

APPENDIX A

Sample Collection, Laboratory, and Quality Assurance/Quality Control (QA/QC) Procedures

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Quality Assurance/Quality Control (QA/QC) Procedures

A. Sample Collection Procedures

1. Soil Sampling

ENVIRON attempted to locate individual soil sampling borings at the approximate geometric center of each pond cell and the centerlines of the ditches. The coordinates of each sample location was logged in the field using hand-held Global Positioning System equipment (GPS). Surficial and subsurface samples were collected with a direct-push drill rig (i.e., Geoprobe) using wide-bore (2-inch or greater) sample spoons. Soil cores were visually logged in accordance with ASTM D-2488 (ASTM 1990) by an experienced ENVIRON geologist or engineer.

All subsurface tools used in the collection of soil samples were constructed of stainless steel. All sampling equipment was decontaminated upon arrival at the site, between all sampling locations, at the end of each day of sampling operations, and prior to demobilization from the site. Equipment decontamination procedures include the following: thoroughly cleaning using a high pressure steam cleaner and/or rinse with tap water; rinsing and scrubbing with non-phosphate detergent solution, rinsing with tap water to remove detergent, and rinsing with distilled/deionized water.

2. Ground Water Sampling

Ground water samples were collected from existing monitoring wells using either down-hole pumps with dedicated tubing or disposable, dedicated Teflon bailers, because of low-flow conditions (at certain locations the pumping caused the wells to become dry). The type of sampling method used at each ground water monitoring location is provided in the well logs (Appendix B). Monitoring wells were purged of three well volumes (plus filter pack volume) or until field parameters (temperature, specific conductivity, dissolved oxygen, and oxidation-reduction potential, and pH) stabilized to three consecutive readings within 10 percent of the arithmetic mean of the values. No permanent ground water monitoring wells were constructed as part of the characterization. Similar to the procedures applied for soil sampling equipment, all equipment used in the collection of ground water samples was decontaminated upon arrival at the site, between all sampling locations, at the end of each day of sampling operations, and prior to demobilization from the site. Equipment decontamination procedures included the following: thoroughly cleaning using a high pressure steam cleaner and/or rinse with tap water; rinsing and

scrubbing with non-phosphate detergent solution, rinsing with tap water to remove detergent, and rinsing with distilled/deionized water.

B. Field QA/QC Procedures

QA/QC sampling procedures were employed during the field program to ensure the reproducibility of results, determine the effects of sample shipping and handling, and assess the quality of field decontamination procedures. The QA/QC procedures applied in the field are discussed in the following sections.

1. Field Duplicate

Field duplicates were collected and submitted to the laboratory at a rate of one duplicate per 10 soil borings or monitoring wells, with a minimum of two per medium. Duplicate samples are used to assess precision; therefore, both pairs of the duplicate samples were collected in the same location, in the same exact manner, and at the same time. The specific locations of field duplicates included P-17 in the Northern Exposure Area, and P-5 and P-7 in the Southern Exposure Area.

2. Rinseate (Field) Blanks

One rinseate blank was collected for every 10 soil borings and monitoring wells, with a minimum of at least two equipment rinseate blanks collected in the field. These samples are used to test for residual contamination of the sampling equipment. The rinseate blanks were collected by pouring de-ionized water over decontaminated sampling equipment into labeled sample bottles. Pre-cleaned sample bottles with appropriate preservatives were supplied by the analytical laboratory. Immediately after filling, the sample bottles were securely closed, placed in a cooler, and kept chilled until delivery to the analytical laboratory. Equipment rinseate blanks were considered associated with all samples collected since the last equipment rinseate blank was collected. Three rinseate blanks were collected in the field (identified as WB01, WB02, and Rinse 3); however, the sample container for WB02 broke in transit to the laboratory.

3. Trip Blanks

One trip blank was collected per cooler used to ship VOC samples. Trip blanks were prepared and shipped by the analytical laboratory with the sample containers. These samples are used to identify contamination introduced in the field or by the laboratory. Trip blanks were labeled in the field at a specific sample location, and shipped to the analytical laboratory with the associated samples. One trip blank sample was included in

each shipment to the analytical laboratory. Trip blanks are considered to be associated with all samples in the same shipment to the laboratory.

C. Sample Custody and Shipping Procedures

1. Field Custody Procedures

Field personnel are responsible for recording field activities on the appropriate field documentation form in sufficient detail to allow the event to be reconstructed without relying on memory. It is the responsibility of the Field Activities Manager to ensure that all documents are complete and legible. At the end of each day, all documents completed that day were reviewed by the Field Activities Manager for accuracy, completeness, and legibility.

The following field documentation forms or records were used during the field activities, at a minimum:

- Sample Chain-of-Custody record;
- Soil Sampling Log;
- Field Activity Daily Log;
- Sample Alteration Form; and
- Corrective Action Report.

Each completed form (a copy or original depending on the type of form) was maintained on the site in chronological order with other completed forms of the same type until the completion of the field activity. Copies of the chain-of-custody forms are provided at the end of this appendix.

2. Field Activity Daily Log

A field activity daily log was used as a record of daily field activities showing the sequence of events. The log included the following information:

- Project name and number;
- Date;
- Starting/ending time and nature of each major field activity;
- Names of all personnel on the site (including visitors), and a description of their involvement with the tasks being conducted;
- Weather conditions;
- References to appropriate field logs for details of each activity performed (e.g., reference sample collection logs for details of all samples collected that day);

- Identification of any photographs taken; and
- Signature of Task Leader or other reviewer.

The Field Activities Manager was responsible for ensuring that all activities were documented in the field activity daily log and that the details of each activity are recorded on the appropriate field documentation form.

3. Photographic Documentation

Color photographs were taken of representative sampling locations and the surrounding site to show the area, sampling equipment, and related site activities. ENVIRON has retained these photographs on file, but is not including them as part of this report.

4. Sample Identification and Labeling Procedures

Each sample collected for testing was assigned a unique sample identification (ID) code. The sample ID facilitates data management by referencing the analytical laboratory, depth interval, site, date, and location. All samples were labeled with the sample ID code and other field information. Duplicate and QA/QC samples (i.e., field equipment rinseate blanks and trip blanks) were similarly labeled.

The sample labels were placed on the sample containers so as not to obscure any data on the containers. Sample information was printed on the labels in a legible manner using waterproof ink. The label contained sufficient information so the sample could be identified on the sampling information form or sample collection log. Sample labels contained the following information:

- The project name and number
- A unique sample identification.
- The date and time.
- Identification of preservatives used, if any.
- A list of analytical tests to be performed on the sample.
- Other necessary remarks.
- Name of the sampler.

5. Chain-of-custody Record

The chain-of-custody record for each sample originates at the site, beginning with sample collection, and is completed prior to shipment to the laboratory. A copy of the chain-of-custody record accompanies the sample to the laboratory in order to establish the

documentation necessary to trace sample possession from sample collection through sample analysis. The sampling portion of the chain-of-custody record contained:

- List of sampling team members;
- Sample number;
- Signature of sampler or bottle preparer;
- Date and time of sample collection;
- Sample depth;
- Medium type;
- Signatures of persons involved in the chain of possession;
- Inclusive dates of possession; and
- Preservation.

6. Shipping Procedures

The following procedures were followed for packing samples for shipment to the laboratory:

- All sample container caps were checked for tightness.
- The sample containers were placed in coolers, allowing sufficient space for the addition of packing material between the sample containers.
- Ice packs (or equivalent) were placed on top of and between the samples.
- A copy of the chain-of-custody form was placed in a sealed, clear plastic envelope and placed in the cooler.
- Custody seals were placed on the outside of each cooler.
- The shipping coolers were taped shut.

Samples were shipped every one or two days to the laboratory via overnight courier.

D. Laboratory Custody Procedures

The laboratory Group Leader accepted custody of the samples shipped from the field and verified that the information on the sample label matches the information on the chain-of-custody record. Pertinent information relating to shipment, pickup, and courier were also be verified on the chain-of-custody record.

The Sample Receipt/Sample Entry Group Leader entered the appropriate data from the chain-of-custody record into the laboratory sample tracking system (both a written file and an electronic database) using the sample number from the sample label or assigning a unique laboratory number to each sample. The Sample Support Group Leader transferred the samples to

the proper analyst, stored the samples in the appropriate secure area, and documented in writing all internal transfers of the samples.

The Sample Receipt/Sample Entry Group Leader notified ENVIRON's Field Activities Manager of any discrepancies noted on the chain-of-custody or sample labels. Samples were not analyzed until the discrepancy was resolved. Any changes made were documented by the laboratory and ENVIRON personnel.

The Sample Receipt/Sample Entry Group Leader and the Sample Support Group Leader are responsible for custody of samples from the time they are received until sample analysis is completed. Any unused portions of samples remaining after completion of analysis by the laboratory was disposed of in accordance with procedures developed by the laboratory and consistent with applicable laws and regulations governing sample disposal.

The laboratory portion of the chain-of-custody form was completed by the designated laboratory sample custodian and contains:

- Name of person receiving the samples;
- Laboratory sample number;
- Date of sample receipt by the laboratory;
- Analyses requested; and
- Sample condition and temperature.

Immediately upon arrival at the contract laboratory, the laboratory recorded the condition of the shipping container and sample containers. The original chain-of-custody form was returned from the laboratory as part of the final analytical report to ENVIRON.

E. Laboratory QA/QC Procedures

In addition to performing the analysis of samples, the analytical laboratory is responsible for performing several quality assurance/quality control (QA/QC) procedures. Laboratory QC checks are accomplished through the use of system checks and QA/QC samples that are introduced into the sample analyses stream. Laboratory system checks and QA/QC samples are required by the selected USEPA analytical methods. Laboratory QA/QC checks were performed and samples were analyzed at the frequencies stated below or at the frequencies established by appropriate USEPA analytical methods, whichever is greater. The QC check samples are listed and defined below.

1. Laboratory Calibration Procedures

The laboratory calibrates its analytical instruments by establishing analytical curve based on the absorbance, emission intensity, or other measured characteristics of known standards. The calibration standards must be prepared using the same type of acid

and at an equivalent concentration as used in the sample preparation. Initial instrument calibration should consist of analysis of analytical standards for a series of different specified concentrations, used to define the quantitative response, linearity, and dynamic range of the instrument to target compounds. Continuing calibration should consist of an analytical standard run every twenty analytical samples or every twelve hours, whichever is more frequent, to verify the calibration of the analytical system.

A calibration blank is prepared by the laboratory using acidified distilled/deionized water to ensure that contamination is not present in the preparation water or in the analytical instrument due to carry over from other samples or standards. The initial calibration blank (ICB) is analyzed after the analytical standards, but not before analysis of the initial calibration verification (ICV) solution(s), during the initial calibration of the instrument. A continuing calibration blank (CCB) is analyzed after every initial and continuing calibration verification. The CCB shall be analyzed at a frequency of 10% or every twelve hours during the run, whichever is more frequent.

2. Method Blank

The method blank is used to detect any contamination introduced by the laboratory. A method blank is a quality control sample prepared by the laboratory that contains distilled/deionized water and the same reagents used with the field samples and carried through the entire analytical procedures (digested and analyzed). An aqueous method blank is treated with the same reagents as a sample with a water matrix; a solid method blank is treated with the same reagents as a soil sample. Method blanks were generated and analyzed at a frequency of at least one per twenty samples of a given matrix (e.g., soil or water).

3. Matrix Spike/Matrix Spike Duplicates

The laboratory prepares a matrix spike (MS) sample by introducing a known amount of chemical to the matrix and subjects the sample to the same analytical procedures as field samples of the matrix. The process is repeated for a matrix spike duplicate (MSD). From this analysis, the laboratory determines the percent recovery (PR) and the relative percent difference (RPD) in recovery between the MS and MSD. The laboratory runs MS and MSD to determine long-term precision and accuracy of an analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sampling.

4. Laboratory Control Sample

The laboratory analyzed laboratory control samples (LCS) periodically during the analysis of field samples to assess the accuracy of the analytical method and the laboratory's performance. In addition, the laboratory analyzes an LCS duplicate and calculates PR for the LCS and LCS duplicate and the RPD for the two samples. The PR and RPD for the LCS are reported by the laboratory as part of the analytical data package. The laboratory compares the PR and RPD to acceptable ranges for these values in the laboratory's SOP.

5. Surrogates

Surrogate compounds, which are chemicals that are not expected to be detected in field samples, are added to certain samples (VOCs, semivolatiles, PCBs, and pesticides) in known quantities to determine recovery for the purpose of determining analytical efficiency. The PR of the surrogate is calculated by the laboratory and compared to the accepted range of PRs in the laboratory's SOP.

OT# F1E220189

Chain of Custody Record

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CUK 174 I

Severn Trent Laboratories, Inc.

J. ST. LOTIS

STL-4121 (0700)

Client ENVIRON	Project Manager Gene Peters	Date 5/21/01	Chain of Custody Number 057709
Address 4350 N. Fairfax Dr, Suite 300	Telephone Number (Area Code)/Fax Number 703-516-2300 / 703-516-2345	Lab Number	Page 1 of 1

City Arlington	State VA	Zip Code 22203	Site Contact D. Errett	Lab Contact Roxanne	Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
Project Name and Location (State) Henderson, NV			Carrier/Waybill Number			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix						Containers & Preservatives						Post-Orgenophosphate Residuate/Dioxin	Rad Param	St. Louis Param	VOA	Trip Blank	Special Instructions/ Conditions of Receipt
			AT	Asphalt	Soil	Soil	Urnine	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	NaOH							
22 P-6 (0-1')	5/21/01	0740			X															500p, 5x120g * Rad Param = GAMMA 226 Ra, 228 Ra, Iso U, Iso Th
23 P-6 (10-12')	5/21/01	0800																		
24 P-6 (18-21')	5/21/01	0825																		
25 P-1 (0-1')		0925																		
26 (10-12')		0945																		* St. Louis Param = PCBs BNA, Pest, Cyanide, Metals, Cr (VI)
27 (18-20')		1015																		
28 WTP-1 (0-1')		0945																		
29 WTP-2 (0-1')		1000																		
30 Trip Blank																				1 vis 410

Possible Hazard Identification <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	Sample Disposal <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 3 months)
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Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)

Relinquished By Sarah E. Gibson	Date 5/21/01	Time 1300	Received By Bill Clarke	Date 052201	Time 0915
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

536

ST# P1E220189

Chain of Custody Record



Severn Trent Laboratories, Inc.

L ST. LOUIS

STL-1124 (0700)

Client: **ENVIRON** Project Manager: **Gene Peters** Date: **5/20/01** Chain of Custody Number: **057706**

Address: **4350 N Fairfax Dr Suite 300** Telephone Number (Area Code)/Fax Number: **703 516-2300 / 703 516-2345** Lab Number: _____ Page: **1** of **1**

City: **Arlington** State: **VA** Zip Code: **22203** Site Contact: **D. Errett** Lab Contact: **Roxanne**

Project Name and Location (State): **Henderson, NV** Carrier/Waybill Number: _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives						Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Asph	Soil	So	Ultrama	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH			
12 P-3(0-1')	5/20/01	0915												Rad Param = GAMMA 226 Ra, 228 Ra, Iso U & Iso Th
13 P-3(10-12')		0930												
14 P-3(18-20')		1000												
15 P-2(0-1')		1130												500p, 5x120
16 P-2(10-12')		1145												500p, 250p, 3420
17 P-2(16-18')		1215												500p, 5x120p
18 A-2(0-1')		1500												
19 A-2(10-12')		1525												
20 A-2(19-21')		1600												
21 Trip Blank														

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify): _____

1. Relinquished By: Jessie Ezglean	Date: 5/21/01	Time: 1300	1. Received By: Jill Clarke	Date: 052201	Time: 0915
2. Relinquished By: _____	Date: _____	Time: _____	2. Received By: _____	Date: _____	Time: _____
3. Relinquished By: _____	Date: _____	Time: _____	3. Received By: _____	Date: _____	Time: _____

Comments: _____

Stays with the Sample: CANARY - Returned to Client with Report: PINK - Field Copy

526

OT# F1E210157

Chain Custody Record

cut 15'



Severn Trent Laboratories, Inc.

ST. LOUIS

STL-4124 (0700)

Client ENVIRON		Project Manager Gene Peters		Date 5/19/01	Chain of Custody Number 057717
Address 4350 N. Fairfax Drive, Suite 300		Telephone Number (Area Code)/Fax Number 703 516-2300 / 703-516-2345		Lab Number	
City Arlington	State VA	Zip Code 22203	Site Contact Doug Errett	Lab Contact Roxanne	
Project Name and Location (State) Henderson, NV		Carrier/Waybill Number		Analysis (Attach list if more space is needed)	
Contract/Purchase Order/Quote No.				Page 1 of 2	

See LOC # 057713 for page 2 of 2

Special Instructions/Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives						Post-Orig sample type Perchlorate/Hexin	Rad Param	St. Louis Param	VOA	Trip Blank	Special Instructions/Conditions of Receipt
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	H2O2	ZnCl2	NaOH						
① P17 (0-1')	5/18/01	1620				X													* Rad Param = GAMMA, 226 Ra, 228 Ra, Iso U, Iso Th
② P17 (4-5)		1635																	
③ Dup 2		1650																	
④ B-3 (0-1') rad jar reads B-3		1750																	
⑤ B-3 (4-5')		1805																	* St. Louis Param = PCBs,
⑥ A-1 (0-1')	5/19/01	0800																	500P, 250G, 3X125BNA, Pest, Cyanide, Metals, Cr(VI)
⑦ (10-12')		0815																	
⑧ (16-18')		0840																	
⑨ P-8 (0-1')		0940																	* 2 coolers in shipment
⑩ (10-12')		0955																	
⑪ (16-18')		1020																	
Dup 2		1550																	

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)

1. Relinquished By Garth E. Lukan	Date 5/19/01	Time 1330	1. Received By Steele/SR	Date 05.21.01	Time 0920
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: ** Matched this sample by collection time since there is no field i.d. SA 05.21.01 jar's read P8 (16-18')*

DISTRIBUTION: WHITE - Stays with the Sample, CANARY - Returned to Client with Report, PINK - Field Copy



Chain of Custody Record

Severn Trent Laboratories, Inc. ST. LOUIS

STL-4124 (0700)

Client: **ENVIRON**

Address: **4350 N. Fairfax Dr., Suite 300**
 State: **VA** Zip Code: **22203**

City: **Richmond** Name an. Location (State): **NV**

Project Manager: **Gene Peters** Telephone Number (Area Code)/Fax Number: **703 516-2300/703-516-2345**

Site Contact: **D. Grrett** Lab Contact: **Boyanne**

Carrier/Waybill Number: _____

Chain of Custody Number: **057712** Page **1** of **2**

Special Instructions/Conditions of Receipt: **see coc# 057718 for page 2 of 2**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives			Analysis (Attach list if more space is needed)
			Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	
3 B-14	5/22/01	17:45	X			8	321		BNA 11111111 Organophosph Organochlor Organic Extra Dioxin Pesticide Tot. Cyanide VOA Trip Blank
4 PCY-GW01	5/23/01	10:40	X			8	321		Same except use the vial organics - per LP for it.
10 STOP Blank									40mL 6xLP 3xLP, 2x70, 2x250 05/24/01

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Other

Return Around Time Required:
 24 Hours 48 Hours 7 Days 14 Days 21 Days

Sample Disposal:
 Disposal By Lab Archive For _____ Months Return To Client

1. Relinquished By: *[Signature]* Date: **5/23/01** Time: **1800**

2. Relinquished By: *[Signature]* Date: **5/24/01** Time: **0930**

3. Relinquished By: _____ Date: _____ Time: _____

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample. CANARY - Returned to Client with Report. PINK - Field Copy

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Severn Trent Laboratories, Inc.

OT# F1E240210

**Chain of
Custody Record**

STL-4124 (0700)

Client: **ENVIRON**

Project Manager: **G. Peters**

Address: **4350 N. Fairfax Dr, Suite 300**

City: **Arlington** State: **VA** Zip Code: **22203**

Project Name and Location (State): **Henders on NU**

Contact/Purchase Order/Quote No.:

Telephone Number (Area Code)/Fax Number: **703 516-2300 / 703 516-2345**

Site Contact: **Lab Contact**

Carrier/Waybill Number:

Date: **6/22/01** Lab Number: **057715**

Page **2** of **2**

Chain of Custody Number: **See vocat 057712 for page 1 of 2**

Sample I.D. No. and Description (Sample I.D. No. and Description may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt					
			Air	Aqueous	Sol	Sol	Sol	Impres	H2SO4	HNO3	HCl	NaOH			ZnAc	NaOH			
24	5/22/01	1745	X								8	3	2	1	1	1	1	Other Rad from wet chem	
24-64501	5/23/01	1040	X								8	3	2	1	1	1	1	Wet Chem (COE), TDS, Turb, Conduct, H, Hardly, P, K, Cl, F, NO3, SO4, or the phosph.	
																		Other Rad Param = 226 Ra, 228 Ra, Iso U, Fea Th.	

Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

1. Relinquished by: *[Signature]* Date: **5/23/01** Time: **1000**

2. Relinquished by: *[Signature]* Date: **5/23/01** Time: **0930**

3. Relinquished By: _____ Date: _____ Time: _____

Comments: **See vocat 057712**

1. Received By: *[Signature]* Date: **05.24.01** Time: **0930**

2. Received By: _____ Date: _____ Time: _____

3. Received By: _____ Date: _____ Time: _____

DISTRIBUTION: WHITE - Stays with the Sample. CANARY - Returned to Client with Report. PINK - Field Copy

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Chain of
Custody Record

Severn Trent Laboratories, Inc.

STL-4124 (0700)
 Client **ENVIRON**
 Address
 Project Manager **Gene Peters**
 Telephone Number (Area Code)/Fax Number **703 516-2300/703 516-2345**
 Site Contact
 Lab Contact
 Date **5/23/01**
 Lab Number
 Chain of Custody Number **057728**
 Page **2** of **2**

Project Name and Location (State)
Henderson, NV
 Contract/Purchase Order/Quote No.
 Carrier/Waybill Number

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)		
			Aqueous	Sol	Sol	Ag	Unpres	H2SO4	HNO3	HCl		NaOH	ZnAc
5 PC-58	5/23/01	1325	X										Other Rod Param GAMA Hot Chem ICP/MS/Hg
4 PC-2		1325	X										* Net Urem = Cr(VI), TDS, Cond., Turb., pH, Hard, Alk, Cl, F, NO3, SO4, Orthophos, * Other Rod Param = 228 Ra, 230 U, Iso Th.

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B 21 Days Other
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other
 Turn Around Time Required
 1. Relinquished By **Sarah E. Zilean** Date
 2. Relinquished By Date
 3. Relinquished By Date

QC Requirements (Specify)
 Return To Client Unknown Poison B 21 Days Other
 Disposal By Lab Archive For _____ Months longer than 3 months
 1. Received By **Sarah E. Zilean** Date **05.24.01** Time **0930**
 2. Received By Date Time
 3. Received By Date Time

Comments
 DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy



Severn Trent Laboratories, Inc.

Chain of Custody Record

LOT# F1E240210

STL-4124 (0700)
 Client: **ENVIRON**
 Project Manager: **Gene Peters**
 Date: **5/22/01**
 Chain of Custody Number: **057741**
 Address: **HENDERSON NV**
 Telephone Number (Area Code)/Fax Number: **703 516 2300 / 703 516-2945**
 Site Contact: **Gene Peters**
 Lab Contact: **Gene Peters**
 Carrier/Waybill Number: **703 516 2300 / 703 516-2945**
 Page **2** of **2**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed	Sol	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH			
7 B28 - Gwbl	5/22/01	1700	X											Other Rad Param Gamma Wet Chem 10/10/05/1/1/1	* Wet Chem = Cr(VI), TDS, Turb., Conduct, pH, Hard, Alk., Cl, F, NO3, SO4, Orthophosph.
															* Other Rad Param 226 Ra, 228 Ra, Iso U, Iso Th

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Possible Hazard Identification: Corrosive Flammable Skin Irritant Poison B Unknown Other

Reinquisition Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

1. Reinquisitioned By: **Gene Peters** Date: **5/23/01** Time: **1700**
 2. Reinquisitioned By: **Gene Peters** Date: **5/24/01** Time: **0930**
 3. Reinquisitioned By: _____ Date: _____ Time: _____

Comments: _____

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Severn Trent Laboratories, Inc.

Chain o.
Custody Record

1202240210

STL-4124 (0700)
 Client: **ENVIRON**
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Project Name and Location (State): **Henders on, NV**
 Contract/Purchase Order/Quote No.: _____
 Project Manager: **Gene Peters**
 Telephone Number (Area Code)/Fax Number: **703 576-2300 / 703 576-2345**
 Site Contact: _____ Lab Contact: _____
 Carrier/Maybill Number: _____
 Date: **5/23/01** Chain of Custody Number: **057739**
 Page **2** of **2**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			Aqueous	Sol	Sol	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc/NaOH	
8 Phase 3	5/23/01	0900	X										Other Rod Room	
													GAMMA	
													Net Chem	
													replicms/Hg	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Other

Turn Around Time Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

Sample Disposal
 Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

1. Relinquished By **Smith, J. J.** Date **5/23/01** Time **17:00**
 2. Relinquished By _____ Date _____ Time _____
 3. Relinquished By _____ Date _____ Time _____

1. Received By **Julia Moore** Date **05-24-01** Time **0930**
 2. Received By _____ Date _____ Time _____
 3. Received By _____ Date _____ Time _____

Comments: _____

WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

USA 1000

**SEVERN
TRENT
SERVICES**

Severn Trent Laboratories, Inc.

Chain of Custody Record

STL-4124 (07/00)

Client: **ENVIRON**

Project Manager: **Gene Peters**

Address: **4350 N Fairfax Dr, Suite 300**

City: **Atlington**

State: **VA** Zip Code: **22203**

Telephone Number (Area Code)/Fax Number: **703 516-2300/703-516-2345**

Site Contact: **D. Greer**

Lab Contact: **Loraine**

Carrier/Waybill Number: **22203**

Chain of Custody Number: **057729**

Date: **5/22/01**

Page: **1** of **1**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH			
5-2(0-1')	5/21/01	1110												500p, 5x120	Lead Param. = GAMMA 226Ra, 228Ra, Iso U, Iso Th
5-2(10-12')	5/21/01	1130												VOA Trip Blank	
5-2(16-20')	5/21/01	1145													
4(0-1')	5/21/01	1500												60x120g 500p, 5x120	
4(10-12')	5/21/01	1520													St Louis Param = PCBs, BMA, Pest, Cyanide, Metals, Cr(CF)
4(20-22')	5/21/01	1545													
4(17-21')	5/21/01	1730													
4(6-8')	5/22/01	0720													
Trip Blank #3															

Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months

QC Requirements (Specify)

1. Relinquished By: **Gene Peters** Date: **5/22/01** Time: **1100**

2. Relinquished By: **Gene Peters** Date: **5-31-01** Time: **1700**

3. Relinquished By: **Gene Peters** Date: _____ Time: _____

1. Received By: **Gene Peters** Date: **052301** Time: **0940**

2. Received By: _____ Date: _____ Time: _____

3. Received By: _____ Date: _____ Time: _____

Comments: *** (Vial with dried sup enclosed for each soil samp.)**

DISTRIBUTION: WHITE - Slays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

SEVERN
TRENT
SERVICES

STL 57 LOUIS

CLK 110 L

Chain of Custody Record

Severn Trent Laboratories, Inc.

STL-4124 (07/00)

Client: ENVIRON

Project Manager: Gene Peters

Address: 4350 N. Fairfax Dr, Suite 300

City: Arlington, VA 22203

Telephone Number (Area Code)/Fax Number: 703-516-2300/703-516-2345

Site Contact: D. Errett

Lab Contact: Roxanna

Carrier/Waybill Number:

Chain of Custody Number: 057726

Date: 5/22/01

Page: 1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
			Asph	Sed	Sol	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH		
2-7 (6-8')	5/22/01	0825	X	X	X	6							TP Blank	* Rad Param = GAMMA, 226 Ra, 228 Ra, Iso U, Iso Th
12 (15-17)	5/22/01	0935	X	X	X	6							St. Louis Param	
7-11 (15-17)	5/22/01	1100	X	X	X	6								
DUP 4	"	1230	X	X	X	6								
DUP 5	"	1300	X	X	X	6								* St Louis Param = PCBs, BNA, Pest, Cyanide, Metals, Cr (VI)
Trip Blank #2														

Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal: Disposal By Lab Archive For _____ Months

Turn Around Time Required: 24 Hours 48 Hours 7 Days 21 Days Other _____

1. Relinquished By: [Signature] Date: 5/22/01 Time: 1400

2. Relinquished By: [Signature] Date: 05/31/01 Time: 1700

3. Relinquished By: _____ Date: _____ Time: _____

1. Received By: [Signature] Date: 05/23/01 Time: 0940

2. Received By: _____ Date: _____ Time: _____

3. Received By: _____ Date: _____ Time: _____

Remarks: 1 vial with dried samp enclosed for each sup.

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

**SEVERN
TRENT
SERVICES**

2 of 2 Cooks if

Chain
Custody Record

Severn Trent Laboratories, Inc.

Client: **ENVIRON**
 Address: **4380 N. Fairfax, Suite 300**
 City: **Henderson, NV**
 State: **NV** Zip Code: **89011**

Project Manager: **G. Peters**
 Telephone Number (Area Code)/Fax Number: **702/221-1011**

Site Contact: _____ Lab Contact: _____
 Carrier/Waybill Number: _____

Chain of Custody Number: **057722**
 Page **2** of **2**

See coc# 057722:
 for p1 of 2.
 Special Instructions/
 Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Other Test Param.		
			Aqueous	Soil	Soil	Soil	Unpres.	H2SO4	HNO3	HCl			NaOH	ZnAc/NaOH
052101-WB01 *	5/21/01	15:40	X					3	2	1			Wet Chem. *SQR	* Other Road Param = 228 Ra, Iso U, Iso Th.
052201-WB01	5/22/01	0700	X					8	3	2	1		Wet Chem. *SQR	* Wet Chem = Cr(VI), TDS, Turb., Cond., pt Hard., Alk., Cl, F, NO ₃ , SO ₄ , Orthophos
Trip Blank 052301 #1		Vial												

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Polson B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

QC Requirements (Specify)

1. Received By: **Bill Clark** Date: **05/23/01** Time: **0940**
 2. Received By: _____ Date: _____ Time: _____
 3. Received By: _____ Date: _____ Time: _____

1. Requested By: _____ Date: _____ Time: _____
 2. Requested By: _____ Date: _____ Time: _____
 3. Requested By: _____ Date: _____ Time: _____

Comments: *** 1 x 12 bottle shipped for samp**

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

CELL 144

SEVERN
TRENT
SERVICES

Severn Trent Laboratories, Inc.

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Chain of Custody Record

Client: ENVIRON
 Address: 4350 N. Fairfax St., Suite 300, Arlington, VA 22203
 Project Name and Location (State): Henderson, NV
 Contract/Purchase Order/Quote No.:
 Project Manager: Gene Peters
 Telephone Number (Area Code)/Fax Number: (703) 576-2300 / (703) 576-2345
 Site Contact: Day Emmett
 Carrier/Waybill Number: Roxanne

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Date	Chain of Custody Number	
			Aqueous	Sol	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH				ZnAc
① P-10 (0-1') ✓	5/17/01	1030	X	X	X							VOA St. Louis Param Red Param (50g) Kerolande/Dixie Pet Longmophas	5/17/01	057701
② P-10 (10-11')		1230										500g 5x12g RAD Param = GAMMA Dip. W/20g 22g Ra, Iso U. E 5x12g Iso Th.		
③ P-10 (16.5-17.5')		1300										500g 5x12g PCB, BNA, Pest, Sparade, Metals, CE(VI)		
④ P-10 (12-12.5')		1620										500g 5x12g PCB, BNA, Pest, Sparade, Metals, CE(VI)		
⑤ P-7 (0-1')		1630										500g 5x12g PCB, BNA, Pest, Sparade, Metals, CE(VI)		
⑥ P-7 (2-3') x See our LOGS on A9 = P-7(2-3')												500g 5x12g PCB, BNA, Pest, Sparade, Metals, CE(VI)		

Special Instructions/Conditions of Receipt: 500g 5x12g PCB, BNA, Pest, Sparade, Metals, CE(VI)

Disposal By Lab Archive For _____ Months
 (A fee may be assessed if samples are retained longer than 3 months)

Sample Disposal: Return To Client Unknown Poison B Skin Irritant Flammable Non-Hazard

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

1. Relinquished By: *Jaysh E. Johnson* Date: 05/17/01 Time: 1715
 2. Relinquished By: *Gene Peters* Date: 05/31/01 Time: 1700
 3. Relinquished By: _____ Date: _____ Time: _____

1. Received By: *Gene Peters* Date: 05/17/01 Time: 0900
 2. Received By: _____ Date: _____ Time: _____
 3. Received By: _____ Date: _____ Time: _____

Comments: ** Eval with dried samp enclosed for each samp.*

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

STL-4124 (0700) Client **ENVIRON** Project Manager **Steve Petros** Date **5/20/01** Chain of Custody Number **057706**

Address **17350 N Fairfax Dr Suite 300** Telephone Number (Area Code)/Fax Number **703 516-2300/703 516-2315** Page **1** of **1**

City **Arlington** State **VA** Zip Code **22203** Site Contact **D. Errett** Lab Contact **Kexanna**

Project Name and Location (State) **Henderson, NV** Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed	Soil	Unpres.	H2SO4	HNOS	HCl	NaOH			ZnAc
P-3 (0-1')	5/20/01	0915												Rad Param = GAMMA, 271 Pa, 272 Pa, ISO U
P-3 (10-12')		0930												ISO Th
P-3 (18-20')		1000												
P-2 (0-1')		1130												
P-2 (10-12')		1145												St. Louis Param = PCU
P-2 (16-18')		1215												BNA, test, Cyanide,
A-2 (0-1')		1500												Metals, Cr(VI)
A-2 (10-12')		1525												
A-2 (17-21')		1600												

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Archive For Months Return To Client Disposal (Specify)

Turn Around Time Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

1. Relinquished By **Janah E. Johnson** Date **5/21/01** Time **13:00**

2. Relinquished By _____ Date _____ Time _____

3. Relinquished By _____ Date _____ Time _____

Comments

STL-4124 (0700) Client ENVIRON Project Manager ... Date 5/21/01 Chain of Custody Number 0517709

Address 1350 N. Fairfax St, Suite 200 Telephone Number (Area Code)/Fax Number 703-511-2300/703-511-2315 Lab Number 1 of 1

City Arlington State VA Zip Code 22203 Site Contact D. ... Lab Contact ...

Project Name and Location (State) Wenderson, NV Carrier/Waybill Number ...

Contract/Purchase Order/Quote No. ...

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed	Soil	Unpres	H2SO4	HNOS	HCl	NaOH	ZnAc	NaOH			
F-6 (0-1')	5/21/01	0740			X										* Rel. Rec. = FAMMA ZTR Co, 21800, ISO U
P-1 (10-12')	5/21/01	0800													
P-6 (12-21')	5/21/01	0825													
P-1 (0-1')		0925													
(10-12')		0945													
(12-20')		1015													
WTP-1 (0-1')		0915													* St Louis Rec. = PCBs AMH, Inc., by ... (10-12')
WTP-2 (0-1')		1000													
Triplet															

Possible Hazard Identification
 1 on-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Sample Disposal
 1 on-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months

Relinquished By ... Date 5/21/01 Time 1200

2. Relinquished By _____ Date _____ Time _____

3. Relinquished By _____ Date _____ Time _____

Comments _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain c Custody Record

**SEVERN
TRENT
SERVICES**

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: **ENVIRON** Project Manager: **G. Peters** Date: **5/17/01** Chain of Custody Number: **057718**

Address: **4250 N. Fairfax Dr., Suite 300** Telephone Number (Area Code)/Fax Number: **703-516-2300 / 703-516-2345** Page: **1** of **1**

City: **Arlington** State: **VA** Zip Code: **22203** Site Contact: **D. Gerratt** Lab Contact: **XXXXXXXXXX**

Project Name and Location (State): **Henderson, NV** Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No.: _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH			
E-2 (0-1')	5/17/01	1430			X										Red Passam = GAMM
G-2 (1-5')		1445													see file for Pa, T, U, I, S, Th
E-1 (0-1')		1500													
E-1 (1-5')		1510													
S-1 (0-1')		1535													* St. Louis Passam: PC
S-1 (10-12')		1550													UVA, Test, Synthesis
S-1 (1-17')		1610													Metals, Cr (VI)
B-1 (0-1')		1730													
B-1 (10-12')		1750													
B-1 (17-21')		1825													
Trip Blank															

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Archive For _____ Months Return To Client (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)	Date	Time
1. Relinquished By Garrah & ...	5/21/01	1300
2. Relinquished By _____	Date	Time
3. Relinquished By _____	Date	Time

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

**Chain of
Custody Record**

STL-4124 (0700)

Client: **ENVIRON** Project Manager: **Gene Peters** Date: **5/17/01** Chain of Custody Number: **057701**

Address: **4320 N. Foothills St., Suite 300** Telephone Number (Area Code)/Fax Number: **(703) 516-2300 / (703) 516-2345** Page **1** of **1**

City: **Archington** State: **VA** Zip Code: **22203** Site Contact: **Doug Elliott** Lab Contact: **REXCO INC**

Project Name and Location (State): **HENDERSON, NV** Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No.: _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc/NaOH
P-10 (0-1')	5/17/01	1030		X									VOA	
P-10 (10-11')		1430		X									St Louis Param	St Louis Param = CANARY
P-10 (14.5-17.5')		1450		X									Rad Param	Rad Param, K, TOU, S
P-10 (12-12.5')		1445		X									Rad Param	Rad Param
P-9 (0-1')		1200												St Louis Param
(19.5-19.5') CAN(8')		1500												1015, 1014, 1011
()														By waste, 1011, 1012
P-7 (0-1')		1120												CC (VI)
(20')		1630												

Sample Disposal: Disposal By Lab Archive For _____ Months Return To Client Unknown Poison B Skin Irritant Flammable Non-Hazard Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify): _____

1. Relinquished By: _____ Date: 5/17/01 Time: 1715

2. Relinquished By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

Comments: _____

DISPOSITION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

**Chain of
Custody Record**

STL-4124 (0700)

Client: **ENVIRON**

Project Manager: **Gene Peters**

Address: **4350 N. Fairfax Drive, Suite 300**

City: **Arlington** State: **VA** Zip Code: **22203**

Telephone Number (Area Code): **(703) 516-2300** Fax Number: **(703) 516-2345**

Site Contact: **Doug Errett** Lab Contact: **Rest-O-Ornament/Box**

Project Name and Location (State): **Henderson, NV**

Carrier/Waybill Number: **517/01**

Date: **05/17/01** Chain of Custody Number: **057703**

Page **1** of **2**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH			
P-7 (10-12')	5/17/01	1715												Rest-O-Ornament/Box	Rad Param = GAMMA 226 Ra, 238 Ra, Iso U ²³⁵
P-7 (13-20')	5/17/01	1800												Rest-O-Ornament/Box	Rad Param = GAMMA 226 Ra, 238 Ra, Iso U ²³⁵
Dup 1	5/17/01	1910												Rest-O-Ornament/Box	Rad Param = GAMMA 226 Ra, 238 Ra, Iso U ²³⁵
P-10 (16.5-17.5')	5/17/01	1200												Rest-O-Ornament/Box	Rad Param = GAMMA 226 Ra, 238 Ra, Iso U ²³⁵
P-11 (0-1')	5/18/01	0745												Rest-O-Ornament/Box	St Louis Param = PCF
P-11 (4-5')	5/18/01	0755												Rest-O-Ornament/Box	BNA, Pest, Cyanide Metal, Cr (VI)
P-12 (0-1')	5/18/01	0815												Rest-O-Ornament/Box	St Louis Param = PCF
P-12 (4-5')	5/18/01	0830												Rest-O-Ornament/Box	BNA, Pest, Cyanide Metal, Cr (VI)
P-14 (0-1')	5/18/01	0920												Rest-O-Ornament/Box	St Louis Param = PCF
P-14 (4-5')	5/18/01	0935												Rest-O-Ornament/Box	BNA, Pest, Cyanide Metal, Cr (VI)
P-16 (0-1')	5/18/01	0955												Rest-O-Ornament/Box	St Louis Param = PCF
P-16 (4-5')	5/18/01	1010												Rest-O-Ornament/Box	BNA, Pest, Cyanide Metal, Cr (VI)

Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months

Turn Around Time Required

24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

1. Relinquished By: **Gene Peters** Date: **5/18/01** Time: **1130**

2. Relinquished By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL-4124 (0700)

Client: **ENVIRON** Project Manager: **Gene Peters** Date: **5/18/00** Chain of Custody Number: **057720**

Address: **4350 N Fairfax Drive, Suite 300** Telephone Number (Area Code)/Fax Number: **(703) 516-2300 (703) 516-2345**

City: **Arlington** State: **VA** Zip Code: **22203** Site Contact: **Doug Errett** Lab Contact: **Roxanne**

Project Name and Location (State): **Henderson, NV** Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No. _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aq	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc
B-2 (0-1')	5/18/01	1330											* Rad Param = GAMMA 216 Ra, 228 Ra, Iso U, & Iso Th
B-2 (4-5')	5/18/01	1345											
P-15 (0-1')		1430											
P-15 (4-5')		1445											
P-17 (0-1')		1520											* St. Louis Param = PCB, BNA, Pesticide, Cyanide, Metals, Cr(VI)
P-17 (4-5')		1535											
Dip-2		1550											
Trip Blank													

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify):

1. Relinquished By	Date	Time	1. Received By	Date	Time
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

**SEVERN
TRENT
SERVICES**

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: EMVISION Project Manager: George Peters Date: 5/1/01 Chain of Custody Number: 057729

Address: 1800 N. Fairfax Dr, Suite 300 Telephone Number (Area Code)/Fax Number: 703 516-2300/703-511-2345 Lab Number: _____ Page: 1 of _____

City: Arlington State: VA Zip Code: 22203 Site Contact: B. G. Smith Lab Contact: XXXXXXXXXX

Project Name and Location (State): Henderson, NV Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No.: _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aq	Soil	Sed	Soil	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH			
S-2(0-1')	5/21/01	1110													* Red Perm. = GAINMA
S-2(10-12')	5/21/01	1130													226Pa, 228Ra, Iso U,
S-2(18-20')	5/21/01	1145													Iso Th
S-2(20-22')	5/21/01	1200													
S-2(20-22')	5/21/01	1220													* St Louis Perm = PCBs
P-7(11-21')	5/21/01	1730													BNA, Pest, Cyanide
E-2(6-8')	5/22/01	0720													Metals, Cr(Cr)
Trip Blank															

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months).

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

Sample Disposal: Return To Client QC Requirements (Specify)

Relinquished By: Garth P. Johnson Date: 5/22/01 Time: 1100

Relinquished By: _____ Date: _____ Time: _____

Relinquished By: _____ Date: _____ Time: _____

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL-4124 (07/00) Client W.R. Roper Project Manager Gene Peters Date 5/22/01 Chair of Custody Number 057726
 Address 4350 N. Fairfax Dr, Suite 300 Telephone Number (Area Code)/Fax Number 703-516-2300/703-516-2315 Lab Number _____ Page 1 of 1
 City Arlington State VA Zip Code 22203 Site Contact D. Errett Lab Contact Perkins

Project Name and Location (State) W.R. Roper Carrier/Waybill Number _____
 Purchase Order/Quote No. _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH			
P-17 (6-8')	5/22/01	0825	X												* Red Param = GAMMA, Zn, Pb, Iso
P-12 (15-17)	5/22/01	0935	X												Iso (H)
P-11 (15-17)	5/22/01	1100	X												* St Louis Param = PCBs
DUP H	"	1230	X												BNA, Pest, Cyanide, Metals, Cr (VI)
DUP S	"	1300	X												
Trip Blank															

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

Relinquished By	Date	Time
<u>[Signature]</u>	5/22/01	
1. Relinquished By	Date	Time
2. Relinquished By	Date	Time
3. Relinquished By	Date	Time

Comments _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL-4124 (0700)

Client: **ENVIRON** Project Manager: **Gene Peters** Date: **5/11/01** Chain of Custody Number: **057117**

Address: **4350 N. Fairfax Drive, Suite 300** Telephone Number (Area Code)/Fax Number: **703-516-2300 / 703-516-2345** Page: **1** of **2**

City: **Arlington** State: **VA** Zip Code: **22203** Site Contact: **Doug Croft** Lab Contact: **Katherine** Analysis (Attach list if more space is needed): **See COS # 057117 for page 2 of 2**

Project Name and Location (State): **Henderson, NV** Carrier/Waybill Number: **Port-O-Clean/Exhibit** Special Instructions/Conditions of Receipt: **Rad Param = GAMMA, 226 Ra, 228 Ra, Iso U, Iso Th**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Special Instructions/Conditions of Receipt	
			Aq	Sed	Soil	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH			
P17 (0-1')	5/11/01	1620			X									
P17 (4-5')		1635												
Dup 2		1650												
B-3 (0-1')		1750												
B-3 (4-5')		1805												
V1-1 (0-1')	5/11/01	0820												
(10-12')		0815												
(16-17')		0840												
P-8 (0-1')		0940												
(10-12')		0935												
(16-18')		1020												
Dup 2	5/11/01	1550												

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)	Date	Time
1. Relinquished By Janeh E. Johnson	5/11/01	1330
2. Relinquished By		
3. Relinquished By		

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

SEVERN
TRENT
SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: **ENVIRONMENTAL** Project Manager: **G. Peters** Date: **5/23/01** Chain of Custody Number: **057719**

Address: **11350 Al Parkford Dr, Suite 300** Telephone Number (Area Code)/Fax Number: **703 516-2900/703 516-2345** Page **1** of **2**

City: **Virginia** State: **VA** Zip Code: **22203** Site Contact: **D. Ercett** Lab Contact: **Lab Number**

Project Name and Location (State): **Walden, NV** Carrier/Waybill Number: **See COC # 057728 For page 2 of 2**

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc			NaOH
PC-2															
PC-58	5/23/01	1325													
Trip Blank															
PC-2	5/23/01	1025													

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Sample Disposal: Non-Hazard Flammable Skin Irritant Poison B Unknown Other

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days

1. Relinquished By: **[Signature]** Date: **5/23/01** Time: **1700**

2. Relinquished By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

**Chain of
Custody Record**

STL-4124 (0700)

Client: **Environ** Project Manager: **Gene Peters** Chair/Custodian Number: **057745**

Address: **4330 N. Fairfax Dr # 300** Telephone Number (Area Code/Fax Number): **(703) 516-2481/2345** Page **2** of **2**

City: **Arlington** State: **VA** Zip Code: **22203** Site Contact: **Gene Peters** Lab Contact: **Gene Peters**

Project Name and Location (State): **Fluorescein, NV** Carrier/Waybill Number: _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			Air	Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3			HCl	NaOH
PC56-GW01	5/23/01	1330	X						8	3	2	1	Other Rad: 226Ra, 228Ra
DUP6	5/23/01	1700	X						8	3	2	1	ISO U, ISO Th
													+ Wet Chem:
													TDS, Turbid, Cond.
													pH, Hardness, Alk.,
													Cl, F, NO3, SO4,
													O. Phosph.

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

QC Requirements (Specify)

Received By	Date	Time
1. Received By	5/23/01	1800
2. Received By		
3. Received By		

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL-4124 (0700)
 Client: ENVIRON
 Address: 4150 N. Fairfax Dr, Suite 300
 City: Arlington, VA Zip Code: 22303
 Project Name and Location (State): Henderson NV
 Contract/Purchase Order/Quote No.:
 Project Manager: G. P. K. 15
 Telephone Number (Area Code)/Fax Number: 703 516-2300 / 703 516-2345
 Date: 5/22/01
 Lab Number: 122101
 Chair of Custody Number: U57715
 Page 2 of 2
 See VOC # 057712 for page 1 of 2

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc/NaOH
B-14	5/22/01	1745	X			8	3	2	1			Wet Chem ICP/ICPMS/Hs	Wet Chem = Cr(VI), TDS, Turb, Cond., pH, Hard, Alk, Cl, F, NO ₃ , Se, orthophosph.
PC4-94501	5/23/01	1040	X			8	3	2	1			Other Rad Exem GAMMA Wet Chem ICP/ICPMS/Hs	Other Rad Param = 226 Ra, 228 Ra, 232 Th, 235 U, 238 U, Iso Th.

Possible Hazard Identification:
 Non-Hazard
 Flammable
 Skin Irritant
 Poison B
 Unknown
 Return To Client
 Disposal By Lab
 Archive For _____ Months
 (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required:
 24 Hours
 48 Hours
 7 Days
 14 Days
 21 Days
 Other

1. Relinquished By: [Signature] Date: 5/23/01 Time: 1800
 2. Relinquished By: [Signature] Date: _____ Time: _____
 3. Relinquished By: _____ Date: _____ Time: _____

Comments:

**SEVERN
TRENT
SERVICES**

Sewern Trent Laboratories, Inc.

Client: **ENVIRON** Chain of Custody Number: **057703**
 Project Manager: **Gene Peters** Date: **05/17/01**
 Telephone Number: (Area Code) / Fax Number: **(703) 516-2300 / (903) 516-2345** Lab Number: **1** of **2**
 Site Contact: **Doug Griffl** Lab Contact: **Rest-Organochlorines**
 City: **Arlington** State: **VA** Zip Code: **22203** Contract/Purchase Order/Quote No.: **Henderson, NV**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			Soils	Sludges	Water	Other	Unknown	Unlabeled	H2SO4	HNO3	HCl	MnCl2			ZnAc	NH4OH
16) P-9 (10-12') ✓ DID NOT ✓	5/17/01	1715													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
17) P-7 (18-20') ✓ REC'D ✓	5/17/01	1800													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
18) Dup 1	5/17/01	1910													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
19) P-10 (16.5-17.5') ✓ DID NOT ✓	5/17/01	1200													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
20) P-11 (0-1') ✓	5/18/01	0745													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
21) P-11 (4-5')	5/18/01	0755													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
22) P-12 (0-1')	5/18/01	0815													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
23) P-12 (4-5')	5/18/01	0830													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
24) P-14 (0-1')	5/18/01	0920													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
25) P-14 (4-5')	5/18/01	0935													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
26) P-16 (0-1') ✓ -1	5/18/01	0955													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th
27) P-16 (4-5')	5/18/01	1010													Rest-Organochlorines Perchlorate/Dioxins Rod Param. St Louis Param. VOA	* Rod Param = GAMMA 226 Po, 238 Ra, Iso U & Iso Th

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Other

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

1. Requisitioned By: **Frank E. Johnson** Date: **5/18/01** Time: **1130**
 2. Requisitioned By: **Subalter** Date: **05/19/01** Time: **0900**
 3. Requisitioned By: _____ Date: _____ Time: _____

Comments: _____

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

1 of 2 Coders!

Chain of Custody Record

STL-4124 (0700)

Client: **ENVIRON** Project Manager: **G. Peters** Date: **5/22/01** Chain of Custody Number: **057722**

Address: **4350 N Fairfax Dr., Suite 300** Telephone Number (Area Code)/Fax Number: **703 516-2300/703 516-2345** Page **1** of **2**

City: **Arlington** State: **VA** Zip Code: **22203** Site Contact: **D. Eirett** Lab Contact: **Kerianne**

Project Name and Location (State): **Henderson, NV** Carrier/Waybill Number: _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)
			Aq	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		
052101-WB01 <i>trip blank</i>	5/21/01	15:40	X			8	3	2	1				Organic-Ext Organochlor. Diclin Pesticide Tot. Cyanide VOA Trip Blank
052201-WB01 <i>trip blank</i>	5/22/01	07:00	X			8	3	2	1				Organic-Ext Organochlor. Diclin Pesticide Tot. Cyanide VOA Trip Blank
Trip Blank (1 per cooler)			X			2							Continued on Chain # 057722

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months
 (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

QC Requirements (Specify)

1. Relinquished By: *[Signature]* Date: **5/22/01** Time: **10:00**

2. Relinquished By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

Comments

