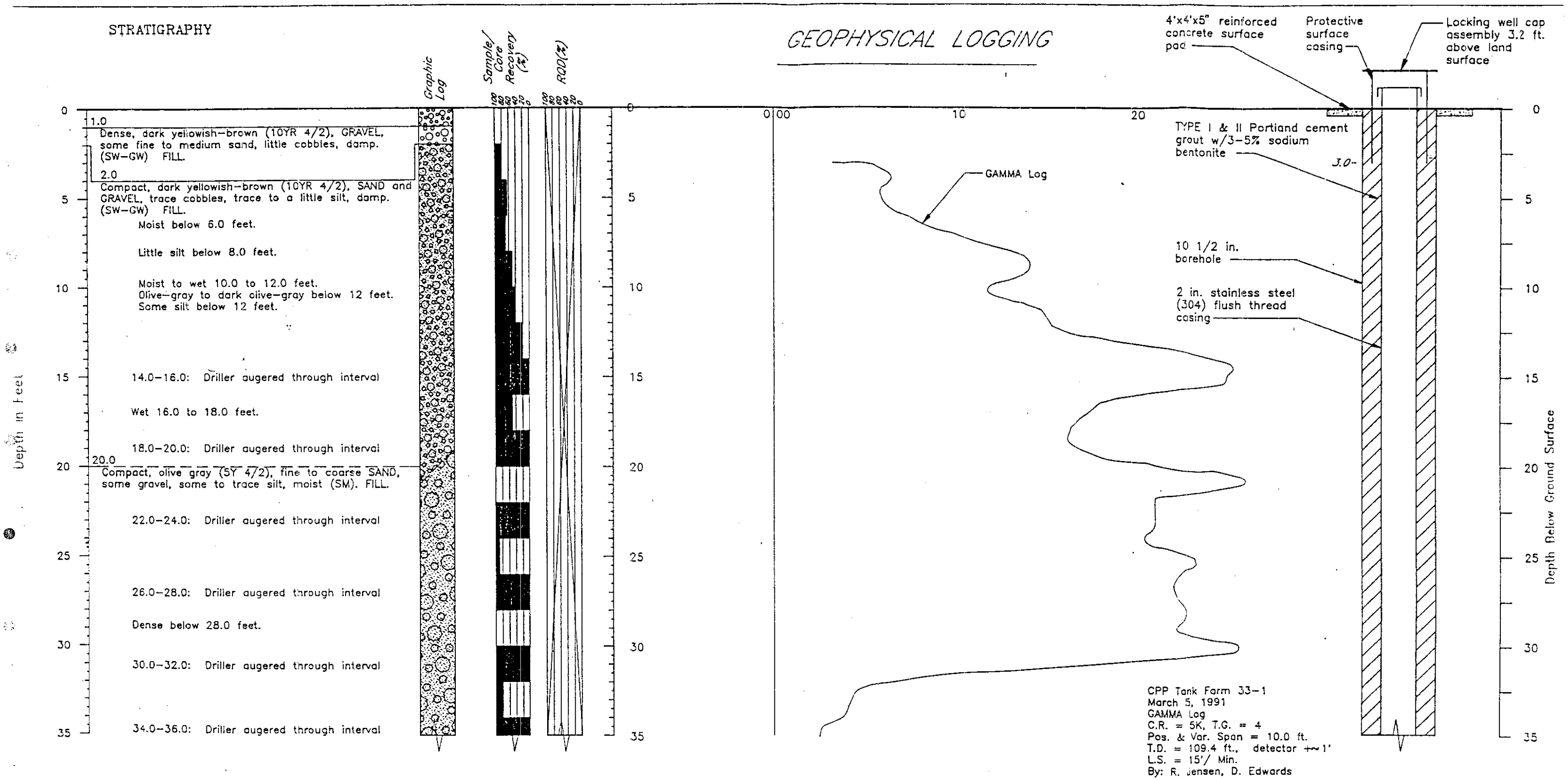
APPENDIX A

BOREHOLE LOG



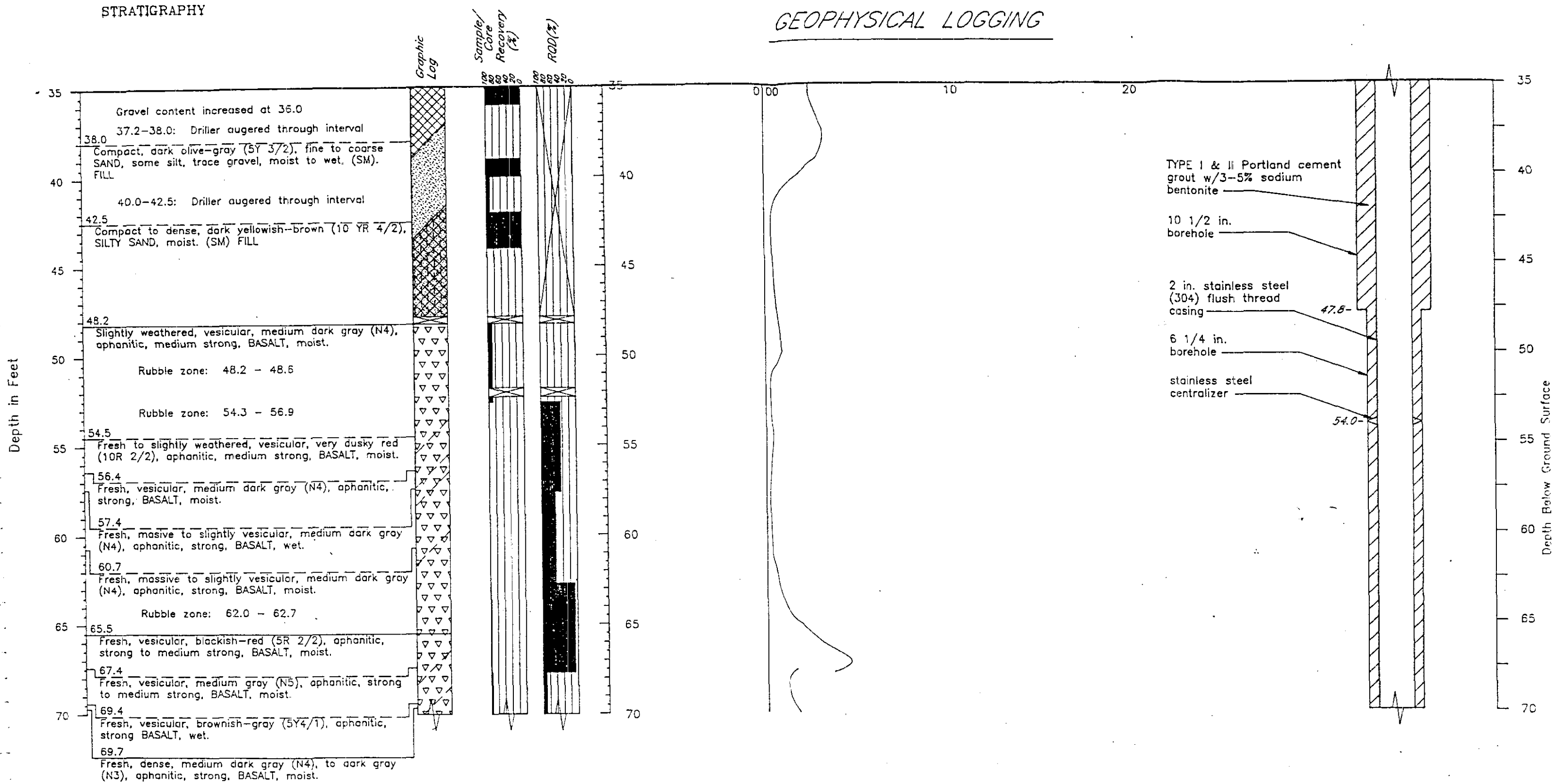
Notes:

1.) All ALLUVIUM samples surveyed by Golder personnel with Eberline ESP (HP260) unless otherwise noted.
2.) All samples surveyed by GOLDER personnel with OVA were at background levels. were at background levels.

FIGURE A-1
SHEET 1 OR 4

GENERALIZED BOREHOLE LOG - WELL SITE CCP 33-1

EG&G\FINAL REPORT\IDAHO



Notes:

2.) All ALLUVIUM samples surveyed by Golder personnel with Eberline ESP (HP260) unless otherwise noted. All BASALT samples surveyed by WINCO HP for Beta and Gamma radiation. See Table 6-4 for survey results.

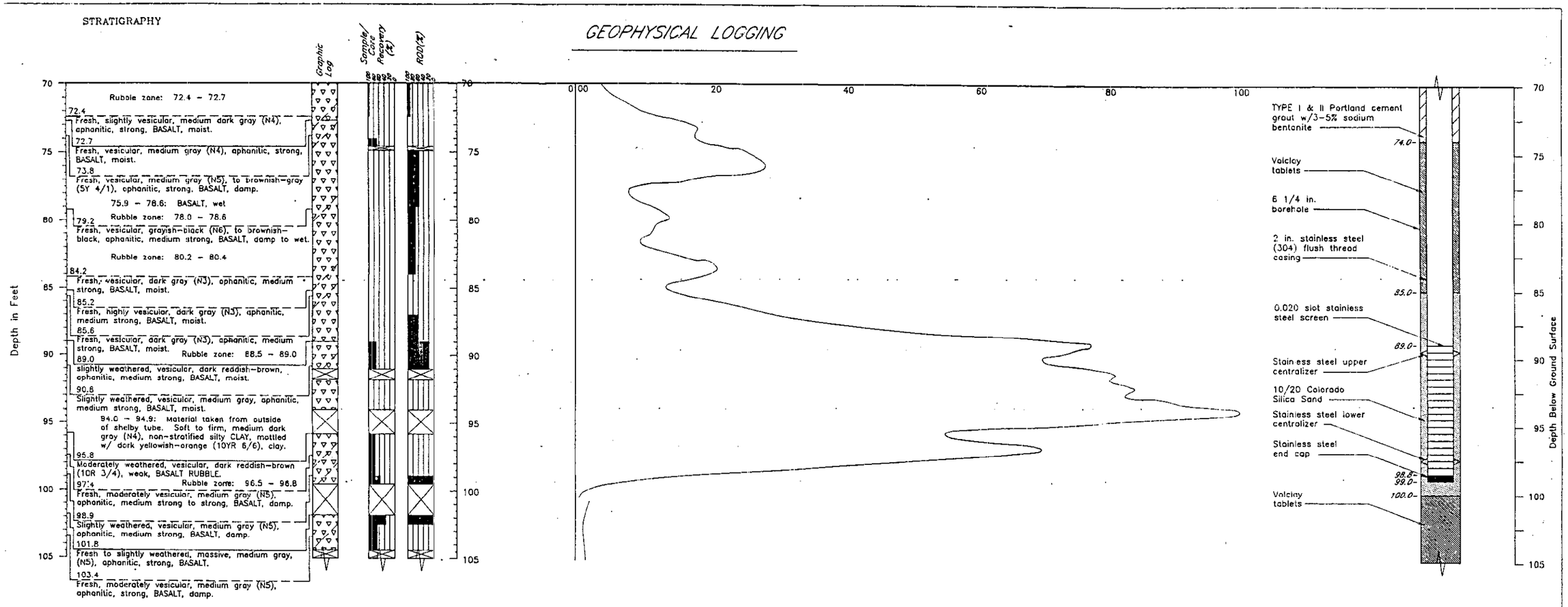
2.) All samples surveyed with OVA were at background levels.

FIGURE A-1
SHEET 2 OF 4

GENERALIZED BOREHOLE LOG - WELL SITE CCP 33-1

EG&G\FINAL REPORT\IDAHO

PROJECT NO 8931185\850 DWG NO 30771 DATE 4/30/91 DRAWN RLM REVIEWED DPF



Notes:

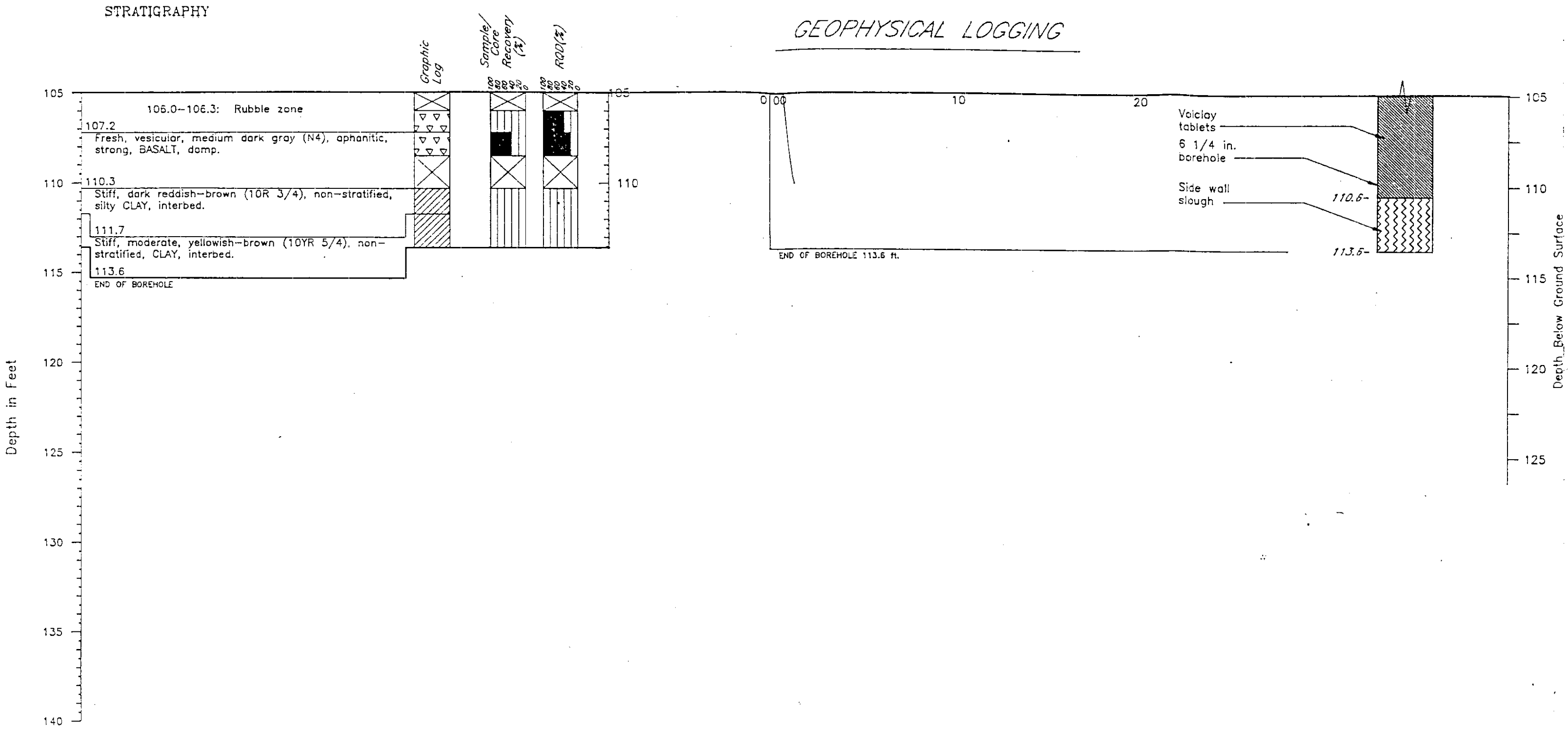
1.) All samples surveyed by WINCO HP for Beta and Gamma radiation. See Table 6-4 for survey results.
2.) All samples surveyed with OVA were at background levels.

FIGURE 3
SHEET 3 OF 4

GENERALIZED BOREHOLE LOG - WELL SITE 33-1

EG&G\FINAL REPORT\IDAHO

PROJECT NO 8931195\850 DWG NO 30772 DATE 4/30/91 DRAWN RLM REVIEWED DPF



Notes:

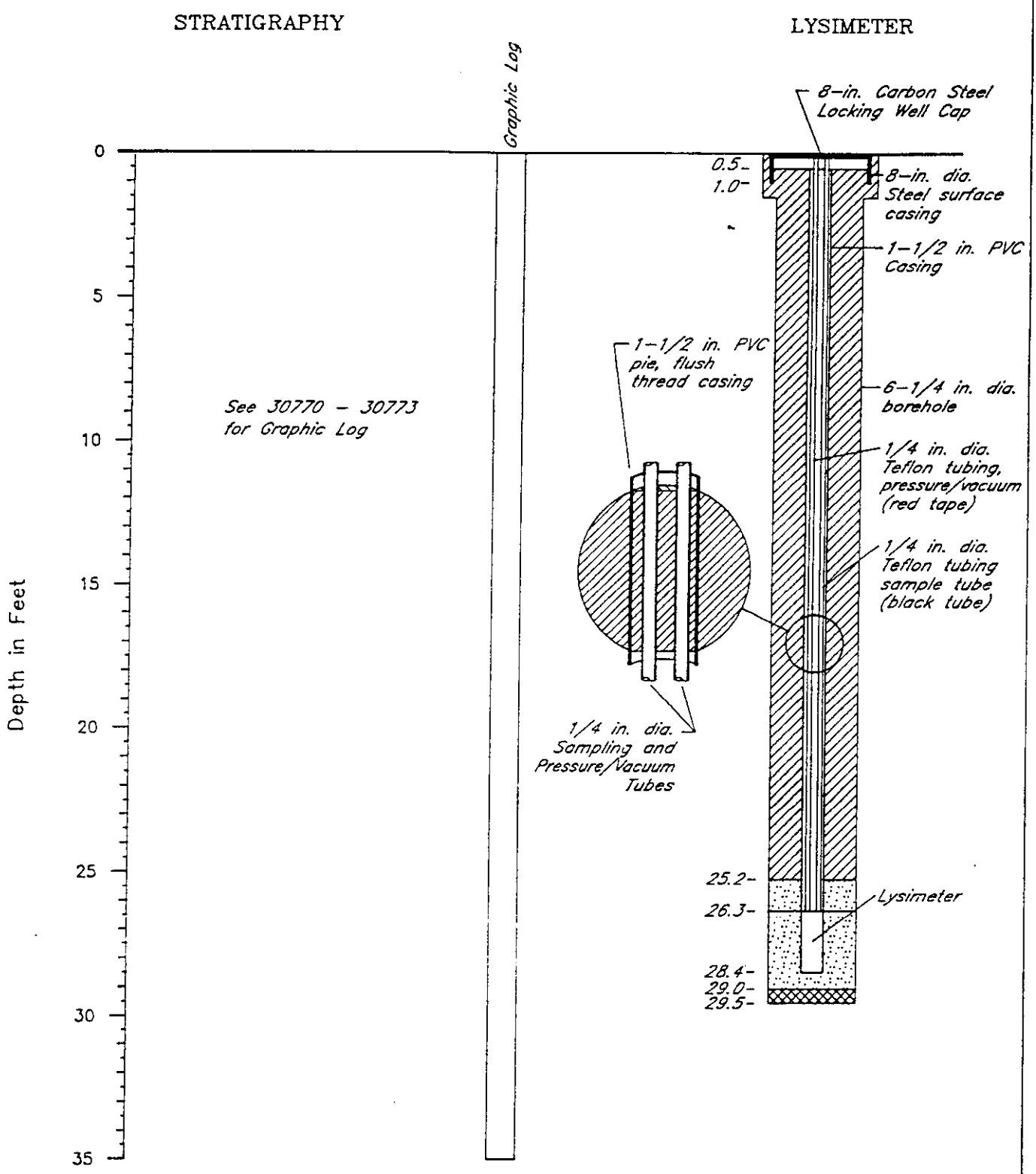
1.) All samples surveyed by WINCO HP for Beta and Gamma radiation were at background levels.
2.) All samples surveyed with OVA were at background levels.

FIGURE 4
SHEET 4 OF 4

GENERALIZED BOREHOLE LOG - WELL SITE 33-1

EG&G\FINAL REPORT\IDAH

PROJECT NO 8931185\850 DWG NO 3C773 DATE 4/30/91 DRAWN RLM REVIEWED DPF



LYSIMETER COMPLETION LEGEND:

- Cement Grout 3-5% Bentonite
- Powdered Bentonite
- Voiclay Tablets
- Sidewall Slough & Voiclay Tablets
- Silica Flour with 2% Bromide Tracer
- Sidewall Slough

NOT TO SCALE

Date: 3/15-19/91
Hydrogeologist: S.B. and T.G.
Drilling Contractor: Hawley Bros.
Drill Method: Hollow Stem Auger
Sampling Method: -

FIGURE **A-2**
SHEET 1 OF 1

LYSIMETER **CPP 33-1**
RECORD OF DRILLHOLE
INEL

PROJECT NO 893-1195.850 DWG NO 30783 DATE 4/12/91 DRAWN RLM REVIEWED ___

APPENDIX B

CHAIN OF CUSTODY

INFORMATION ONLY

1. PURPOSE

This instruction establishes the requirements for documenting and maintaining environmental sample chain of custody from the point of origin to receipt of the sample at the analytical laboratory.

2. APPLICABILITY

When specifically invoked by project work plans, sampling plans, or QA plans, this instruction shall apply to all types of soil, water, and/or core samples collected in environmental investigations by Golder Associates Inc., and is applicable from the time of sample acquisition until custody of the sample is transferred to an analytical or geotechnical laboratory.

3. DEFINITIONS

3.1 Custody

Custody refers to the physical responsibility for sample integrity, handling, and/or transportation. Custody responsibilities are effectively met if the samples are:

- in the responsible individual's physical possession,
- in the responsible individual's visual range after having taken possession,
- secured by the responsible individual so that no tampering can occur, or
- secured or locked by the responsible individual, in an area in which access is restricted to only that individual.

3.2 Chain of Custody

Chain of custody refers to the history of the physical transfer of samples between the Sampler, the transporter or carrier, and the Laboratory Sample Custodian. Chain of custody documentation is required as evidence that the integrity of samples was maintained during transfer.

4. REFERENCES

4.1 EPA, 1986, NEIC Policies and Procedures; US Department of Ecology, National Enforcement Investigations Center, Denver, Colorado.

4.2 Golder Associates Technical Procedure TP-1.2-2, "Geotechnical Rock Core Logging."

5. DISCUSSION

Environmental samples must be tracked, handled and transported in a manner such that sample integrity and identification (to the location and interval at which they were obtained) is maintained. The Sample Custodian must maintain proper storage and custody of samples from the time of collection until transport to the laboratory. The Sampler shall initiate Chain of Custody forms which accompany samples from the collection site to the laboratory and provide documentation of any transfer of custody throughout transport. Sample identification and integrity shall be ensured by the application of seals and labels to the sample containers at the time of sample collection. Seals and labels shall be verified upon receipt of samples at the analytical laboratory; unacceptable samples shall be identified on the Chain of Custody form, and referred to the Geologist/Field Engineer or Project Manager for evaluation and appropriate disposition.

6. RESPONSIBILITIES

6.1 Project Manager

The Geologist/Field Engineer is responsible for the overall management of sampling environmental activities, for designating the sample shipment method (considering permitted sample holding times), for delegating sampling responsibilities to qualified personnel, and reviewing any Procedure Alteration Checklists that may be initiated during the investigation, and for delegating Document Custodian responsibilities to suitably qualified personnel.

6.2 Geologist/Field Engineer

The Geologist/Field Engineer is responsible for: 1) general supervision of sampling operations as directed by the Project Manager; 2) ensuring proper temporary storage of samples, and proper transportation of samples from the sampling site to the laboratory; and 3) initiating Procedure Alteration Checklists when required. The Geologist/Field Engineer is also responsible for tracking Chain of Custody forms for samples to ensure timely receipt of the completed original, for reviewing Chain of Custody forms to ensure appropriate documentation of sample transfers, and for advising the Project Manager of any problems observed that are related to sample integrity and chain of custody. The Geologist/Field Engineer may delegate document tracking and review responsibilities to suitably qualified personnel.

6.3 Sampler

The Sampler may be the same individual as the Geologist/Field Engineer and is responsible for: 1) sample acquisition in compliance with applicable procedures; 2) for checking sample integrity and document prior to transfer; 3) for initiating the Chain of Custody form; 4) for initial transfer of samples; and 5) for physically transferring the samples to the transporter.

6.4 Laboratory Sample Custodian

The Laboratory Sample Custodian (or designated sample receiving technician) is responsible for: 1) inspecting transferred samples to ensure that seals are intact, that labels are affixed, that sample condition is acceptable, and that Sample Integrity Data Sheets are available, when required for a particular project; 2) for completion of the Chain of Custody form upon receipt and for forwarding copies of the completed Chain of Custody form to the Project Manager; and 3) for segregating and identifying unacceptable samples, and subsequent notification of the Project Manager.

6.5 Document Custodian

The Document Custodian is responsible for maintaining completed chain of custody records in the project files, and shall be designated by the Project Manager on a project basis.

7. EQUIPMENT AND MATERIALS

- Seals and labels (Exhibit A)
- Sample Integrity Data Sheets (Exhibit B), if required by the applicable sampling procedure, work plan, sampling plan, or QA plan, or if requested by the Project Manager
- Chain of Custody forms (Exhibit C)
- Procedure Alteration Checklists (Exhibit D)
- Packing and shipping materials, which may include coolers or insulated packing boxes, "blue ice" or dry ice, cardboard packing boxes, wooden core storage boxes, and shipping labels

8. PROCEDURE

8.1 Seals, Labels, and Initial Storage

At the time of collection, all samples shall be labeled, sealed, and appropriately stored in the custody of the sample custodian (as defined in 3.1 above). Examples of standard seals and labels are included in Exhibit A.

8.2 Sample-Packaging

All samples shall be packaged appropriately for shipping to protect them from damage, to ensure that moisture content and/or chemical integrity is maintained where necessary, and to ensure that appropriate temperatures are maintained as required. All sample shipping containers shall be sealed (see Exhibit A) to identify possible tampering. If shipping containers cannot be

adequately sealed, seals shall be placed on individual sample bottles.

Environmental core sample boxing, marking, and labeling shall be in compliance with Section 8.3 of TP-1.2-2, "Geotechnical Rock Core Logging." Other types of environmental samples stored in jars or bottles may be packaged in insulated coolers, or, if sample temperature is not a concern, in the original sample container packing boxes. Beginning with the first sample taken, jars shall be placed in shipping containers from the top right corner downward, and from left to right as shown in Figure 8.1. A label containing the following information shall be affixed to the front of each shipping container:

- Project Number
- Location
- Borehole number
- Date collected
- Sample numbers enclosed

Boxes shall be numbered consecutively; the last box from a borehole and drillhole shall also be identified "EOH", i.e, end of hole. Where cooling is required, samples shall be shipped in insulated coolers containing "blue ice" packages sufficient to keep the samples below 4° Centigrade but above freezing.

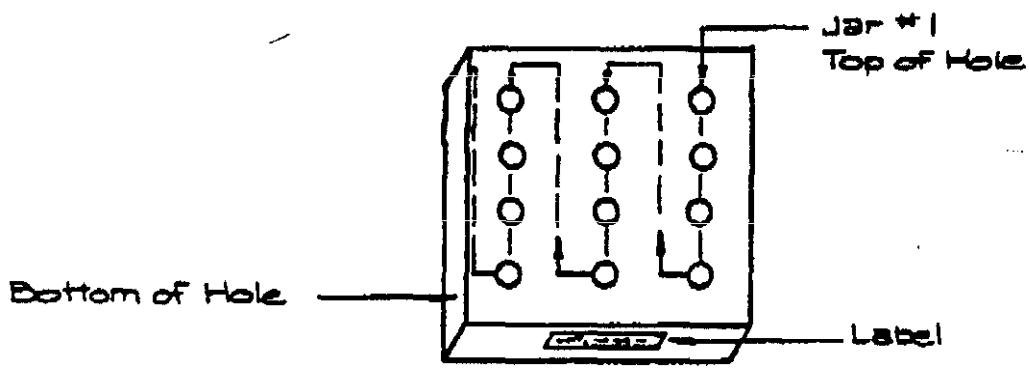
8.3 Sample Examination

Prior to transfer of samples, the Sampler shall ensure that:

- labels are affixed and completely filled out,
- seals are intact and completely filled out,
- special handling and storage requirements are identified where required,
- Sample Integrity Data Sheets (Exhibit B) are available where required by applicable sampling procedures or the Project Manager,
- there are no indications of sample container leaks or other questionable conditions that may affect the integrity of the sample, and that
- hazardous and/or radioactive samples are clearly identified as such.

Samples that do not meet the requirements for initial transfer shall be referred to the Geologist/Field Engineer for disposition.

FIGURE 8-1



8.4 Chain of Custody Form Initiation

The Sampler shall initiate the Chain of Custody form (Exhibit C) for the initial transfer of samples. The following information shall be entered on the form:

- the destination of the samples and the transporter or carrier,
- the date by which the laboratory should acknowledge receipt,
- the project identification and sampling site,
- the date and time of sample collection,
- the sample identification numbers and descriptions.

When all required information has been entered the Sampler shall sign the Chain of Custody form as the initiator.

8.5 Transfer of Custody

To document the initial transfer of samples, the Sampler relinquishing custody and the transporter accepting custody shall sign, date, and note the time of transfer on the Chain of Custody form. If the transporter is not an employee of Golder Associates Inc., the Sampler may identify the carrier and reference the bill of lading number in lieu of the transporter's signature. The Chain of Custody form is in triplicate. One copy of the Chain of Custody form shall be forwarded to the Geologist/Field Engineer by the Sampler. The original form and the remaining copy shall accompany the samples.

8.6 Receipt at Destination

The Laboratory Sample Custodian shall inspect the transferred samples to ensure that:

- the seals are intact
- the labels are affixed and legible
- Sample Integrity Data Sheets are available where required
- the physical condition of the samples is acceptable, and
- the samples being transferred directly correspond to those listed on the Chain of Custody form

If the integrity of the samples is questionable, the Laboratory Technician shall notify the Project Manager, segregate the unacceptable samples and identify them on the Chain of Custody Form. Otherwise, the Laboratory Sample Custodian and the transporter shall sign, date, and note the time of transfer

on the Chain of Custody form. If the transporter is not an employee of Golder Associates Inc., the Laboratory Sample Custodian may identify the carrier and reference the bill of lading number in lieu of the transporter's signature. The Laboratory Sample Custodian shall retain the remaining copy of the Chain of Custody form and forward the original to the Geologist/Field Engineer. Appropriate laboratory custody procedures shall be initiated upon completion of transfer of custody in compliance with the laboratory's internal QA program requirements.

8.7 Document Tracking

The copy of the Chain of Custody form recording the initial transfer of samples shall be forwarded to the Geologist/Field Engineer, followed by the completed original. The Geologist/Field Engineer shall track the Chain of Custody form to ensure timely completion and receipt of the original, based on the laboratory acknowledgement due date indicated on the form.

After receipt of the completed original, the Geologist/Field Engineer may discard the copy. The completed original Chain of Custody form shall be forwarded to the Document Custodian. Chain of Custody forms determined to be overdue or incorrectly completed shall be referred to the Project Manager for appropriate action.

8.8 Procedure Alteration Checklist

Variation from established procedure requirements may be necessary due to unique circumstances encountered on individual projects. All variations from established procedures shall be documented on Procedure Alteration Checklists (Exhibit D) and reviewed by the Project Manager and the QA Manager.

The Project Manager may authorize individual Geologist/Field Engineers to initiate necessary variations. If possible, the request for variation shall be reviewed by the Project Manager and the QA Manager prior to implementation. If prior review is not possible, the variation may be implemented immediately at the direction of the Geologist/Field Engineer, provided that the Project Manager is notified of the variation within 24 hours of the implementation, and the Procedure Alteration Checklist is forwarded to the Project Manager and QA Manager within 2 working days of implementation. If the variation is unacceptable to either reviewer, the activity shall be reperformed or action shall be taken as indicated in the Comments section of the reviewed Checklist. All completed Procedure Alteration Checklists shall be maintained in project records.

EXHIBIT A

Golder Associates

Location _____
Job No. _____ Date _____
Boring No. _____ Sample No. _____
Depth _____ Blows _____
Description _____
_____
_____
_____
Driller _____ Engr. _____

Golder Associates

Sample I.D. No.

Date _____ Time _____
Station _____ Depth _____
Media _____
Preservative _____
Sampled by _____

Golder Associates
Seal Number
2455

Sent By: _____
Date: _____

EXHIBIT B

SAMPLE INTEGRITY DATA SHEET

Plant/Site _____ Project No. _____

Site Location _____ Sample ID _____

Sampling Location _____

Technical Procedure Reference(s) _____

Type of Sampler _____

Date _____ Time _____

Media _____ Station _____

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Sample Description _____

Field Measurements on Sample (pH, conductivity, etc.) _____

Aliquot Amount	Container	Preservation/Amount

Sampler (signature) _____ Date _____

Supervisor (signature) _____ Date _____

Golder Associates Inc.

EXHIBIT C

GOLDER ASSOCIATES INC.
CHAIN OF CUSTODY RECORD

PROJ. NO. SITE/LOCATION

SAMPLER/LAB TECH (Signature of Initiator)

STA. NO.	DATE	TIME	SAMPLE TYPE	MEDIA	IDENTIFICATION	NO. OF CONTAINERS	AMOUNT/ PRESERVATIVE				SEAL NO.	SEAL INTACT? Y or N	REMARKS (With Initials)

DESTINATION: Via:

ACKNOWLEDGEMENT OF RECEIPT DUE BY:

Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)
Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by:

Return Completed Form To: Remarks: (Attachments if necessary)

EXHIBIT D

PROCEDURE ALTERATION CHECKLIST

Job/Task Number: _____

Procedure Reference: _____

Requested Variation: _____

Reason for Variation: _____

Special Equipment, Material or Personnel Required: _____

Alteration Requested By: _____ Date: _____

Title: _____

Reviewed By: _____ Date: _____

Title: GAI Project Manager

Comments: _____

Reviewed By: _____ Date: _____

Title: GAI QA Manager

Comments: _____

APPENDIX C

FIELD DUPLICATE ANALYSIS RESULTS
LAND DISPOSAL UNIT CPP-33 BOREHOLE 1

TABLE C-1

FIELD DUPLICATE ANALYSIS RESULTS
SITE 1 (BOREHOLE 1) CPP-33

Sample ID: CPP-33-01-TX/R-39-13
CPP-33-01-V2-39-13

Analyte/ Compound	Sample Result (mg/kg)	Duplicate Result (mg/kg)	Relative Percent Difference
Arsenic	5.5	6.3	13.6
Barium	144.	133.	7.9
Cadmium	8.2	7.8	5.0
Chromium	31.8	30.2	5.2
Lead	19.5	17.1	13.1
Mercury	0.12	0.15	22.2
Silver	0.72	0.68	5.7
pH	9.38 SU	9.15 SU	2.5
Percent Solids	83 %	88 %	5.8
Cesium-137	0.42±0.07 pCi/g	3.82±0.59 pCi/g	160.4

TABLE C-2

FIELD SPLIT SAMPLE ANALYSIS RESULTS
LAND DISPOSAL UNIT CPP-33, BOREHOLE 1

Golder Sample ID	CPP33-01-TX-1-1	CPP33-01-TX-1-1	RPD
Lab Sample ID	9102253-15	9102253-17	
Inorganic Results	mg/Kg	mg/Kg	
Arsenic	3.7	3.2	14.5
Barium	74.8	10.6	150.4
Cadmium	3.8	0.52	151.9
Chromium	16.4	2.5	147.1
Lead	9.6	1.8	136.8
Mercury	1.51	0.03	192.2
Silver	0.83	0.50 U	NC
pH	10.2 SU	10.0 SU	2.0
Radionuclides	pCi/g	pCi/g	
Americium-241	2.04 ± 0.87	0.05 U	NC
Plutonium-238	0.46 ± 0.14	0.05 U	NC
Plutonium-239	0.34 ± 0.12	0.05 U	NC
Strontium-90	2.87 ± 0.20	0.59 ± 0.12	131.8
Uranium-234	0.09 ± 0.02	0.12 ± 0.03	28.6
Uranium-238	0.09 ± 0.03	0.10 ± 0.03	10.5

U - Analyte was not detected at the given detection limit.

NC - Not calculable due to one or both results at or below the sample detection limit or not detected.

RPD - Relative percent difference is calculated by taking the absolute value of the difference between two measurements divided by the average of the two measurements, multiplied by 100.

TABLE C-2 (Cont.)

FIELD SPLIT SAMPLE ANALYSIS RESULTS
LAND DISPOSAL UNIT CPP-33, BOREHOLE 1

Golder Sample ID	CPP33-01-TX-3-2	CPP33-01-TX-3-2	RPD
Lab Sample ID	9102253-05	9102253-13	
Inorganic Results	mg/Kg	mg/Kg	
Arsenic	3.2	3.4	6.1
Barium	81.5	82.1	0.7
Cadmium	3.9	4.2	7.4
Chromium	16.8	17.1	1.8
Lead	10.6	10.6	0
Mercury	0.27	0.13	70.0
Silver	0.73	0.73	0
pH	10.1 SU	8.91 SU	12.5
Radionuclides	pCi/g	pCi/g	
Plutonium-238	0.05 U	0.55 ± 0.13	NC
Strontium-90	0.35 ± 0.10	201.8 ± 1.5	199.3
Uranium-234	0.15 ± 0.05	0.11 ± 0.02	30.8
Uranium-238	0.13 ± 0.04	0.12 ± 0.02	8.0

U - Analyte was not detected at the given detection limit.

NC - Not calculable due to one or both results at or below the sample detection limit or not detected.

RPD - Relative percent difference is calculated by taking the absolute value of the difference between two measurements divided by the average of the two measurements, multiplied by 100.

APPENDIX D

LIST OF COMPOUNDS ANALYZED
LAND DISPOSAL UNIT CPP-33 BOREHOLE 1

TABLE D-1

LIST OF ANALYTES/COMPOUNDS ANALYZED
LAND DISPOSAL UNIT CPP-33 BOREHOLE 1

Volatile Organic Compounds	Analytical Method
Chloromethane	CLP SOW 2/88
Bromomethane	
Vinyl Chloride	
Chloroethane	
Methylene Chloride	
Acetone	
Carbon Disulfide	
1,1-Dichloroethene	
1,1-Dichloroethane	
1,2-Dichloroethene (total)	
Chloroform	
1,2-Dichlorothane	
2-Butanone	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Vinyl Acetate	
Bromodichloromethane	
1,2-Dichloropropane	
cis-1,3-Dichloropropene	
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
Benzene	
trans-1,3-Dichloropropene	
Bromoform	
4-Methyl-2-pentanone	
2-Hexanone	
Tetrachloroethene	
1,1,2,2-Tetrachloroethane	
Toluene	
Chlorobenzene	
Ethylbenzene	
Styrene	
Xylene (total)	

TABLE D-1 (Cont.)

LIST OF ANALYTES/COMPOUNDS ANALYZED
LAND DISPOSAL UNIT CPP-33 BOREHOLE 1

Inorganic Analytes	Analytical Method
pH	9045[1]
Arsenic	7060[1]
Barium	6010[1]
Cadmium	6010[1]
Chromium	6010[1]
Lead	7421[1]
Mercury	7471[1]
Selenium	7740[1]
Silver	6010[1]

[1]Methods are from Test Methods for Evaluating Solid Waste, SW846, Third Edition, November 1986.

TABLE D-1 (Cont.)

LIST OF ANALYTES/COMPOUNDS ANALYZED
LAND DISPOSAL UNIT CPP-33 BOREHOLE 1

Radionuclides	Analytical Method
Americium-241	EERF Am-01[1]
Antimony-125	EPA 901.1[2]
Cerium-144	EPA 901.1[2]
Cesium-134	EPA 901.1[2]
Cesium-137	EPA 901.1[2]
Cobalt-58	EPA 901.1[2]
Cobalt-60	EPA 901.1[2]
Iodine-129	EPA 901.1[2]
Neptumium-237	EML Np-01[3]
Plutonium-238	EERF Pu-01[1]
Plutonium-239	EERF Pu-01[1]
Plutonium-240	EERF Pu-01[1]
Ruthenium-103	EPA 901.1[2]
Ruthenium-106	EPA 901.1[2]
Strontium-90	EML Sr-05[3]
Uranium-234	EERF 00-07[1]
Uranium-235	EERF 00-07[1]
Uranium-238	EERF 00-07[1]

[1]Eastern Environmental Radiation Facility, Radiochemistry Procedures Manual, EPA 520/5-84-006, (EPA, 1984)

[2]Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, EPA 600/4-80-032, (EPA, 1982)

[3]EML Procedures Manual, 25th Edition, (DOE, 1982)

APPENDIX E

SAMPLE RESULTS
FOR INORGANIC AND RADIONUCLIDES
ANALYSIS AS REPORTED BY THE LABORATORY
LAND DISPOSAL UNIT CPP-33, BOREHOLE 1

TABLE E-1

EXPLANATION OF INOGANIC RESULTS QUALIFIERS

B - Indicates the reported value and less than the contract required quantitation limit but greater than or equal to the instrument detection limit.

U - Indicates the analyte was analyzed for but not detected at the value reported.

E - Indicates the reported value is estimated because of the presence of an interference.

M - Indicates the duplicate injection precision was not met.

N - Indicates the spiked sample recovery was not within the control limit.

S - Indicates the reported value was determined by the method of standard additions.

W - The post digestion spike for the furnace AA analysis was out of control limits while the sample absorbance was less than 50% of the spike absorbance.

* - The duplicate analysis was not within control limit.

+ - The correlation coefficient for the MSA was less than 0.995.

P - The analyte was determined by ICP analysis.

A - The analyte was determined by Flame AA.

F - The analyte was determined by Furnace AA.

CV - The analyte was determined by Cold Vapor AA.

NR - The analyte is not required to be analyzed.

E-I Sample Identification

Samples were identified and sealed using the standard identification labels and seals shown in Exhibit D of TP-1.2-5. Samples exhibiting radioactivity >100 cpm above background were tagged with a WINCO radiation label and marked with the calculated microcurie reading provided by the WINCO HP. Sample numbers shall be assigned in the following format:

> CPP33 (LDU designator)-BB (borehole number)-CC (analytical code, from Table 4-3)-DD (sample interval, in feet)-EE (sequential number, by borehole)-FF (additional type designator for Quality Control samples).

Table 4-3 includes a listing of alphanumerical container codes for the various types of analyses to be performed. Parameter lists applicable to all operable units are defined in Section 4 of the Technical Work Plan (Volume I) (Golder Associates, 1991a). Additional sample number designators required for field Quality Control (QC) were entered as FB if a field blank EB if an equipment blank; or FD if a field duplicate. Samples footages and intervals were entered as -00- for trip blanks and field blanks. Examples of sample identifications for LDU CPP-33 are shown below. Since spiked samples or reference samples prepared for performance audit purposes must be submitted blind to the analytical laboratory they were numbered as if they were field blanks or equipment blanks.

Samples obtained from the borehole were identified as follows (example: borehole number 1, surface to 2-foot interval):

Sample ID	Description	Analyses
CPP33-01-TX-1-1	Surface to 2 feet	RCRA Metals, pH
CPP33-01-R-1-1	Surface to 2 feet	Radionuclides
CPP33-01-V2-1-1	Surface to 2 feet	Volatile Organics

CPP33-01-V2-EB	Equipment Blank	Volatile Organics
CPP33-01-TX-EB	Equipment Blank	RCRA Metals, pH
CPP33-01-M-EB	Equipment Blank	Mercury
CPP33-01-R-EB	Equipment Blank	Radionuclide
CPP33-01-TB	Trip Blank	
CPP33-01-V2-1-1-FD	Surface to 2 foot, Field Duplicate	Volatile Organics
CPP33-01-TX-1-1-FD	Surface to 2 foot, Field Duplicate	RCRA Metals, pH
CPP33-01-R-1-1-FD	Surface to 2 foot, Field Duplicate	Radionuclide

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-11-6

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.: CPP33-01 Lab Sample ID: 9102253-03 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 95.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.26			F
7440-39-3	Barium	61.05			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.26			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	11.89			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	8.74			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.53			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-5-3

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.: CPP33-01 Lab Sample ID: 9102253-04 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 95.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.95			F
7440-39-3	Barium	58.11			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	2.74			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	11.26			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	7.37			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.63			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX-3-2

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.: CPP33-01 Lab Sample ID: 9102253-05 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 96.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.23			F
7440-39-3	Barium	81.46			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.85			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	16.77			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	10.63			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.27			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.73			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX-3-2

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.: CPP33-01 Lab Sample ID: 9102253-13 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 96.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.44			F
7440-39-3	Barium	82.08			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	4.17			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	17.08			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	10.63			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.13			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.73			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX-1-1

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID: 9102253-15 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 96.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.65			F
7440-39-3	Barium	74.79			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.75			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	16.35			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	9.58			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	1.51			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.83			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX-1-1

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102253-17 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 96.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.23			F
7440-39-3	Barium	10.63			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	0.52			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	2.50			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.77			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.03			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.50	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-7-4

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102253-19 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 93.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.80			F
7440-39-3	Barium	66.13			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.23			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	13.44			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	9.68			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.16			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.54			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-9-5

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102253-20 Date Received: 02/13/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 93.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.73			F
7440-39-3	Barium	75.81			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	4.09			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	15.59			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	11.72			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.12			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.54			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-O-EB

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102283-08 Date Received: 02/14/91

Matrix (soil/water): WATER Level (low/med):LOW

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.4	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX-O-EB

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102283-09 Date Received: 02/14/91

Matrix (soil/water): WATER Level (low/med):LOW

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	10.0	U		F
7440-39-3	Barium	10.0	U		P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.0	U		F
7440-70-2	Calcium				NR
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.4	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	10.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-37-12

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-04 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 94.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	5.53			F
7440-39-3	Barium	61.06			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	4.57			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	13.30			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	9.57			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.17			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	0.64			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-39-13

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-05 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 83.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	5.54			F
7440-39-3	Barium	144.22			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	8.19			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	31.81			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	19.52			NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.12			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.72			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-39-13-FD

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-06 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 88.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	6.25			F
7440-39-3	Barium	132.50			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	7.73			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	30.23			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	17.05			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.68			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-17-7

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-08 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 96.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.06			F
7440-39-3	Barium	81.88			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	4.79			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	15.73			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	11.98			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.09			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.52			NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-21-8

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-09 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 92.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.57			F
7440-39-3	Barium	82.72			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.11			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	17.72			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	11.41			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.14			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.54			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-25-9

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-10 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 95.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.89			F
7440-39-3	Barium	88.84			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	4.95			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	16.32			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	12.21			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.12			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.53			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-29-10

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-11 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 93.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.30			F
7440-39-3	Barium	90.97			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	4.62			NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	15.81			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	12.15			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.19			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.65			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-33-11

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-12 Date Received: 02/18/91

Matrix (soil/water): SOIL Level(low/med) :LOW

% Solids: 93.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.30			F
7440-39-3	Barium	57.63			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	2.69			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	10.11			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.88			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.54			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-41-14

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-14 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 87.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.83			F
7440-39-3	Barium	158.05			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	9.43			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	36.90			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	22.76			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				
7439-97-6	Mercury	0.26			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	1.15			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-45-15

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-16 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 84.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.88			F
7440-39-3	Barium	193.45			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	11.07			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	40.00			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	25.48			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.13			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.71			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

TX/R-47-16

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9102336-18 Date Received: 02/18/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 85.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.24			F
7440-39-3	Barium	178.35			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	9.06			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	34.12			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	21.06			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	0.59			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

113-MS

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9103063-01 Date Received: 03/05/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 76.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	1.18			F
7440-39-3	Barium	192.63			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	11.45			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	36.32			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	30.79			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.02			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	0.45			F
7440-22-4	Silver	0.92			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

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Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

113

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9103063-02 Date Received: 03/05/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 76.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	6.84			F
7440-39-3	Barium	190.79			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	11.05			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	36.97			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	30.53			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.02			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	0.78			F
7440-22-4	Silver	0.92			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

112

Lab Name: C.E.P. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____

SDG No.:CPP33-01 Lab Sample ID:9103063-03 Date Received: 03/05/91

Matrix (soil/water): SOIL Level (low/med):LOW

% Solids: 76.0%

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	5.92			F
7440-39-3	Barium	193.29			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	11.18			P
7440-70-2	Calcium				NR
7440-47-3	Chromium	33.95			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	31.71			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.03			CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	0.51			F
7440-22-4	Silver	0.92			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR
7440-31-5	Tin				NR

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC DATA ASSESSMENT SUMMARY

PROJECT NO. 893-1195.850 SITE INEL

LABORATORY CEP SAMPLES/MATRIX 19 Soil

1 Water

SDG # CPP33-01

DATA ASSESSMENT SUMMARY

	ICP	AA	HG	~~CYANIDE~~
1. HOLDING TIMES	O	O	O	
2. CALIBRATIONS	O	O	O	
3. BLANKS	O	O	O	
4. ICS	O			
5. LCS	M	M	M	
6. DUPLICATE ANALYSIS	O	O	O	
7. MATRIX SPIKE	O	O	O	
8. MSA		N/A		
9. SERIAL DILUTION	O			
10. SAMPLE VERIFICATION	O	O	O	
11. OTHER QC				
12. OVERALL ASSESSMENT	M	M	M	

O = Data had no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

NOTES: Data as qualified acceptable for use.

Validated by: [signature] Date: 5/24/91

Reviewed by: Date:

SDG # CPP33-01 Project No. 893-1195.850

	Acceptable YES	NO
1. Holding Times	✓	

Samples Collected: Hg Anal:
1-1 thru 11-6 2/8 3/4
17-7 thru 33-11 2/12
37-12 thru 39-13 PD 2/13
41-14 thru 47-16 2/14
112 + 113 - 3/1/91 3/15
all < 28 days

2. Calibrations		

Se - Low Std. 10 ug/L Hg - Low Std .0004 mg/L
all r > 0.995 Hg - only 3 stds, ICS(?) - 4th Conc
Cont. Cal run but in most cases not midrange std.

'J' Cr values for "253" sample

3. Blanks	✓	

No contamination in blanks run.

No Continuing Calibration Blanks Run!

4. ICP Interference Check Sample (ICS)		✓

ICSA + ICSAB improperly prepared. ICSA contained analytes ~~only~~ but no interferents, and ICSAB contained interferents but not analytes. Al, Ca, Mg + Fe not reported for any sample.

5. Laboratory Control Sample (LCS)		

Lab did not run solid LCS.
"J" all data
Aqueous LCS %R ok.

6. Duplicate Sample Analysis	✓	

~~Samples run~~ %RPDs ok ✓

7. Matrix Spike Sample Analysis	✓	

%R's ok ✓

SDG # _____ Project No. _____

	Acceptable YES	NO
8. Furnace Atomic Absorption QC		✓

No analytical spikes were analyzed.
Unable to determine if duplicate injections were used.

9. ICP Serial Dilution	✓	

253 Set qualify Ag results "J"

10. Sample Result Verification		

ICP raw data reports results in ug/g - verified reported results.

11. Field Duplicates	✓	

all RPDs < 35%

12. Overall Assessment		

112 & 113 (0&3 set) "J" As values

Data as qualified acceptable for use.