI/G
SC-35915-C	5/17/2000	RADIUM-226	0.9	0.22	PCI/G
SC-35916-S	5/17/2000	RADIUM-226	0.52	0.25	PCI/G
SC-35917-S	5/17/2000	RADIUM-226	0.72	0.28	PCI/G
SC-35918-S	5/17/2000	RADIUM-226	0.96	0.26	PCI/G
SC-35919-C	5/17/2000	RADIUM-226	0.75	0.27	PCI/G
SC-35920-S	5/17/2000	RADIUM-226	0.51	0.23	PCI/G
SC-35921-S	5/17/2000	RADIUM-226	0.255	0.51	PCI/G
SC-35922-S	5/17/2000	RADIUM-226	0.53	0.22	PCI/G
SC-35925-S	5/17/2000	RADIUM-226	0.62	0.25	PCI/G
SC-35926-S	5/17/2000	RADIUM-226	0.7	0.23	PCI/G
SC-35929-C	5/17/2000	RADIUM-226	0.65	0.26	PCI/G
SC-36001-C	5/17/2000	RADIUM-226	0.59	0.21	PCI/G
SC-36001-S	5/17/2000	RADIUM-226	0.48	0.22	PCI/G
SC-36001-U	5/13/2000	RADIUM-226	0.44	0.24	PCI/G
SC-36002-S	5/17/2000	RADIUM-226	0.45	0.23	PCI/G
SC-36003-S	5/17/2000	RADIUM-226	1.02	0.3	PCI/G
SC-36004-S	5/17/2000	RADIUM-226	0.51	0.26	PCI/G
SC-36005-S	5/17/2000	RADIUM-226	0.71	0.25	PCI/G
SC-36006-S	4/20/2000	RADIUM-226	0.91	0.27	PCI/G
SC-36007-S	5/17/2000	RADIUM-226	0.67	0.24	PCI/G
SC-36008-S	5/17/2000	RADIUM-226	0.23	0.46	PCI/G
SC-36009-S	5/17/2000	RADIUM-226	0.69	0.25	PCI/G
SC-36010-S	4/20/2000	RADIUM-226	0.61	0.25	PCI/G
SC-36011-S	5/17/2000	RADIUM-226	0.225	0.45	PCI/G
SC-36012-S	5/17/2000	RADIUM-226	0.42	0.25	PCI/G
SC-36012-S-HS01	5/24/2000	RADIUM-226	24.2	0.72	PCI/G
SC-36012-S-RS01	5/25/2000	RADIUM-226	0.75	0.25	PCI/G
SC-36013-S	4/20/2000	RADIUM-226	1.16	0.2	PCI/G
SC-36013-S-HS01	5/24/2000	RADIUM-226	8.1	0.39	PCI/G
SC-36013-S-HS02	5/24/2000	RADIUM-226	0.62	0.2	PCI/G
SC-36013-S-RS01	5/25/2000	RADIUM-226	0.61	0.22	PCI/G
SC-36013-S-RS02	5/25/2000	RADIUM-226	0.7	0.26	PCI/G
SC-36014-S	4/20/2000	RADIUM-226	0.97	0.25	PCI/G
SC-36015-S	5/17/2000	RADIUM-226	0.235	0.47	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36016-S	5/17/2000	RADIUM-226	0 55	0 23	PCI/G
SC-36016-S-HS01	5/24/2000	RADIUM-226	0 58	0 28	PCI/G
SC-36016-S-RS01	5/25/2000	RADIUM-226	0 67	0 26	PCI/G
SC-36017-S	4/20/2000	RADIUM-226	0 91	0 25	PCI/G
SC-36018-S	4/20/2000	RADIUM-226	0 79	0 25	PCI/G
SC-36019-S	5/17/2000	RADIUM-226	0 42	0 21	PCI/G
SC-36020-S	4/20/2000	RADIUM-226	1 47	0 25	PCI/G
SC-36021-S	4/20/2000	RADIUM-226	0 91	0 2	PCI/G
SC-36022-S	4/29/2000	RADIUM-226	0 81	0 26	PCI/G
SC-36101-S	4/20/2000	RADIUM-226	0 69	0 27	PCI/G
SC-36102-S	4/20 2000	RADIUM-226	0 81	0 26	PCI/G
SC-36103-S	4/29/2000	RADIUM-226	0 72	0 26	PCI/G
SC-36104-S	4/29/2000	RADIUM-226	0 63	0 23	PCI/G
SC-36105-S	4/29/2000	RADIUM-226	0 7	0 25	PCI/G
SC-36106-S	4/29/2000	RADIUM-226	0 95	0 31	PCI/G
SC-36107-S	4/29/2000	RADIUM-226	0 62	0 24	PCI/G
SC-36108-S	4/29/2000	RADIUM-226	0 255	0 51	PCI/G
SC-36109-S	4/10/2000	RADIUM-226	0 71	0 26	PCI/G
SC-36110-S	4/29/2000	RADIUM-226	0 73	0 29	PCI/G
SC-36111-S	4/29/2000	RADIUM-226	0 57	0 21	PCI/G
SC-36112-S	4/29 2000	RADIUM-226	0 67	0 27	PCI/G
SC-36113-S	4/10/2000	RADIUM-226	0 56	0 31	PCI/G
SC-36114-S	4/10 2000	RADIUM-226	0 5	0 22	PCI/G
SC-36115-S	4/10/2000	RADIUM-226	0 6	0 25	PCI/G
SC-36116-S	4/10/2000	RADIUM-226	0 56	0 24	PCI/G
SC-36117-S	4/29/2000	RADIUM-226	0 77	0 25	PCI/G
SC-36118-S	4/29 2000	RADIUM-226	0 69	0 25	PCI/G
SC-36119-S	4/29/2000	RADIUM-226	0 65	0 23	PCI/G
SC-36120-S	4/10 2000	RADIUM-226	0 31	0 26	PCI/G
SC-36121-S	4/10/2000	RADIUM-226	0 47	0 23	PCI/G
SC-36122-S	4/10/2000	RADIUM-226	0 4	0 27	PCI/G
SC-36123-S	4/10/2000	RADIUM-226	0 75	0 29	PCI/G
SC-36124-S	4/10 2000	RADIUM-226	0 56	0 31	PCI/G
SC-36125-S	4/10 2000	RADIUM-226	0 71	0 24	PCI/G
SC-36126-S	4/10/2000	RADIUM-226	0 77	0 21	PCI/G
SC-36201-S	5/17/2000	RADIUM-226	0 67	0 24	PCI/G
SC-36202-S	4/20 2000	RADIUM-226	0 9	0 23	PCI/G
SC-36203-S	4/20 2000	RADIUM-226	0 83	0 27	PCI/G
SC-36204-S	4/29 2000	RADIUM-226	0 79	0 23	PCI/G
SC-36205-S	4/29/2000	RADIUM-226	0 69	0 24	PCI/G
SC-36206-S	4/10/2000	RADIUM-226	0 54	0 21	PCI/G
SC-36207-S	5/17 2000	RADIUM-226	0 63	0 28	PCI/G
SC-36208-S	4/20/2000	RADIUM-226	0 82	0 24	PCI/G
SC-36209-S	4/29/2000	RADIUM-226	0 69	0 26	PCI/G
SC-36210-S	4/29/2000	RADIUM-226	0 7	0 25	PCI/G
SC-36211-S	4/10/2000	RADIUM-226	0 49	0 26	PCI/G
SC-36212-S	4/10/2000	RADIUM-226	0 59	0 26	PCI/G
SC-36215-S	4/29/2000	RADIUM-226	0 79	0 27	PCI/G
SC-36216-S	4/29/2000	RADIUM-226	0 66	0 25	PCI/G
SC-36217-S	4/10 2000	RADIUM-226	0 68	0 23	PCI/G
SC-36218-S	4/10/2000	RADIUM-226	0 235	0 47	PCI/G
SC-36220-C	4/29 2000	RADIUM-226	0 68	0 24	PCI/G
SC-36222-C	4/10 2000	RADIUM-226	0 76	0 26	PCI/G
SC-36223-S	4/12/2000	RADIUM-226	0 54	0 23	PCI/G
SC-36301-S	4/10 2000	RADIUM-226	0 65	0 24	PCI/G
SC 36302-S	4/10/2000	RADIUM-226	0 47	0 29	PCI/G
SC-36303-S	4/10/2000	RADIUM-226	0 54	0 24	PCI/G
SC-36304-S	4/10/2000	RADIUM-226	0 54	0 25	PCI/G
SC-36305-S	4/10/2000	RADIUM-226	0 235	0 47	PCI/G
SC-36306-S	4/10/2000	RADIUM-226	0 26	0 52	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36307-S	4/10/2000	RADIUM-226	0.63	0.23	PCI/G
SC-36308-S	4/10/2000	RADIUM-226	0.52	0.22	PCI/G
SC-36309-S	4/10/2000	RADIUM-226	0 19	0.38	PCI/G
SC-36310-S	4/10 2000	RADIUM-226	0 48	0.22	PCI/G
SC-36311-S	4/10/2000	RADIUM-226	0.55	0.25	PCI/G
SC-36312-S	4/10 2000	RADIUM-226	0.54	0.24	PCI/G
SC-36313-S	4/10 2000	RADIUM-226	0.235	0 47	PCI/G
SC-36314-S	4/10 2000	RADIUM-226	0.47	0.23	PCI/G
SC-36315-S	4/10/2000	RADIUM-226	0.68	0.18	PCI/G
SC-36316-S	4/10/2000	RADIUM-226	0.87	0.24	PCI/G
SC-36317-S	4/10/2000	RADIUM-226	0.21	0 42	PCI/G
SC-36318-S	4/10/2000	RADIUM-226	0.55	0.24	PCI/G
SC-36321-S	4/12/2000	RADIUM-226	0.78	0 23	PCI/G
SC-36322-S	4/10/2000	RADIUM-226	0.215	0 43	PCI/G
SC-36325-C	4/12/2000	RADIUM-226	0.79	0.28	PCI/G
SC-36401-S	4/10.2000	RADIUM-226	0 41	0 21	PCI/G
SC-36402-S	4/10/2000	RADIUM-226	0.23	0 46	PCI/G
SC-36403-S	4/10 2000	RADIUM-226	0.46	0.24	PCI/G
SC-36404-S	4/10/2000	RADIUM-226	0.24	0.48	PCI/G
SC-36405-S	4/10/2000	RADIUM-226	0 47	0.23	PCI/G
SC-36406-S	4/10/2000	RADIUM-226	0.48	0.29	PCI/G
SC-36407-S	4/10/2000	RADIUM-226	0 44	0.23	PCI/G
SC-36409-S	4/10 2000	RADIUM-226	0.63	0.24	PCI/G
SC-36410-S	4/10/2000	RADIUM-226	0 49	0.26	PCI/G
SC-36411-S	4/10/2000	RADIUM-226	0.225	0 45	PCI/G
SC-36412-S	4/10/2000	RADIUM-226	0 51	0.25	PCI/G
SC-36413-S	4/10 2000	RADIUM-226	0 67	0.24	PCI/G
SC-36414-S	4/10/2000	RADIUM-226	0 42	0.25	PCI/G
SC-36415-S	4/10 2000	RADIUM-226	0.6	0.22	PCI/G
SC-36416-S	4/10/2000	RADIUM-226	0 43	0.29	PCI/G
SC-36417-S	4/10 2000	RADIUM-226	0.245	0 49	PCI/G
SC-36418-S	4/10 2000	RADIUM-226	0.56	0 26	PCI/G
SC-36419-S	4/10 2000	RADIUM-226	0.51	0.25	PCI/G
SC-36426-C	9/3 1998	RADIUM-226	0.94	0 38	PCI/G
SC-36427-C	9/3/1998	RADIUM-226	0.75	0 33	PCI/G
SC-36428-C	9/3 1998	RADIUM-226	1.04	0.26	PCI/G
SC-36429-C	9/3/1998	RADIUM-226	1	0 3	PCI/G
SC-36430-S	9/3/1998	RADIUM-226	1.3	0.21	PCI/G
SC-36431-C	9/3/1996	RADIUM-226	1 42	0.33	PCI/G
SC-36432-C	9/3 1998	RADIUM-226	1.57	0 21	PCI/G
SC-36433-C	9/3 1998	RADIUM-226	1.09	0 36	PCI/G
SC-36434-C	9/3 1998	RADIUM-226	1.97	0 26	PCI/G
SC-36435-C	9/3 1998	RADIUM-226	1.62	0 35	PCI/G
SC-36501-S	8/14/1998	RADIUM-226	1.39	0.32	PCI/G
SC-36502-S	8/14 1998	RADIUM-226	1.41	0.23	PCI/G
SC-36503-S	8/28/1998	RADIUM-226	1 04	0.256	PCI/G
SC-36504-S	8/28/1998	RADIUM-226	0.885	0.417	PCI/G
SC-36505-S	8/17/1998	RADIUM-226	1.24	0 42	PCI/G
SC-36506-S	8/17/1998	RADIUM-226	1.32	0.24	PCI/G
SC-36507-S	8/17/1998	RADIUM-226	1.32	0.44	PCI/G
SC-36508-S	8/28 1998	RADIUM-226	1.2	0.357	PCI/G
SC-36509-S	8/17 1998	RADIUM-226	1 2	0 28	PCI/G
SC-36510-S	8/17 1998	RADIUM-226	1.21	0.38	PCI/G
SC-36511-S	8/17 1998	RADIUM-226	1 36	0.34	PCI/G
SC-36512-S	8/17/1998	RADIUM-226	0 29	0.58	PCI/G
SC-36513-S	8/6 1998	RADIUM-226	1.25	0 46	PCI/G
SC-36514-S	8/6 1998	RADIUM-226	1.56	0 31	PCI/G
SC-36515-S	8/17 1998	RADIUM-226	0.89	0.2	PCI/G
SC-36516-S	8/17/1998	RADIUM-226	1.14	0.46	PCI/G
SC-36517-S	8/17/1998	RADIUM-226	1.34	0.34	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36518-S	8/17/1998	RADIUM-226	1 17	0 42	PCI/G
SC-36519-S	8/17/1998	RADIUM-226	0 85	0 28	PCI/G
SC-36520-S	8/6 1998	RADIUM-226	1 26	0 29	PCI/G
SC-36521-S	8/6/1998	RADIUM-226	1 18	0 32	PCI/G
SC-36602-S	8/31 1998	RADIUM-226	0 596	0 403	PCI/G
SC-36603-S	8/31/1998	RADIUM-226	0 214	0 604	PCI/G
SC-36604-S	8/31/1998	RADIUM-226	0 902	0 395	PCI/G
SC-36605-S	8/31/1998	RADIUM-226	0 541	0 656	PCI/G
SC-36606-S	8/17/1998	RADIUM-226	0 71	0 34	PCI/G
SC-36607-S	8/17/1998	RADIUM-226	1 13	0 23	PCI/G
SC-36608-S	8/17/1998	RADIUM-226	1 18	0 34	PCI/G
SC-36610-S	8/31/1998	RADIUM-226	0 837	0 298	PCI/G
SC-36611-S	8/31/1998	RADIUM-226	0 125	0 382	PCI/G
SC-36612-S	8/31/1998	RADIUM-226	0 606	0 292	PCI/G
SC-36613-S	8/31/1998	RADIUM-226	0 381	0 431	PCI/G
SC-36614-S	8/31/1998	RADIUM-226	0 498	0 269	PCI/G
SC-36615-S	8/31/1998	RADIUM-226	0 384	0 363	PCI/G
SC-36616-S	8/17/1998	RADIUM-226	1 05	0 22	PCI/G
SC-36619-C	8/31/1998	RADIUM-226	0 97	0 32	PCI/G
SC-36621-S	8/31/1998	RADIUM-226	0 238	0 454	PCI/G
SC-36622-S	8/31 1998	RADIUM-226	1 13	0 281	PCI/G
SC-36623-S	8/31 1998	RADIUM-226	0 667	0 343	PCI/G
SC-36626-C	8/31 1998	RADIUM 226	0 737	0 243	PCI/G
SC-36701-S	8/17 1998	RADIUM-226	0 72	0 33	PCI/G
SC-36702-S	8/17 1998	RADIUM-226	0 98	0 27	PCI/G
SC-36703-S	8/6 1998	RADIUM-226	1 57	0 3	PCI/G
SC-36704-S	8/6 1998	RADIUM-226	1 56	0 29	PCI/G
SC-36705-S	8/17 1998	RADIUM-226	1 11	0 38	PCI/G
SC-36706-S	8/17/1998	RADIUM-226	0 74	0 29	PCI/G
SC-36707-S	8/17/1998	RADIUM-226	1 09	0 42	PCI/G
SC-36708-S	8/6 1998	RADIUM-226	1 46	0 31	PCI/G
SC-36709-S	8/17/1998	RADIUM-226	1 19	0 41	PCI/G
SC-36710-S	8/17 1998	RADIUM-226	1 16	0 47	PCI/G
SC-36711-S	8/17 1998	RADIUM-226	1 08	0 27	PCI/G
SC-36712-S	8/6 1998	RADIUM-226	1 37	0 35	PCI/G
SC-36713-S	8/31/1998	RADIUM-226	0 575	0 334	PCI/G
SC-36714-S	8/17/1998	RADIUM-226	1 02	0 31	PCI/G
SC-36715-S	8/17/1998	RADIUM-226	1 22	0 24	PCI/G
SC-36716-S	8/17 1998	RADIUM-226	1 06	0 31	PCI/G
SC-36718-S	8/27 1998	RADIUM-226	0 628	0 34	PCI/G
SC-36719-S	8/17/1998	RADIUM-226	1 28	0 25	PCI/G
SC-36720-S	8/6 1998	RADIUM-226	1 43	0 24	PCI/G
SC-36801-S	8/6 1998	RADIUM-226	1 29	0 28	PCI/G
SC-36802-S	8/6 1998	RADIUM-226	1 58	0 35	PCI/G
SC-36803-C	8/19/1998	RADIUM-226	1 25	0 3	PCI/G
SC-36803-S	8/19/1998	RADIUM-226	1 24	0 25	PCI/G
SC-36804-S	8/19 1998	RADIUM-226	1 13	0 4	PCI/G
SC-36805-S	8/6 1998	RADIUM-226	1 22	0 32	PCI/G
SC-36806-S	8/19/1998	RADIUM-226	1 36	0 3	PCI/G
SC-36807-S	4/7 1999	RADIUM-226	0 81	0 39	PCI/G
SC-36808-S	8/19 1998	RADIUM-226	1 28	0 43	PCI/G
SC-36809-S	8/6 1998	RADIUM-226	1 19	0 26	PCI/G
SC-36810-S	8/19/1998	RADIUM-226	1 45	0 28	PCI/G
SC-36811-S	8/19/1998	RADIUM-226	0 91	0 43	PCI/G
SC-36812-S	8/19/1998	RADIUM-226	1 33	0 26	PCI/G
SC-36813-C	8/19 1998	RADIUM-226	1 39	0 31	PCI/G
SC-36813-S	8/19 1998	RADIUM-226	1 3	0 28	PCI/G
SC-36814-S	8/6 1998	RADIUM-226	1 32	0 34	PCI/G
SC-36815-S	8/19 1998	RADIUM-226	1 33	0 44	PCI/G
SC-36816-S	8/19 1998	RADIUM-226	1 26	0 23	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36817-S	8/19/1998	RADIUM-226	1.03	0.37	PCI/G
SC-36818-S	8/19/1998	RADIUM-226	1.51	0.27	PCI/G
SC-36821-S	8/6/1998	RADIUM-226	1.19	0.34	PCI/G
SC-36822-S	8/19/1998	RADIUM-226	0.77	0.4	PCI/G
SC-36823-S	8/19/1998	RADIUM-226	0.97	0.21	PCI/G
SC-36824-S	8/19/1998	RADIUM-226	1.28	0.36	PCI/G
SC-36825-S	8/19/1998	RADIUM-226	1.48	0.21	PCI/G
SC-38701-C	8/27/1998	RADIUM-226	0.574	0.315	PCI/G
SC-38702-S	8/27/1998	RADIUM-226	0.913	0.339	PCI/G
SC-38703-S	8/6/1998	RADIUM-226	1.38	0.29	PCI/G
SC-38704-S	8/6/1998	RADIUM-226	1.28	0.43	PCI/G
SC-38706-S	8/21/1998	RADIUM-226	1.11	0.38	PCI/G
SC-38707-S	8/21/1998	RADIUM-226	1.37	0.27	PCI/G
SC-38708-S	8/21/1998	RADIUM-226	1.26	0.33	PCI/G
SC-38709-S	8/21/1998	RADIUM-226	1.06	0.32	PCI/G
SC-38710-C	8/21/1998	RADIUM-226	1.23	0.39	PCI/G
SC-38711-S	8/21/1998	RADIUM-226	1.37	0.2	PCI/G
SC-38712-S	8/21/1998	RADIUM-226	1.29	0.34	PCI/G
SC-38713-S	8/21/1998	RADIUM-226	1.81	0.25	PCI/G
SC-38714-C	8/21/1998	RADIUM-226	1.2	0.36	PCI/G
SC-38715-S	8/21/1998	RADIUM-226	1.24	0.25	PCI/G
SC-38716-S	8/21/1998	RADIUM-226	1.38	0.3	PCI/G
SC-38717-S	8/21/1998	RADIUM-226	1.49	0.23	PCI/G
SC-38719-S	8/21/1998	RADIUM-226	1.5	0.31	PCI/G
SC-38720-S	8/21/1998	RADIUM-226	1.62	0.29	PCI/G
SC-38721-S	8/21/1998	RADIUM-226	1.31	0.42	PCI/G
SC-38724-S	8/21/1998	RADIUM-226	1.28	0.29	PCI/G
SC-38725-S	8/21/1998	RADIUM-226	1.1	0.39	PCI/G
SC-38728-S	8/21/1998	RADIUM-226	1.28	0.22	PCI/G
SC-38729-C	8/21/1998	RADIUM-226	1.05	0.34	PCI/G
SC-38801-S	8/19/1998	RADIUM-226	0.7	0.36	PCI/G
SC-38802-S	8/19/1998	RADIUM-226	0.93	0.25	PCI/G
SC-38803-S	8/19/1998	RADIUM-226	1.11	0.35	PCI/G
SC-38804-S	8/19/1998	RADIUM-226	1.27	0.32	PCI/G
SC-38808-S	8/19/1998	RADIUM-226	0.97	0.26	PCI/G
SC-38809-S	8/19/1998	RADIUM-226	1.29	0.31	PCI/G
SC-38810-S	8/19/1998	RADIUM-226	1.42	0.29	PCI/G
SC-38811-S	8/19/1998	RADIUM-226	1.15	0.36	PCI/G
SC-38814-S	8/19/1998	RADIUM-226	1.54	0.32	PCI/G
SC-38815-S	8/19/1998	RADIUM-226	0.97	0.33	PCI/G
SC-38816-S	8/19/1998	RADIUM-226	1.53	0.38	PCI/G
SC-38817-S	8/19/1998	RADIUM-226	1.19	0.21	PCI/G
SC-38819-S	8/21/1998	RADIUM-226	1.49	0.23	PCI/G
SC-38820-S	8/19/1998	RADIUM-226	1.59	0.37	PCI/G
SC-38821-S	8/19/1998	RADIUM-226	0.81	0.23	PCI/G
SC-38823-S	8/21/1998	RADIUM-226	1.14	0.44	PCI/G
SC-38824-C	8/19/1998	RADIUM-226	1.38	0.41	PCI/G
SC-38826-C	8/21/1998	RADIUM-226	1.33	0.26	PCI/G
SC-38902-S	8/14/1998	RADIUM-226	0.86	0.37	PCI/G
SC-38903-S	8/14/1998	RADIUM-226	1.29	0.26	PCI/G
SC-38904-C	8/14/1998	RADIUM-226	1.14	0.3	PCI/G
SC-38905-S	8/14/1998	RADIUM-226	1.36	0.31	PCI/G
SC-38906-S	8/14/1998	RADIUM-226	1.45	0.38	PCI/G
SC-38908-S	8/14/1998	RADIUM-226	1.37	0.33	PCI/G
SC-38909-S	8/14/1998	RADIUM-226	1.15	0.49	PCI/G
SC-38910-C	8/14/1998	RADIUM-226	1.3	0.32	PCI/G
SC-38911-S	8/14/1998	RADIUM-226	1.16	0.39	PCI/G
SC-38912-S	8/28/1998	RADIUM-226	0.939	0.35	PCI/G
SC-38914-S	8/31/1998	RADIUM-226	0.87	0.33	PCI/G
SC-38915-S	8/28/1998	RADIUM-226	0.984	0.306	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-38916-S	8/17/1998	RADIUM-226	1 23	0 39	PCI/G
SC-38918-S	8/31/1998	RADIUM-226	0 149	0 351	PCI/G
SC-38919-S	8/17/1998	RADIUM-226	0 97	0 26	PCI/G
SC-38920-S	8/17/1998	RADIUM-226	0 64	0 35	PCI/G
SC-35704-S	9/8/2000	RADIUM-228	1 2	0 49	PCI/G
SC-35708-S	9/21/2000	RADIUM-228	0 97	0 39	PCI/G
SC-35709-S	9/21/2000	RADIUM-228	1 17	0 37	PCI/G
SC-35713-S	9/21/2000	RADIUM-228	1 08	0 44	PCI/G
SC-35714-S	9/21/2000	RADIUM-228	0 9	0 36	PCI/G
SC-35718-S	9/20/2000	RADIUM-228	0 94	0 45	PCI/G
SC-35720-S	9/7/2000	RADIUM-228	0 34	0 68	PCI/G
SC-35721-S	9/7/2000	RADIUM-228	1	0 32	PCI/G
SC-35722-S	9/20/2000	RADIUM-228	1 05	0 36	PCI/G
SC-35724-C	9/7/2000	RADIUM-228	0 87	0 42	PCI/G
SC-35725-S	9/7/2000	RADIUM-228	1 08	0 37	PCI/G
SC-35726-S	9/19/2000	RADIUM-228	0 92	0 38	PCI/G
SC-35727-C	9/7/2000	RADIUM-228	1 06	0 39	PCI/G
SC-35728-S	9/7/2000	RADIUM-228	1 11	0 36	PCI/G
SC-35729-S	9/7/2000	RADIUM-228	1 31	0 43	PCI/G
SC-35730-C	9/7/2000	RADIUM-228	0 75	0 26	PCI/G
SC-35731-C	9/7/2000	RADIUM-228	0 4	0 8	PCI/G
SC-35732-S	9/7/2000	RADIUM-228	0 78	0 31	PCI/G
SC-35734-C	9/7/2000	RADIUM-228	0 99	0 35	PCI/G
SC-35801-S	9/8/2000	RADIUM-228	1 92	0 46	PCI/G
SC-35801-S-RS	9/19/2000	RADIUM-228	1 03	0 37	PCI/G
SC-35801-U	9/22/2000	RADIUM-228	1 3	0 45	PCI/G
SC-35802-S	9/8/2000	RADIUM-228	1 42	0 38	PCI/G
SC-35802-U	9/22/2000	RADIUM-228	0 96	0 37	PCI/G
SC-35803-C	9/17/2000	RADIUM-228	1 12	0 4	PCI/G
SC-35803-S	9/17/2000	RADIUM-228	1 03	0 31	PCI/G
SC-35804-S	9/19/2000	RADIUM-228	0 34	0 68	PCI/G
SC-35805-S	9/19/2000	RADIUM-228	1 08	0 34	PCI/G
SC-35806-S	9/8/2000	RADIUM-228	1 15	0 37	PCI/G
SC-35807-S	9/8/2000	RADIUM-228	1 01	0 29	PCI/G
SC-35808-S	9/17/2000	RADIUM-228	1 1	0 36	PCI/G
SC-35809-S	9/17/2000	RADIUM-228	0 98	0 33	PCI/G
SC-35810-C	9/13/2000	RADIUM-228	0 84	0 4	PCI/G
SC-35810-S	9/14/2000	RADIUM-228	0 8	0 37	PCI/G
SC-35811-S	9/13/2000	RADIUM-228	1 07	0 27	PCI/G
SC-35812-S	9/13/2000	RADIUM-228	0 39	0 78	PCI/G
SC-35813-S	9/9/2000	RADIUM-228	0 92	0 37	PCI/G
SC-35814-S	9/20/2000	RADIUM-228	0 86	0 5	PCI/G
SC-35815-S	9/17/2000	RADIUM-228	0 95	0 39	PCI/G
SC-35816-S	9/17/2000	RADIUM-228	0 345	0 69	PCI/G
SC-35817-S	9/13/2000	RADIUM-228	0 98	0 36	PCI/G
SC-35818-S	9/9/2000	RADIUM-228	0 38	0 76	PCI/G
SC-35819-S	9/9/2000	RADIUM-228	0 95	0 57	PCI/G
SC-35820-C	9/9/2000	RADIUM-228	1 89	0 46	PCI/G
SC-35821-C	9/19/2000	RADIUM-228	0 395	0 79	PCI/G
SC-35821-S	9/19/2000	RADIUM-228	0 385	0 77	PCI/G
SC-35822-S	9/19/2000	RADIUM-228	1 03	0 44	PCI/G
SC-35823-C	9/17/2000	RADIUM-228	1	0 31	PCI/G
SC-35823-S	9/17/2000	RADIUM-228	1 07	0 37	PCI/G
SC-35824-S	9/9/2000	RADIUM-228	0 4	0 8	PCI/G
SC-35827-S	9/19/2000	RADIUM-228	1 04	0 34	PCI/G
SC-35828-S	9/19/2000	RADIUM-228	0 91	0 36	PCI/G
SC-35829-S	9/14/2000	RADIUM-228	1 28	0 3	PCI/G
SC-35831-S	9/7/2000	RADIUM-228	1 12	0 44	PCI/G
SC-35832-S	9/8/2000	RADIUM-228	1 95	0 66	PCI/G
SC-35834-C	9/8/2000	RADIUM-228	0 405	0 81	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35902-S	5/17/2000	RADIUM-228	0.395	0.79	PCI/G
SC-35903-C	5/17/2000	RADIUM-228	0.97	0.36	PCI/G
SC-35904-S	5/17/2000	RADIUM-228	0 99	0.43	PCI/G
SC-35906-S	5/17/2000	RADIUM-228	0.94	0.4	PCI/G
SC-35907-S	5/17/2000	RADIUM-228	0.375	0.75	PCI/G
SC-35908-C	5/17/2000	RADIUM-228	1.01	0.36	PCI/G
SC-35909-S	5/17/2000	RADIUM-228	0.91	0.41	PCI/G
SC-35910-S	5/17/2000	RADIUM-228	1.06	0.34	PCI/G
SC-35912-C	5/17/2000	RADIUM-228	0.89	0 44	PCI/G
SC-35912-S	5/17/2000	RADIUM-228	1	0.31	PCI/G
SC-35913-S	5/17/2000	RADIUM-228	0.97	0 5	PCI/G
SC-35914-S	5/17/2000	RADIUM-228	1.12	0.3	PCI/G
SC-35915-C	5/17/2000	RADIUM-228	1.26	0 33	PCI/G
SC-35916-S	5/17/2000	RADIUM-228	1.26	0.33	PCI/G
SC-35917-S	5/17/2000	RADIUM-228	1.09	0 47	PCI/G
SC-35918-S	5/17/2000	RADIUM-228	1 34	0.35	PCI/G
SC-35919-C	5/17/2000	RADIUM-228	1.29	0.3	PCI/G
SC-35920-S	5/17/2000	RADIUM-228	1.05	0.32	PCI/G
SC-35921-S	5/17/2000	RADIUM-228	1 11	0.42	PCI/G
SC-35922-S	5/17/2000	RADIUM-228	1.06	0.32	PCI/G
SC-35925-S	5/17/2000	RADIUM-228	0.34	0.68	PCI/G
SC-35926-S	5/17/2000	RADIUM-228	1	0.34	PCI/G
SC-35929-C	5/17/2000	RADIUM-228	1 07	0.42	PCI/G
SC-36001-C	5/17/2000	RADIUM-228	0 77	0.33	PCI/G
SC-36001-S	5/17/2000	RADIUM-228	1 17	0.41	PCI/G
SC-36001-U	5/13/2000	RADIUM-228	1.28	0.32	PCI/G
SC-36002-S	5/17/2000	RADIUM-228	1 03	0.34	PCI/G
SC-36003-S	5/17/2000	RADIUM-228	0 43	0 86	PCI/G
SC-36004-S	5/17/2000	RADIUM-228	1 15	0 35	PCI/G
SC-36005-S	5/17/2000	RADIUM-228	1 06	0.38	PCI/G
SC-36006-S	4/20/2000	RADIUM-228	0 71	0.49	PCI/G
SC-36007-S	5/17/2000	RADIUM-228	1.11	0.34	PCI/G
SC-36008-S	5/17/2000	RADIUM-228	0.97	0 41	PCI/G
SC-36009-S	5/17/2000	RADIUM-228	0.93	0 37	PCI/G
SC-36010-S	4/20/2000	RADIUM-228	1 01	0.31	PCI/G
SC-36011-S	5/17/2000	RADIUM-228	0 97	0.39	PCI/G
SC-36012-S	5/17/2000	RADIUM-228	0 89	0 31	PCI/G
SC-36012-S-HS01	5/24/2000	RADIUM-228	5	1.1	PCI/G
SC-36012-S-RS01	5/25/2000	RADIUM-228	1 25	0.39	PCI/G
SC-36013-S	4/20/2000	RADIUM-228	1 17	0.33	PCI/G
SC-36013-S-HS01	5/24/2000	RADIUM-228	2.19	0.59	PCI/G
SC-36013-S-HS02	5/24/2000	RADIUM-228	1 19	0 3	PCI/G
SC-36013-S-RS01	5/25/2000	RADIUM-228	1.24	0 31	PCI/G
SC-36013-S-RS02	5/25/2000	RADIUM-228	1.07	0 4	PCI/G
SC-36014-S	4/20/2000	RADIUM-228	1 12	0.36	PCI/G
SC-36015-S	5/17/2000	RADIUM-228	0.77	0 39	PCI/G
SC-36016-S	5/17/2000	RADIUM-228	1.08	0 28	PCI/G
SC-36016-S-HS01	5/24/2000	RADIUM-228	0 405	0 81	PCI/G
SC-36016-S-RS01	5/25/2000	RADIUM-228	1 05	0.35	PCI/G
SC-36017-S	4/20/2000	RADIUM-228	0 4	0 8	PCI/G
SC-36018-S	4/20/2000	RADIUM-228	1 19	0.32	PCI/G
SC-36019-S	5/17/2000	RADIUM-228	1.07	0 34	PCI/G
SC-36020-S	4/20/2000	RADIUM-228	1.29	0.38	PCI/G
SC-36021-S	4/20/2000	RADIUM-228	1 17	0.3	PCI/G
SC-36022-S	4/29/2000	RADIUM-228	0 385	0 77	PCI/G
SC-36101-S	4/20/2000	RADIUM-228	0.39	0 78	PCI/G
SC-36102-S	4/20/2000	RADIUM-228	1.23	0 42	PCI/G
SC-36103-S	4/29/2000	RADIUM-228	0 385	0 77	PCI/G
SC-36104-S	4/29/2000	RADIUM-228	0 9	0.38	PCI/G
SC-36105-S	4/29/2000	RADIUM-228	1.03	0.39	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36106-S	4/29/2000	RADIUM-228	0 77	0 48	PCI/G
SC-36107-S	4/29/2000	RADIUM-228	1 18	0 32	PCI/G
SC-36108-S	4/29/2000	RADIUM-228	0 77	0 47	PCI/G
SC-36109-S	4/10/2000	RADIUM-228	1 36	0 34	PCI/G
SC-36110-S	4/29/2000	RADIUM-228	1 06	0 39	PCI/G
SC-36111-S	4/29/2000	RADIUM-228	0 96	0 35	PCI/G
SC-36112-S	4/29/2000	RADIUM-228	0 395	0 79	PCI/G
SC-36113-S	4/10/2000	RADIUM-228	0 33	0 66	PCI/G
SC-36114-S	4/10/2000	RADIUM-228	0 83	0 24	PCI/G
SC-36115-S	4/10/2000	RADIUM-228	1 04	0 34	PCI/G
SC-36116-S	4/10/2000	RADIUM-228	0 88	0 33	PCI/G
SC-36117-S	4/29/2000	RADIUM-228	1 12	0 34	PCI/G
SC-36118-S	4/29/2000	RADIUM-228	0 83	0 26	PCI/G
SC-36119-S	4/29/2000	RADIUM-228	1 07	0 36	PCI/G
SC-36120-S	4/10/2000	RADIUM-228	0 91	0 39	PCI/G
SC-36121-S	4/10/2000	RADIUM-228	0 96	0 3	PCI/G
SC-36122-S	4/10/2000	RADIUM-228	0 96	0 38	PCI/G
SC-36123-S	4/10/2000	RADIUM-228	1 22	0 28	PCI/G
SC-36124-S	4/10/2000	RADIUM-228	1 24	0 44	PCI/G
SC-36125-S	4/10/2000	RADIUM-228	1 18	0 38	PCI/G
SC-36126-S	4/10/2000	RADIUM-228	1 03	0 37	PCI/G
SC-36201-S	5/17/2000	RADIUM-228	1 07	0 4	PCI/G
SC-36202-S	4/20/2000	RADIUM-228	1 1	0 34	PCI/G
SC-36203-S	4/20/2000	RADIUM-228	1 2	0 36	PCI/G
SC-36204-S	4/29/2000	RADIUM-228	0 38	0 76	PCI/G
SC-36205-S	4/29/2000	RADIUM-228	0 84	0 35	PCI/G
SC-36206-S	4/10/2000	RADIUM-228	1 07	0 35	PCI/G
SC-36207-S	5/17/2000	RADIUM-228	0 84	0 45	PCI/G
SC-36208-S	4/20/2000	RADIUM-228	1 02	0 33	PCI/G
SC-36209-S	4/29/2000	RADIUM-228	0 92	0 41	PCI/G
SC-36210-S	4/29/2000	RADIUM-228	1 15	0 3	PCI/G
SC-36211-S	4/10/2000	RADIUM-228	0 4	0 8	PCI/G
SC-36212-S	4/10/2000	RADIUM-228	1 16	0 32	PCI/G
SC-36215-S	4/29/2000	RADIUM-228	0 39	0 78	PCI/G
SC-36216-S	4/29/2000	RADIUM-228	1 12	0 37	PCI/G
SC-36217-S	4/10/2000	RADIUM-228	0 37	0 74	PCI/G
SC-36218-S	4/10/2000	RADIUM-228	0 93	0 38	PCI/G
SC-36220-C	4/29/2000	RADIUM-228	1 15	0 32	PCI/G
SC-36222-C	4/10/2000	RADIUM-228	0 71	0 47	PCI/G
SC-36223-S	4/12/2000	RADIUM-228	1 13	0 35	PCI/G
SC-36301-S	4/10/2000	RADIUM-228	0 94	0 43	PCI/G
SC-36302-S	4/10/2000	RADIUM-228	0 4	0 8	PCI/G
SC-36303-S	4/10/2000	RADIUM-228	1 01	0 33	PCI/G
SC-36304-S	4/10/2000	RADIUM-228	1 09	0 35	PCI/G
SC-36305-S	4/10/2000	RADIUM-228	1 03	0 46	PCI/G
SC-36306-S	4/10/2000	RADIUM-228	0 95	0 42	PCI/G
SC-36307-S	4/10/2000	RADIUM-228	1 08	0 32	PCI/G
SC-36308-S	4/10/2000	RADIUM-228	1 36	0 31	PCI/G
SC-36309-S	4/10/2000	RADIUM-228	0 85	0 37	PCI/G
SC-36310-S	4/10/2000	RADIUM-228	0 96	0 32	PCI/G
SC-36311-S	4/10/2000	RADIUM-228	0 38	0 76	PCI/G
SC-36312-S	4/10/2000	RADIUM-228	0 99	0 32	PCI/G
SC-36313-S	4/10/2000	RADIUM-228	0 95	0 43	PCI/G
SC-36314-S	4/10/2000	RADIUM-228	0 82	0 37	PCI/G
SC-36315-S	4/10/2000	RADIUM-228	0 295	0 59	PCI/G
SC-36316-S	4/10/2000	RADIUM-228	0 96	0 33	PCI/G
SC-36317-S	4/10/2000	RADIUM-228	0 37	0 74	PCI/G
SC-36318-S	4/10/2000	RADIUM-228	1 09	0 29	PCI/G
SC-36321-S	4/12/2000	RADIUM-228	1 21	0 32	PCI/G
SC-36322-S	4/10/2000	RADIUM-228	0 345	0 69	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36325-C	4/12/2000	RADIUM-228	1.06	0.49	PCI/G
SC-36401-S	4/10/2000	RADIUM-228	0.92	0.37	PCI/G
SC-36402-S	4/10/2000	RADIUM-228	0 91	0.51	PCI/G
SC-36403-S	4/10/2000	RADIUM-228	1.19	0.36	PCI/G
SC-36404-S	4/10/2000	RADIUM-228	0.99	0.46	PCI/G
SC-36405-S	4/10/2000	RADIUM-228	0.97	0.35	PCI/G
SC-36406-S	4/10/2000	RADIUM-228	0.45	0.9	PCI/G
SC-36407-S	4/10/2000	RADIUM-228	1 01	0.37	PCI/G
SC-36409-S	4/10/2000	RADIUM-228	0 85	0.44	PCI/G
SC-36410-S	4/10/2000	RADIUM-228	0 94	0.38	PCI/G
SC-36411-S	4/10/2000	RADIUM-228	0.87	0 45	PCI/G
SC-36412-S	4/10/2000	RADIUM-228	0.98	0.36	PCI/G
SC-36413-S	4/10/2000	RADIUM-228	1.06	0.38	PCI/G
SC-36414-S	4/10/2000	RADIUM-228	0.365	0.73	PCI/G
SC-36415-S	4/10/2000	RADIUM-228	0.96	0.36	PCI/G
SC-36416-S	4/10/2000	RADIUM-228	1.08	0.41	PCI/G
SC-36417-S	4/10/2000	RADIUM-228	0.375	0.75	PCI/G
SC-36418-S	4/10/2000	RADIUM-228	0 37	0.74	PCI/G
SC-36419-S	4/10/2000	RADIUM-228	1.01	0 31	PCI/G
SC-36426-C	9/3/1998	RADIUM-228	1 14	0.27	PCI/G
SC-36427-C	9/3/1998	RADIUM-228	1 33	0.93	PCI/G
SC-36428-C	9/3/1998	RADIUM-228	1.21	0.28	PCI/G
SC-36429-C	9/3/1998	RADIUM-228	1.17	0.58	PCI/G
SC-36430-S	9/3/1998	RADIUM-228	1.38	0.5	PCI/G
SC-36431-C	9/3/1998	RADIUM-228	1.38	0.49	PCI/G
SC-36432-C	9/3/1998	RADIUM-228	1 1	0.45	PCI/G
SC-36433-C	9/3/1998	RADIUM-228	1.07	0.45	PCI/G
SC-36434-C	9/3/1998	RADIUM-228	1.01	0.48	PCI/G
SC-36435-C	9/3/1998	RADIUM-228	0 96	0.51	PCI/G
SC-36501-S	8/14/1998	RADIUM-228	1.44	0 49	PCI/G
SC-36502-S	8/14/1998	RADIUM-228	1 28	0 14	PCI/G
SC-36503-S	8/28/1998	RADIUM-228	1 19	0.78	PCI/G
SC-36504-S	8/28/1998	RADIUM-228	0.978	1 11	PCI/G
SC-36505-S	8/17/1998	RADIUM-228	2.09	0.71	PCI/G
SC-36506-S	8/17/1998	RADIUM-228	2.17	0.5	PCI/G
SC-36507-S	8/17/1998	RADIUM-228	1.68	0 62	PCI/G
SC-36508-S	8/28/1998	RADIUM-228	1.38	0.651	PCI/G
SC-36509-S	8/17/1998	RADIUM-228	1.31	0 4	PCI/G
SC-36510-S	8/17/1998	RADIUM-228	0.695	1 39	PCI/G
SC-36511-S	8/17/1998	RADIUM-228	2.06	0 45	PCI/G
SC-36512-S	8/17/1998	RADIUM-228	0.92	0 48	PCI/G
SC-36513-S	8/5/1998	RADIUM-228	1.17	0.5	PCI/G
SC-36514-S	8/6/1998	RADIUM-228	1.36	0.38	PCI/G
SC-36515-S	8/17/1998	RADIUM-228	1 12	0.47	PCI/G
SC-36516-S	8/17/1998	RADIUM-228	2.63	0.65	PCI/G
SC-36517-S	8/17/1998	RADIUM-228	2.52	0.51	PCI/G
SC-36518-S	8/17/1998	RADIUM-228	2.04	0.74	PCI/G
SC-36519-S	8/17/1998	RADIUM-228	1.54	0.33	PCI/G
SC-36520-S	8/6/1998	RADIUM-228	1 32	0.48	PCI/G
SC-36521-S	8/6/1998	RADIUM-228	1 44	0.39	PCI/G
SC-36602-S	8/31/1998	RADIUM-228	0.849	1.04	PCI/G
SC-36603-S	8/31/1998	RADIUM-228	1.24	1.64	PCI/G
SC-36604-S	8/31/1998	RADIUM-228	1.51	0 971	PCI/G
SC-36605-S	8/31/1998	RADIUM-228	1 27	1.21	PCI/G
SC-36606-S	8/17/1998	RADIUM-228	0.86	0 52	PCI/G
SC-36607-S	8/17/1998	RADIUM-228	1.04	0 37	PCI/G
SC-36608-S	8/17/1998	RADIUM-228	1.28	0 42	PCI/G
SC-36610-S	8/31/1998	RADIUM-228	1.21	0 707	PCI/G
SC-36611-S	8/31/1998	RADIUM-228	1.36	0.998	PCI/G
SC-36612-S	8/31/1998	RADIUM-228	0.989	0.523	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36613-S	8/31/1998	RADIUM-228	1 24	1 01	PCI/G
SC-36614-S	8/31/1998	RADIUM-228	1 15	0 73	PCI/G
SC-36615-S	8/31/1998	RADIUM-228	1 18	0 99	PCI/G
SC-36616-S	8/17/1998	RADIUM-228	1 21	0 39	PCI/G
SC-36619-C	8/31/1998	RADIUM-228	1 1	0 567	PCI/G
SC-36621-S	8/31/1998	RADIUM-228	1 12	1 09	PCI/G
SC-36622-S	8/31/1998	RADIUM-228	1 41	0 692	PCI/G
SC-36623-S	8/31/1998	RADIUM-228	1 16	1 04	PCI/G
SC-36626-C	8/31/1998	RADIUM-228	0 977	0 594	PCI/G
SC-36701-S	8/17/1998	RADIUM-228	1 19	0 31	PCI/G
SC-36702-S	8/17/1998	RADIUM-228	1 33	0 41	PCI/G
SC-36703-S	8/6/1998	RADIUM-228	1 44	0 48	PCI/G
SC-36704-S	8/6/1998	RADIUM-228	1 5	0 46	PCI/G
SC-36705-S	8/17/1998	RADIUM-228	1 15	0 56	PCI/G
SC-36706-S	8/17/1998	RADIUM-228	1	0 34	PCI/G
SC-36707-S	8/17/1998	RADIUM-228	1 29	0 62	PCI/G
SC-36708-S	8/6/1998	RADIUM-228	1 2	0 38	PCI/G
SC-36709-S	8/17/1998	RADIUM-228	1 4	0 41	PCI/G
SC-36710-S	8/17/1998	RADIUM-228	1 36	0 56	PCI/G
SC-36711-S	8/17/1998	RADIUM-228	1	0 32	PCI/G
SC-36712-S	8/6/1998	RADIUM-228	1 58	0 59	PCI/G
SC-36713-S	8/31/1998	RADIUM-228	1 26	0 872	PCI/G
SC-36714-S	8/17/1998	RADIUM-228	0 565	1 13	PCI/G
SC-36715-S	8/17/1998	RADIUM-228	1 42	0 42	PCI/G
SC-36716-S	8/17/1998	RADIUM-228	1 13	0 64	PCI/G
SC-36718-S	8/27/1998	RADIUM-228	1 11	0 706	PCI/G
SC-36719-S	8/17/1998	RADIUM-228	1 11	0.55	PCI/G
SC-36720-S	8/6/1998	RADIUM-228	1 11	0 43	PCI/G
SC-36801-S	8/6/1998	RADIUM-228	1 78	0 68	PCI/G
SC-36802-S	8/6/1998	RADIUM-228	1 31	0 41	PCI/G
SC-36803-C	8/19/1998	RADIUM-228	0 87	0 76	PCI/G
SC-36803-S	8/19/1998	RADIUM-228	1 28	0 39	PCI/G
SC-36804-S	8/19/1998	RADIUM-228	0 65	1 3	PCI/G
SC-36805-S	8/6/1998	RADIUM-228	1 33	0 61	PCI/G
SC-36806-S	8/19/1998	RADIUM-228	1 15	0 39	PCI/G
SC-36807-S	4/7/1999	RADIUM-228	1 11	0 74	PCI/G
SC-36808-S	8/19/1998	RADIUM-228	1 13	0 58	PCI/G
SC-36809-S	8/6/1998	RADIUM-228	1 36	0 33	PCI/G
SC-36810-S	8/19/1998	RADIUM-228	1 28	0 33	PCI/G
SC-36811-S	8/19/1998	RADIUM-228	0 555	1 11	PCI/G
SC-36812-S	8/19/1998	RADIUM-228	1 39	0 39	PCI/G
SC-36813-C	8/19/1998	RADIUM-228	1	0 54	PCI/G
SC-36813-S	8/19/1998	RADIUM-228	1.27	0 35	PCI/G
SC-36814-S	8/6/1998	RADIUM-228	1 46	0 51	PCI/G
SC-36815-S	8/19/1998	RADIUM-228	1 2	0 61	PCI/G
SC-36816-S	8/19/1998	RADIUM-228	1 32	0 48	PCI/G
SC-36817-S	8/19/1998	RADIUM-228	1	0 69	PCI/G
SC-36818-S	8/19/1998	RADIUM-228	1 23	0 46	PCI/G
SC-36821-S	8/6/1998	RADIUM-228	1 05	0 64	PCI/G
SC-36822-S	8/19/1998	RADIUM-228	1 15	0 53	PCI/G
SC-36823-S	8/19/1998	RADIUM-228	1 2	0 29	PCI/G
SC-36824-S	8/19/1998	RADIUM-228	1 23	0 49	PCI/G
SC-36825-S	8/19/1998	RADIUM-228	1 15	0 33	PCI/G
SC-38701-C	8/27/1998	RADIUM-228	0 565	1 26	PCI/G
SC-38702-S	8/27/1998	RADIUM-228	0 705	0 567	PCI/G
SC-38703-S	8/6/1998	RADIUM-228	1 12	0 37	PCI/G
SC-38704-S	8/6/1998	RADIUM-228	0 595	1 19	PCI/G
SC-38706-S	8/21/1998	RADIUM-228	1 31	0 52	PCI/G
SC-38707-S	8/21/1998	RADIUM-228	1 14	0 31	PCI/G
SC-38708-S	8/21/1998	RADIUM-228	1 33	0 6	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-38709-S	8/21/1998	RADIUM-228	1.06	0.34	PCI/G
SC-38710-C	8/21/1998	RADIUM-228	1.14	0.53	PCI/G
SC-38711-S	8/21/1998	RADIUM-228	1.02	0 33	PCI/G
SC-38712-S	8/21/1998	RADIUM-228	1 04	0 67	PCI/G
SC-38713-S	8/21/1998	RADIUM-228	1.29	0.4	PCI/G
SC-38714-C	8/21/1998	RADIUM-228	1.04	0 69	PCI/G
SC-38715-S	8/21/1998	RADIUM-228	1.27	0.4	PCI/G
SC-38716-S	8/21/1998	RADIUM-228	1.19	0.66	PCI/G
SC-38717-S	8/21/1998	RADIUM-228	1.52	0.25	PCI/G
SC-38719-S	8/21/1998	RADIUM-228	1.36	0.62	PCI/G
SC-38720-S	8/21/1998	RADIUM-228	1.16	0.46	PCI/G
SC-38721-S	8/21/1998	RADIUM-228	0.87	0.66	PCI/G
SC-38724-S	8/21/1998	RADIUM-228	0 78	0.39	PCI/G
SC-38725-S	8/21/1998	RADIUM-228	0 57	1.14	PCI/G
SC-38728-S	8/21/1998	RADIUM-228	1.04	0.36	PCI/G
SC-38729-C	8/21/1998	RADIUM-228	1.06	0 6	PCI/G
SC-38801-S	8/19/1998	RADIUM-228	0 565	1.13	PCI/G
SC-38802-S	8/19/1998	RADIUM-228	1.31	0.31	PCI/G
SC-38803-S	8/19/1998	RADIUM-228	0.87	0 59	PCI/G
SC-38804-S	8/19/1998	RADIUM-228	1.29	0.49	PCI/G
SC-38808-S	8/19/1998	RADIUM-228	1.24	0.59	PCI/G
SC-38809-S	8/19/1998	RADIUM-228	1 21	0 45	PCI/G
SC-38810-S	8/19/1998	RADIUM-228	1.38	0 39	PCI/G
SC-38811-S	8/19/1998	RADIUM-228	1 16	0 42	PCI/G
SC-38814-S	8/19/1998	RADIUM-228	1.4	0 47	PCI/G
SC-38815-S	8/19/1998	RADIUM-228	1.35	0.34	PCI/G
SC-38816-S	8/19/1998	RADIUM-228	1.28	0.69	PCI/G
SC-38817-S	8/19/1998	RADIUM-228	0.83	0.46	PCI/G
SC-38819-S	8/21/1998	RADIUM-228	1 08	0 56	PCI/G
SC-38820-S	8/19/1998	RADIUM-228	0.56	1 12	PCI/G
SC-38821-S	8/19/1998	RADIUM-228	0 6	0 34	PCI/G
SC-38823-S	8/21/1998	RADIUM-228	1.29	0 51	PCI/G
SC-38824-C	8/19/1998	RADIUM-228	1.24	0 45	PCI/G
SC-38826-C	8/21/1998	RADIUM-228	1.24	0 47	PCI/G
SC-38902-S	8/14/1998	RADIUM-228	1 49	0.49	PCI/G
SC-38903-S	8/14/1998	RADIUM-228	1.13	0.48	PCI/G
SC-38904-C	8/14/1998	RADIUM-228	1.21	0 27	PCI/G
SC-38905-S	8/14/1998	RADIUM-228	1.26	0 46	PCI/G
SC-38906-S	8/14/1998	RADIUM-228	1.15	0.29	PCI/G
SC-38908-S	8/14/1998	RADIUM-228	1.24	0.35	PCI/G
SC-38909-S	8/14/1998	RADIUM-228	0 585	1.17	PCI/G
SC-38910-C	8/14/1998	RADIUM-228	1.29	0.43	PCI/G
SC-38911-S	8/14/1998	RADIUM-228	1.28	0.48	PCI/G
SC-38912-S	8/28/1998	RADIUM-228	1.17	0.77	PCI/G
SC-38914-S	8/31/1998	RADIUM-228	1.29	0.655	PCI/G
SC-38915-S	8/28/1998	RADIUM-228	1.15	0.657	PCI/G
SC-38916-S	8/17/1998	RADIUM-228	1 74	0 44	PCI/G
SC-38918-S	8/31/1998	RADIUM-228	1.02	1.02	PCI/G
SC-38919-S	8/17/1998	RADIUM-228	0 91	0 47	PCI/G
SC-38920-S	8/17/1998	RADIUM-228	1.21	0.59	PCI/G
SC-35704-S	9/8/2000	THALLIUM	0 38	0.76	UG/G
SC-35708-S	9/21/2000	THALLIUM	2 1	0 77	UG/G
SC-35709-S	9/21/2000	THALLIUM	1 7	0.8	UG/G
SC-35713-S	9/21/2000	THALLIUM	1 6	0 77	UG/G
SC-35714-S	9/21/2000	THALLIUM	1 2	0 77	UG/G
SC-35718-S	9/20/2000	THALLIUM	1.3	0 74	UG/G
SC-35720-S	9/7/2000	THALLIUM	0.355	0 71	UG/G
SC-35721-S	9/7/2000	THALLIUM	0.79	0 74	UG/G
SC-35722-S	9/20/2000	THALLIUM	1 8	0 77	UG/G
SC-35724-C	9/7/2000	THALLIUM	0 37	0 74	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35725-S	9/7/2000	THALLIUM	0 38	0 76	UG/G
SC-35726-S	9/19/2000	THALLIUM	1 6	0 78	UG/G
SC-35727-C	9/7/2000	THALLIUM	0 36	0 72	UG/G
SC-35728-S	9/7/2000	THALLIUM	0 38	0 76	UG/G
SC-35729-S	9/7/2000	THALLIUM	0 385	0 77	UG/G
SC-35730-C	9/7/2000	THALLIUM	0 37	0 74	UG/G
SC-35731-C	9/7/2000	THALLIUM	0 38	0 76	UG/G
SC-35732-S	9/7/2000	THALLIUM	0 355	0 71	UG/G
SC-35734-C	9/7/2000	THALLIUM	0 37	0 74	UG/G
SC-35801-S	9/8/2000	THALLIUM	0 395	0 79	UG/G
SC-35802-S	9/8/2000	THALLIUM	0 41	0 82	UG/G
SC-35803-C	9/17/2000	THALLIUM	2 1	0 78	UG/G
SC-35803-S	9/17/2000	THALLIUM	1 5	0 78	UG/G
SC-35804-S	9/19/2000	THALLIUM	1 9	0 79	UG/G
SC-35805-S	9/19/2000	THALLIUM	2 6	0 78	UG/G
SC-35806-S	9/8/2000	THALLIUM	0 395	0 79	UG/G
SC-35807-S	9/8/2000	THALLIUM	0 37	0 74	UG/G
SC-35808-S	9/17/2000	THALLIUM	1 9	0 79	UG/G
SC-35809-S	9/17/2000	THALLIUM	2 2	0 81	UG/G
SC-35810-C	9/13/2000	THALLIUM	3 3	3 3	UG/G
SC-35810-S	9/14/2000	THALLIUM	1 1	0 77	UG/G
SC-35811-S	9/13/2000	THALLIUM	2 5	3 3	UG/G
SC-35812-S	9/13/2000	THALLIUM	2 8	3 3	UG/G
SC-35813-S	9/9/2000	THALLIUM	1 7	0 77	UG/G
SC-35814-S	9/20/2000	THALLIUM	1 7	0 77	UG/G
SC-35815-S	9/17/2000	THALLIUM	2	0 79	UG/G
SC-35816-S	9/17/2000	THALLIUM	1 9	0 79	UG/G
SC-35817-S	9/13/2000	THALLIUM	2 6	3 3	UG/G
SC-35818-S	9/9/2000	THALLIUM	1 5	0 79	UG/G
SC-35819-S	9/9/2000	THALLIUM	1 5	0 75	UG/G
SC-35820-C	9/9/2000	THALLIUM	1 7	0 77	UG/G
SC-35821-C	9/19/2000	THALLIUM	1 9	0 76	UG/G
SC-35821-S	9/19/2000	THALLIUM	2	0 79	UG/G
SC-35822-S	9/19/2000	THALLIUM	2	0 75	UG/G
SC-35823-C	9/17/2000	THALLIUM	2 5	0 77	UG/G
SC-35823-S	9/17/2000	THALLIUM	1	0 76	UG/G
SC-35824-S	9/9/2000	THALLIUM	2	0 89	UG/G
SC-35827-S	9/19/2000	THALLIUM	1 5	0 76	UG/G
SC-35828-S	9/19/2000	THALLIUM	1 3	0 71	UG/G
SC-35829-S	9/14/2000	THALLIUM	1	0 71	UG/G
SC-35831-S	9/7/2000	THALLIUM	0 34	0 68	UG/G
SC-35832-S	9/8/2000	THALLIUM	0 94	0 71	UG/G
SC-35834-C	9/8/2000	THALLIUM	0 355	0 71	UG/G
SC-35902-S	5/17/2000	THALLIUM	0 35	0 7	UG/G
SC-35903-C	5/17/2000	THALLIUM	0 365	0 73	UG/G
SC-35904-S	5/17/2000	THALLIUM	0 37	0 74	UG/G
SC-35906-S	5/17/2000	THALLIUM	0 345	0 69	UG/G
SC-35907-S	5/17/2000	THALLIUM	0 83	0 77	UG/G
SC-35908-C	5/17/2000	THALLIUM	0 82	0 69	UG/G
SC-35909-S	5/17/2000	THALLIUM	0 94	0 78	UG/G
SC-35910-S	5/17/2000	THALLIUM	0 385	0 77	UG/G
SC-35912-C	5/17/2000	THALLIUM	0.365	0 73	UG/G
SC-35912-S	5/17/2000	THALLIUM	0 72	0 72	UG/G
SC-35913-S	5/17/2000	THALLIUM	0 385	0 77	UG/G
SC-35914-S	5/17/2000	THALLIUM	0 365	0 73	UG/G
SC-35915-C	5/17/2000	THALLIUM	0 365	0 73	UG/G
SC-35916-S	5/17/2000	THALLIUM	0 355	0 71	UG/G
SC-35917-S	5/17/2000	THALLIUM	0 68	0 68	UG/G
SC-35918-S	5/17/2000	THALLIUM	0 35	0 7	UG/G
SC-35919-C	5/17/2000	THALLIUM	0 355	0 71	UG/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35920-S	5/17/2000	THALLIUM	0.95	0.72	UG/G
SC-35921-S	5/17/2000	THALLIUM	0 9	0 73	UG/G
SC-35922-S	5/17/2000	THALLIUM	0.75	0.75	UG/G
SC-35925-S	5/17/2000	THALLIUM	0.86	0.71	UG/G
SC-35926-S	5/17/2000	THALLIUM	0.37	0.74	UG/G
SC-35929-C	5/17/2000	THALLIUM	0 37	0.74	UG/G
SC-36001-C	5/17/2000	THALLIUM	0.365	0.73	UG/G
SC-36001-S	5/17/2000	THALLIUM	0.38	0 76	UG/G
SC-36001-U	5/13/2000	THALLIUM	1 5	0 73	UG/G
SC-36002-S	5/17/2000	THALLIUM	0 78	0.73	UG/G
SC-36003-S	5/17/2000	THALLIUM	1 1	0 73	UG/G
SC-36004-S	5/17/2000	THALLIUM	0.39	0.78	UG/G
SC-36005-S	5/17/2000	THALLIUM	0.395	0 79	UG/G
SC-36007-S	5/17/2000	THALLIUM	0.79	0.7	UG/G
SC-36008-S	5/17/2000	THALLIUM	1 6	0.74	UG/G
SC-36009-S	5/17/2000	THALLIUM	0 37	0 74	UG/G
SC-36011-S	5/17/2000	THALLIUM	0.375	0.75	UG/G
SC-36012-S	5/17/2000	THALLIUM	1 1	0.79	UG/G
SC-36013-S	4/20/2000	THALLIUM	0 435	0.87	UG/G
SC-36015-S	5/17/2000	THALLIUM	1 3	0.71	UG/G
SC-36016-S	5/17/2000	THALLIUM	1 6	0.72	UG/G
SC-36019-S	5/17/2000	THALLIUM	1.5	0.7	UG/G
SC-36020-S	4/20/2000	THALLIUM	0.395	0.79	UG/G
SC-36201-S	5/17/2000	THALLIUM	1.8	0 76	UG/G
SC-36207-S	5/17/2000	THALLIUM	2 4	0 7	UG/G
SC-36505-S	8/17/1998	THALLIUM	2.5	1	UG/G
SC-36506-S	8/17/1998	THALLIUM	2.5	0.91	UG/G
SC-36507-S	8/17/1998	THALLIUM	2	0 97	UG/G
SC-36509-S	8/17/1998	THALLIUM	2.8	0.77	UG/G
SC-36510-S	8/17/1998	THALLIUM	1.2	1.04	UG/G
SC-36511-S	8/17/1998	THALLIUM	3.8	0 74	UG/G
SC-36512-S	8/17/1998	THALLIUM	19	1.36	UG/G
SC-36515-S	8/17/1998	THALLIUM	2 9	0 95	UG/G
SC-36516-S	8/17/1998	THALLIUM	2.2	0.97	UG/G
SC-36517-S	8/17/1998	THALLIUM	2	0 94	UG/G
SC-36518-S	8/17/1998	THALLIUM	3.3	0 93	UG/G
SC-36519-S	8/17/1998	THALLIUM	1.7	0.89	UG/G
SC-36603-S	8/31/1998	THALLIUM	1.3	0 86	UG/G
SC-36604-S	8/31/1998	THALLIUM	0.37	0.74	UG/G
SC-36605-S	8/31/1998	THALLIUM	0 455	0 91	UG/G
SC-36606-S	8/17/1998	THALLIUM	3.5	1	UG/G
SC-36607-S	8/17/1998	THALLIUM	2	1 1	UG/G
SC-36608-S	8/17/1998	THALLIUM	1.6	0 87	UG/G
SC-36614-S	8/31/1998	THALLIUM	1.5	0.87	UG/G
SC-36615-S	8/31/1998	THALLIUM	0 405	0 81	UG/G
SC-36616-S	8/17/1998	THALLIUM	3 5	0.84	UG/G
SC-36701-S	8/17/1998	THALLIUM	1.7	1.1	UG/G
SC-36702-S	8/17/1998	THALLIUM	2.2	0.97	UG/G
SC-36705-S	8/17/1998	THALLIUM	1.6	0 89	UG/G
SC-36706-S	8/17/1998	THALLIUM	2.7	0 65	UG/G
SC-36707-S	8/17/1998	THALLIUM	1 6	0.93	UG/G
SC-36711-S	8/17/1998	THALLIUM	2.1	1	UG/G
SC-36715-S	8/17/1998	THALLIUM	2.7	0 72	UG/G
SC-38909-S	8/14/1998	THALLIUM	2.9	0 87	UG/G
SC-38911-S	8/14/1998	THALLIUM	1.2	0 88	UG/G
SC-38912-S	8/28/1998	THALLIUM	0 88	0.76	UG/G
SC-38915-S	8/28/1998	THALLIUM	0.92	0.75	UG/G
SC-38916-S	8/17/1998	THALLIUM	2 4	0 85	UG/G
SC-38919-S	8/17/1998	THALLIUM	3	0 9	UG/G
SC-38920-S	8/17/1998	THALLIUM	3 9	0.9	UG/G

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36503-S	8/28/1998	THORIUM-228	0 622	0 416	PCI/G
SC-36504-S	8/28/1998	THORIUM-228	0 483	0 29	PCI/G
SC-36508-S	8/28/1998	THORIUM-228	0 531	0 39	PCI/G
SC-36602-S	8/31/1998	THORIUM-228	0 552	0 286	PCI/G
SC-36603-S	8/31/1998	THORIUM-228	0 56	0 387	PCI/G
SC-36604-S	8/31/1998	THORIUM-228	0 615	0 201	PCI/G
SC-36605-S	8/31/1998	THORIUM-228	0 708	0 284	PCI/G
SC-36610-S	8/31/1998	THORIUM-228	0 49	0 26	PCI/G
SC-36611-S	8/31/1998	THORIUM-228	0 514	0 234	PCI/G
SC-36612-S	8/31/1998	THORIUM-228	0 413	0 213	PCI/G
SC-36613-S	8/31/1998	THORIUM-228	0 394	0 231	PCI/G
SC-36614-S	8/31/1998	THORIUM-228	0 604	0 25	PCI/G
SC-36615-S	8/31/1998	THORIUM-228	0 73	0 346	PCI/G
SC-36619-C	8/31/1998	THORIUM-228	0 406	0 178	PCI/G
SC-36621-S	8/31/1998	THORIUM-228	0 369	0 256	PCI/G
SC-36622-S	8/31/1998	THORIUM-228	0 429	0 26	PCI/G
SC-36623-S	8/31/1998	THORIUM-228	0 384	0 191	PCI/G
SC-36626-C	8/31/1998	THORIUM-228	0 507	0 238	PCI/G
SC-36713-S	8/31/1998	THORIUM-228	0 463	0 279	PCI/G
SC-36718-S	8/27/1998	THORIUM-228	0 396	0 492	PCI/G
SC-38701-C	8/27/1998	THORIUM-228	0 35	0 33	PCI/G
SC-38702-S	8/27/1998	THORIUM-228	0 273	0 456	PCI/G
SC-38912-S	8/28/1998	THORIUM-228	0 436	0 361	PCI/G
SC-38914-S	8/31/1998	THORIUM-228	0 378	0 236	PCI/G
SC-38915-S	8/28/1998	THORIUM-228	0 365	0 258	PCI/G
SC-38918-S	8/31/1998	THORIUM-228	0 482	0 157	PCI/G
SC-35704-S	9/8/2000	THORIUM-230	2 2	0 64	PCI/G
SC-35708-S	9/21/2000	THORIUM-230	0 92	0 64	PCI/G
SC-35709-S	9/21/2000	THORIUM-230	27 8	0 65	PCI/G
SC-35709-S-RS	9/22/2000	THORIUM-230	0 95	0 64	UG/G
SC-35713-S	9/21/2000	THORIUM-230	1 24	0 64	PCI/G
SC-35714-S	9/21/2000	THORIUM-230	1 11	0 64	PCI/G
SC-35718-S	9/20/2000	THORIUM-230	0 94	0 64	PCI/G
SC-35720-S	9/7/2000	THORIUM-230	0 87	0 64	PCI/G
SC-35721-S	9/7/2000	THORIUM-230	1 45	0 65	PCI/G
SC-35722-S	9/20/2000	THORIUM-230	3 55	0 65	PCI/G
SC-35724-C	9/7/2000	THORIUM-230	1 57	0 64	PCI/G
SC-35725-S	9/7/2000	THORIUM-230	0 87	0 64	PCI/G
SC-35726-S	9/19/2000	THORIUM-230	1 04	0 64	PCI/G
SC-35727-C	9/7/2000	THORIUM-230	1 46	0 65	PCI/G
SC-35728-S	9/7/2000	THORIUM-230	2 88	0 7	PCI/G
SC-35729-S	9/7/2000	THORIUM-230	6 88	0 64	PCI/G
SC-35729-S-RS	9/19/2000	THORIUM-230	1 36	0 65	PCI/G
SC-35730-C	9/7/2000	THORIUM-230	1 45	0 65	PCI/G
SC-35731-C	9/7/2000	THORIUM-230	1 02	0 64	PCI/G
SC-35732-S	9/7/2000	THORIUM-230	1 54	0 65	PCI/G
SC-35734-C	9/7/2000	THORIUM-230	1 2	0 64	PCI/G
SC-35801-S	9/8/2000	THORIUM-230	81	0 65	PCI/G
SC-35801-S-RS	9/19/2000	THORIUM-230	0 98	0 64	PCI/G
SC-35801-U	9/22/2000	THORIUM-230	1 03	0 65	PCI/G
SC-35802-S	9/8/2000	THORIUM-230	28 4	0 64	PCI/G
SC-35802-S-RS	9/19/2000	THORIUM-230	1 45	0 64	PCI/G
SC-35802-U	9/22/2000	THORIUM-230	1 09	0 64	PCI/G
SC-35803-C	9/17/2000	THORIUM-230	1 01	0 64	PCI/G
SC-35803-S	9/17/2000	THORIUM-230	0 88	0 65	PCI/G
SC-35804-S	9/19/2000	THORIUM-230	2 35	0 65	PCI/G
SC-35805-S	9/19/2000	THORIUM-230	9 24	0 64	PCI/G
SC-35805-S-RS	9/22/2000	THORIUM-230	0 97	0 64	PCI/G
SC-35806-S	9/8/2000	THORIUM-230	1 22	0 64	PCI/G
SC-35807-S	9/8/2000	THORIUM-230	1 69	0 65	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35808-S	9/17/2000	THORIUM-230	1.2	0 64	PCI/G
SC-35809-S	9/17/2000	THORIUM-230	2.23	0.64	PCI/G
SC-35810-C	9/13/2000	THORIUM-230	0.94	0.64	PCI/G
SC-35810-S	9/14/2000	THORIUM-230	0 99	0.64	PCI/G
SC-35810-S-RS	9/22/2000	THORIUM-230	0 75	0 65	PCI/G
SC-35811-S	9/13/2000	THORIUM-230	1	0.65	PCI/G
SC-35811-S-RS	9/22/2000	THORIUM-230	3.61	0.64	PCI/G
SC-35812-S	9/13/2000	THORIUM-230	4.05	0.64	PCI/G
SC-35813-S	9/9/2000	THORIUM-230	2.33	0 64	PCI/G
SC-35814-S	9/20/2000	THORIUM-230	1 08	0.64	PCI/G
SC-35815-S	9/17/2000	THORIUM-230	0 96	0.64	PCI/G
SC-35816-S	9/17/2000	THORIUM-230	1.03	0.64	PCI/G
SC-35817-S	9/13/2000	THORIUM-230	1 06	0.65	PCI/G
SC-35818-S	9/9/2000	THORIUM-230	1 19	0 65	PCI/G
SC-35819-S	9/9/2000	THORIUM-230	42 6	0.64	PCI/G
SC-35819-S-RS	9/14/2000	THORIUM-230	1.03	0.65	PCI/G
SC-35820-C	9/9/2000	THORIUM-230	59	0.65	PCI/G
SC-35820-C-RS	9/14/2000	THORIUM-230	1.21	0.64	PCI/G
SC-35821-C	9/19/2000	THORIUM-230	3.4	0.64	PCI/G
SC-35821-S	9/19/2000	THORIUM-230	0 94	0 64	PCI/G
SC-35822-S	9/19/2000	THORIUM-230	1.21	0 65	PCI/G
SC-35823-C	9/17/2000	THORIUM-230	1.26	0 65	PCI/G
SC-35823-S	9/17/2000	THORIUM-230	1 14	0.64	PCI/G
SC-35824-S	9/9/2000	THORIUM-230	1 04	0 64	PCI/G
SC-35827-S	9/19/2000	THORIUM-230	5.73	0.64	PCI/G
SC-35828-S	9/19/2000	THORIUM-230	1.08	0.64	PCI/G
SC-35829-S	9/14/2000	THORIUM-230	0.99	0.65	PCI/G
SC-35831-S	9/7/2000	THORIUM-230	1.79	0.64	PCI/G
SC-35832-S	9/8/2000	THORIUM-230	74.1	0 64	PCI/G
SC-35832-S-RS	9/14/2000	THORIUM-230	0.97	0 65	PCI/G
SC-35834-C	9/8/2000	THORIUM-230	2 76	0.65	PCI/G
SC-35902-S	5/17/2000	THORIUM-230	1 16	0.62	PCI/G
SC-35903-C	5/17/2000	THORIUM-230	1.13	0.64	PCI/G
SC-35904-S	5/17/2000	THORIUM-230	16.9	0 62	PCI/G
SC-35904-S-RS	5/25/2000	THORIUM-230	1.61	0.65	PCI/G
SC-35906-S	5/17/2000	THORIUM-230	1.92	0.62	PCI/G
SC-35907-S	5/17/2000	THORIUM-230	5 47	0 62	PCI/G
SC-35908-C	5/17/2000	THORIUM-230	1.3	0.64	PCI/G
SC-35909-S	5/17/2000	THORIUM-230	3 19	0 62	PCI/G
SC-35910-S	5/17/2000	THORIUM-230	15 4	0.62	PCI/G
SC-35910-S-RS	5/25/2000	THORIUM-230	1.16	0.64	PCI/G
SC-35912-C	5/17/2000	THORIUM-230	2 44	0.62	PCI/G
SC-35912-S	5/17/2000	THORIUM-230	3.05	0 64	PCI/G
SC-35913-S	5/17/2000	THORIUM-230	9 73	0 62	PCI/G
SC-35913-S-RS	6/2/2000	THORIUM-230	4.86	0.64	PCI/G
SC-35914-S	5/17/2000	THORIUM-230	12.4	0.62	PCI/G
SC-35914-S-RS	5/25/2000	THORIUM-230	0 85	0.64	PCI/G
SC-35915-C	5/17/2000	THORIUM-230	18.6	0.64	PCI/G
SC-35915-C-RS	5/25/2000	THORIUM-230	1 42	0.65	PCI/G
SC-35916-S	5/17/2000	THORIUM-230	3.76	0.62	PCI/G
SC-35917-S	5/17/2000	THORIUM-230	15	0.62	PCI/G
SC-35917-S-RS	5/25/2000	THORIUM-230	1.35	0 65	PCI/G
SC-35918-S	5/17/2000	THORIUM-230	2.54	0.62	PCI/G
SC-35919-C	5/17/2000	THORIUM-230	6 88	0 64	PCI/G
SC-35919-C-RS	5/25/2000	THORIUM-230	1 4	0.64	PCI/G
SC-35920-S	5/17/2000	THORIUM-230	1 29	0 62	PCI/G
SC-35921-S	5/17/2000	THORIUM-230	3 27	0 62	PCI/G
SC-35922-S	5/17/2000	THORIUM-230	1 76	0 62	PCI/G
SC-35925-S	5/17/2000	THORIUM-230	1 11	0.64	PCI/G
SC-35926-S	5/17/2000	THORIUM-230	1 05	0 62	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35929-C	5/17/2000	THORIUM-230	1 15	0 62	PCI/G
SC-36001-C	5/17/2000	THORIUM-230	1 76	0 62	PCI/G
SC-36001-S	5/17/2000	THORIUM-230	1 03	0 64	PCI/G
SC-36001-U	5/13/2000	THORIUM-230	0 9	0 62	PCI/G
SC-36002-S	5/17/2000	THORIUM-230	1 5	0 62	PCI/G
SC-36003-S	5/17/2000	THORIUM-230	2 06	0 62	PCI/G
SC-36004-S	5/17/2000	THORIUM-230	1 12	0 62	PCI/G
SC-36005-S	5/17/2000	THORIUM-230	1 45	0 62	PCI/G
SC-36006-S	4/20/2000	THORIUM-230	0 79	0 64	PCI/G
SC-36007-S	5/17/2000	THORIUM-230	1 97	0 64	PCI/G
SC-36008-S	5/17/2000	THORIUM-230	3 05	0 62	PCI/G
SC-36009-S	5/17/2000	THORIUM-230	5 69	0 62	PCI/G
SC-36010-S	4/20/2000	THORIUM-230	0 84	0 64	PCI/G
SC-36011-S	5/17/2000	THORIUM-230	2 61	0 62	PCI/G
SC-36012-S	5/17/2000	THORIUM-230	1 1	0 64	PCI/G
SC-36012-S-HS01	5/24/2000	THORIUM-230	596	0 64	PCI/G
SC-36012-S-RS01	5/25 2000	THORIUM-230	1 21	0 64	PCI/G
SC-36013-S	4/20/2000	THORIUM-230	15 8	0 62	PCI/G
SC-36013-S-HS01	5/24 2000	THORIUM-230	278	0 64	PCI/G
SC-36013-S-HS02	5/24/2000	THORIUM-230	4 05	0 64	PCI/G
SC-36013-S-RS	4/27/2000	THORIUM-230	0 84	0 64	PCI/G
SC-36013-S-RS01	5/25/2000	THORIUM-230	1 16	0 65	PCI/G
SC-36013-S-RS02	5/25/2000	THORIUM-230	2 15	0 65	PCI/G
SC-36014-S	4/20/2000	THORIUM-230	1 02	0 62	PCI/G
SC-36015-S	5/17/2000	THORIUM-230	0 96	0 62	PCI/G
SC-36016-S	5/17/2000	THORIUM-230	2 23	0 62	PCI/G
SC-36016-S-HS01	5/24/2000	THORIUM-230	5 44	0 64	PCI/G
SC-36016-S-RS01	5/25 2000	THORIUM-230	3 48	0 64	PCI/G
SC-36017-S	4/20/2000	THORIUM-230	0 86	0 64	PCI/G
SC-36018-S	4/20/2000	THORIUM-230	1 12	0 64	PCI/G
SC-36019-S	5/17/2000	THORIUM-230	1 2	0 62	PCI/G
SC-36020-S	4/20/2000	THORIUM-230	18 3	0 62	PCI/G
SC-36020-S-RS	4/27/2000	THORIUM-230	1 13	0 64	PCI/G
SC-36021-S	4/20/2000	THORIUM-230	1 11	0 62	PCI/G
SC-36022-S	4/29/2000	THORIUM-230	1 16	0 62	PCI/G
SC-36101-S	4/20/2000	THORIUM-230	0 94	0 64	PCI/G
SC-36102-S	4/20/2000	THORIUM-230	0 96	0 62	PCI/G
SC-36103-S	4/29/2000	THORIUM-230	1 33	0 64	PCI/G
SC-36104-S	4/29/2000	THORIUM-230	1 23	0 62	PCI/G
SC-36105-S	4/29 2000	THORIUM-230	1 4	0 64	PCI/G
SC-36106-S	4/29 2000	THORIUM-230	0 92	0 62	PCI/G
SC-36107-S	4/29/2000	THORIUM-230	2 06	0 62	PCI/G
SC-36108-S	4/29 2000	THORIUM-230	2 52	0 64	PCI/G
SC-36109-S	4/10/2000	THORIUM-230	6 34	0 64	PCI/G
SC-36109-S-HS01	4/14/2000	THORIUM-230	2 37	0 64	PCI/G
SC-36109-S-HS02	4/14/2000	THORIUM-230	2 93	0 62	PCI/G
SC-36109-S-HS03	4/14/2000	THORIUM-230	2 64	0 62	PCI/G
SC-36109-S-HS04	4/14/2000	THORIUM-230	3 46	0 64	PCI/G
SC-36110-S	4/29/2000	THORIUM-230	1 17	0 64	PCI/G
SC-36111-S	4/29/2000	THORIUM-230	2 03	0 62	PCI/G
SC-36112-S	4/29/2000	THORIUM-230	1 97	0 62	PCI/G
SC-36113-S	4/10/2000	THORIUM-230	1 23	0 62	PCI/G
SC-36114-S	4/10/2000	THORIUM-230	0 96	0 64	PCI/G
SC-36115-S	4/10/2000	THORIUM-230	1 44	0 62	PCI/G
SC-36116-S	4/10/2000	THORIUM-230	1 46	0 64	PCI/G
SC-36117-S	4/29 2000	THORIUM-230	1 92	0 64	PCI/G
SC-36118-S	4/29/2000	THORIUM-230	0 97	0 64	PCI/G
SC-36119-S	4/29/2000	THORIUM-230	1 44	0 62	PCI/G
SC-36120-S	4/10/2000	THORIUM-230	1 49	0 62	PCI/G
SC-36121-S	4/10/2000	THORIUM-230	1 19	0 64	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36122-S	4/10/2000	THORIUM-230	0 73	0.62	PCI/G
SC-36123-S	4/10/2000	THORIUM-230	6.17	0.64	PCI/G
SC-36124-S	4/10/2000	THORIUM-230	5 69	0.62	PCI/G
SC-36125-S	4/10/2000	THORIUM-230	1.54	0.64	PCI/G
SC-36126-S	4/10/2000	THORIUM-230	1.61	0.62	PCI/G
SC-36201-S	5/17/2000	THORIUM-230	1.67	0.62	PCI/G
SC-36202-S	4/20/2000	THORIUM-230	1.23	0.64	PCI/G
SC-36203-S	4/20/2000	THORIUM-230	1.4	0.64	PCI/G
SC-36204-S	4/29/2000	THORIUM-230	1.21	0.62	PCI/G
SC-36205-S	4/29/2000	THORIUM-230	1.22	0 64	PCI/G
SC-36206-S	4/10/2000	THORIUM-230	0 96	0 64	PCI/G
SC-36207-S	5/17/2000	THORIUM-230	0.98	0.62	PCI/G
SC-36208-S	4/20/2000	THORIUM-230	1.32	0.62	PCI/G
SC-36209-S	4/29/2000	THORIUM-230	1.14	0.64	PCI/G
SC-36210-S	4/29/2000	THORIUM-230	1.11	0 62	PCI/G
SC-36211-S	4/10/2000	THORIUM-230	0 93	0.62	PCI/G
SC-36212-S	4/10/2000	THORIUM-230	0.77	0 64	PCI/G
SC-36215-S	4/29/2000	THORIUM-230	1 14	0.62	PCI/G
SC-36216-S	4/29/2000	THORIUM-230	0.95	0 64	PCI/G
SC-36217-S	4/10/2000	THORIUM-230	0.91	0.62	PCI/G
SC-36218-S	4/10/2000	THORIUM-230	0.74	0.64	PCI/G
SC-36220-C	4/29/2000	THORIUM-230	1.01	0 64	PCI/G
SC-36222-C	4/10/2000	THORIUM-230	0 75	0.62	PCI/G
SC-36223-S	4/12/2000	THORIUM-230	1.07	0.64	PCI/G
SC-36301-S	4/10/2000	THORIUM-230	1.92	0 64	PCI/G
SC-36302-S	4/10/2000	THORIUM-230	0 84	0.62	PCI/G
SC-36303-S	4/10/2000	THORIUM-230	1.04	0.64	PCI/G
SC-36304-S	4/10/2000	THORIUM-230	0 88	0.62	PCI/G
SC-36305-S	4/10/2000	THORIUM-230	0.79	0.64	PCI/G
SC-36306-S	4/10/2000	THORIUM-230	0.93	0.62	PCI/G
SC-36307-S	4/10/2000	THORIUM-230	2.3	0.64	PCI/G
SC-36308-S	4/10/2000	THORIUM-230	0 99	0.62	PCI/G
SC-36309-S	4/10/2000	THORIUM-230	0 92	0 64	PCI/G
SC-36310-S	4/10/2000	THORIUM-230	0 92	0.62	PCI/G
SC-36311-S	4/10/2000	THORIUM-230	1 82	0.64	PCI/G
SC-36312-S	4/10/2000	THORIUM-230	2.34	0 62	PCI/G
SC-36313-S	4/10/2000	THORIUM-230	0 93	0.64	PCI/G
SC-36314-S	4/10/2000	THORIUM-230	1 01	0.62	PCI/G
SC-36315-S	4/10/2000	THORIUM-230	1.26	0 64	PCI/G
SC-36316-S	4/10/2000	THORIUM-230	1 06	0.62	PCI/G
SC-36317-S	4/10/2000	THORIUM-230	0 83	0 64	PCI/G
SC-36318-S	4/10/2000	THORIUM-230	0.91	0 62	PCI/G
SC-36321-S	4/12/2000	THORIUM-230	0.85	0.62	PCI/G
SC-36322-S	4/10/2000	THORIUM-230	1.2	0.64	PCI/G
SC-36325-C	4/12/2000	THORIUM-230	1.02	0.64	PCI/G
SC-36401-S	4/10/2000	THORIUM-230	0.88	0.62	PCI/G
SC-36402-S	4/10/2000	THORIUM-230	0 64	0.64	PCI/G
SC-36403-S	4/10/2000	THORIUM-230	0.96	0 62	PCI/G
SC-36404-S	4/10/2000	THORIUM-230	1.47	0.64	PCI/G
SC-36405-S	4/10/2000	THORIUM-230	0.83	0 62	PCI/G
SC-36406-S	4/10/2000	THORIUM-230	2 28	0.64	PCI/G
SC-36407-S	4/10/2000	THORIUM-230	1 17	0 62	PCI/G
SC-36409-S	4/10/2000	THORIUM-230	0 91	0.64	PCI/G
SC-36410-S	4/10/2000	THORIUM-230	0.98	0 62	PCI/G
SC-36411-S	4/10/2000	THORIUM-230	1 08	0 64	PCI/G
SC-36412-S	4/10/2000	THORIUM-230	0 7	0 64	PCI/G
SC-36413-S	4/10/2000	THORIUM-230	0 79	0 62	PCI/G
SC-36414-S	4/10/2000	THORIUM-230	0.83	0 64	PCI/G
SC-36415-S	4/10/2000	THORIUM-230	0 96	0.62	PCI/G
SC-36416-S	4/10/2000	THORIUM-230	1 01	0 64	PCI/G

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36417-S	4/10/2000	THORIUM-230	0 99	0 62	PCI/G
SC-36418-S	4/10/2000	THORIUM-230	0 94	0 64	PCI/G
SC-36419-S	4/10/2000	THORIUM-230	1 01	0 62	PCI/G
SC-36426-C	9/3/1998	THORIUM-230	2 68	0 62	PCI/G
SC-36501-S	8/14/1998	THORIUM-230	1 13	0 62	PCI/G
SC-36502-S	8/14/1998	THORIUM-230	1 2	0 62	PCI/G
SC-36503-S	8/28/1998	THORIUM-230	1 53	0 447	PCI/G
SC-36504-S	8/28/1998	THORIUM-230	1 28	0 312	PCI/G
SC-36505-S	8/17/1998	THORIUM-230	1 58	0 62	PCI/G
SC-36506-S	8/17/1998	THORIUM-230	2 11	0 62	PCI/G
SC-36507-S	8/17/1998	THORIUM-230	1 8	0 62	PCI/G
SC-36508-S	8/28/1998	THORIUM-230	1 21	0 419	PCI/G
SC-36509-S	8/17/1998	THORIUM-230	1 12	0 62	PCI/G
SC-36510-S	8/17/1998	THORIUM-230	1 38	0 62	PCI/G
SC-36511-S	8/17/1998	THORIUM-230	2 39	0 62	PCI/G
SC-36512-S	8/17/1998	THORIUM-230	0 96	0 62	PCI/G
SC-36513-S	8/6/1998	THORIUM-230	1 01	0 62	PCI/G
SC-36514-S	8/6/1998	THORIUM-230	1 2	0 62	PCI/G
SC-36515-S	8/17/1998	THORIUM-230	0 9	0 62	PCI/G
SC-36516-S	8/17/1998	THORIUM-230	2 61	0 62	PCI/G
SC-36517-S	8/17/1998	THORIUM-230	2 68	0 62	PCI/G
SC-36518-S	8/17/1998	THORIUM-230	2 25	0 62	PCI/G
SC-36519-S	8/17/1998	THORIUM-230	1 08	0 62	PCI/G
SC-36520-S	8/6/1998	THORIUM-230	1 21	0 62	PCI/G
SC-36521-S	8/6/1998	THORIUM-230	1 09	0 62	PCI/G
SC-36602-S	8/31/1998	THORIUM-230	0 538	0 307	PCI/G
SC-36603-S	8/31/1998	THORIUM-230	1 26	0 416	PCI/G
SC-36604-S	8/31/1998	THORIUM-230	1 73	0 216	PCI/G
SC-36605-S	8/31/1998	THORIUM-230	0 346	0 304	PCI/G
SC-36606-S	8/17/1998	THORIUM-230	1 3	0 62	PCI/G
SC-36607-S	8/17/1998	THORIUM-230	1 27	0 62	PCI/G
SC-36608-S	8/17/1998	THORIUM-230	1 05	0 62	PCI/G
SC-36610-S	8/31/1998	THORIUM-230	0 386	0 28	PCI/G
SC-36611-S	8/31/1998	THORIUM-230	0 652	0 251	PCI/G
SC-36612-S	8/31/1998	THORIUM-230	0 388	0 229	PCI/G
SC-36613-S	8/31/1998	THORIUM-230	0 419	0 248	PCI/G
SC-36614-S	8/31/1998	THORIUM-230	0 427	0 268	PCI/G
SC-36615-S	8/31/1998	THORIUM-230	0 945	0 371	PCI/G
SC-36616-S	8/17/1998	THORIUM-230	1 01	0 62	PCI/G
SC-36619-C	8/31/1998	THORIUM-230	0 575	0 191	PCI/G
SC-36621-S	8/31/1998	THORIUM-230	0 619	0 274	PCI/G
SC-36622-S	8/31/1998	THORIUM-230	0 526	0 279	PCI/G
SC-36623-S	8/31/1998	THORIUM-230	0 519	0 205	PCI/G
SC-36626-C	8/31/1998	THORIUM-230	0 242	0 255	PCI/G
SC-36701-S	8/17/1998	THORIUM-230	1 01	0 62	PCI/G
SC-36702-S	8/17/1998	THORIUM-230	1 06	0 62	PCI/G
SC-36703-S	8/6/1998	THORIUM-230	1 12	0 62	PCI/G
SC-36704-S	8/6/1998	THORIUM-230	1 35	0 62	PCI/G
SC-36705-S	8/17/1998	THORIUM-230	1 23	0 62	PCI/G
SC-36706-S	8/17/1998	THORIUM-230	1 11	0 62	PCI/G
SC-36707-S	8/17/1998	THORIUM-230	1 43	0 62	PCI/G
SC-36708-S	8/6/1998	THORIUM-230	1 18	0 62	PCI/G
SC-36709-S	8/17/1998	THORIUM-230	1 18	0 62	PCI/G
SC-36710-S	8/17/1998	THORIUM-230	1 26	0 62	PCI/G
SC-36711-S	8/17/1998	THORIUM-230	1 48	0 62	PCI/G
SC-36712-S	8/6/1998	THORIUM-230	1 23	0 62	PCI/G
SC-36713-S	8/31/1998	THORIUM-230	0 584	0 3	PCI/G
SC-36714-S	8/17/1998	THORIUM-230	0 94	0 62	PCI/G
SC-36715-S	8/17/1998	THORIUM-230	1 17	0 62	PCI/G
SC-36716-S	8/17/1998	THORIUM-230	1 28	0 62	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36718-S	8/27/1998	THORIUM-230	0.915	0 528	PCI/G
SC-36719-S	8/17/1998	THORIUM-230	1 4	0.62	PCI/G
SC-36720-S	8/6/1998	THORIUM-230	1.34	0.62	PCI/G
SC-36801-S	8/6/1998	THORIUM-230	1 17	0.62	PCI/G
SC-36802-S	8/6/1998	THORIUM-230	1.37	0.62	PCI/G
SC-36803-C	8/19/1998	THORIUM-230	1 13	0.62	PCI/G
SC-36803-S	8/19/1998	THORIUM-230	1.3	0.62	PCI/G
SC-36804-S	8/19/1998	THORIUM-230	1.22	0.62	PCI/G
SC-36805-S	8/6/1998	THORIUM-230	1.14	0.62	PCI/G
SC-36806-S	8/19/1998	THORIUM-230	1.04	0.62	PCI/G
SC-36807-S	4/7/1999	THORIUM-230	1.21	0.62	PCI/G
SC-36808-S	8/19/1998	THORIUM-230	1.13	0 62	PCI/G
SC-36809-S	8/6/1998	THORIUM-230	1.11	0.62	PCI/G
SC-36810-S	8/19/1998	THORIUM-230	1.23	0.62	PCI/G
SC-36811-S	8/19/1998	THORIUM-230	0.79	0.62	PCI/G
SC-36812-S	8/19/1998	THORIUM-230	1.1	0.62	PCI/G
SC-36813-C	8/19/1998	THORIUM-230	1.2	0.62	PCI/G
SC-36813-S	8/19/1998	THORIUM-230	1 1	0.62	PCI/G
SC-36814-S	8/6/1998	THORIUM-230	1.28	0.62	PCI/G
SC-36815-S	8/19/1998	THORIUM-230	1.26	0.62	PCI/G
SC-36816-S	8/19/1998	THORIUM-230	1.09	0.62	PCI/G
SC-36817-S	8/19/1998	THORIUM-230	1.02	0.62	PCI/G
SC-36818-S	8/19/1998	THORIUM-230	1 06	0 62	PCI/G
SC-36821-S	8/6/1998	THORIUM-230	1 06	0.62	PCI/G
SC-36822-S	8/19/1998	THORIUM-230	1 12	0 62	PCI/G
SC-36823-S	8/19/1998	THORIUM-230	0.98	0.62	PCI/G
SC-36824-S	8/19/1998	THORIUM-230	1 33	0.62	PCI/G
SC-36825-S	8/19/1998	THORIUM-230	1.27	0.62	PCI/G
SC-38701-C	8/27/1998	THORIUM-230	1 06	0.355	PCI/G
SC-38702-S	8/27/1998	THORIUM-230	0 724	0.49	PCI/G
SC-38703-S	8/6/1998	THORIUM-230	1.17	0 62	PCI/G
SC-38704-S	8/6/1998	THORIUM-230	1 14	0 62	PCI/G
SC-38706-S	8/21/1998	THORIUM-230	1.23	0.62	PCI/G
SC-38707-S	8/21/1998	THORIUM-230	1 09	0.62	PCI/G
SC-38708-S	8/21/1998	THORIUM-230	1.01	0.62	PCI/G
SC-38709-S	8/21/1998	THORIUM-230	0 96	0 62	PCI/G
SC-38710-C	8/21/1998	THORIUM-230	1.23	0.62	PCI/G
SC-38711-S	8/21/1998	THORIUM-230	1.21	0.62	PCI/G
SC-38712-S	8/21/1998	THORIUM-230	0.95	0.62	PCI/G
SC-38713-S	8/21/1998	THORIUM-230	1.04	0 62	PCI/G
SC-38714-C	8/21/1998	THORIUM-230	1.16	0.62	PCI/G
SC-38715-S	8/21/1998	THORIUM-230	1.08	0.62	PCI/G
SC-38716-S	8/21/1998	THORIUM-230	0 91	0 62	PCI/G
SC-38717-S	8/21/1998	THORIUM-230	1 31	0.62	PCI/G
SC-38719-S	8/21/1998	THORIUM-230	1.21	0 62	PCI/G
SC-38720-S	8/21/1998	THORIUM-230	1.2	0.62	PCI/G
SC-38721-S	8/21/1998	THORIUM-230	1 31	0.62	PCI/G
SC-38724-S	8/21/1998	THORIUM-230	1 99	0.62	PCI/G
SC-38725-S	8/21/1998	THORIUM-230	1.19	0 62	PCI/G
SC-38728-S	8/21/1998	THORIUM-230	1.55	0 62	PCI/G
SC-38729-C	8/21/1998	THORIUM-230	1.21	0.62	PCI/G
SC-38801-S	8/19/1998	THORIUM-230	1.02	0 62	PCI/G
SC-38802-S	8/19/1998	THORIUM-230	1 04	0 62	PCI/G
SC-38803-S	8/19 1998	THORIUM-230	1.1	0 62	PCI/G
SC-38804-S	8/19/1998	THORIUM-230	1.28	0.62	PCI/G
SC-38808-S	8/19/1998	THORIUM-230	1 06	0.62	PCI/G
SC-38809-S	8/19/1998	THORIUM-230	1 07	0.62	PCI/G
SC-38810-S	8/19 1998	THORIUM-230	1 19	0 62	PCI/G
SC-38811-S	8/19 1998	THORIUM-230	1.6	0 62	PCI/G
SC-38814-S	8/19/1998	THORIUM-230	1 05	0 62	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-38815-S	8/19/1998	THORIUM-230	0 95	0 62	PCI/G
SC-38816-S	8/19/1998	THORIUM-230	0 99	0 62	PCI/G
SC-38817-S	8/19/1998	THORIUM-230	1 59	0 62	PCI/G
SC-38819-S	8/21/1998	THORIUM-230	1 22	0 62	PCI/G
SC-38820-S	8/19/1998	THORIUM-230	0 99	0 62	PCI/G
SC-38821-S	8/19/1998	THORIUM-230	1 35	0 62	PCI/G
SC-38823-S	8/21/1998	THORIUM-230	1 01	0 62	PCI/G
SC-38824-C	8/19/1998	THORIUM-230	1 22	0 62	PCI/G
SC-38826-C	8/21/1998	THORIUM-230	1 44	0 62	PCI/G
SC-38902-S	8/14/1998	THORIUM-230	0 99	0 62	PCI/G
SC-38903-S	8/14/1998	THORIUM-230	1 29	0 62	PCI/G
SC-38904-C	8/14/1998	THORIUM-230	1 35	0 62	PCI/G
SC-38905-S	8/14/1998	THORIUM-230	1 19	0 62	PCI/G
SC-38906-S	8/14/1998	THORIUM-230	1 37	0 62	PCI/G
SC-38908-S	8/14/1998	THORIUM-230	1 22	0 62	PCI/G
SC-38909-S	8/14/1998	THORIUM-230	1 41	0 62	PCI/G
SC-38910-C	8/14/1998	THORIUM-230	1 31	0 62	PCI/G
SC-38911-S	8/14/1998	THORIUM-230	1 33	0.62	PCI/G
SC-38912-S	8/28 1998	THORIUM-230	1 07	0 387	PCI/G
SC-38914-S	8/31/1998	THORIUM-230	0 884	0 253	PCI/G
SC-38915-S	8/28 1998	THORIUM-230	0 762	0 277	PCI/G
SC-38916-S	8/17/1998	THORIUM-230	4 19	0 62	PCI/G
SC-38918-S	8/31/1998	THORIUM-230	0 329	0 169	PCI/G
SC-38919-S	8/17/1998	THORIUM-230	0 88	0 62	PCI/G
SC-38920-S	8/17/1998	THORIUM-230	0 91	0 62	PCI/G
SC-36503-S	8/28/1998	THORIUM-232	0 491	0 481	PCI/G
SC-36504-S	8/28/1998	THORIUM-232	0 606	0 336	PCI/G
SC-36508-S	8/28/1998	THORIUM-232	0 584	0 452	PCI/G
SC-36602-S	8/31/1998	THORIUM-232	0 614	0 331	PCI/G
SC-36603-S	8/31/1998	THORIUM-232	0 595	0 448	PCI/G
SC-36604-S	8/31/1998	THORIUM-232	0 671	0 233	PCI/G
SC-36605-S	8/31/1998	THORIUM-232	0 54	0 328	PCI/G
SC-36610-S	8/31 1998	THORIUM-232	0 541	0 301	PCI/G
SC-36611-S	8/31/1998	THORIUM-232	0 593	0 27	PCI/G
SC-36612-S	8/31/1998	THORIUM-232	0 464	0 247	PCI/G
SC-36613-S	8/31/1998	THORIUM-232	0 431	0 267	PCI/G
SC-36614-S	8/31/1998	THORIUM-232	0 737	0 289	PCI/G
SC 36615-S	8/31/1998	THORIUM-232	0 877	0 4	PCI/G
SC-36619-C	8/31/1998	THORIUM-232	0 484	0 206	PCI/G
SC-36621-S	8/31/1998	THORIUM-232	0 382	0 296	PCI/G
SC-36622-S	8/31/1998	THORIUM-232	0 455	0 301	PCI/G
SC-36623-S	8/31 1998	THORIUM-232	0 425	0 221	PCI/G
SC-36626-C	8/31/1998	THORIUM-232	0 509	0 275	PCI/G
SC-36713-S	8/31/1998	THORIUM-232	0 556	0 323	PCI/G
SC-36718-S	8/27/1998	THORIUM-232	0 685	0 569	PCI/G
SC-38701-C	8/27/1998	THORIUM-232	0 345	0 382	PCI/G
SC-38702-S	8/27/1998	THORIUM-232	0 24	0 528	PCI/G
SC-38912-S	8/28 1998	THORIUM-232	0 709	0 417	PCI/G
SC-38914-S	8/31/1998	THORIUM-232	0 478	0 273	PCI/G
SC-38915-S	8/28/1998	THORIUM-232	0 459	0 298	PCI/G
SC-38918-S	8/31/1998	THORIUM-232	0 505	0 182	PCI/G
SC-35702-S	4/10 2000	URANIUM-238	2 88	2 33	PCI/G
SC-35703-S	4/10/2000	URANIUM-238	1 335	2 67	PCI/G
SC-35704-S	9/8/2000	URANIUM-238	5 21	2 32	PCI/G
SC-35706-S	4/10/2000	URANIUM-238	0 895	1 79	PCI/G
SC-35707-S	4/10 2000	URANIUM-238	1 235	2 47	PCI/G
SC-35708-S	9/21/2000	URANIUM-238	0 98	1 95	PCI/G
SC-35709-S	9/21/2000	URANIUM-238	1 31	2 62	PCI/G
SC-35711-S	4/10/2000	URANIUM-238	0 95	1 9	PCI/G
SC-35712-S	4/10 2000	URANIUM-238	3 55	1 91	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35713-S	9/21/2000	URANIUM-238	1 01	2.02	PCI/G
SC-35714-S	9/21/2000	URANIUM-238	1 015	2 03	PCI/G
SC-35716-S	4/10/2000	URANIUM-238	1.04	2.08	PCI/G
SC-35717-S	4/10/2000	URANIUM-238	3.33	1.96	PCI/G
SC-35718-S	9/20/2000	URANIUM-238	1.05	2 1	PCI/G
SC-35720-S	9/7/2000	URANIUM-238	0.97	1.94	PCI/G
SC-35721-S	9/7/2000	URANIUM-238	3 62	2.03	PCI/G
SC-35722-S	9/20/2000	URANIUM-238	1.14	2.28	PCI/G
SC-35724-C	9/7/2000	URANIUM-238	3.22	2.4	PCI/G
SC-35725-S	9/7/2000	URANIUM-238	2.26	1.82	PCI/G
SC-35726-S	9/19/2000	URANIUM-238	1.06	2.12	PCI/G
SC-35727-C	9/7/2000	URANIUM-238	4.95	2.34	PCI/G
SC-35728-S	9/7/2000	URANIUM-238	1.27	2.54	PCI/G
SC-35729-S	9/7/2000	URANIUM-238	1.415	2.83	PCI/G
SC-35730-C	9/7/2000	URANIUM-238	1 075	2 15	PCI/G
SC-35731-C	9/7/2000	URANIUM-238	1.08	2 16	PCI/G
SC-35732-S	9/7/2000	URANIUM-238	1 015	2.03	PCI/G
SC-35734-C	9/7/2000	URANIUM-238	2 01	1.89	PCI/G
SC-35801-S	9/8/2000	URANIUM-238	1.985	3 97	PCI/G
SC-35801-U	9/22/2000	URANIUM-238	1 09	2.18	PCI/G
SC-35802-S	9/8/2000	URANIUM-238	1.575	3 15	PCI/G
SC-35802-U	9/22/2000	URANIUM-238	1.2	2 4	PCI/G
SC-35803-C	9/17/2000	URANIUM-238	1 055	2 11	PCI/G
SC-35803-S	9/17/2000	URANIUM-238	1.07	2 14	PCI/G
SC-35804-S	9/19/2000	URANIUM-238	1.04	2.08	PCI/G
SC-35805-S	9/19 2000	URANIUM-238	1.19	2.36	PCI/G
SC-35806-S	9/8/2000	URANIUM-238	1.24	2 48	PCI/G
SC-35807-S	9/8/2000	URANIUM-238	3 61	2.17	PCI/G
SC-35808-S	9/17/2000	URANIUM-238	1.06	2.12	PCI/G
SC-35809-S	9/17/2000	URANIUM-238	1 03	2.06	PCI/G
SC-35810-C	9/13/2000	URANIUM-238	1 005	2.01	PCI/G
SC-35810-S	9/14/2000	URANIUM-238	0.955	1.91	PCI/G
SC-35811-S	9/13/2000	URANIUM-238	1.055	2.11	PCI/G
SC-35812-S	9/13 2000	URANIUM-238	0 97	1.94	PCI/G
SC-35813-S	9/9/2000	URANIUM-238	3 46	2.04	PCI/G
SC-35814-S	9/20/2000	URANIUM-238	0.95	1.9	PCI/G
SC-35815-S	9/17/2000	URANIUM-238	1	2	PCI/G
SC-35816-S	9/17/2000	URANIUM-238	0.955	1.91	PCI/G
SC-35817-S	9/13/2000	URANIUM-238	1.025	2.05	PCI/G
SC-35818-S	9/9/2000	URANIUM-238	1.245	2 49	PCI/G
SC-35819-S	9/9/2000	URANIUM-238	4.53	6.13	PCI/G
SC-35820-C	9/9/2000	URANIUM-238	1.855	3 71	PCI/G
SC-35821-C	9/19/2000	URANIUM-238	1.045	2.09	PCI/G
SC-35821-S	9/19/2000	URANIUM-238	1.05	2 1	PCI/G
SC-35822-S	9/19/2000	URANIUM-238	0 905	1.81	PCI/G
SC-35823-C	9/17/2000	URANIUM-238	1.04	2 08	PCI/G
SC-35823-S	9/17/2000	URANIUM-238	1.005	2.01	PCI/G
SC-35824-S	9/9/2000	URANIUM-238	1.245	2.49	PCI/G
SC-35827-S	9/19/2000	URANIUM-238	1 13	2.26	PCI/G
SC-35828-S	9/19/2000	URANIUM-238	1 13	2.26	PCI/G
SC-35829-S	9/14/2000	URANIUM-238	1.075	2 15	PCI/G
SC-35831-S	9/7/2000	URANIUM-238	4 61	2.23	PCI/G
SC-35832-S	9/8/2000	URANIUM-238	5.68	3 21	PCI/G
SC-35834-C	9/8/2000	URANIUM-238	4 74	2.22	PCI/G
SC-35902-S	5/17/2000	URANIUM-238	1.215	2 43	PCI/G
SC-35903-C	5/17/2000	URANIUM-238	1 17	2.34	PCI/G
SC-35904-S	5/17/2000	URANIUM-238	1.24	2 48	PCI/G
SC-35906-S	5/17 2000	URANIUM-238	1 18	2 36	PCI/G
SC-35907-S	5/17 2000	URANIUM-238	1.09	2 18	PCI/G
SC-35908-C	5/17 2000	URANIUM-238	1 15	2.3	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-35909-S	5/17/2000	URANIUM-238	1 295	2 59	PCI/G
SC-35910-S	5/17/2000	URANIUM-238	1 105	2 21	PCI/G
SC-35912-C	5/17/2000	URANIUM-238	1 105	2 21	PCI/G
SC-35912-S	5/17/2000	URANIUM-238	1 155	2 31	PCI/G
SC-35913-S	5/17/2000	URANIUM-238	1 2	2 4	PCI/G
SC-35914-S	5/17/2000	URANIUM-238	1 62	1 86	PCI/G
SC-35915-C	5/17/2000	URANIUM-238	1 215	2 43	PCI/G
SC-35916-S	5/17/2000	URANIUM-238	1 085	2 17	PCI/G
SC-35917-S	5/17/2000	URANIUM-238	1 07	2 14	PCI/G
SC-35918-S	5/17/2000	URANIUM-238	1 26	2 52	PCI/G
SC-35919-C	5/17/2000	URANIUM-238	1 225	2 45	PCI/G
SC-35920-S	5/17/2000	URANIUM-238	1 12	2 24	PCI/G
SC-35921-S	5/17/2000	URANIUM-238	1 06	2 12	PCI/G
SC-35922-S	5/17/2000	URANIUM-238	1 06	2 12	PCI/G
SC-35925-S	5/17/2000	URANIUM-238	1 1	2 2	PCI/G
SC-35926-S	5/17/2000	URANIUM-238	1 01	2 02	PCI/G
SC-35929-C	5/17/2000	URANIUM-238	1 135	2 27	PCI/G
SC-36001-C	5/17/2000	URANIUM-238	1 085	2 17	PCI/G
SC-36001-S	5/17/2000	URANIUM-238	1 14	2 28	PCI/G
SC-36001-U	5/13/2000	URANIUM-238	1 01	2 02	PCI/G
SC-36002-S	5/17/2000	URANIUM-238	1 055	2 11	PCI/G
SC-36003-S	5/17/2000	URANIUM-238	11 5	3 19	PCI/G
SC-36004-S	5/17/2000	URANIUM-238	1 82	1 86	PCI/G
SC-36005-S	5/17/2000	URANIUM-238	1 255	2 51	PCI/G
SC-36006-S	4/20/2000	URANIUM-238	1 24	2 48	PCI/G
SC-36007-S	5/17/2000	URANIUM-238	1 14	2 28	PCI/G
SC-36008-S	5/17/2000	URANIUM-238	0 96	1 92	PCI/G
SC-36009-S	5/17/2000	URANIUM-238	1 175	2 35	PCI/G
SC-36010-S	4/20/2000	URANIUM-238	1 105	2 21	PCI/G
SC-36011-S	5/17/2000	URANIUM-238	1 075	2 15	PCI/G
SC-36012-S	5/17/2000	URANIUM-238	1 05	2 1	PCI/G
SC-36012-S-HS01	5/24/2000	URANIUM-238	13 6	7 61	PCI/G
SC-36012-S-RS01	5/25/2000	URANIUM-238	1 085	2 17	PCI/G
SC-36013-S	4/20/2000	URANIUM-238	0 865	1 73	PCI/G
SC-36013-S-HS01	5/24/2000	URANIUM-238	2 265	4 53	PCI/G
SC-36013-S-HS02	5/24/2000	URANIUM-238	1 12	2 24	PCI/G
SC-36013-S-RS01	5/25/2000	URANIUM-238	1 12	2 24	PCI/G
SC-36013-S-RS02	5/25/2000	URANIUM-238	1 04	2 08	PCI/G
SC-36014-S	4/20/2000	URANIUM-238	2 57	2 01	PCI/G
SC-36015-S	5/17/2000	URANIUM-238	1 015	2 03	PCI/G
SC-36016-S	5/17/2000	URANIUM-238	1 165	2 33	PCI/G
SC-36016-S-HS01	5/24/2000	URANIUM-238	1 04	2 08	PCI/G
SC-36016-S-RS01	5/25/2000	URANIUM-238	1 085	2 17	PCI/G
SC-36017-S	4/20/2000	URANIUM-238	1 215	2 43	PCI/G
SC-36018-S	4/20/2000	URANIUM-238	1 13	2 26	PCI/G
SC-36019-S	5/17/2000	URANIUM-238	1 06	2 12	PCI/G
SC-36020-S	4/20/2000	URANIUM-238	3 01	2 2	PCI/G
SC-36021-S	4/20/2000	URANIUM-238	3 2	2 08	PCI/G
SC-36022-S	4/29/2000	URANIUM-238	1 16	2 32	PCI/G
SC-36101-S	4/20/2000	URANIUM-238	1 2	2 4	PCI/G
SC-36102-S	4/20/2000	URANIUM-238	1 37	2 74	PCI/G
SC-36103-S	4/29/2000	URANIUM-238	1 175	2 35	PCI/G
SC-36104-S	4/29/2000	URANIUM-238	3 23	1 93	PCI/G
SC-36105-S	4/29/2000	URANIUM-238	1 63	1 95	PCI/G
SC-36106-S	4/29/2000	URANIUM-238	1 19	2 38	PCI/G
SC-36107-S	4/29/2000	URANIUM-238	1 045	2 09	PCI/G
SC-36108-S	4/29/2000	URANIUM-238	1 19	2 38	PCI/G
SC-36109-S	4/10/2000	URANIUM-238	1 19	2 38	PCI/G
SC-36110-S	4/29/2000	URANIUM-238	3 66	2 39	PCI/G
SC-36111-S	4/29/2000	URANIUM-238	1 11	2 22	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36112-S	4/29/2000	URANIUM-238	1.21	2 42	PCI/G
SC-36113-S	4/10/2000	URANIUM-238	1.205	2.41	PCI/G
SC-36114-S	4/10/2000	URANIUM-238	1.06	2.12	PCI/G
SC-36115-S	4/10/2000	URANIUM-238	1.145	2 29	PCI/G
SC-36116-S	4/10/2000	URANIUM-238	1.23	2 46	PCI/G
SC-36117-S	4/29/2000	URANIUM-238	2.42	2.02	PCI/G
SC-36118-S	4/29/2000	URANIUM-238	1.145	2.29	PCI/G
SC-36119-S	4/29/2000	URANIUM-238	1.06	2.12	PCI/G
SC-36120-S	4/10/2000	URANIUM-238	0.975	1.95	PCI/G
SC-36121-S	4/10/2000	URANIUM-238	0 98	1.96	PCI/G
SC-36122-S	4/10/2000	URANIUM-238	1.035	2.07	PCI/G
SC-36123-S	4/10/2000	URANIUM-238	4.33	2.1	PCI/G
SC-36124-S	4/10/2000	URANIUM-238	1.285	2.57	PCI/G
SC-36125-S	4/10/2000	URANIUM-238	1.365	2 73	PCI/G
SC-36126-S	4/10 2000	URANIUM-238	5 18	2.1	PCI/G
SC-36201-S	5/17 2000	URANIUM-238	1 185	2.37	PCI/G
SC-36202-S	4/20/2000	URANIUM-238	1 78	1.9	PCI/G
SC-36203-S	4/20/2000	URANIUM-238	2 38	2.16	PCI/G
SC-36204-S	4/29/2000	URANIUM-238	1.095	2 19	PCI/G
SC-36205-S	4/29/2000	URANIUM-238	1.015	2.03	PCI/G
SC-36206-S	4/10/2000	URANIUM-238	1.075	2.15	PCI/G
SC-36207-S	5/17/2000	URANIUM-238	1.26	2.52	PCI/G
SC-36208-S	4/20 2000	URANIUM-238	1 185	2.37	PCI/G
SC-36209-S	4/29 2000	URANIUM-238	1.105	2.21	PCI/G
SC-36210-S	4/29/2000	URANIUM-238	1.66	1.82	PCI/G
SC-36211-S	4/10 2000	URANIUM-238	0.985	1.97	PCI/G
SC-36212-S	4/10 2000	URANIUM-238	1 105	2.21	PCI/G
SC-36215-S	4/29 2000	URANIUM-238	1.215	2 43	PCI/G
SC-36216-S	4/29 2000	URANIUM-238	1 14	2.28	PCI/G
SC-36217-S	4/10/2000	URANIUM-238	2.37	2.21	PCI/G
SC-36218-S	4/10 2000	URANIUM-238	1.02	2.04	PCI/G
SC-36220-C	4/29 2000	URANIUM-238	1.155	2.31	PCI/G
SC-36222-C	4/10/2000	URANIUM-238	5.31	3.06	PCI/G
SC-36223-S	4/12 2000	URANIUM-238	1.01	2 02	PCI/G
SC-36301-S	4/10 2000	URANIUM-238	1.06	2.12	PCI/G
SC-36302-S	4/10/2000	URANIUM-238	1.04	2.08	PCI/G
SC-36303-S	4/10 2000	URANIUM-238	1.055	2 11	PCI/G
SC-36304-S	4/10 2000	URANIUM-238	1.045	2.09	PCI/G
SC-36305-S	4/10 2000	URANIUM-238	0.99	1.98	PCI/G
SC-36306-S	4/10/2000	URANIUM-238	1.005	2 01	PCI/G
SC-36307-S	4/10 2000	URANIUM-238	1.165	2 33	PCI/G
SC-36308-S	4/10/2000	URANIUM-238	1.06	2 12	PCI/G
SC-36309-S	4/10/2000	URANIUM-238	1.045	2.09	PCI/G
SC-36310-S	4/10/2000	URANIUM-238	1 03	2.06	PCI/G
SC-36311-S	4/10 2000	URANIUM-238	1.015	2.03	PCI/G
SC-36312-S	4/10/2000	URANIUM-238	1.13	2.26	PCI/G
SC-36313-S	4/10 2000	URANIUM-238	1.1	2.2	PCI/G
SC-36314-S	4/10 2000	URANIUM-238	1.09	2.18	PCI/G
SC-36315-S	4/10 2000	URANIUM-238	0.885	1.77	PCI/G
SC-36316-S	4/10/2000	URANIUM-238	1.215	2.43	PCI/G
SC-36317-S	4/10 2000	URANIUM-238	0.96	1 92	PCI/G
SC-36318-S	4/10 2000	URANIUM-238	1 075	2.15	PCI/G
SC-36321-S	4/12 2000	URANIUM-238	3.11	1.78	PCI/G
SC-36322-S	4/10 2000	URANIUM-238	1 045	2 09	PCI/G
SC-36325-C	4/12 2000	URANIUM-238	1.225	2 45	PCI/G
SC-36401-S	4/10/2000	URANIUM-238	1 01	2.02	PCI/G
SC-36402-S	4/10 2000	URANIUM-238	1.015	2.03	PCI/G
SC-36403-S	4/10 2000	URANIUM-238	1.09	2 18	PCI/G
SC-36404-S	4/10 2000	URANIUM-238	4 66	2.41	PCI/G
SC-36405-S	4/10 2000	URANIUM-238	1 075	2 15	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36406-S	4/10 2000	URANIUM-238	1	2	PCI/G
SC-36407-S	4/10 2000	URANIUM-238	1 12	2 24	PCI/G
SC-36409-S	4/10 2000	URANIUM-238	1 16	2 32	PCI/G
SC-36410-S	4/10 2000	URANIUM-238	1 055	2 11	PCI/G
SC-36411-S	4/10 2000	URANIUM-238	1 11	2 22	PCI/G
SC-36412-S	4/10 2000	URANIUM-238	1	2	PCI/G
SC-36413-S	4/10 2000	URANIUM-238	1 06	2 12	PCI/G
SC-36414-S	4/10/2000	URANIUM-238	1 06	2 12	PCI/G
SC-36415-S	4/10/2000	URANIUM-238	1 07	2 14	PCI/G
SC-36416-S	4/10/2000	URANIUM-238	1 12	2 24	PCI/G
SC-36417-S	4/10/2000	URANIUM-238	1 165	2 33	PCI/G
SC-36418-S	4/10/2000	URANIUM-238	0 975	1 95	PCI/G
SC-36419-S	4/10 2000	URANIUM-238	1 115	2 23	PCI/G
SC-36421-S	4/12/2000	URANIUM-238	1 205	2 41	PCI/G
SC-36422-S	4/12/2000	URANIUM-238	1 265	2 53	PCI/G
SC-36425-C	4/12/2000	URANIUM-238	2 72	2 05	PCI/G
SC-36426-C	9/3/1998	URANIUM-238	1 84	3 68	PCI/G
SC-36426-S	4/12 2000	URANIUM-238	1 13	2 26	PCI/G
SC-36427-C	9/3 1998	URANIUM-238	1 86	3 72	PCI/G
SC-36428-C	9/3/1998	URANIUM-238	1 325	2 65	PCI/G
SC-36429-C	9/3 1998	URANIUM-238	1 955	3 91	PCI/G
SC-36430-C	4/12/2000	URANIUM-238	1 35	2 7	PCI/G
SC-36430-S	9/3 1998	URANIUM-238	1 36	2 72	PCI/G
SC-36431-C	9/3 1998	URANIUM-238	5 4	4 19	PCI/G
SC-36432-C	9/3/1998	URANIUM-238	8	2 64	PCI/G
SC-36433-C	9/3 1998	URANIUM-238	1 91	3 82	PCI/G
SC-36434-C	9/3 1998	URANIUM-238	14 7	2 72	PCI/G
SC-36435-C	9/3 1998	URANIUM-238	4 35	2 8	PCI/G
SC-36501-S	8/14 1998	URANIUM-238	1 835	3 67	PCI/G
SC-36502-S	8/14/1998	URANIUM-238	6 97	2 56	PCI/G
SC-36503-S	8/28 1998	URANIUM-238	3 68	2 73	PCI/G
SC-36504-S	8/28/1998	URANIUM-238	5	2 06	PCI/G
SC-36505-S	8/17/1998	URANIUM-238	15 7	5 18	PCI/G
SC-36506-S	8/17/1998	URANIUM-238	29 2	4	PCI/G
SC-36507-S	8/17/1998	URANIUM-238	29 3	5 11	PCI/G
SC-36508-S	8/28/1998	URANIUM-238	2.72	2 91	PCI/G
SC-36509-S	8/17/1998	URANIUM-238	7 77	2 91	PCI/G
SC-36510-S	8/17/1998	URANIUM-238	10 2	4 79	PCI/G
SC-36511-S	8/17/1998	URANIUM-238	30 6	3 73	PCI/G
SC-36512-S	8/17/1998	URANIUM-238	3 7	2 48	PCI/G
SC-36513-S	8/6 1998	URANIUM-238	1 755	3 51	PCI/G
SC-36514-S	8/6 1998	URANIUM-238	6 2	2 77	PCI/G
SC-36515-S	8/17 1998	URANIUM-238	2 39	2 22	PCI/G
SC-36516-S	8/17 1998	URANIUM-238	31	5 7	PCI/C
SC-36517-S	8/17/1998	URANIUM-238	53 7	4 41	PCI/G
SC-36518-S	8/17 1998	URANIUM-238	31 4	5 55	PCI/G
SC-36519-S	8/17 1998	URANIUM-238	1 46	2 92	PCI/G
SC-36520-S	8/6 1998	URANIUM-238	1 905	3 81	PCI/G
SC-36521-S	8/6/1998	URANIUM-238	1 555	3 11	PCI/G
SC-36602-S	8/31 1998	URANIUM-238	2 36	3 08	PCI/G
SC-36603-S	8/31/1998	URANIUM-238	1 75	3 07	PCI/G
SC-36604-S	8/31/1998	URANIUM-238	5 01	4 06	PCI/G
SC-36605-S	8/31 1998	URANIUM-238	2 32	3 43	PCI/G
SC-36606-S	8/17/1998	URANIUM-238	2 33	2 52	PCI/G
SC-36607-S	8/17/1998	URANIUM-238	3 85	2	PCI/G
SC-36608-S	8/17 1998	URANIUM-238	2 68	3 01	PCI/G
SC-36610-S	8/31 1998	URANIUM-238	5 88	2 69	PCI/G
SC-36611-S	8/31/1998	URANIUM-238	2 2	2 18	PCI/G
SC-36612-S	8/31 1998	URANIUM-238	0 78	2 78	PCI/G
SC-36613-S	8/31 1998	URANIUM-238	3 69	2 31	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-36614-S	8/31/1998	URANIUM-238	4 11	2 7	PCI/G
SC-36615-S	8/31/1998	URANIUM-238	27 1	2 9	PCI/G
SC-36616-S	8/17/1998	URANIUM-238	1.285	2.57	PCI/G
SC-36619-C	8/31/1998	URANIUM-238	2.74	2 82	PCI/G
SC-36621-S	8/31/1998	URANIUM-238	12	2.93	PCI/G
SC-36622-S	8/31/1998	URANIUM-238	4 46	2.63	PCI/G
SC-36623-S	8/31/1998	URANIUM-238	2.04	2.06	PCI/G
SC-36626-C	8/31/1998	URANIUM-238	3.23	2.28	PCI/G
SC-36701-S	8/17 1998	URANIUM-238	1 77	3.54	PCI/G
SC-36702-S	8/17/1998	URANIUM-238	9 54	2.89	PCI/G
SC-36703-S	8/6/1998	URANIUM-238	2.77	3.89	PCI/G
SC-36704-S	8/6/1998	URANIUM-238	4 68	2 33	PCI/G
SC-36705-S	8/17/1998	URANIUM-238	1 905	3.81	PCI/G
SC-36706-S	8/17/1998	URANIUM-238	3.39	1.81	PCI/G
SC-36707-S	8/17/1998	URANIUM-238	15	4 45	PCI/G
SC-36708-S	8/6/1998	URANIUM-238	3.06	2.61	PCI/G
SC-36709-S	8/17/1998	URANIUM-238	3 49	2.94	PCI/G
SC-36710-S	8/17/1998	URANIUM-238	1 965	3.93	PCI/G
SC-36711-S	8/17/1998	URANIUM-238	2 99	1.88	PCI/G
SC-36712-S	8/6/1998	URANIUM-238	5.31	3 52	PCI/G
SC-36713-S	8/31/1998	URANIUM-238	1.64	2 14	PCI/G
SC-36714-S	8/17/1998	URANIUM-238	1.18	2.33	PCI/G
SC-36715-S	8/17/1998	URANIUM-238	1 455	2.91	PCI/G
SC-36716-S	8/17 1998	URANIUM-238	2 075	4 15	PCI/G
SC-36718-S	8/27/1998	URANIUM-238	0.835	2.64	PCI/G
SC-36719-S	8/17/1998	URANIUM-238	3 15	2.25	PCI/G
SC-36720-S	8/6/1998	URANIUM-238	3.9	2.54	PCI/G
SC-36801-S	8/6/1998	URANIUM-238	5.65	3 34	PCI/G
SC-36802-S	8/6/1998	URANIUM-238	4 45	2 11	PCI/G
SC-36803-C	8/19/1998	URANIUM-238	4 76	4	PCI/G
SC-36803-S	8/19/1998	URANIUM-238	3.65	2.37	PCI/G
SC-36804-S	8/19 1998	URANIUM-238	2 07	4.09	PCI/G
SC-36805-S	8/6/1998	URANIUM-238	2 265	4.53	PCI/G
SC-36806-S	8/19/1998	URANIUM-238	2.23	2.03	PCI/G
SC-36807-S	4/7 1999	URANIUM-238	1 47	2.94	PCI/G
SC-36808-S	8/19/1998	URANIUM-238	4.44	4 01	PCI/G
SC-36809-S	8/6/1998	URANIUM-238	3 42	2.73	PCI/G
SC-36810-S	8/19/1998	URANIUM-238	4.54	1.88	PCI/G
SC-36811-S	8/19 1998	URANIUM-238	1 84	3.68	PCI/G
SC-36812-S	8/19 1998	URANIUM-238	1 335	2.67	PCI/G
SC-36813-C	8/19 1998	URANIUM-238	6.28	3 67	PCI/G
SC-36813-S	8/19/1998	URANIUM-238	1 73	1.94	PCI/G
SC-36814-S	8/6/1998	URANIUM-238	3 18	3.07	PCI/G
SC-36815-S	8/19/1998	URANIUM-238	4 25	4 05	PCI/G
SC-36816-S	8/19/1998	URANIUM-238	2.25	2.87	PCI/G
SC-36817-S	8/19/1998	URANIUM-238	2 005	4 01	PCI/G
SC-36818-S	8/19/1998	URANIUM-238	1.97	2.59	PCI/G
SC-36821-S	8/6/1998	URANIUM-238	1 975	3.95	PCI/G
SC-36822-S	8/19/1998	URANIUM-238	2 005	4.01	PCI/G
SC-36823-S	8/19 1998	URANIUM-238	1 295	2 59	PCI/G
SC-36824-S	8/19 1998	URANIUM-238	2.035	4.07	PCI/G
SC-36825-S	8/19/1998	URANIUM-238	3.16	2.57	PCI/G
SC-38701-C	8/27 1998	URANIUM-238	1 45	2.17	PCI/G
SC-38702-S	8/27/1998	URANIUM-238	0 269	3.21	PCI/G
SC-38703-S	8/6 1998	URANIUM-238	3.95	2.15	PCI/G
SC-38704-S	8/6/1998	URANIUM-238	2 145	4.29	PCI/G
SC-38706-S	8/21/1998	URANIUM-238	4 4	2.76	PCI/G
SC-38707-S	8/21 1998	URANIUM-238	3 36	1 96	PCI/G
SC-38708-S	8/21 1998	URANIUM-238	2 245	4 49	PCI/G
SC-38709-S	8/21 1998	URANIUM-238	2	2.55	PCI/G

APPENDIX B WP-437 RU16 FINAL DATA

WSSRAP_ID	DATE_SAM	PARAMETER	CONC	DL	UNITS
SC-38710-C	8/21/1998	URANIUM-238	2 7	3 64	PCI/G
SC-38711-S	8/21/1998	URANIUM-238	4 53	2 53	PCI/G
SC-38712-S	8/21/1998	URANIUM-238	2 15	4 3	PCI/G
SC-38713-S	8/21/1998	URANIUM-238	1 37	2 74	PCI/G
SC-38714-C	8/21/1998	URANIUM-238	1 95	3 9	PCI/G
SC-38715-S	8/21/1998	URANIUM-238	1 45	2 9	PCI/G
SC-38716-S	8/21/1998	URANIUM-238	1 86	3 72	PCI/G
SC-38717-S	8/21/1998	URANIUM-238	1 35	2 7	PCI/G
SC-38719-S	8/21/1998	URANIUM-238	1 97	3 94	PCI/G
SC-38720-S	8/21/1998	URANIUM-238	1 36	2 72	PCI/G
SC-38721-S	8/21/1998	URANIUM-238	2 175	4 35	PCI/G
SC-38724-S	8/21/1998	URANIUM-238	20 3	3 45	PCI/G
SC-38725-S	8/21/1998	URANIUM-238	4 3	3 09	PCI/G
SC-38728-S	8/21/1998	URANIUM-238	10 1	2 17	PCI/G
SC-38729-C	8/21/1998	URANIUM-238	6 71	3 67	PCI/G
SC-38801-S	8/19/1998	URANIUM-238	1 78	2 33	PCI/G
SC-38802-S	8/19/1998	URANIUM-238	1 48	2 96	PCI/G
SC-38803-S	8/19/1998	URANIUM-238	2 62	2 43	PCI/G
SC-38804-S	8/19/1998	URANIUM-238	4 64	2 45	PCI/G
SC-38808-S	8/19/1998	URANIUM-238	2 2	4 4	PCI/G
SC-38809-S	8/19/1998	URANIUM-238	2 24	2 09	PCI/G
SC-38810-S	8/19/1998	URANIUM-238	2 16	4 32	PCI/G
SC-38811-S	8/19/1998	URANIUM-238	5 04	2 3	PCI/G
SC-38814-S	8/19/1998	URANIUM-238	26 2	5 52	PCI/G
SC-38815-S	8/19/1998	URANIUM-238	1 3	2 6	PCI/G
SC-38816-S	8/19/1998	URANIUM-238	1 49	2 72	PCI/G
SC-38817-S	8/19/1998	URANIUM-238	2 51	2 78	PCI/G
SC-38819-S	8/21/1998	URANIUM-238	2 56	1 74	PCI/G
SC-38820-S	8/19/1998	URANIUM-238	3	4 12	PCI/G
SC-38821-S	8/19/1998	URANIUM-238	1 31	2 62	PCI/G
SC-38823-S	8/21/1998	URANIUM-238	2 105	4 21	PCI/G
SC-38824-C	8/19/1998	URANIUM-238	2 19	4 38	PCI/G
SC-38826-C	8/21/1998	URANIUM-238	3 71	1 9	PCI/G
SC-38902-S	8/14/1998	URANIUM-238	3 91	3 03	PCI/G
SC-38903-S	8/14/1998	URANIUM-238	1 38	2 76	PCI/G
SC-38904-C	8/14/1998	URANIUM-238	7 15	3 16	PCI/G
SC-38905-S	8/14/1998	URANIUM-238	4 7	1 8	PCI/G
SC-38906-S	8/14/1998	URANIUM-238	19 9	5 21	PCI/G
SC-38908-S	8/14/1998	URANIUM-238	3 62	2 1	PCI/G
SC-38909-S	8/14/1998	URANIUM-238	3 59	4 14	PCI/G
SC-38910-C	8/14/1998	URANIUM-238	2 35	1 84	PCI/G
SC-38911-S	8/14/1998	URANIUM-238	6 67	4 03	PCI/G
SC-38912-S	8/28/1998	URANIUM-238	3 59	1 94	PCI/G
SC-38914-S	8/31/1998	URANIUM-238	6 18	3 04	PCI/G
SC-38915-S	8/28/1998	URANIUM-238	5 16	2 67	PCI/G
SC-38916-S	8/17/1998	URANIUM-238	9 88	2 97	PCI/G
SC-38918-S	8/31/1998	URANIUM-238	2 23	2 19	PCI/G
SC-38919-S	8/17/1998	URANIUM-238	1 32	2 64	PCI/G
SC-38920-S	8/17/1998	URANIUM-238	1 955	3 91	PCI/G

APPENDIX C
RU016 Sample Location Coordinates

WP437 RU16 SAMPLE LOCATION COORDINATES

SAMPLE LOCATION	NORTHING	EASTING	ELEVATION
SC-35702-S	1044216.52	755168.50	642.69 *
SC-35703-S	1044200.49	755197.13	640.81 *
SC-35704-S	1044184.61	755225.80	641.47
SC-35706-S	1044203.92	755123.85	647.72 *
SC-35707-S	1044187.89	755152.48	640.14 *
SC-35708-S	1044172.03	755180.98	630.09
SC-35709-S	1044155.80	755209.71	628.52
SC-35709-S-RS	1044155.83	755209.73	627.37
SC-35711-S	1044175.29	755107.82	647.98 *
SC-35712-S	1044159.26	755136.45	640.49 *
SC-35713-S	1044143.33	755165.04	629.44
SC-35714-S	1044127.14	755193.63	629.08
SC-35716-S	1044146.66	755091.80	649.03 *
SC-35717-S	1044130.64	755120.42	640.88 *
SC-35718-S	1044114.74	755149.07	629.71
SC-35720-S	1044117.48	755075.94	650.60
SC-35721-S	1044102.10	755104.62	640.63
SC-35722-S	1044086.05	755133.15	629.21
SC-35724-C	1044095.63	755082.46	643.16
SC-35725-S	1044072.92	755088.62	640.49
SC-35726-S	1044057.52	755117.10	629.58
SC-35727-C	1044066.67	755067.48	644.98
SC-35728-S	1044044.64	755072.21	643.21
SC-35729-S	1044028.64	755101.00	635.69
SC-35729-S-RS	1044028.75	755101.06	634.59
SC-35730-C	1044040.36	755058.02	648.33
SC-35731-C	1044022.40	755078.59	643.84
SC-35732-S	1044000.21	755084.78	648.55
SC-35734-C	1043990.57	755095.88	649.82
SC-35801-S	1044168.45	755254.35	641.01
SC-35801-S-RS	1044168.46	755254.26	638.82
SC-35801-U	1044020.89	755371.45	630.16
SC-35802-S	1044152.60	755282.91	641.46
SC-35802-U	1043996.00	755395.54	630.08
SC-35803-C	1044146.09	755260.75	633.26
SC-35803-S	1044139.85	755238.41	630.31
SC-35804-S	1044123.79	755266.99	629.21
SC-35805-S	1044107.92	755295.68	630.47
SC-35805-S-RS	1044107.80	755295.01	629.97
SC-35806-S	1044091.69	755324.08	635.27
SC-35807-S	1044075.66	755352.88	639.50
SC-35808-S	1044111.08	755222.23	629.20
SC-35809-S	1044094.55	755250.05	630.70
SC-35810-C	1044085.43	755301.89	629.13
SC-35810-S	1044079.20	755279.45	629.23
SC-35810-S-RS	1044061.03	755305.73	628.50
SC-35811-S	1044063.08	755308.24	628.91
SC-35811-S-RS	1044047.02	755335.45	628.65
SC-35812-S	1044047.15	755336.88	629.11
SC-35813-S	1044143.33	755165.04	629.11
SC-35814-S	1044098.59	755177.80	629.96
SC-35815-S	1044082.17	755205.89	629.71
SC-35816-S	1044066.51	755235.02	629.34
SC-35817-S	1044050.55	755263.59	629.90
SC-35818-S	1044034.58	755292.30	632.37
SC-35819-S	1044018.48	755320.73	639.15
SC-35819-S-RS	1044018.55	755320.99	638.11
SC-35820-C	1044023.30	755365.29	640.29
SC-35820-C-RS	1044030.21	755357.75	636.84
SC-35821-C	1044076.29	755183.97	630.09
SC-35821-S	1044069.92	755161.71	629.46
SC-35822-S	1044053.83	755190.17	629.51
SC-35823-C	1044044.21	755241.16	629.56

WP437 RU16 SAMPLE LOCATION COORDINATES

SC-35823-S	1044037.92	755218.88	629.69
SC-35824-S	1044021.79	755247 62	636.94
SC-35827-S	1044041.17	755145.65	629.40
SC-35828-S	1044025.30	755174 24	633.21
SC-35829-S	1044009.33	755202.85	640.23
SC-35831-S	1044012.70	755129.60	638.82 *
SC-35832-S	1043996.77	755158.26	645.21
SC-35832-RS	1043997.84	755156.81	643.68
SC-35834-C	1043995.88	755135 73	645 15
SC-35902-S	1044281.64	755656 25	629.49
SC-35903-C	1044272.59	755635 29	625.88
SC-35904-S	1044253.05	755639.85	619 57
SC-35904-S-RS	1044253.19	755640.33	618 04
SC-35906-S	1044240.62	755595 76	623 50
SC-35907-S	1044224.16	755624 03	619 42
SC-35908-C	1044229.47	755578 28	622 64
SC-35909-S	1044212.24	755579 43	620 94
SC-35910-S	1044196.13	755608.37	619 07
SC-35910-S-RS	1044195.97	755608.21	617 41
SC-35912-C	1044204.02	755558 13	623.61
SC-35912-C-RS	1044204.28	755557 94	619 43
SC-35912-S	1044199 37	755534 91	626.92
SC-35913-S	1044183.27	755563 23	618 82
SC-35913-S-RS	1044183 48	755563.52	618 38
SC-35914-S	1044167.42	755592 05	618 61
SC-35914-S-RS	1044167 29	755592 12	617.18
SC-35915-C	1044184 67	755520.57	627.26
SC-35915-C-RS	1044184 88	755519.98	625 61
SC-35916-S	1044170 72	755519 12	623.25
SC-35917-S	1044154.55	755547.39	616 35
SC-35917-S-RS	1044155.08	755547 27	616 00
SC-35918-S	1044138 35	755575.98	617 84
SC-35919-C	1044160 74	755501 44	627 32
SC-35919-C-RS	1044160.93	755501 03	625 95
SC-35920-S	1044141 90	755502 86	626 43
SC-35921-S	1044126 47	755531 27	619 91
SC-35922-S	1044110.48	755560 14	615 09
SC-35925-S	1044097.26	755515 37	630 17
SC-35926-S	1044081 63	755544 23	627 92
SC-35929-C	1044059.14	755550 44	629.00 *
SC-36001-C	1044238.82	755686 08	625 47
SC-36001-S	1044237.21	755668 73	619 07
SC-36001-U	1044062 47	755665 93	619 17
SC-36002-S	1044221 34	755697 71	624 49
SC-36003-S	1044208 77	755652.86	618 85
SC-36004-S	1044192.62	755681.60	619 12
SC-36005-S	1044176 54	755709 86	620 13
SC-36006-S	1044160 32	755738 91	628 88
SC-36007-S	1044179 64	755636 90	619 58
SC-36008-S	1044163.61	755665.49	619 55
SC-36009-S	1044147.57	755694 03	620 13
SC-36010-S	1044132.03	755722 60	629 45
SC-36011-S	1044151 12	755620 41	619 09
SC-36012-S	1044135 63	755649.69	619 17
SC-36012-S HS01	1044108.59	755655 36	622 53
SC-36012-S RS01	1044108.56	755655.35	621 15
SC-36013-S	1044119 55	755678.37	625 38
SC-36013-S HS01	1044124.67	755689.36	623 47
SC-36013-S RS01	1044124 66	755689.35	621 76
SC-36013-S HS02	1044124.28	755685 80	622 98
SC-36013-S RS02	1044124.34	755685.82	621 65
SC-36013-RS	1044120.43	755681 18	624.21
SC-36014-S	1044103 17	755706 45	629 81
SC-36015-S	1044122.48	755604 85	619 57

WP437 RU16 SAMPLE LOCATION COORDINATES

SC-36016-S	1044106.75	755633.61	621.00
SC-36016-S HS01	1044106.20	755652.01	622.60
SC-36016-S RS01	1044106.09	755651.98	621.02
SC-36017-S	1044090.95	755661.57	629.55
SC-36018-S	1044074.78	755690.56	626.49
SC-36019-S	1044094.18	755588.87	618.83
SC-36020-S	1044078.23	755617.58	625.75
SC-36020-S-RS	1044076.43	755616.23	625.42
SC-36021-S	1044061.96	755645.66	630.08
SC-36022-S	1044046.55	755674.63	622.97
SC-36101-S	1044144.59	755767.69	629.78
SC-36102-S	1044115.91	755751.26	625.59
SC-36103-S	1044099.43	755779.98	622.13
SC-36104-S	1044083.59	755808.49	627.58
SC-36105-S	1044087.17	755735.52	619.66
SC-36106-S	1044071.10	755764.06	617.18
SC-36107-S	1044055.00	755792.39	618.33
SC-36108-S	1044039.01	755821.17	621.15
SC-36109-S	1044022.58	755849.69	627.16
SC-36109-S-HS01	1044024.25	755850.64	627.53
SC-36109-S-HS02	1044022.82	755852.01	627.69
SC-36109-S-HS03	1044021.55	755850.57	627.08
SC-36109-S-HS04	1044023.65	755848.66	626.85
SC-36110-S	1044058.64	755719.41	617.99
SC-36111-S	1044042.43	755748.19	618.52
SC-36112-S	1044027.06	755777.45	618.31
SC-36113-S	1044010.21	755804.94	619.04
SC-36114-S	1043994.39	755833.86	619.82
SC-36115-S	1043978.47	755862.60	622.18
SC-36116-S	1043962.14	755890.95	627.28
SC-36117-S	1044029.66	755703.18	618.12
SC-36118-S	1044013.67	755732.08	618.29
SC-36119-S	1043997.97	755760.49	619.47
SC-36120-S	1043981.82	755789.18	619.32
SC-36121-S	1043965.66	755817.71	619.59
SC-36122-S	1043949.57	755846.17	620.43
SC-36123-S	1043933.96	755875.00	620.93
SC-36124-S	1043917.84	755903.46	622.34
SC-36125-S	1043901.71	755932.12	627.68
SC-36126-S	1043885.69	755960.54	630.27
SC-36201-S	1044065.73	755572.90	623.21
SC-36201-U	1044063.14	755665.71	619.11
SC-36202-S	1044049.47	755601.17	629.02
SC-36203-S	1044033.66	755629.95	629.27
SC-36204-S	1044017.34	755658.76	617.77
SC-36205-S	1044001.25	755687.83	618.82
SC-36206-S	1043985.26	755715.90	619.28
SC-36207-S	1044036.19	755557.07	630.42
SC-36208-S	1044020.56	755585.02	629.70
SC-36209-S	1044004.78	755614.06	628.79
SC-36210-S	1043988.61	755642.49	622.94
SC-36211-S	1043972.72	755671.18	618.50
SC-36212-S	1043956.68	755699.81	615.33
SC-36215-S	1043976.25	755598.14	630.11
SC-36216-S	1043960.05	755626.46	629.51
SC-36217-S	1043944.16	755655.39	628.54
SC-36218-S	1043927.90	755683.37	624.69
SC-36220-C	1043960.44	755609.63	630.57
SC-36222-C	1043922.23	755662.13	629.73
SC-36223-S	1043899.41	755667.76	630.07 *
SC-36301-S	1043969.19	755744.47	619.29
SC-36302-S	1043953.41	755772.85	620.26
SC-36303-S	1043937.13	755801.83	620.58
SC-36304-S	1043920.97	755830.34	620.09

WP437 RU16 SAMPLE LOCATION COORDINATES

SC-36305-S	1043905.18	755858.78	620 95
SC-36306-S	1043940.58	755728.26	619 98
SC-36307-S	1043924.66	755756 75	620.95
SC-36308-S	1043908.54	755785.82	621 00
SC-36309-S	1043892.58	755814 20	620 90
SC-36310-S	1043876.56	755842.93	621.68
SC-36311-S	1043911.93	755712.40	622.09
SC-36312-S	1043896.40	755741.14	620 05
SC-36313-S	1043879.93	755769.60	620.96
SC-36314-S	1043864 03	755798.53	621.47
SC-36315-S	1043883.37	755696.25	629 97
SC-36316-S	1043867 31	755725 11	627.85
SC-36317-S	1043851.24	755753.55	623.45
SC-36318-S	1043835.39	755782.12	621 19
SC-36321-S	1043822.70	755737.62	630.32 *
SC-36322-S	1043806.69	755766.29	629 65
SC-36325-C	1043788.20	755776.46	629.67 *
SC-36401-S	1043889.07	755887.52	621 02
SC-36402-S	1043873.41	755916 27	621 93
SC-36403-S	1043857 17	755944 76	623 01
SC-36404-S	1043841.14	755973 25	630.53
SC-36405-S	1043860.51	755871 37	621 85
SC-36406-S	1043844 53	755900 09	618.60
SC-36407-S	1043828 48	755928.57	622.62
SC-36409-S	1043848.06	755826.87	621 46
SC-36410-S	1043831.79	755855.82	622.23
SC-36411-S	1043815 62	755883 90	622 79
SC-36412-S	1043799.73	755912 69	626 85
SC-36413-S	1043819.27	755810 66	621 42
SC-36414-S	1043803.26	755839.49	622 21
SC-36415-S	1043787.19	755868 24	623 03
SC-36416-S	1043771.25	755896 64	630 30
SC-36417-S	1043790.59	755794 68	627 83
SC-36418-S	1043774 32	755823.73	627 44
SC-36419-S	1043758 35	755852 31	624 57
SC-36421-S	1043745.99	755807 47	630.26 *
SC-36422-S	1043729 97	755836 10	631 63 *
SC-36425-C	1043706.70	755839.99	633 37 *
SC-36426-C	1043762.35	755715 59	638 90
SC-36426-S	1043685.31	755848 70	635.40 *
SC-36427-C	1043709 43	755771.10	638.48
SC-36428-C	1043689.25	755795.27	638 78
SC-36429-C	1043668.02	755820.57	638 84
SC-36430-C	1043664 99	755857.56	637.34
SC-36430-S	1043656.83	755832.73	639.29
SC-36431-C	1043645 28	755844.87	639.30
SC-36432-C	1043625.03	755874.57	638 99
SC-36433-C	1043602.67	755896 67	637 17
SC-36434-C	1043580.78	755922.02	638 23
SC-36434-C-RS01	1043590.73	755904.76	637 44
SC-36434-C-RS02	1043588.09	755916.94	637 51
SC-36434-C-RS03	1043572.98	755915.74	637.47
SC-36434-C-RS04	1043582.59	755905.74	637 01
SC-36434-C-RS05	1043583.46	755911.34	637.52
SC-36435-C	1043560.79	755946.36	637 47
SC-36501-S	1043655.65	756170 48	623.99
SC-36502-S	1043627.12	756154 75	623.53
SC-36503-S	1043610.90	756183.02	625.28
SC-36504-S	1043594.88	756211.64	630 18
SC-36505-S	1043598.53	756138 33	622 08
SC-36506-S	1043582.32	756167.14	621 54
SC-36507-S	1043566 35	756195 73	621 65
SC-36508-S	1043550.23	756224 23	626 95
SC-36509-S	1043569 95	756122.43	620 25

WP437 RU16 SAMPLE LOCATION COORDINATES

SC-36510-S	1043553.93	756151.16	621.15
SC-36511-S	1043537.58	756179.55	621.37
SC-36512-S	1043521.50	756208.37	621.55
SC-36512-S-HS01	1043529.70	756208.37	621.60 *
SC-36512-S-HS02	1043521.50	756216.57	621.50 *
SC-36512-S-HS03	1043513.30	756208.37	621.30 *
SC-36512-S-HS04	1043521.50	756200.17	621.40 *
SC-36513-S	1043505.66	756237.08	630.12
SC-36514-S	1043489.67	745265.32	633.56
SC-36515-S	1043541.18	756106.52	618.18
SC-36516-S	1043525.19	756135.11	617.15
SC-36517-S	1043509.01	756163.34	619.81
SC-36518-S	1043493.02	756192.33	620.91
SC-36519-S	1043477.00	756221.28	622.00
SC-36520-S	1043460.94	756249.39	631.57
SC-36521-S	1043445.08	756278.22	633.78
SC-36602-S	1043576.47	755975.70	629.32
SC-36603-S	1043560.52	756004.40	621.58
SC-36604-S	1043544.55	756033.15	621.45
SC-36605-S	1043528.36	756061.41	620.67
SC-36606-S	1043512.46	756090.31	619.81
SC-36607-S	1043496.44	756118.89	622.20
SC-36608-S	1043480.21	756147.45	616.60
SC-36610-S	1043547.93	755959.76	635.03
SC-36611-S	1043531.89	755988.39	631.67
SC-36612-S	1043515.87	756017.04	629.29
SC-36613-S	1043499.83	756045.64	624.48
SC-36614-S	1043483.80	756074.25	621.45
SC-36615-S	1043467.81	756102.94	620.26
SC-36616-S	1043451.78	756131.57	621.88
SC-36619-C	1043497.35	756026.56	632.17
SC-36621-S	1043455.20	756058.32	631.40
SC-36622-S	1043439.17	756086.87	629.94
SC-36623-S	1043423.13	756115.45	626.74
SC-36626-C	1043402.50	756125.97	632.08
SC-36701-S	1043464.21	756176.20	621.32
SC-36702-S	1043448.28	756205.24	621.64
SC-36703-S	1043432.22	756233.35	631.21
SC-36704-S	1043416.27	756262.12	632.88
SC-36705-S	1043435.57	756160.57	622.29
SC-36706-S	1043419.66	756188.90	621.97
SC-36707-S	1043403.65	756217.49	626.86
SC-36708-S	1043387.71	756245.94	631.72
SC-36709-S	1043407.03	756144.10	631.97
SC-36710-S	1043390.95	756172.86	629.10
SC-36711-S	1043374.99	756201.46	622.38
SC-36712-S	1043359.02	756230.04	632.44
SC-36713-S	1043378.49	756128.00	634.69
SC-36714-S	1043362.42	756156.59	631.83
SC-36715-S	1043346.55	756185.54	621.77
SC-36716-S	1043330.62	756213.80	629.69
SC-36718-S	1043333.85	756140.68	634.12
SC-36719-S	1043317.86	756169.31	631.75
SC-36720-S	1043301.86	756197.91	636.42
SC-36801-S	1043400.32	756290.66	635.58
SC-36802-S	1043371.55	756274.66	635.06
SC-36803-C	1043357.74	756318.47	637.94
SC-36803-S	1043355.54	756303.42	637.17
SC-36804-S	1043339.35	756332.37	638.40
SC-36805-S	1043343.13	756258.67	634.29
SC-36806-S	1043327.05	756287.17	636.71
SC-36807-S	1043310.95	756315.90	637.92
SC-36808-S	1043294.93	756344.51	637.00
SC-36809-S	1043314.45	756242.55	635.59

WP437 RU16 SAMPLE LOCATION COORDINATES

SC-36810-S	1043298.30	756271 30	637 94
SC-36811-S	1043282.23	756299 97	635 97
SC-36812-S	1043266.30	756328 50	631 76
SC-36813-C	1043251.48	756370 08	634 26
SC-36813-S	1043250.07	756357.37	638 86
SC-36814-S	1043285.83	756226.53	637 45
SC-36815-S	1043269.72	756255.22	637 41 *
SC-36816-S	1043253.56	756284.04	635 52
SC-36817-S	1043237 69	756312.45	632 17
SC-36818-S	1043221.68	756341.05	633.66
SC-36821-S	1043257.17	756210.61	636 77
SC-36822-S	1043241.06	756239.22	636 87
SC-36823-S	1043225.17	756267 74	631.53
SC-36824-S	1043208.90	756296.55	632 81
SC-36825-S	1043193.18	756324.93	635 34
SC-38701-C	1043326.03	756122.59	624 65
SC-38702-S	1043305.12	756124.70	637.08
SC-38702-S	1043305.17	756124.81	623.08
SC-38703-S	1043289.40	756153 24	638.65
SC-38703-S	1043289.04	756153 39	638 48
SC-38704-S	1043273.17	756181.93	637 66
SC-38704-S	1043273.37	756181 84	637.62
SC-38706-S	1043276.95	756108.71	639.92
SC-38707-S	1043260.21	756137 36	638 41
SC-38708-S	1043244.42	756165 95	637.74
SC-38709-S	1043228.62	756194.49	636 75
SC-38710-C	1043254 19	756118.37	639.13
SC-38711-S	1043231.86	756121.27	640 22
SC-38712-S	1043216.26	756149 80	638 73
SC-38713-S	1043199 94	756178 49	633 35
SC-38714-C	1043223.74	756109 17	642 43
SC-38715-S	1043203.38	756105.23	643.40
SC-38716-S	1043186.97	756133.90	635.79
SC-38717-S	1043171.09	756162.52	636.20
SC-38719-S	1043175.14	756089.23	639 51
SC-38720-S	1043158.63	756117 84	641 65
SC-38721-S	1043142.54	756146 47	641 49
SC-38724-S	1043129.93	756101 81	645 50
SC-38725-S	1043114 38	756130.39	644 40
SC-38728-S	1043085 04	756114.42	644 62
SC-38729-C	1043081.23	756098.49	644 88
SC-38801-S	1043212.34	756223 24	631 55
SC-38802-S	1043196.44	756251.79	632 12
SC-38803-S	1043180.52	756280 35	634 21
SC-38804-S	1043164.26	756309 14	635.34
SC-38808-S	1043183.85	756207 13	636.85
SC-38809-S	1043167.71	756235 81	633 97
SC-38810-S	1043151.80	756264.39	634.95
SC-38811-S	1043135.62	756293 09	635 72
SC-38814-S	1043155.28	756191.20	638.27
SC-38815-S	1043139.13	756219.77	634.71
SC-38816-S	1043123.10	756248.41	634 97
SC-38817-S	1043107.38	756276.85	638.06
SC-38819-S	1043126 45	756175 12	639 93
SC-38820-S	1043111 07	756203.56	639 49
SC-38821-S	1043094.56	756232 32	639 32
SC-38823-S	1043098.09	756159 04	642 07
SC-38824-C	1043095.65	756209 30	640 01
SC-38826-C	1043086 04	756163.67	641 87
SC-38902-S	1043716.23	756129.22	618 87
SC-38903-S	1043699 91	756157 84	626.50
SC-38904-C	1043706.53	756112 65	623.62
SC-38905-S	1043687.84	756113 21	623 94
SC-38906-S	1043671 37	756141 75	619 88

WP437 RU16 SAMPLE LOCATION COORDINATES

SC-38908-S	1043658.93	756097.17	626.43
SC-38909-S	1043643.09	756125.81	624.12
SC-38910-C	1043650.26	756078.48	627.28
SC-38911-S	1043630.74	756081.11	630.77
SC-38914-S	1043617.64	756036.29	633.60
SC-38916-S	1043586.01	756093.84	621.91
SC-38918-S	1043589.11	756020.41	621.64
SC-38919-S	1043573.46	756048.94	620.61
SC-38920-S	1043557.15	756077.70	621.67

* approximate elevation as determined by as-built topo

APPENDIX D
Interoffice Correspondence

MORRISON KNUDSEN CORPORATION

MK-FERGUSON GROUP

INTER-OFFICE CORRESPONDENCE

DATE: November 17, 1995

TO: ALARA Committee

FROM: Michelle French/Richard Machado

SUBJECT: **RA-226 DETERMINATION FOR SITE CONFIRMATION SAMPLES**

Background

The issue surrounding Ra-226 analysis via gamma spectroscopy arises due to the fact that the Ra-226 soil concentration is determined by using the following energy peaks: 295 keV and 352 keV for Pb-214; and 609 keV, 1120 keV, and 1764 keV for Bi-214. These radionuclides are both short-lived daughters of Rn-222. The drying and grinding processes are known to drive off Rn-222 that is trapped in the soil pores and moisture held in the soil. In order to quantitatively identify Ra-226 using gamma spectroscopy, Rn-222 and its short-lived progeny must be allowed to grow into secular equilibrium following such sample preparation techniques. The following alternatives were evaluated for estimating the Ra-226 concentration in soil given gamma spectroscopy analysis within five working days of sample collection.

Alternative 1

Send all samples requiring Ra-226 analysis to an offsite laboratory. At offsite facilities, Ra-226 is typically analyzed through alpha spectroscopy which does not rely on the Ra-222 daughter products to provide a quantitative result. The minimum turnaround time that can be provided for alpha spectroscopy analysis for Ra-226 is four days. At one and two day turnaround times, the method for analysis is modified to use Gas Flow Proportional Counting for total alpha counting yielding a total radium number with no separation of isotopic contributions. Given the four day turnaround time and an estimate of 750 samples (WP-253 and WP-420), the total analytical costs will be $95,250.

The major disadvantage in this approach is the tight schedule involved with sample collection, packaging, shipping, data receipt, data review, and ALARA committee action. It may be impossible to accomplish this within five working days given the four day turnaround requirement.

Alternative 2

As stated above, the drying and grinding processes are known to drive off radon that is trapped in the soil matrix. However, the amount of radon removed from these processes is not quantified. If you were to assume that all the radon is removed during these processes and the time of final preparation was recorded, a correction factor can be applied based upon the secular equilibrium condition equation. For example, the following table summarizes the ratio of activity of Rn-222 to the activity of Ra-226.

A(Rn-222)/A(Ra-226)	Time Post Canning (Days)
0.167	1
0.306	2
0.422	3
0.665	6
0.807	9
0.888	12
0.935	15
0.963	18
0.978	21
0.987	24
0.993	27
0.996	30

Thus, if the samples were counted three days post canning, a correction factor of 0.422 would be used to determine the estimated final Ra-226 concentration. Given this approach, any concentration determined three days post preparation would be divided by 0.422 to arrive at the final concentration. For a 5 pCi/g ALARA goal, any result above 2.1 pCi/g would be rejected.

The major limitation with this approach is the assumption that the drying and grinding processes remove 100% of the radon. Samples that have been analyzed within one day of preparation have never yielded results much below expected background concentrations (0.8-1.0 pCi/g).

Thus, the use of a correction factor on the order of 0.167 could result in a very conservative approach for estimating the final Ra-226 soil concentration in background soils (in fact all samples analyzed one day after canning would equal or exceed 5 pCi/g).

Alternative 3

All samples that are collected to support confirmation can be analyzed as wet samples to virtually eliminate the radon removal that occurs during sample preparation. However, there are numerous considerations, such as sample homogeneity, particle size, moisture content variability, etc., that can produce error in such analyses. If the samples are analyzed wet, they would also be prepared and analyzed to provide final concentrations for each radionuclide of interest for the sample. This dry evaluation would require an analysis within the confirmation cleanup turnaround period and a second analysis within 20-30 days later to finalize Ra-226 concentrations to an acceptable quality level. This approach would involve three analyses of every sample. The initial wet analysis can be used to estimate the final Ra-226 concentration. However, this estimate must be made on a case by case basis through moisture corrections, etc.

The major limitation for this approach is the reduction in lab productivity as an extra canning effort would be needed to generate a wet and a dry sample for each sample and count time for each sample would increase by a factor of three.

Alternative 4

Over the last several months, the onsite radiological laboratory has been recounting samples that were analyzed during the months of April - September 1995. These reanalyses were done in order to support final analyses of SE Drainage and Quarry characterization samples. The graph on the attached page illustrates a portion of the recount results versus the initial results. The graph includes those samples that had initial Ra-226 results < 5 pCi/g. As illustrated, the background - 2.2 pCi/g sample range had 100% of all sample recounts fall less than 5 pCi/g. For those in the range of 2.2 - 3.2 pCi/g, the likelihood of exceeding 5 pCi/g was approximately 50%. All of the samples with initial results greater than 3.2 pCi/g had final Ra-226 results > 5 pCi/g.

This information can be used to establish a criteria about which samples can be said to meet the ALARA goal of 5 pCi/g within the five working day turnaround window.

Given the current study findings, it is recommended that any sample with an initial Ra-226 result > 2.2 pCi/g be expected to exceed the ALARA goal of 5 pCi/g. In addition, the estimated final Ra-226 soil concentration should be found by multiplying the initial result by 2.27 (2.2 pCi/g x 2.27 = 5 pCi/g). This correction factor is very close to the maximum increase from initial results to recount results (e.g., 2.56) in the background to 2.2 pCi/g concentration range. The average increase from initial results to recount results for this range was 1.51. However, use of a value closer to the maximum value affords less risk in exceeding expected confirmation goals. The laboratory will work to refine these numbers to further minimize the risk as they continue to recount samples collected over the last few months. The major limitation with this alternative is the potential to over excavate, increasing disposal costs.

Alternative 5

This alternative involves a combination of alternatives 3 and 4. Samples that do not have elevated direct survey results via a 2x2 NaI or a 44-9 survey should be prepared and evaluated in accordance with alternative 4. Samples that do have above background survey results will be analyzed wet and evaluated accordingly to determine the estimated final Ra-226 concentration. The sample will then be prepared and analyzed a second time to provide quality level data for the other radionuclides of interest. In addition, each prepared sample would be analyzed within 30 days after preparation to finalize the Ra-226 concentration to an acceptable quality level.

The major limitation with this approach is the loss in productivity as a result of the double canning needs and increased count times for a portion of the samples.

Recommendation

The Onsite Radiological Laboratory recommends the use of alternative 4. This alternative minimizes risk of failing to meet expected cleanup ALARA goals and provides for maximum efficiency/productivity within the laboratory. The second favorable alternative is number 5. This alternative would increase the workload in the laboratory, but would further reduce the risk of over excavation and failure to meet desired cleanup objectives.

In all of the above alternatives, the estimated final Ra-226 concentration will be used in conjunction with the measured Ra-228 concentration as follows to determine if the mixture rule for the ALARA goals as described in the Record of Decision is achieved.

$$\frac{\text{Est. Final Ra-226 (pCi/g)}}{5\ \text{pCi/g}} + \frac{\text{Ra-228 (pCi/g)}}{5\ \text{pCi/g}} = \text{Mixture Ratio}$$

If mixture ratio <= 1, then the sample meets cleanup confirmation design. If mixture ratio > 1, then the sample must be considered by the ALARA committee.

MLF/RM/pr

Attachment

Distribution:

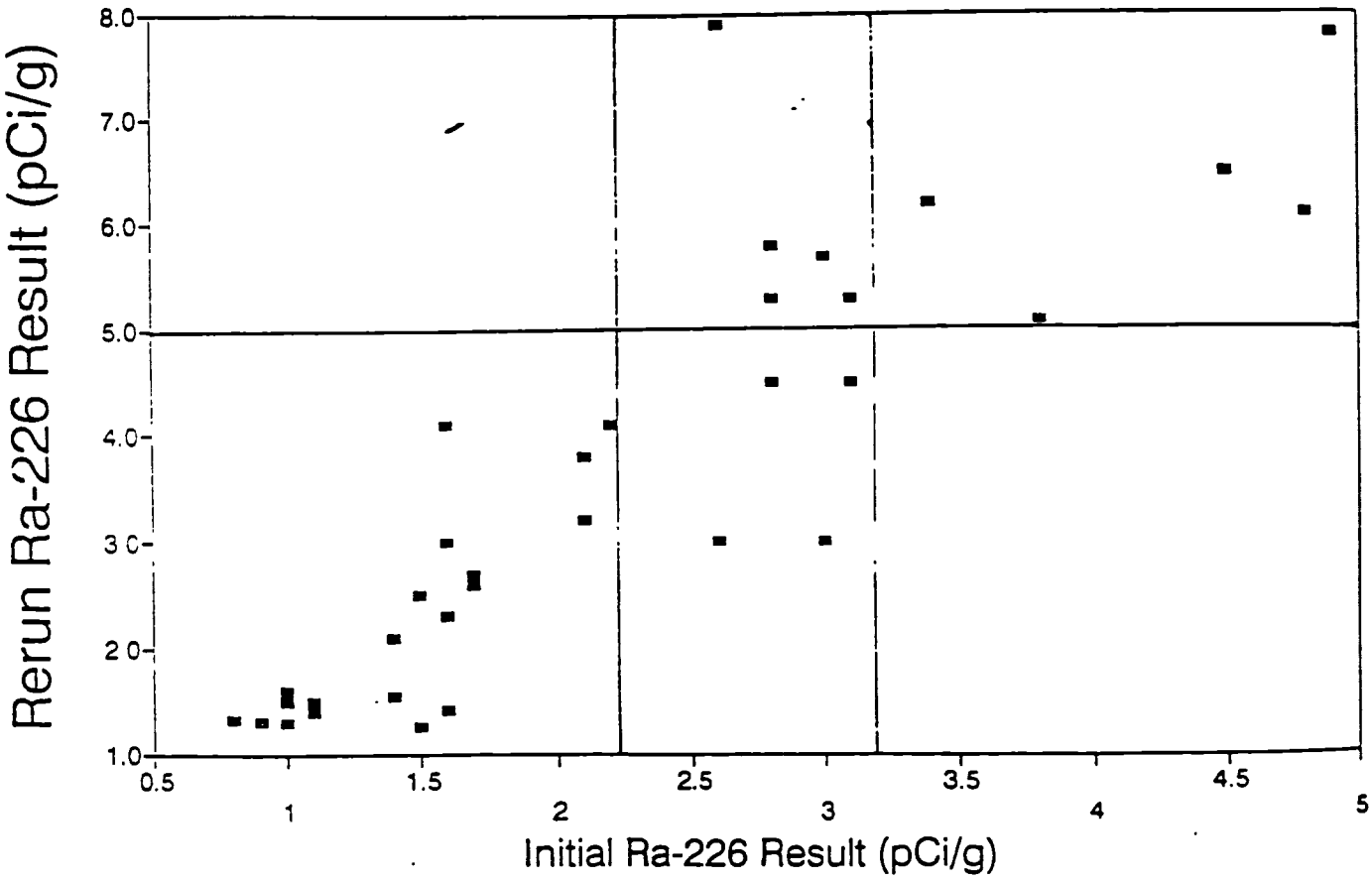
Ken Meyer
Steve Warren
Ken Greenwell
Jim Meier

Alternates: Marj Wesley
Jack Cooney
Dan Hoffman

cc: Melissa Lutz

Ra226 Concentration Range

Background - 5.0 pCi/g



MORRISON KNUDSEN CORPORATION
MK-FERGUSON GROUP

INTER-OFFICE CORRESPONDENCE

DATE: November 20, 1995

TO: ALARA Committee

FROM: Richard Machado/Michelle French MF

SUBJECT: TH232 DETERMINATION FOR SITE CONFIRMATION SAMPLES

Th232 can occur in two forms at the site: (1) naturally and (2) processed to purify Th232. Both of these forms are subject to the same transformation equation. Given a Th232 half life of 1.39 x 10^{10} years and a Ra228 half life of 5.75 years, a condition known as secular equilibrium occurs. Secular equilibrium occurs when the half life of the parent is very much greater than that of the daughter. If an initially pure parent (Th232) is formed, its radioactive transformation will result in accumulation of the daughter (Ra228). Since the daughter (Ra228) decays very much faster than the parent (Th232), a point is soon reached at which the amount of parent (Th232) present is equal to that of the daughter (Ra228).

The equation that represents this condition of secular equilibrium is:

$$Q_B = Q_A (1 - e^{-\lambda_B t})$$

where Q_A=parent (Th232) activity, Q_B=daughter (Ra228) activity, t=time since placement of material, and λ_B=decay constant for daughter (Ra228). Therefore, the fraction of daughter activity to parent activity

$$\left(\frac{A(RA\text{-}228)}{A(Th\text{-}232)}\right)$$

present at the WSSRAP in 1995 can be calculated.

Assume that production ceased at the site on January 1, 1965, and that all Th232 was produced on that very last day (t=30.9 years). Given a half life for Ra228 of 5.75 years, the decay constant would equal

$$(\lambda_B = 0.121\ Y^{-1})$$

Given this information, the ratio of Ra228 activity to Th232 activity can be calculated as follows:

$$\frac{Q_B}{Q_A} = \frac{A\,(Ra\text{-}228)}{A\,(Th\text{-}232)} = 1 - e^{-\lambda_B t}$$

$$\frac{A\,(Ra228)}{A\,(Th232)} = 1 - e^{-(0.121Y^{-1})\,(30.9\,Y)} = 1 - 0.024 = 0.976$$

$$\therefore \frac{A\,(Ra\text{-}228)}{A\,(Th\text{-}232)} = 0.976 \quad or \quad A\,(Th\text{-}232) = 1.025\,A\,(Ra\text{-}228)$$

This representation will be true for both naturally occurring Th232 and processed Th232. The other situation to be addressed includes the circumstance when Ra228 and associated decay products were placed as a waste material after purification of Th232. In this situation, the amount of Ra228 present will be much greater than the Th232 present. This information is illustrated in a previous assessment of the ratio of Ra228 concentrations to that of Th232 in raffinate pit wastes. The average ratio was reported as 7.02 in the *Concentration Ratios of Radionuclides* in the U238, U235, and Th232 *Decay Series* (DOE/OR/21548-250), indicating that the average activity concentration for Th232 is 0.14 of the activity concentration for Ra228.

The Record of Decision states that if Th232 and Ra228 are present and not in secular equilibrium, the cleanup criteria apply for the radionuclide with the higher concentration. Thus, for determination of successful cleanup, the use of a Ra-228 ALARA goal of 4.88 pCi/g and a criteria of 6.05 pCi/g will result in removing Th232 to within 5 pCi/g (ALARA) and 6.2 pCi/g (criteria), respectively.

Given this practice, it is recommended that the on-site radiological analyses for Ra-228 concentrations in soil be used to determine attainment of Th-232 cleanup. It is also recommended that 2% of the samples (1 of every 50) that are independently analyzed via an off-site facility be used as a quality check for all radionuclides of interest (U238, Th230, Th232, Ra228, and Ra226). In addition, these numbers should be summarized in post remediation reports for each work package to support the decision to use Ra228 to determine successful cleanup of Th232.

RM/MF/jn

Distribution: ALARA Committee

Steve Warren	Alternates:	Marj Wesley
Ken Meyer		Jack Cooney
Ken Greenwell		Dan Hoffman
Jim Meier		Melissa Lutz

APPENDIX E
ORISE Hotspot Table

ORISE Hotspots - Frog Pond Work Zone

WSSRAP-ID	CU#	LOCATION DESCRIPTION	BKGRD READINGS	ORISE 1x1 READINGS	PMC FINAL RESULTS
SC-36012-S-HS01	CU360	approx. 7.3m NE of SC-36016-S	3 - 4,000 cpm	12,000 cpm	< ALARA (see data for SC-36012-S-RS01)
SC-36013-S-HS01	CU360	approx. 3.7m NE of SC-36013-S	3 - 4,000 cpm	12,000 cpm	< ALARA (see data for SC-36013-S-RS01)
SC-36013-S-HS02	CU360	approx. 3.1m NE of SC-36013-S	3 - 4,000 cpm	10,000 cpm	< ALARA (see data for SC-36013-S-RS02)
SC-36016-S-HS01	CU360	approx. 5.5m E of SC-36016-S	3 - 4,000 cpm	28,000 cpm	< ALARA (see data for SC-36016-S-RS01)