Roy F. Weston, Inc.
11840-D Kempersprings Drive
Cincinnati, Ohio 45240-1640
® 513-825-3440 • Fax 513-825-3336

28 February 1997

EG&G Mound Applied Technologies, Inc.
Attn.: Mr. James Rigano
P.O. Box 3000, OSW-4
Miamisburg, Ohio 45343-3000

RE: ER Program, Mound Plant
BOA 24251, Task Order No. 68282
Methods Compendium - Update Packet 3 RFW WO# 05376-060-001 x07

Dear Mr. Rigano:

Roy F. Weston, Inc. (WESTON®) has completed the fourth set of procedures (Update Packet 3) for the Compendium which are enclosed with this letter. This distribution includes two new procedures: Q-010 and Q-011 that specify the electronic reporting requirements for CLP Organic and Inorganic Analyses. In addition to the new procedures, five procedures are being re-issued to make changes requested by the USEPA, to correct typographical errors, or to include updated information. Each of the revised methods and the reason for re-issuing the method are listed in the table below.

Method	Reason for Re-issue
A-001	Table 4.3 was expanded to include acetonitrile and acrylonitrile as matrix spike compounds, page 9 was revised to correct the concentration units for acrylonitrile and acetonitrile, and page 9 was also revised to include acetonitrile in line 8.2.1.8.
Q-006	Exhibit 3.1 was revised to clarify the use of data validation qualifiers in response to a USEPA comment.
Q-009	The title was revised for clarity per EG&G Mound's request and Section 3.1 was revised in response to a USEPA comment.
Q-012	The laboratory codes were corrected, two spelling errors were corrected, and two new test codes were added: Total Recoverable Petroleum Hydrocarbon and EPA Method 601.
Q-013	The laboratory codes were corrected, two spelling errors were corrected, and two new test codes were added: Total Recoverable Petroleum Hydrocarbon and EPA Method 601.

WESTON has also provided two attachments to this letter. One attachment lists the entire contents of Update Package 3 including method revisions. The other attachment is the response to the USEPA comments received on Update Package 1. Please use the Update Package 3 Content List to remove and discard the older versions of the methods, introductions, and table of

We anticipate releasing a fifth set of procedures in March which will include the field procedures for sampling. If you have any questions, please call me or Craig Stoll at (513) 825-3440.

Very truly yours,

ROY F. WESTON, INC.

Gordon S. Horn, P.E., DEE
Alternate Project Manager

cas/vkb

Attachments

cc: Richard Christopher (EG&G)

Update Package 3 Content List
28 February 1997

Method Number	Revision	Description	Source
A-001	3.0	Volatile Organic Analysis by CLP SOW OLM01.8	QAPP
Q-006	2.0	Validation of Laboratory Data Packages	QAPP
Q-009	2.0	Data Validation for Field Measurements	QAPP
Q-010	1.0	Electronic Data Deliverable Format Specification - MEIMS Standard Format for CLP Organic Analyses	Compendium
Q-011	1.0	Electronic Data Deliverable Format Specification - MEIMS Standard Format for CLP Metals Analyses	Compendium
Q-012	2.0	Electronic Data Deliverable Format Specification - MEIMS Non-CLP - Standard Format	Compendium
Q-013	2.0	Electronic Data Deliverable Format Specification Alternate Non-CLP Format - RTL	Compendium
Main TOC	4.0	Cover Page and Master Table of Contents	NA
TOC/Title Pg	3.0	Section 1.0 - Analytical Methods	NA
TOC/Title Pg	3.0	Section 2.0 - Field Methods	NA
TOC/Title Pg	3.0	Section 3.0 - Quality Assurance Methods	NA
TOC/Title Pg	2.0	Section 4.0 - Data Validation Methods	NA

Response to the United States EPA Comments on the Mound Plant Methods Compendium Update 1

1. Method Q-009, Page 1, Section 3.1

   It is stated that if an outlier result is obtained, then the sample would be re-measured twice more to try to verify the result. What happens if the original measurement is declared invalid? Which result will be used or will an average be used?

   The text has been revised to indicate what action will be taken when an initial measurement is determined to be invalid. The last sentence of the first paragraph has been revised "If the two additional measurements do not match the outlier, then the initial result will be considered invalid and the average value of the two additional measurements will be used."

2. Method Q-006, Attachment II

   Several of the definitions of the data qualifiers in the list are inconsistent with the definitions in the other Quality Methods. The following qualifier have more than one definition: D, S, C +, and B. The discrepancy should be eliminated. Refer to Q-005 for the other definitions.

   The heading for the data validation qualifiers in Attachment II of Method Q-006 has been clarified to read "Glossary of Data Validation Qualifier Codes." The codes specified in Q-005 and Q-006 were used for the analytical data collected since 1992. The Inorganic and Organic qualifiers described in Q-005 and Q-006 are consistent with those required by the USEPA for the contract laboratory program. The sub-qualifiers were added to facilitate data assessment. Because the guidelines for these qualifiers and sub-qualifiers have been used since 1992, and because there is a significant body of data qualified using these guidelines, the qualifiers and sub-qualifiers were not revised in order to retain consistency with the historic data set. Maintaining consistency in the use of the laboratory and data validation qualifiers ensures that current and future data users will not be confused by multiple qualification systems being applied to the data.

Environmental Restoration Program

METHODS COMPENDIUM

Mound Plant
Miamisburg, Ohio

Department of Energy
Ohio Field Office
EG&G Mound Applied Technologies

Table of Contents

Section 3 — Quality Assurance Methods

Method Number	Method Description	Document
Q-001	Corrective Action Reports	QAPP
Q-002	Chain-of-Custody Procedures	QAPP
Q-003	Documentation Requirements	QAPP
Q-004	Laboratory Data Reduction	QAPP
Q-005	Laboratory Data Reporting - Tier III - Complete Data Package Summary	QAPP
Q-006	Validation of Laboratory Data Packages	QAPP
Q-007	Data Assessment	QAPP
Q-008	Data Integrity Verification	Compendium
Q-009	Data Validation for Field Measurements	QAPP
Q-010	Electronic Data Deliverable Format Specification - MEIMS Standard Format for CLP Organic Analyses	QAPP
Q-011	Electronic Data Deliverable Format Specification - MEIMS Standard Format for CLP Metals Analyses	QAPP
Q-012	Electronic Data Deliverable Format Specification - MEIMS Non-CLP Standard Format	Compendium
Q-013	Electronic Data Deliverable Format Specification - MEIMS Alternate Non-CLP Format - RTL	Compendium
Q-014	Laboratory Data Reporting - Tier II - Data Summary Report	Compendium
Q-015	Compendium Methods Word Processing Format Specifications	Compendium

Section 4 — Data Validation Methods

Method Number	Method Description	Document
DV-001	CLP Volatile Organic Data Validation	QAPP
DV-002	Volatile Organic Method 8021 Data Validation	QAPP
DV-003	CLP Semi-Volatile Organic Data Validation	QAPP
DV-004	CLP Pesticide/PCB Data Validation	QAPP
DV-005	Inorganic (Metals) Data Validation	QAPP
DV-006	Cyanide Data Validation	QAPP
DV-007	General Chemistry Data Validation	QAPP
DV-008	Total Dissolved Solids (TDS) and Total Suspended Solids (TSS) Data Validation	QAPP
DV-009	Total Organic Carbon (TOC) Data Validation	QAPP
DV-010	Explosives Data Validation	QAPP
DV-011	Alkalinity Data Validation	QAPP
DV-012	Uranium, Plutonium, and Thorium Alpha Spectrometry Data Validation	QAPP
DV-013	Americium Data Validation	QAPP
DV-014	Tritium Data Validation	QAPP
DV-015	Gamma Spectrometry Data Validation	QAPP
DV-016	Strontium^{90} Data Validation	QAPP
DV-017	Radium^{226} Data Validation	QAPP
DV-018	Volatile Organic Analysis by SW8030 Data Validation	QAPP

Method Number	Method Description	Document
DV-019	Hexavalent Chromium Data Validation	QAPP
DV-020	Volatile Organic Analysis by SW8020 Data Validation	Compendium
DV-021	Volatile Organic Analysis by EPA 601 Data Validation	Compendium
DV-022	Volatile Organic Analysis by SW8015 for Gasoline Range Organics Data Validation	Compendium
DV-023	Total Petroleum Hydrocarbons by EPA 418.1 Data Validation	Compendium
DV-024	Volatile Organic Analysis by SW8015 for Diesel Range Data Validation	Compendium

Section 5 — Field Standard Operating Procedures

Method Number	Method Description	Document

INTRODUCTION

INTRODUCTION

In 1995, the DOE Mound Plant Environmental Restoration (ER) department, the Ohio Environmental Protection Agency (OEPA) and the United States Environmental Protection Agency (USEPA) developed a program to identify and evaluate potential release sites and, if required, remediate the contaminated sites. These potential release sites were identified on the basis of data collected during previous sampling and investigative programs. Because there is previous data which characterizes the contamination at these release sites, the sampling and analysis methods selected for further evaluating the release sites could, in many cases, be highly focused. For example, if a potential release site had been identified to have chromium contamination and more information was required, then DOE resources could be used to focus the sampling and analysis methods on collecting additional chromium data and not spent confirming the lack of other contaminants (e.g. volatile organics, semi-volatile organics, other metals, etc.)

Given this change in the focus of the DOE Mound Plant mission, this Compendium was generated. The Compendium was designed to act as a depository for sampling, analysis, and quality control methods implemented on the plant site. The initial Compendium methods were extracted from the Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan (QAPP), April 1995, revision 4. Because the QAPP was approved for evaluating the nature and extent of contamination throughout the plant site and contains extensive target analyte lists, the QAPP methods were included in the Compendium to provide a common basis in the event potential release sites are identified which lack adequate data to develop a focused target analyte list.

The Compendium is divided into five sections: Analytical Methods, Field Methods, Quality Assurance Methods, Data Validation Methods, and Field Standard Operating Procedures. Methods within each section have been identified using a prefix and a sequential number. The prefix codes are shown below.

Type of Method	Prefix
Analytical Methods	A
Field Methods	F
Quality Assurance Methods	Q
Data Validation Methods	DV
Field Standard Operating Procedures	S

At the beginning of the each section, there is a short introduction and a table of contents for the section. The methods extracted from the QAPP can be identified in three ways: by the table of contents at the beginning of each section, within the introduction to each of the sections, or on the title page of each of the methods where the source document is listed. As new methods are

added, the table of contents will be updated and distributed to the copy holders with the new methods. Each of the new methods will include a source document reference and document date. The source document and document date will be used to identify the first potential release site approved for the use of the method.

ANALYTICAL METHODS

Table of Contents

ANALYTICAL METHODS

Analytical methods describe the quality control requirements for methods of analysis performed at off-site laboratories. Analytical methods 1 to 18 were extracted from the Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan (QAPP). The extracted methods retain as much of the original text from the QAPP as feasible. However, because many of the methods with similar quality control requirements were discussed within the same paragraph of the QAPP, some text was revised for inclusion in the individual methods. Additionally, the method modifications in Appendix B of the QAPP, and included in each of the CLP methods (A-001, A-003, A-004, and A-005) were revised to only address the changes applicable to the attached method. Each of the methods extracted from the QAPP lists the source document as QAPP and the document date as April 1995.

The methods extracted from the QAPP should be usable for characterizing the extent and degree of contamination of potential release sites which have:

- limited analytical data;
- inconclusive analytical data; or
- no previous sample data.

Where release site data are available, the analyte list for the QAPP approved methods should be appropriately reduced or new methods should be introduced to collect focused and usable analytical data. If the analyte list is reduced, the reduced analyte list should be noted in the appropriate sample plan. If a new method is added, then:

- the method should be added to this Compendium;
- section 1.1 of the method should describe the use of the method; and
- the method should be identified in the sample plan.

When a new method is approved for use with a specific release site, then:

- the Source Document and Document Date on the title page of the method must be updated; and

- both the method and a revised table of contents for the section must distributed to all copy holders. The DOE prime contractor will be responsible for the distribution or assigning the distribution to a subcontractor.

MOUND

Environmental
Restoration
Program

Method: Q-011

Electronic Data Deliverable Format Specification - MEIMS Standard Format for CLP Metals Analyses

Revision 1.0

Mound Plant
Miamisburg, OH

Source Document: Compendium (November 1996)

1. INTRODUCTION

This procedure contains the specifications for the standard Mound Environmental Information Management System (MEIMS) CLP electronic data deliverable (EDD) format.

2. RESPONSIBILITIES

Laboratory Reporting Staff - The reporting staff is responsible for accurately transferring the laboratory data to 3.5 inch floppy diskettes in the format specified in this procedure.

Database Clerk - The database clerk is responsible for loading the EDD into MEIMS and reporting entry errors to the database administrator.

Database Administrator - The database administrator is responsible for maintaining the format specification in this procedure and resolving laboratory EDD problems. The database administrator may designate an individual to resolve laboratory EDD problems.

3. PROCEDURE

The EDDs for MEIMS are prepared at the laboratory and stored on 3.5 inch floppy disks. EDDs for CLP data shall follow the attached specifications for file Format A, as described in Appendix H of the CLP SOW. The information in the EDD must correspond exactly with the information submitted in the hardcopy data package and on the hardcopy data package forms.

Attachment A presents the Format A specifications for inorganic analyses per the CLP SOW ILM01.0.

3.1. Modifications to Standard Format

The four additional elements specified A-005 (bismuth, molybdenum, tin, and lithium) must be included on all electronic deliverables. The four elements must be added to all forms, including Form 14, either by:

- modifying the software code to add four additional columns to Form 14 on the EDD; or
- by submitting a second EDD specific for the four additional elements and modifying the Forms by replacing the current elements with these elements.

All QC data must be included with the sample results.

If the four additional analytes are added to a standard Form 14, the additional analytes must appear in the following order on the Form I: bismuth, molybdenum, tin, and lithium.

ATTACHMENT A

FORM FILE FORMAT FOR INORGANIC ANALYSES PER THE CLP SOW

FORMAT A SPECIFICATION

1. Format Characteristics

1.1 Format A is based upon the structure of the hardcopy reporting forms required by the contract. With two exceptions, Form Suffix and Record Type, all fields in the format correspond directly with entries or items on the hardcopy forms.

1.2 Format A includes detailed specifications for the required format of each Inorganic Reporting Form's HEADER and DETAIL records. The exact columns in which each field is to be contained are shown, as well as the length of the field. Each field's required contents are specified either as a literal (contained in single quotes) which must appear exactly as shown (without the quotes), or as a variable for which a format is listed in the format column. Each field's required format is specified either as an option of two or more choices (divided by slashes), as MM/DD/YY for a date, as a CHARACTER field, or as a NUMERIC field.

1.3 Format fields listed as CHARACTER may contain any standard ASCII characters, and must be left-justified and padded with blanks. Formats listed as NUMERIC may contain numeric digits, a decimal point, and a leading plus or minus sign, and must be right-justified and padded with blanks. The numbers following the word NUMERIC specify the maximum number of digits which are allowed on either side of the decimal. The decimal point is not assumed and must be contained in the field in its correct position. For example, the format "NUMERIC 3.2" allows 3 digits preceding the decimal point and 2 following it (a total length of 6 characters). The format "NUMERIC S3.2" allows a leading plus or minus sign (a total length of 7). If a field's format description does not contain a decimal point, then a decimal point is not allowed in the field. If a field's format description does not contain an "S", then a sign is not allowed in the field.

Explanation of NUMERIC fields in Format A.

In the examples below the format NUMERIC 3.2 is described.

(Quotation marks indicate limits of the field described and are not included in the format.)

If the value of the field is 10.1:
The columns in the format will appear as: "10.10" (six columns).

The table below demonstrates several examples:

Value	Appears on Format
10.1	"10.10"
10.11	"10.11"
100.11	"100.11"
100	"100.00"
.29	"0.29"
-100.129	Invalid
-10.1	Invalid

The following table presents examples of NUMERIC S3.2:

Value	Appears on Format
10.1	"10.10" (seven columns)
-10.11	" -10.11"
-100.11	"-100.11"
-1000.1	Invalid
100	" 100.00"
- .22	" -0.22"
- .239	" -0.24"

2. Record Types

2.1 Format A consists of variable length ASCII records. The last two bytes of each record must contain "carriage return" and "line feed", respectively. Unused bytes in partially filled fields must be blank-filled.

2.2 Format A has three types of records: Header Records, Detail Records and Comment Records.

Type	Type ID	Contents
Header	H	Nonrepeating fields which together are unique to the associated hardcopy form
Detail	D	A group of fields that are repeated on a form, and are uniquely positioned by (e.g., Analyte Chemical Symbol)
Comment	C	Nonrepeating fields containing text that comments on information reported on the form

The format for Comment Records is the same for all forms, and is described after all other formats.

2.3 The first 5 bytes of each record contain the FORM ID, identifying the Inorganic Analysis Reporting Form for which the record contains data. The ID must be left-justified in the field.

FORM ID	FORM NAME
COVER	COVER PAGE - INORGANIC ANALYSES DATA PACKAGE
I	INORGANIC ANALYSIS DATA SHEET
II (1)	INITIAL AND CONTINUING CALIBRATION VERIFICATION
II (2)	CRDL STANDARD FOR AA AND ICP
III	BLANKS
IV	ICP INTERFERENCE CHECK SAMPLE
V (1)	SPIKE SAMPLE RECOVERY
V (2)	POST DIGEST SPIKE SAMPLE RECOVERY
VI	DUPLICATES
VII	LABORATORY CONTROL SAMPLE
VIII	STANDARD ADDITION RESULTS
IX	ICP SERIAL DILUTIONS
X	INSTRUMENT DETECTION LIMITS (QUARTERLY)
XI	ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)
XII	ICP LINEAR RANGES (QUARTERLY)
XIII	PREPARATION LOG
XIV	ANALYSIS RUN LOG

Following the FORM ID is a two-byte, left-justified, FORM SUFFIX, which must be unique for each set of records that correspond to one hardcopy form. For example, records for the first occurrence of a form must contain the suffix AA. Records for the second occurrence must contain AB, and the twenty-seventh occurrence would contain BA.

The 8th byte of each record contains the TYPE ID, which specifies what kind of data the record contains (see paragraph 2.2).

Records with the same FORM ID and FORM SUFFIX must be grouped together in the file. Within each FORM ID/FORM SUFFIX group, there may be only one HEADER record, and it must come first. DETAIL records must follow the HEADER record. The COMMENT records, which are optional, must come last in the group, and be in sequence corresponding to the form.

The FORM ID/FORM SUFFIX group(s) for the COVER PAGE(S) must come first in the file. After the COVER PAGE(S), the FORM ID/FORM SUFFIX groups do not have to

be in any specific order. For example, a set of HEADER/DETAIL/COMMENT records for FORM V could come before records for FORM I, as long as the records within the group are in the correct order.

3. Record Length

Table 3.1 summarizes the length (excluding carriage return/line feed) and (in parentheses) the number of records in Format A. The maximum number of detail and comment records is shown, corresponding to a submission of hardcopy forms on which information is written on all possible lines.

Table 3.1 Format A Summary

Form	Record		
	Header	Detail	Comment
Cover	80[a] (1)[b]	25 (20)	78 (4)
I	90 (1)	31 (24)	78 (4)
II (1)	32 (1)	65 (24)	
II (2)	32 (1)	66 (23)	
III	18 (1)	59 (24)	
IV	32 (1)	64 (23)	
V(l)	33 (1)	66 (24)	78 (4)
V(2)	23 (1)	62 (24)	78 (4)
VI	38 (1)	56 (24)	
VII	32 (1)	68 (24)	
VIII	8 (1)	69 (32)	
IX	23 (1)	44 (23)	
X	52 (1)	29 (23)	78 (4)
XI (1)	28 (1)	77 (23)	78 (4)
XI(2)	28 (1)	77 (23)	78 (4)
XII	28 (1)	29 (23)	78 (4)
XIII	10 (1)	32 (32)	
XIV	38 (1)	59 (32)	

[a] Length of record in bytes (excluding carriage return/line feed).

[b] Maximum number of records required for a form.

Record Listing

The remainder of this section contains detailed specifications for every record required for a full set of hardcopy forms.

COVER PAGE

INORGANIC ANALYSES DATA PACKAGE COVER PAGE HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'COVER'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-33	25	LAB NAME	CHARACTER
34-43	10	CONTRACT	CHARACTER
44-49	6	LAB CODE	CHARACTER
50-54	5	CASE NUMBER	CHARACTER
55-60	6	SAS NUMBER	CHARACTER
61-66	6	SDG NUMBER	CHARACTER
67-71	5	SOW NUMBER	CHARACTER
72-74	3	ICP INT CORRECTIONS	'YES'/'NO'
75-77	3	ICP BG CORRECTIONS	'YES'/'NO'
78-80	3	RAW DATA BEFORE	'YES'/'NO'/BLANK

NOTE: The LAB NAME, CONTRACT, LAB CODE, CASE NUMBER, SAS NUMBER, AND SDG NUMBER, which are contained in the COVER PAGE HEADER record, are not repeated in the HEADER records of the other forms. Each form's HEADER record contains only data which are unique to the DETAIL records which follow it.

INORGANIC ANALYSES DATA PACKAGE COVER PAGE DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'COVER'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-25	10	LAB SAMPLE ID NO.	CHARACTER

FORM I

INORGANIC ANALYSIS DATA SHEET HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'I'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-20	5	MATRIX	'WATER'/' SOIL'
21-30	10	LAB SAMPLE ID	CHARACTER
31-33	3	LEVEL	'LOW'/'MED'
34-41	8	DATE RECEIVED	MM/DD/YY
42-46	5	PERCENT SOLIDS	NUMERIC 3.1
47-51	5	CONCENTRATION UNITS	'UG/L '/ 'MG/KG'
52-60	9	COLOR BEFORE	CHARACTER
61-69	9	COLOR AFTER	CHARACTER
70-75	6	CLARITY BEFORE	CHARACTER
76-81	6	CLARITY AFTER	CHARACTER
82-87	6	TEXTURE	CHARACTER
88-90	3	ARTIFACTS	'YES'/BLANK

INORGANIC ANALYSIS DATA SHEET DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'I'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-22	12	CONCENTRATION	NUMERIC 9.2
23	1	CONC FLAG (C)	'B'/'U'/BLANK
24-29	6	QUALIFIER (Q)	UP TO 6 ONE-CHARACTER FLAGS (OTHER THAN 'B' OR 'U')
30-31	2	METHOD (M)	METHOD CODE/'NR'

FORM II (PART 1)

INITIAL AND CONTINUING CALIBRATION VERIFICATION HEADER RECORD:

COLUMN (S)	LENGTH	CONTENTS	FORMAT
1-5	5	'II(1)'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	INIT CAL SOURCE	CHARACTER
21-32	12	CONT CAL SOURCE	CHARACTER

INITIAL AND CONTINUING CALIBRATION VERIFICATION DETAIL RECORDS:

COLUMN (S)	LENGTH	CONTENTS	FORMAT
1-5	5	'II(1)'	
6-7	2	'D'	
8	1	FORM SUFFIX	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	INITIAL CAL TRUE	NUMERIC 5.1
18-25	8	INITIAL CAL FOUND	NUMERIC 5.2
26-30	5	INITIAL CAL %R	NUMERIC 3.1
31-37	7	CONT CAL TRUE	NUMERIC 5.1
38-45	8	CONT CAL FOUND 1	NUMERIC 5.2
46-50	5	CONT CAL %R 1	NUMERIC 3.1
51-58	3	CONT CAL FOUND 2	NUMERIC 5.2
59-63	5	CONT CAL %R 2	NUMERIC 3.1
64-65	2	METHOD (M)	METHOD CODE/' NR '

FORM II (PART 2)

CRDL STANDARD FOR AA AND ICP HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'II (2)'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	AA STANDARD SOURCE	CHARACTER
21-32	12	ICP STANDARD SOURCE	CHARACTER

CRDL STANDARD FOR AA AND ICP DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'II (2)'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	AA TRUE	NUMERIC 5.1
18-26	9	AA FOUND	NUMBRIC 6.2
27-31	5	AA %R	NUMERIC 3.1
32-38	7	ICP INIT TRUE	NUMERIC 5.1
39-47	9	ICP INIT FOUND	NUMERIC 6.2
48-52	5	ICP INIT %R	NUMERIC 3.1
53-61	9	ICP FINAL FOUND	NUMERIC 6.2
62-66	5	ICP FINAL %R	NUMERIC 3.1

FORM III

BLANKS HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'III'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-13	5	PREP BLANK MATRIX	'WATER'/'SOIL
14-18	5	PREP BLANK UNITS	'UG/L '/'MG/KG'

BLANKS DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'III'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-18	8	INITIAL CAL BLANK	NUMERIC S5.1
19	1	INITIAL CAL FLAG (C)	'B'/'U'/BLANK
20-27	8	CONT CAL BLANK 1	NUMERIC S5.1
28	1	CC BLANK 1 FLAG (C)	'B'/'U'/BLANK
29-36	8	CONT CAL BLANK 2	NUMERIC S5.1
37	1	CC BLANK 2 FLAG (C)	'B'/'U'/BLANK
38-45	8	CONT CAL BLANK 3	NUMERIC S5.1
46	1	CC BLANK 3 FLAG (C)	'B'/'U'/BLANK
47-56	10	PREPARATION BLANK	NUMERIC S5.3
57	1	PREP BLANK FLAG (C)	'B'/'U'/BLANK
58-59	2	METHOD (M)	METHOD CODE/'NR'

FORM IV

ICP INTERFERENCE CHECK SAMPLE HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'IV'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	ICP ID NUMBER	CHARACTER
21-32	12	ICS SOURCE	CHARACTER

ICP INTERFERENCE CHECK SAMPLE DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'IV'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-16	6	TRUE A	NUMERIC 6
17-22	6	TRUE AB	NUMERIC 6
23-29	7	INITIAL A	NUMERIC S6
30-38	9	INITIAL AB	NUMERIC S6.1
39-43	5	INITIAL %R	NUMERIC 3.1
44-50	7	FINAL A	NUMERIC S6
51-59	9	FINAL AB	NUMERIC S6.1
60-64	5	FINAL %R	NUMERIC 3.1

FORM V (PART 1)

SPIKE SAMPLE RECOVERY HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'V(1)'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-20	5	MATRIX	'WATER'/'SOIL'
21-23	3	LEVEL	'LOW'/'MED'
24-28	5	CONCENTRATION UNITS	'UG/L '/ 'MG/KG'
29-33	5	SAMPLE % SOLIDS	NUMERIC 3.1

SPIKE SAMPLE RECOVERY DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'V(1)'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-16	6	CONTROL LIMIT %R	'75-125'/BLANK
17-30	14	SPIKED SAMPLE RESULT	NUMERIC 9.4
31	1	SSR FLAG (C)	'B'/'U'/BLANK
32-44	13	SAMPLE RESULT	NUMERIC 8.4
45	1	SR FLAG (C)	'B'/'U'/BLANK
45-56	11	SPIKE ADDED	NUMERIC 8.2
57-63	7	PERCENT RECOVERED	NUMERIC S4.1
64	1	QUALIFIER (Q)	'N'/BLANK
65-66	2	METHOD (M)	METHOD CODE/'NR'

FORM V (PART 2)

POST DIGEST SPIKE SAMPLE RECOVERY HEADER RECORD

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'V(2)'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-20	5	MATRIX	'WATER'/'SOIL'
21-23	3	LEVEL	'LOW'/'MED'

POST DIGEST SPIKE SAMPLE RECOVERY DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'V(2)'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-16	6	CONTROL LIMIT %R	BLANK
17-28	12	SPIKED SAMPLE RESULT	NUMERIC 9.2
29	1	SSR FLAG (C)	'B'/'U'/BLANK
30-41	12	SAMPLE RESULT	NUMERIC 9.2
42	1	SR FLAG (C)	'B'/'U'/BLANK
43-52	10	SPIKE ADDED	NUMERIC 8.1
53-59	7	PERCENT RECOVERED	NUMERIC S4.1
60	1	QUALIFIER (Q)	BLANK
61-62	2	METHOD (M)	METHOD CODE/'NR'

FORM VI

DUPLICATES HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'VI'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-20	5	MATRIX	'WATER'/'SOIL'
21-23	3	LEVEL	'LOW'/'MED'
24-28	5	CONCENTRATION UNITS	'UG/L'/'MG/KG'
29-33	5	SAMPLE % SOLIDS	NUMERIC 3.1
34-38	5	DUPLICATE % SOLIDS	NUMERIC 3.1

DUPLICATES DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'VI'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	CONTROL LIMIT	NUMERIC 5.1
18-31	14	SAMPLE	NUMERIC 9.4
32	1	SAMPLE FLAG (C)	'B'/'U'/BLANK
33-46	14	DUPLICATE	NUMERIC 9.4
47	1	DUPLICATE FLAG (C)	'B'/'U'/BLANK
48-53	6	RPD	NUMERIC 4.1
54	1	QUALIFIER (Q)	'*'/BLANK
55-56	2	METHOD (M)	METHOD CODE/'NR'

FORM VII

LABORATORY CONTROL SAMPLE HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'VII'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	SOLID LCS SOURCE	CHARACTER
21-32	12	AQUEOUS LCS SOURCE	CHARACTER

LABORATORY CONTROL SAMPLE DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'VII'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	AQUEOUS TRUE	NUMERIC 5.1
18-25	8	AQUEOUS FOUND	NUMERIC 5.2
26-30	5	AQUEOUS % RECOVERED	NUMERIC 3.1
31-38	8	SOLID TRUE	NUMERIC 6.1
39-46	8	SOLID FOUND	NUMERIC 6.1
47	1	SOLID FOUND FLAG (C)	'B'/'U'/BLANK
48-55	8	SOLID LOWER LIMIT	NUMERIC 6.1
56-63	8	SOLID UPPER LIMIT	NUMERIC 6.1
64-68	5	SOLID % RECOVERED	NUMERIC 6.1

FORM VIII

STANDARD ADDITION RESULTS HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'VIII '	
6-7	2	FORM SUFFIX	
8	1	'H'	

NOTE: Although there are no fields which occur only once per FORM VIII, the HEADER record must be included as a place holder, indicating that DETAIL records follow.

STANDARD ADDITION RESULTS DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'VIII'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-17	2	ANALYTE SYMBOL	CHARACTER
18-22	5	0 ADD ABSORBANCE	NUMERIC 1.3
23-28	6	1 ADD CONCENTRATION	NUMERIC 3.2
29-33	5	1 ADD ABSORBANCE	NUMERIC 1.3
34-39	6	2 ADD CONCENTRATION	NUMERIC 3.2
40-44	5	2 ADD ABSORBANCE	NUMERIC 1.3
45-50	6	3 ADD CONCENTRATION	NUMERIC 3.2
51-55	5	3 ADD ABSORBANCE	NUMERIC 1.3
56-62	7	FINAL CONCENTRATION	NUMERIC 5.1
63-68	6	CORRELATION COEF (R)	NUMERIC 1.4
69	1	QUALIFIER (Q)	'+'/BLANK

FORM IX

ICP SERIAL DILUTIONS HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'IX'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-15	7	EPA SAMPLE NO.	CHARACTER
16-20	5	MATRIX	'WATER'/'SOIL'
21-23	3	LEVEL	'LOW'/'MED'

ICP SERIAL DILUTIONS DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'IX'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-22	12	INIT SAMPLE (I)	NUMERIC 9.2
23	1	INIT SAMPLE FLAG (C)	'B'/'U'/BLANK
24-35	12	SERIAL DILUTION (S)	NUMERIC 9.2
36	1	DILUTION FLAG (C)	'B'/'U'/BLANK
37-41	5	PERCENT DIFFERENCE	NUMERIC 3.1
42	1	QUALIFIER (Q)	'E'/BLANK
43-44	2	METHOD (M)	METHOD CODE/'NR'

FORM X

INSTRUMENT DETECTION LIMITS (QUARTERLY) HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'X'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-16	8	DATE	MM/DD/YY
17-28	12	ICP ID NUMBER	CHARACTER
29-40	12	FLAME AA ID NUMBER	CHARACTER
41-52	12	FURNACE AA ID NUMBER	CHARACTER

INSTRUMENT DETECTION LIMITS (QUARTERLY) DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'X'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	WAVELENGTH	NUMERIC 4.2
18-19	2	BACKGROUND	'BS'/'BD'/'BZ'/BLANK
20-27	8	IDL	NUMERIC 6.1
28-29	2	METHOD (M)	METHOD CODE/'NR'

FORM XI (PART 1)

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY) HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XI(1)'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	ICP ID NUMBER	CHARACTER
21-28	8	DATE	MM/DD/YY

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY) DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XI(l)'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	WAVELENGTH	NUMERIC 4.2
18-19	2	ELEMENT 1 SYMBOL	AL
20-29	10	ELEMENT 1 FACTOR	NUMERIC Sl.7
30-31	2	ELEMENT 2 SYMBOL	CA
32 -41	10	ELEMENT 2 FACTOR	NUMERIC S1.7
42-43	2	ELEMENT 3 SYMBOL	FE
44-53	10	ELEMENT 3 FACTOR	NUMERIC S1.7
54-55	2	ELEMENT 4 SYMBOL	MG
56-65	10	ELEMENT 4 FACTOR	NUMERIC Sl.7
66-67	2	ELEMENT 5 SYMBOL	CHARACTER
68-77	10	ELEMENT 5 FACTOR	NUMERIC S1.7

NOTE: ELEMENTs 1, 2, 3 and 4 SYMBOL can only be AL, CA, FE and MG respectively. ELEMENT 5 Symbol can be any other analyte symbol.

FORM XI (PART 2)

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY) HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XI(2)'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	ICP ID NUMBER	CHARACTER
21-28	8	DATE	MM/DD/YY

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY) DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XI(2)'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-17	7	WAVELENGTH	NUMERIC 4.2
18-19	2	ELEMENT 1 SYMBOL	CHARACTER
20-29	10	ELEMENT 1 FACTOR	NUMERIC S1.7
30-31	2	ELEMENT 2 SYMBOL	CHARACTER
32-41	10	ELEMENT 2 FACTOR	NUMERIC S1.7
42-43	2	ELEMENT 3 SYMBOL	CHARACTER
44-53	10	ELEMENT 3 FACTOR	NUMERIC S1.7
54-55	2	ELEMENT 4 SYMBOL	CHARACTER
56-65	10	ELEMENT 4 FACTOR	NUMERIC S1.7
66-67	2	ELEMENT 5 SYMBOL	CHARACTER
68-77	10	ELEMENT 5 FACTOR	NUMERIC S1.7

FORM XII

ICP LINEAR RANGES (QUARTERLY) HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XII'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	ICP ID NUMBER	CHARACTER
21-28	8	DATE	MM/DD/YY

ICP LINEAR RANGES (QUARTERLY) DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XII'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-10	2	ANALYTE SYMBOL	CHARACTER
11-16	6	INTEGRATION TIME	NUMERIC 3.2 (SECONDS)
17-27	11	CONCENTRATION	NUMERIC 9.1
28-29	2	METHOD (M) (ICP IS ASSUMED IF BLANK)	'NR' /BLANK

FORM XIII

PREPARATION LOG HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XIII'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-10	2	METHOD	METHOD CODE

PREPARATION LOG DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XIII'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-15	7	EPA SAMPLE NUMBER	CHARACTER
16-23	8	PREP DATE	MM/DD/YY
24-28	5	WEIGHT	NUMERIC 2.2
29-32	4	VOLUME	NUMERIC 4

FORM XIV

ANALYSIS RUN LOG HEADER RECORD:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XIV'	
6-7	2	FORM SUFFIX	
8	1	'H'	
9-20	12	INSTRUMENT ID NUMBER	CHARACTER
21-22	2	METHOD	METHOD CODE
23-30	8	START DATE	MM/DD/YY
31-38	8	END DATE	MM/DD/YY

ANALYSIS RUN LOG DETAIL RECORDS:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	'XIV'	
6-7	2	FORM SUFFIX	
8	1	'D'	
9-16	8	EPA SAMPLE NUMBER	CHARACTER
17-24	8	DILUTION FACTOR	NUMERIC 5.2
25-28	4	TIME	HHMM
29-35	7	PERCENT RECOVERED	NUMERIC S4.1
36	1	ANAYLTE (AL)	"X"/BLANK
37	1	ANAYLTE (SB)	"X"/BLANK
38	1	ANAYLTE (AS)	"X"/BLANK
39	1	ANAYLTE (BA)	"X"/BLANK
40	1	ANAYLTE (BE)	"X"/BLANK
41	1	ANAYLTE (CD)	"X"/BLANK
42	1	ANAYLTE (CA)	"X"/BLANK
43	1	ANAYLTE (CR)	"X"/BLANK
44	1	ANAYLTE (CO)	"X"/BLANK
45	1	ANAYLTE (CU)	"X"/BLANK
46	1	ANAYLTE (FE)	"X"/BLANK
47	1	ANAYLTE (PB)	"X"/BLANK
48	1	ANAYLTE (MG)	"X"/BLANK
49	1	ANAYLTE (MN)	"X"/BLANK

COLUMN(S)	LENGTH	CONTENTS	FORMAT
50	1	ANAYLTE (HG)	"X"/BLANK
51	1	ANAYLTE (NI)	"X"/BLANK
52	1	ANAYLTE (K)	"X"/BLANK
53	1	ANAYLTE (SE)	"X"/BLANK
54	1	ANAYLTE (AG)	"X"/BLANK
55	1	ANAYLTE (NA)	"X"/BLANK
56	1	ANAYLTE (TL)	"X"/BLANK
57	1	ANAYLTE (V)	"X"/BLANK
58	1	ANAYLTE (ZN)	"X"/BLANK
59	1	ANAYLTE (CN)	"X"/BLANK
60	1	ANALYTE (BI)	"X"/BLANK
61	1	ANALYTE (MO)	"X"/BLANK
62	1	ANALYTE (SN)	"X"/BLANK
63	1	ANALYTE (LI)	"X"/BLANK

COMMENT RECORDS

COMMENT records are optional for any FORM ID/FORM SUFFIX group. There may be up to 4 COMMENT records per group. They must come after the DETAIL records and be formatted as follows:

COLUMN(S)	LENGTH	CONTENTS	FORMAT
1-5	5	FORM ID	
6-7	2	FORM SUFFIX	
8	1	'C'	
9-78	70	COMMENTS	FREE FORM TEXT

The text may be in paragraph form if desired, but must be contained in columns 9 through 78 only. The key fields must be repeated in columns 1 through 8 of each line.

MOUND

Environmental
Restoration
Program

Method: Q-012

Electronic Data Deliverable Format Specification - MEIMS Non-CLP Standard Format

Revision 2.0

Mound Plant
Miamisburg, OH

Source Document: Compendium (November 1996)

1. INTRODUCTION

This procedure contains the specifications for the standard Mound Environmental Information Management System (MEIMS) non-CLP electronic data deliverable (EDD) format. Quality Method Q-013 describes an alternate deliverable format which can be used for non-CLP analyses. The alternative specification should only be used if the laboratory is unable to meet the specifications in this procedure.

2. RESPONSIBILITIES

Laboratory Reporting Staff — The reporting staff is responsible for accurately transferring the laboratory data to 3.5 inch floppy diskettes in the format specified in this procedure.

Database Clerk — The database clerk is responsible for loading the EDD into MEIMS and reporting entry errors to the database administrator.

Database Administrator — The database administrator is responsible for maintaining the format specification in this procedure and resolving laboratory EDD problems. The database administrator may designate an individual to resolve laboratory EDD problems.

3. PROCEDURE

The EDDs for the MEIMS are prepared at the laboratory and stored on 3.5 inch floppy disks. EDDs for non-CLP data shall follow a specified format. The following sections describe the format for each data record including the fields and allowable codes for each field.

Section 3.1 lists each field, the position of the field, and the field length. The section also identifies the source of the field information, shows an example for each field, and identifies whether the field is required.

3.1. Non-CLP Record Format

Field Description	Position	Length	Source	Example	Required**
Header Record*					
Project Number	1-20	20	CONTRACT	E123A1156	Opt
Submission Date	21-28	8	LAB	12/30/93	Opt
Number of records	29-33	6	LAB	1235	Opt
Detail Record					
Client Sample ID	1-20	20	COC	900123	Mand
Date Collected	21-28	8	COC	11/23/93	Mand***
Time Collected	29-33	5	COC	1300	Opt
Lab Batch/SDG Number	34-48	15	LAB	50071	Mand
Matrix	49-56	8	COC	WATER	Mand
Lab Sample ID	57-76	20	LAB	CC113091	Mand
Lab Code	77-81	5	VALID CODE LIST	COMPUC	Mand

Field Description	Position	Length	Source	Example	Required**
Date Extracted/Prepared	82-89	8	LAB	12/10/93	Opt
Date Analyzed	90-97	8	LAB	12/12/93	Mand
Time Analyzed	98-102	5	LAB	1200	Mand
Lab Blank Sample Number	103-122	20	LAB	CC113124	Mand
Analysis Type Code	123-132	10	VALID CODE LIST	ORVOA	Opt
Result Type Code	133-135	3	VALID CODE LIST	REG	Mand
Parameter Code	136-146	11	VALID CODE LIST	100-41-4	Mand
Result	147-156	10	LAB	10.0	Mand
Result Qualifier Code	157-161	5	VALID CODE LIST	U	Mand
Uncertainty	162-171	10	LAB	0.0025	Opt
Unit of Measure Code	172-179	8	VALID CODE LIST	UG/L	Mand
Retention Time (TICs only)	180-186	7	LAB	2330	Opt
Analyte Name	187-216	30	VALID CODE LIST	Endrin	Mand
Detection Limit	217-226	10	LAB	10.0	Mand
Method ⅄	227-236	10	LAB	SW8020	Mand
Percent Solids	237-241	5	LAB	82.3	Opt
Sample Weight/Volume	242-246	5	LAB	5.0	Mand
Weight/Volume Units	247-248	2	LAB	G	Mand
Dilution	249-253	5	LAB	1.0	Mand

* If the header is not used, leave the first line blank

** Opt = Optional, Mand = Mandatory. The optional fields may be lab/matrix/method dependent. The fields become required when the associated lab/matrix/method dictates.

*** The data collected must have a date entered, or if the date is unknown, the date format must be entered i.e. " / / ".

⅄ % solids method should be 'UNKNOWN.'

CONTRACT — indicates the data is found on the laboratory subcontract.

LAB — indicates the information is provided by the laboratory.

COC — indicates that the data are found on the Chain-of-Custody form.

VALID CODE LIST — indicates that only codes listed in the valid codes list are to be used. In case where a code definition does not meet the needs of the data recorded, the data administrator will be contacted so that concurrence can be obtained in establishing required coding conventions. ASCII data files that contain all valid code lists will be provided to all participating labs. See Section 3.3 for the valid code lists.

The following conventions must be used:

- The code LCS must be used as the sample ID for blank spikes — spikes that do not involve true environmental samples from Mound. A sample type of LCS must be used for blank spikes.

- The code BLK must be used as the sample ID for method blanks. A sample type of BLK must also be used.

- The code MS must be appended to the end of the sample ID for matrix spikes — spikes of real environmental samples from Mound. A sample type of SPK must be used for matrix spikes.

3.2. Field Definitions

Field Description	Field Definition
Header Record	
Project Number	Laboratory subcontract number for this project.
Submission Date	Date the data were submitted.
Number of records	Number of detail records in this file.
Detail Record	
Client Sample ID	Sample identifier assigned by the client.
Analysis Type Code	Code identifying the type of analysis performed on the sample.
Date Collected	Date sample was collected.
Time Collected	Time sample was collected.
Lab Case Number	Laboratory case number for this data submittal.
Lab Batch/SDG Number	Laboratory sample delivery group number or batch number.
Matrix	Sample matrix as specified on the Chain-of-Custody.
Lab Sample ID	Sample identifier assigned by the laboratory.
Lab Code	Code identifying the laboratory.
Date Extracted/Prepared	Date the sample was extracted.
Date Analyzed	Date the sample was analyzed.
Time Analyzed	Time the sample was analyzed.
Lab Blank Sample Number	Sample identifier for the laboratory blank associated to this sample.
Result Type Code	Code identifying the type of laboratory result.
Parameter Code	Code identifying the parameter.
Result	Result of the parameter for the sample.
Result Qualifier	Laboratory qualifier for the result.
Uncertainty	2 sigma error for radiological results.
Unit of Measure	Code identifying the unit of measure.
Retention Time (TICs only)	Retention time for tentatively identified compounds.
Detection Limit	Detection limit associated with the parameter results.
Method	Analytic method of analysis. Lab SOP if not standard method.
Percent Solids	The solid fraction of a non-aqueous sample. Blank if aqueous.
Sample Weight/Volume	The weight or volume of the sample.
Weight/Volume Units	Unit of measure of the sample weight or volume.
Dilution	Dilution factor associated with the parameter results.

3.3. Valid Code Lists

3.3.1. Result Types

Code	Description
BLK	Method Blank
DIL	Dilution
DUP	Analytical Duplicate
LCS	Lab Control Sample / Blank Spikes
PB	Prep blank
R1	Replicate Sample
REA	Reanalyzed Sample
REG	Regular Sample or Reported Value if Reanalyzed
SPK	Matrix Spike / Matrix Spike Duplicate
TIC	Tentatively Identified Compound

3.3.2. Analysis Types

Code	Description
ANION	Common Anions
EPTOX	EP TOX Leachate
GENERA	General Chemistry
GEOTEC	Geotechnical
INORG	Metals
OILGRS	Oil and Grease
ORBTEX	BTEX Compounds
ORDIOX	Dioxins/Dibenzofurans
ORDRO	Diesel Range Organics
OREXP	Explosives
ORGRO	Gasoline Range Organics
ORHERB	Herbicides
ORMORO	Motor Oil Range Organics
ORMRO	Motor Oil Range Organics
ORPETH	Petroleum Hydrocarbons
ORPHNL	Phenols
ORPPB	Pesticides and/or PCBs
ORSVO	Semi-Volatile Organics
ORVOA	Volatile Organics
OTHER	Other
RAD	Radiological
TCLPHB	TCLP Herbicides
TCLPIN	TCLP Metals
TCLPPP	TCLP PCBs
TCLPR	TCLP Reactivity, Corrosivity
TCLPSV	TCLP Semi-Volatiles
TCLPVO	TCLP Volatiles

3.3.3. Parameter Codes

Code	Parameter name
100	% Clay
54100	% Gravel

Code	Parameter name
8000	% Sand
8400	% Silt
630-20-6	1,1,1,2-Tetrachloroethane
71-55-6	1,1,1-Trichloroethane
79-34-5	1,1,2,2-Tetrachloroethane
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane
79-00-5	1,1,2-Trichloroethane
75-34-3	1,1-Dichloroethane
75-35-4	1,1-Dichloroethene
563-58-6	1,1-Dichloropropene
35822-46-9	1,2,3,4,6,7,8-HpCDD
67562-39-4	1,2,3,4,6,7,8-HpCDF
55673-89-7	1,2,3,4,7,8,9-HpCDF
39227-28-6	1,2,3,4,7,8-HxCDD
70648-26-9	1,2,3,4,7,8-HxCDF
57653-85-7	1,2,3,6,7,8-HxCDD
57117-44-9	1,2,3,6,7,8-HxCDF
19408-74-3	1,2,3,7,8,9-HxCDD
72918-21-9	1,2,3,7,8,9-HxCDF
40321-76-4	1,2,3,7,8-PeCDD
57117-41-6	1,2,3,7,8-PeCDF
87-61-6	1,2,3-Trichlorobenzene
96-18-4	1,2,3-Trichloropropane
120-82-1	1,2,4-Trichlorobenzene
95-63-6	1,2,4-Trimethylbenzene
156-59-2	1,2-cis-Dichloroethene
96-12-8	1,2-Dibromo-3-chloropropane
106-93-4	1,2-Dibromoethane
95-50-1	1,2-Dichlorobenzene
2199-69-1	1,2-Dichlorobenzene-d4
107-06-2	1,2-Dichloroethane
17060-07-0	1,2-Dichloroethane-d4
540-59-0	1,2-Dichloroethene
78-87-5	1,2-Dichloropropane
135-01-3	1,2-Diethylbenzene
156-60-5	1,2-trans-Dichloroethene
108-67-8	1,3,5-Trimethylbenzene
99-35-4	1,3,5-Trinitrobenzene
10061-01-5	1,3-cis-Dichloropropene
541-73-1	1,3-Dichlorobenzene
142-28-9	1,3-Dichloropropane
141-93-5	1,3-Diethylbenzene
99-65-0	1,3-Dinitrobenzene
10061-02-6	1,3-trans-Dichloropropene
106-46-7	1,4-Dichlorobenzene
105-05-5	1,4-Diethylbenzene
544-10-5	1-Chlorohexane
108-60-1	2,2'-oxybis(1-chloropropane)
594-20-7	2,2-Dichloropropane
60851-34-5	2,3,4,6,7,8-HxCDF
57117-31-4	2,3,4,7,8-PeCDF
1746-01-6	2,3,7,8-TCDD

Code	Parameter name
51207-31-9	2,3,7,8-TCDF
95-95-4	2,4,5-Trichlorophenol
118-79-6	2,4,6-Tribromophenol
88-06-2	2,4,6-Trichlorophenol
118-96-7	2,4,6-Trinitrotoluene
120-83-2	2,4-Dichlorophenol
105-67-9	2,4-Dimethylphenol
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene
35572-78-2	2-Amino-4,6-dinitrotoluene
120-32-1	2-Benzyl-4-Chlorophenol
78-93-3	2-Butanone
110-75-8	2-Chloroethylvinylether
91-58-7	2-Chloronaphthalene
95-57-8	2-Chlorophenol
93951-73-6	2-Chlorophenol-d4
95-49-8	2-Chlorotoluene
321-60-8	2-Fluorobiphenyl
367-12-4	2-Fluorophenol
591-78-6	2-Hexanone
91-57-6	2-Methylnaphthalene
95-48-7	2-Methylphenol
88-74-4	2-Nitroaniline
88-75-5	2-Nitrophenol
88-72-2	2-Nitrotoluene
91-94-1	3,3'-Dichlorobenzidine
618-87-1	3,5-Dinitroaniline
99-09-2	3-Nitroaniline
99-08-1	3-Nitrotoluene
72-54-8	4,4'-DDD
72-55-9	4,4'-DDE
50-29-3	4,4'-DDT
534-52-1	4,6-Dinitro-o-Cresol
1946-51-0	4-Amino-2,6-Dinitrotoluene
101-55-3	4-Bromophenyl-phenyl Ether
59-50-7	4-chloro-3-methylphenol
106-47-8	4-Chloroaniline
7005-72-3	4-Chlorophenyl-phenylether
106-43-4	4-Chlorotoluene
108-10-1	4-Methyl-2-pentanone
106-44-5	4-Methylphenol
100-01-6	4-Nitroaniline
100-02-7	4-Nitrophenol
99-99-0	4-Nitrotoluene
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
67-64-1	Acetone
75-05-8	Acetonitrile
107-13-1	Acrylonitrile
AC-227	Actinium-227
14331-83-0	Actinium-228

Code	Parameter name
309-00-2	Aldrin
ALK	Alkalinity
ALHCO3	Alkalinity: HCO3
5103-71-9	Alpha Chlordane
ALPHA	Alpha, Total
319-84-6	Alpha-BHC
7429-90-5	Aluminum
14596-10-2	Americium-241
AMM	Ammonia
120-12-7	Anthracene
7440-36-0	Antimony
SB-124	Antimony-124
SB-125	Antimony-125
12674-11-2	Aroclor-1016
11104-28-2	Aroclor-1221
11141-16-5	Aroclor-1232
53469-21-9	Aroclor-1242
12672-29-6	Aroclor-1248
11097-69-1	Aroclor-1254
11096-82-5	Aroclor-1260
7440-38-2	Arsenic
7440-39-3	Barium
BA-133	Barium-133
BA-140	Barium-140
71-43-2	Benzene
92-87-5	Benzidine
56-55-3	Benzo(a)anthracene
50-32-8	Benzo(a)pyrene
205-99-2	Benzo(b)fluoranthene
191-24-2	Benzo(g,h,i)perylene
207-08-9	Benzo(k)fluoranthene
65-85-0	Benzoic Acid
100-51-6	Benzyl Alcohol
7440-41-7	Beryllium
13966-02-4	Beryllium-7
BETA	Beta, Total
319-85-7	Beta-BHC
BOD	Bio Oxygen Demand
111-91-1	Bis(2-chloroethoxy)methane
111-44-4	Bis(2-chloroethyl)ether
117-81-7	Bis(2-ethylhexyl)phthalate
7440-69-9	Bismuth
BI-207	Bismuth-207
BI-210	Bismuth-210
BI-210M	Bismuth-210M
BI-211	Bismuth-211
14913-49-6	Bismuth-212
14733-03-0	Bismuth-214
7440-42-8	Boron
108-86-1	Bromobenzene
74-97-5	Bromochloromethane
75-27-4	Bromodichloromethane

Code	Parameter name
460-00-4	Bromofluorobenzene
75-25-2	Bromoform
74-83-9	Bromomethane
85-68-7	Butyl Benzyl Phthalate
C4C8	C4-C8 Cycloalkanes/Alkenes
7440-43-9	Cadmium
7440-70-2	Calcium
86-74-8	Carbazole
75-15-0	Carbon Disulfide
56-23-5	Carbon Tetrachloride
153861900	Cation Exchange
CEC	Cation Exchange Capacity as Na
CERADA	Ceridaphnia
7440-45-1	Cerium
CE-139	Cerium-139
CE-141	Cerium-141
CE-144	Cerium-144
13967-70-9	Cesium-134
10045-97-3	Cesium-137
COD	Chemical Oxygen Demand
57-74-9	Chlordane
CL	Chloride
7782-50-5	Chlorine
108-90-7	Chlorobenzene
75-00-3	Chloroethane
67-66-3	Chloroform
74-87-3	Chloromethane
25168-05-2	Chlorotoluene
7440-47-3	Chromium
CR6	Chromium, Hexavalent
CR-51	Chromium-51
218-01-9	Chrysene
7440-48-4	Cobalt
CO-57	Cobalt-57
CO-58	Cobalt-58
10198-40-0	Cobalt-60
7440-50-8	Copper
57-12-5	Cyanide
2051-24-3	Decachlorobiphenyl
319-86-8	Delta-BHC
84-74-2	Di-n-butyl Phthalate
117-84-0	Di-n-octyl Phthalate
53-70-3	Dibenzo(a,h)anthracene
132-64-9	Dibenzofuran
124-48-1	Dibromochloromethane
74-95-3	Dibromomethane
75-71-8	Dichlorodifluoromethane
60-57-1	Dieldrin
DRO	Diesel Range Organics
84-66-2	Diethyl Phthalate
131-11-3	Dimethyl Phthalate
DO	Dissolved Oxygen

Code	Parameter name
TDS	Dissolved Solids
7429-91-6	Dypsprosium
ECOLI	E. Coli
959-98-8	Endosulfan I
33213-65-9	Endosulfan II
1031-07-8	Endosulfan Sulfate
72-20-8	Endrin
7421-93-4	Endrin Aldehyde
53494-70-5	Endrin Ketone
7440-52-0	Erbium
100-41-4	Ethylbenzene
7440-53-1	Europium
14683-23-9	Europium-152
15585-10-1	Europium-154
EU-155	Europium-155
FECAL	Fecal Coliform Bacteria
206-44-0	Fluoranthene
86-73-7	Fluorene
FL	Fluoride
462-06-6	Flurobenzene
7440-54-2	Gadolinium
GD-153	Gadolinium-153
5103-74-2	Gamma Chlordane
58-89-9	Gamma-BHC (Lindane)
GRO	Gasoline Range Organics
HARDCA	Hardness as CaCO3
76-44-8	Heptachlor
1024-57-3	Heptachlor Epoxide
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadiene
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
110-54-3	Hexane
2691-41-0	HMX
7440-60-0	Holmium
37871-00-4	HpCDD
38998-75-3	HpCDF
34465-46-8	HxCDD
55684-94-1	HxCDF
193-39-5	Indeno(1,2,3-cd)pyrene
IOD	Iodide
I-131	Iodine-131
74-88-4	Iodomethane
IR-192	Iridium-192
7439-89-6	Iron
FE-59	Iron-59
78-59-1	Isophorone
98-82-8	Isopropyl Benzene
7439-91-0	Lanthanum
LA-140	Lanthanum-140
7439-92-1	Lead
PB-210	Lead-210

Code	Parameter name
15092-94-1	Lead-212
15067-28-4	Lead-214
7439-93-2	Lithium
7439-94-3	Lutetium
13777-61-2	m&p-Xylene
7439-95-4	Magnesium
7439-96-5	Manganese
MN-54	Manganese-54
5711900	Maximum Density
571582400	Maximum Dry Density
7439-97-6	Mercury
HG-203	Mercury-203
72-43-5	Methoxychlor
75-09-2	Methylene Chloride
717423200	Minimum Dry Density
3711900	Minimum Density
45800	Moisture
7439-98-7	Molybdenum
MORO	Motor Oil Range Organics
104-51-8	n-Butylbenzene
621-64-7	N-Nitroso-di-n-propylamine
86-30-6	N-Nitrosodiphenylamine
103-65-1	n-propylbenzene
91-20-3	Naphthalene
7440-00-8	Neodymium
NP-237	Neptunium-237
7440-02-0	Nickel
NB-95	Niobium-95
NO3	Nitrate
NO2/NO3	Nitrate-Nitrite-N
1497-55-8	Nitrate/Nitrite
NO2	Nitrite
98-95-3	Nitrobenzene
4165-60-0	Nitrobenzene-d5
NITROGEN	Nitrogen
55-63-0	Nitroglycerin
348-51-6	O-Chloroflurobenzene
95-47-6	o-Xylene
3268-87-9	OCDD
39001-02-0	OCDF
OIL	Oil
OMC	Optimum Moisture Content
TOC	Organic Carbon
7683200	Organic Content
MOIST	Organic Content / Moisture
99-87-6	p-Isopropyltoluene
36088-22-9	PeCDDI
30402-15-4	PeCDF
87-86-5	Pentachlorophenol
%MOISTURE	Percent Moisture
%SOLIDS	Percent Solids
PERM	Permeability

Code	Parameter name
78-11-5	PETN
1006	pH
85-01-8	Phenanthrene
108-95-2	Phenol
4165-62-2	Phenol-d5
PHENOLICS	Phenolics
PHENOLS	Phenols
PO4T	Phosphate
PHOS	Phosphorous
7723-14-0	Phosphorous
PIMEP	Pimephales
PU-238/239	Plutonium 238/239
13981-16-3	Plutonium-238
PU-239/240	Plutonium-239/240
PU-242	Plutonium-242
PO-210	Polonium-210
1336-36-3	Polychlorinated Biphenyl (PCB)
7440-09-7	Potassium
13966-00-2	Potassium-40
7440-10-0	Praseodym
13981-14-1	Protactinium-233
15100-28-4	Protactinium-234 metastable
15117-48-3	Pu-239
129-00-0	Pyrene
15623-45-7	Radium-223
13233-32-4	Radium-224
RA-225	Radium-225
13982-63-3	Radium-226
RA-228	Radium-228
121-82-4	RDX
EH	Redox Potential
RU-103	Ruthenium-103
13967-48-1	Ruthenium-106
7440-19-9	Samarium
7319568600	Saturated Hydraulic Conductivity
SC-46	Scandium-46
135-98-8	sec-Butylbenzene
7782-49-2	Selenium
7440-21-3	Silicon
7440-22-4	Silver
AG-110	Silver-110
7440-23-5	Sodium
13966-32-0	Sodium-22
EC	Specific Conductance
79125400	Specific Gravity
SG	Specific Gravity
SR-85	Strontium-85
14158-27-1	Strontium-89
10098-97-2	Strontium-90
100-42-5	Styrene
SO4	Sulfate
18496-25-8	Sulfide

Code	Parameter name
TSS	Suspended Solids
7440-25-7	Tantalum
41903-57-5	TCDD, Total
30402-14-3	TCDF
TC-99	Techetium-99
7440-27-9	Terbium
98904-43-9	Terphenyl-d14
98-06-6	tert-Butylbenzene
877-09-8	Tetrachloro-m-xylene
127-18-4	Tetrachloroethene
479-45-8	Tetryl
7440-28-0	Thallium
14913-50-9	Thallium-208
TH-227	Thorium-227
14274-82-9	Thorium-228
14269-63-7	Thorium-230
7440-29-1	Thorium-232
15065-10-8	Thorium-234
7440-30-4	Thulium
7440-31-5	Tin
SN-113	Tin-113
SN-126	Tin-126
108-88-3	Toluene
2037-26-5	Toluene-d8
AHYD	Total Aromatic Hydrocarbons
TOGRHY	Total C5 TO C11 Petroleum Hydrocarbons
THAHYC	Total Halogenated Hydrocarbons
TOX	Total Organic Halides
IPHC	Total Petroleum Hydrocarbon
RATOT	Total Radium
TSVHYC	Total Semivolatile Hydrocarbons
8001-35-2	Toxaphene
79-01-6	Trichloroethene
75-69-4	Trichlorofluoromethane
10028-17-8	Tritium
7440-61-1	Uranium
UDAUGH	Uranium Daughters
U-233	Uranium-233
13966-29-5	Uranium-234
15117-96-1	Uranium-235
U-235/236	Uranium-235/236
U-236	Uranium-236
24678-82-8	Uranium-238
7440-62-2	Vanadium
108-05-4	Vinyl Acetate
75-01-4	Vinyl Chloride
1330-20-7	Xylenes, Total
7440-64-4	Ytterbium
Y-88	Yttrium-88
7440-66-6	Zinc
ZN-65	Zinc-65
ZR-95	Zirconium-95

3.3.4. Parameter Units

Code	Description
BQ/L	Bequerels per Liter
CM/S	Centimeters/Second
COL/10	Coliform/100 milliliters
CFU/G	Colony Forming Units/Gram
CFU/G	Colony Forming Units/Gram Oven Dried
CFU/ML	Colony Forming Units/Milliliter
CFU/ML	Colony Forming Units/ML
CPM	Counts per Minute
C	Degrees Celsius
F	Degrees Farehneit
DPM/G	Disintegrations per Minute per Gram
G/CC	Grams per Cubic Centimeter
L/MIN	Liters per Minute
UG/G	Micrograms per Gram
UG/KG	Micrograms per Kilogram
UG/L	Micrograms per Liter
UG/ML	Micrograms per Liter
MEQ/100	Milliequivalents/100 Grams
MG/KG	Milligrams per Kilogram
MG/L	Milligrams per Liter
NCI/L	NanoCuries per Liter
NG/G	Nanograms per Gram
NTU	National Thermal Units
%	Percent
STD UN	pH Standard Units
PCI/G	Picocuries per Gram
PCI/L	Picocuries per Liter
PCI/ML	PicoCuries per Milliliter
PG/G	Picograms per Gram
PCF	Pounds per Cubic Foot

3.3.5. Laboratories

Code	Description
DATAC	Data Chem Laboratory
WESTO	Weston Laboratory
QTESR	Quanterra Environmental Services - Richland
QUANT	Quanterra Environmental Services - Denver

MOUND

Environmental
Restoration
Program

Method: Q-013

Electronic Data Deliverable Format Specification - MEIMS Alternate Non-CLP Format - RTL

Revision 2.0

Mound Plant
Miamisburg, OH

Source Document: Compendium (November 1996)

1. INTRODUCTION

This procedure contains an alternate specification for the standard Mound Environmental Information Management System (MEIMS) non-CLP electronic data deliverable (EDD) format. Quality Method Q-012 describes the preferred deliverable format which can be used for non-CLP analyses. The alternative specification should only be used if the laboratory is unable to meet the specifications in Q-012.

2. RESPONSIBILITIES

Laboratory Reporting Staff - The reporting staff is responsible for accurately transferring the laboratory data to 3.5 inch floppy diskettes in the format specified in this procedure.

Database Clerk - The database clerk is responsible for loading the EDD into MEIMS and reporting entry errors to the database administrator.

Database Administrator - The database administrator is responsible for maintaining the format specification in this procedure and resolving laboratory EDD problems. The database administrator may designate an individual to resolve laboratory EDD problems.

3. PROCEDURE

The MEIMS RTL reporting format shall be prepared by Mound contractors in a specified ASCII delimited format whenever the contractor does not utilize MEIMS. The following sections describe the format for each data record for spatial, field measurement, sample, laboratory, chemical and tentatively identified compounds. The definitions for each record type include a field name and description, field type and length, whether it is required, a source of where the information can be found, and finally an example entry for the field.

Valid code lists are provided for fields where codes are used. Examples of each type of data record are also provided.

Sample IDs must be unique for each sampling event. If a new sample is taken from the same station for a project, then a new sample ID must be used.

3.1. MEIMS RTL Record Format

Spatial Information (SPATIAL)

Field Name	Field Type	Field Length	Required	Source	Field Description	Example
OU	C	5		Field log book	Mound Operable Unit	OU1
AREA	C	50	✓	Field log book	Mound general area	Mound Operable Unit 1

Spatial Information (SPATIAL)

Field Name	Field Type	Field Length	Required	Source	Field Description	Example
STATION	C	10	✓	Field log book	Sampling station name	0031
STA_DESC	C	50	✓	Field log book	Sampling station description	33-1
XCOORD	N	13.5	✓	Surveyor	Easting coordinate	1496503.49
YCOORD	N	13.5	✓	Surveyor	Northing coordinate	597967.49
ELEVATION	N	13.5	✓	Surveyor	Elevation	775.28
GRID_SYS	C	5	✓	Surveyor	Coordinate grid system	OH27
GRID_ORENT	C	5		Surveyor	Coordinate grid orientation	
COORDSOURC	C	6	✓	Valid code list	Coordinate source code	SURVEY
STA_TYPE	C	2	✓	Valid code list	Station type code	W

Field Measurement Information (FLD_DATA)

Field Name	Field Type	Field Length	Required	Source	Field Description	Example
STATION	C	10	✓	Field log book	Sampling station name	0031
SMP_ID	C	12		Client ID	Sample ID	0031-0001
DATE_COL	D	8	✓	Field log book	Date of measurement	09/08/94
TIME_COL	C	4		Field log book	Time of measurement	1200
PAR_CODE	C	12	✓	Valid code list	Parameter code	TEMP
RESULTS	C	12	✓	Field log book	Value of measurement	20.0
PAR_UNIT	C	8	✓	Field log book	Units of measurement	C
SMP_EVENT	C	3		Field log book	Sampling event	010
LOG_BOOK	C	3		Field log book	Logbook identification	LB1
PROJ_CODE	C	10	✓	Field log book	Project identification code	MND01

Sampling Information (FLD_SAMP)

Field Name	Field Type	Field Length	Required	Source	Field Description	Example
STATION	C	10	✓	Field log book	Sampling station name	0031
PROJ_CODE	C	10	✓	Field log book	Project identification code	MND01

Sampling Information (FLD_SAMP)						
Field Name	Field Type	Field Length	Required	Source	Field Description	Example
SMP_ID	C	12	✓	Field log book	Sample ID	0031-001
ALT_ID	C	20		Field log book	Alternate sample ID	MND01-0031-0001
COLLECTED	L	1	✓	Field log book	Was the sample collected?	T
DATE_COL	D	8	✓	Field log book	Sample collection date	09/08/94
TIME_COL	C	4		Field log book	Sample collection time	1200
SMP_EVENT	C	3		Field log book	Sampling event	010
FSMP_TYP	C	2	✓	Valid code list	Field sample type	GR
MED_CODE	C	2	✓	Valid code list	Sample media code	0
SSMP_DEP	N	5.1	✓[1]	Field log book	Sample starting interval depth	0.0
ESMP_DEP	N	5.1	✓[1]	Field log book	Sample ending interval depth	2.0
DEP_UNIT	C	2	✓[1]	Field log book	Sample depth unit of measure	FT
LOG_BOOK	C	3		Field log book	Log book identification	LB1
COC	C	5		Chain of custody	Chain of custody identification	32467
S_METHOD	C	2	✓	Valid code list	Sample collection method	AH
COMMENT	C	255		Field log book	Sample collection comments	

[1] Required only for soil samples

Laboratory Information (LAB_SAMP)						
Field Name	Field Type	Field Length	Required	Source	Field Description	Example
ANA_TYPE	C	6	✓	Valid code list	Analysis type code	ORSVO
SMP_ID	C	12	✓	Client ID	Sample ID	0031-0001
LAB_CODE	C	6	✓	Valid code list	Analytic Laboratory code	DATACH
MATRIX	C	10	✓	Laboratory	Lab sample matrix	SOIL
METHOD	C	12	✓	Valid code list	Laboratory analytic method code	CLPSVO
PAR_UNIT	C	8	✓	Valid code list	Laboratory result unit of measure	UG/KG
RES_TYPE	C	3	✓	Valid code list	Analytic result type code	REG
SDG_NUM	C	10		Laboratory	Sample delivery group identifier	SAIS02

Laboratory Information (LAB_SAMP)

Field Name	Field Type	Field Length	Required	Source	Field Description	Example
FILTERED	L	1	✓	Chain of custody	Is the sample filtered?	F
DATE_ANA	D	8	✓	Laboratory	Laboratory sample analysis date	09/30/94
DATE_EXT	D	8		Laboratory	Laboratory sample extraction date	09/14/94
DATE_REC	D	8		Laboratory	Laboratory sample receipt date	09/15/94
DILU_FAC	N	9.3	✓	Laboratory	Laboratory sample dilution factor	1.0
EXT_METH	C	4		Laboratory	Laboratory sample extraction method	
INST_NUM	C	16		Laboratory	Laboratory instrument number	5100-D
LABSMPID	C	15	✓	Laboratory	Laboratory sample ID	CLP10596
LEVEL	C	3		Laboratory	Laboratory analytic level	LOW
PCT_SOL	N	6.2		Laboratory	Laboratory sample percent solids	86.00
SDG_REC	D	8		Client input	Sample delivery group receipt date	10/25/94
SMP_PH	N	4.1		Laboratory	Laboratory sample pH	7.9
TIME_ANA	C	4		Laboratory	Laboratory sample time of analysis	1245
WGT_VOL	N	9.4		Laboratory	Laboratory sample weight or volume	30.0
WV_UNIT	C	2		Laboratory	Laboratory sample weight or volume unit of measure	G

Chemical Information (CHEMICAL)

Field Name	Field Type	Field Length	Required	Source	Field Description	Example
ANA_TYPE	C	6	✓	Valid code list	Analysis type code	ORSVO
SMP_ID	C	12	✓	Client ID	Sample ID	0031-0001
RES_TYPE	C	3	✓	Valid code list	Analytic result type code	REG
METHOD	C	12	✓	Valid code list	Laboratory analytic method code	CLPSVO
PAR_CODE	C	12	✓	Valid code list	Parameter code	108-95-2
RESULTS	C	12	✓	Laboratory	Analytic result	380
ERROR	C	12		Laboratory	Uncertainty or error in analytic result (RADS only)	
DET_LIM	C	12		Laboratory	Detection limit	380
LABQUAL	C	6	✓	Laboratory	Laboratory qualifier	U
DATAQUAL	C	2		Client input	Data validation qualifier	U
VERIFIED	L	1		Client input	Was the analytic result verified?	T

Chemical Information (CHEMICAL)						
Field Name	Field Type	Field Length	Required	Source	Field Description	Example
VALIDATED	L	1		Client input	Was the analytic result validated?	T
VAL_CODE	C	16		Client input	Validation code	See QAAP

Tentatively Identified Compounds (TICS)						
Field Name	Field Type	Field Length	Required	Source	Field Description	Example
ANA_TYPE	C	6	✓	Valid code list	Analysis type code	ORSVO
SMP_ID	C	12	✓	Client ID	Sample ID	0031-0001
RES_TYPE	C	3	✓	Valid code list	Analytic result type code	REG
METHOD	C	12	✓	Valid code list	Laboratory analytic method code	CLPSVO
PAR_CODE	C	12		Valid code list	Parameter code	
RET_TIME	N	5.2		Laboratory	Retention time	37.94
NAME	C	50	✓	Laboratory	Compound name	ALKANE @ C32
RESULTS	C	12	✓	Laboratory	Analytic result	240
LABQUAL	C	6		Laboratory	Laboratory qualifier	J
DATAQUAL	C	2		Valid code list	Data validation qualifier	NJ
VERIFIED	L	1		Client input	Was the analytic result verified?	T
VALIDATED	L	1		Client input	Was the analytic result validated?	T
VAL_CODE	C	16		Client input	Validation code	See QAPP

Laboratory - indicates the information is provided by the contracted laboratory(s).

Client input - indicates that the contractor needs to input this data.

Client ID - indicates the contractor needs to use the client ID developed for the project.

Chain of Custody - indicates the data are found on the sample Chain of Custody form.

Field log book - indicates the information is provided in the contractor's field log book

Surveyor - indicates the information is provided by the contracted surveyor.

Valid Code List - indicates that only codes listed in the valid codes list are to be used. In cases where a code definition does not meet the needs of the data recorded, the data administrator will be contacted so that concurrence can be obtained in establishing required coding conventions.

ASCII data files that contain all valid code lists can be provided to all participating contractors. See Section 2.0 for the valid code lists.

3.2. Valid Code Lists

ANA_TYPE	Description
ANION	Common Anions
EPTOX	EP TOX Leachate
GENERA	General Chemistry
GEOTEC	Geotechnical
INORG	Metals
OILGRS	Oil and Grease
ORBTEX	BTEX Compounds
ORDIOX	Dioxins/Dibenzofurans
ORDRO	Diesel Range Organics
OREXP	Explosives
ORGRO	Gasoline Range Organics
ORHERB	Herbicides
ORMORO	Motor Oil Range Organics
ORMRO	Motor Oil Range Organics
ORPETH	Petroleum Hydrocarbons
ORPHNL	Phenols
ORPPB	Pesticides and/or PCBs
ORSVO	Semi-Volatile Organics
ORVOA	Volatile Organics
OTHER	Other
RAD	Radiological
TCLPHB	TCLP Herbicides
TCLPIN	TCLP Metals
TCLPPP	TCLP PCBs
TCLPR	TCLP Reactivity, Corrosivity
TCLPSV	TCLP Semi-Volatiles
TCLPVO	TCLP Volatiles

COORDSOURC	Description
DIGIT	Digitized
SURVEY	Surveyed
GPS	Global positioning system
OTHR	Other
UNK	Unknown

DATAQUAL	Description
	The material was analyzed for and was detected. The associated numerical value is the sample concentration
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit
J	The associated numerical value is an estimated quantity
R	The data are unusable (compound may or may not be present)
NJ	Presumptive evidence of presence of material
J	Presumptive evidence of the presence of the material at an estimated quantity
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity

FSMP_TYP	Description
AB	Ambient Blank
BB	Bottle Blank
FB	Field Blank
FR	Other Field
GC	Grab Composite
GR	Grab
OT	Field Duplicate
PC	Flow Composite
PE	Performance Evaluation
RI	Equipment Rinsate
SC	Spatial Composite
SP	Split Sample
TB	Trip Blank
TC	Temporal Composite
WP	Wipe

LAB_CODE	Description
DATAC	Data Chem
QUANT	Quanterra Environmental Services-Denver
WESTO	Weston
QSTER	Quanterra Environmental Services-Richland

MED_CODE	Description
0	Soil
1	Sediment
2	Air
3	Biota
4	Waste Material
5	Surface Water
6	Groundwater
7	Quality Control
8	Other

METHOD	Description
9045	pH
9081	Cation Exchange
ASTM D-425	Density
ASTM D-508	Saturated Hydraulic Conductivity
ASTM D1429	Specific Gravity
ASTM D2974	Organic Content / Moisture
ASTM D422	Hydrometer Analysis / Mechanical Grain Size Analysis
ASTMD2460-70	Radium-226
ASTMD2974-87	Organic Carbon
CLP 200.7	Metals by ICP, CLP Method 200.7
CLP 204.2	Antimony by Graphite Furnace, CLP Method 204.2
CLP 206.2	Arsenic by Graphite Furnace, CLP Method 206.2
CLP 210.2	Beryllium by Graphite Furnace, CLP Method 210.2
CLP 213.2	Cadmium by Graphite Furnace, CLP Method 213.2
CLP 218.2	Chromium by Graphite Furnace, CLP Method 218.2
CLP 239.2	Lead by Graphite Furnace, CLP Method 239.2
CLP 245.1	Mercury in water by manual cold vapor
CLP 245.2	Mercury in water by automated cold vapor, CLP 245.2
CLP 245.5	Mercury in Soil by Manual Cold Vapor, CLP Method
CLP 270.2	Selenium by Graphite Furnace, CLP Method 270.2
CLP 272.2	Silver by Graphite Furnace, CLP Method 272.2
CLP 279.2	Thallium by Graphite Furnace, CLP Method 272.2
CLP 335.2	Cyanide by one of the CLP Methods
CLPMET	Metals by CLP Method
CLPPCB	Pesticides/PCBs by GC/ECD, CLP Method 608
CLPSOW	Unknown CLP Method
CLPSVO	Semi-Volatiles by GC/MS, CLP Method 625
CLPVOA	Volatiles by CLP Method
EML AM-01	Americium-241
EPA 160.1	Dissolved Solids
EPA 160.2	Suspended Solids
EPA 200.7	Metals by ICP, Method 200.7
EPA 204.2	Antimony by Graphite Furnace, Method 204.2
EPA 206.2	Arsenic by Graphite Furnace, Method 206.2
EPA 210.2	Beryllium by Graphite Furnace, Method 210.2
EPA 213.2	Cadmium by Graphite Furnace, Method 213.2
EPA 218.2	Chromium by Graphite Furnace, Method 218.2
EPA 239.2	Lead by Graphite Furnace, Method 239.2
EPA 245.1	Mercury in water by manual cold vapor, EPA 245.1
EPA 245.2	Mercury in Water by Auto Cold Vapor, Method 245.2
EPA 245.5	Mercury in Soil by Manual Cold Vapor, Method 245.5
EPA 270.2	Selenium by Graphite Furnace, Method 270.2
EPA 272.2	Silver by Graphite Furnace, Method 272.2
EPA 279.2	Thallium by Graphite Furnace, Method 272.2
EPA 310.1	Alkalinity by Titrimetric (pH 4.5), CAWW Method 310.1
EPA 310.2	Alkalinity
EPA 325.1	Chloride by CAWW Method 325.1
EPA 325.2	Chloride by CAWW Method 325.2

METHOD	Description
EPA 325.3	Chloride by CAWW Method 325.3
EPA 335.2	Cyanide by one of the EPA Methods
EPA 340.2	Fluoride by Potentiometric SIE, CAWW Method 340.2
EPA 350.1	Ammonia
EPA 351.2	Total Nitrogen
EPA 351.3	Nitrogen, CAWW Method
EPA 353.2	Nitrate-Nitrite by CAWW Method 353.2
EPA 354.1	Nitrite by Spectrometric, CAWW 354.1
EPA 365.1	Total Phosphorous Method EPA 365.1
EPA 365.3	Total Phosphorous Method EPA 365.3
EPA 365.4	Total Phosphorous Method EPA 365.4
EPA 375.2	Sulfate by Turbidimetric, CAWW Method 375.2
EPA 375.4	Sulfate by Turbidimetric, CAWW Method 375.4
EPA 415.1	Total Organic Carbon CAWW Method 415.1
EPA 415.2	Total Organic Carbon CAWW Method 415.2
EPA 418.1	Total Recoverable Petroleum Hydrocarbons, CAWW Method 418.1
EPA 601	Volatile Organics, CAWW Method 601
EPA 900	Gross Alpha and Gross Beta Radioactivity
EPA 901	Radioactive Method 901
EPA 901.0	Radioactive Method 901.0
EPA 901.1	Radioactive Method 901.1
EPA 903	Alpha-Emitting Radium Isotopes, Method 903
EPA 903.1	EPA 903.1
EPA 905	Radioactive Strontium, Method 905
EPA 905.1	EPA 905.1
EPA 906	Tritium, Method 906
EPA 906.0	Tritium, Method 906.0
EPA 906.1	Tritium, Method 906.1
EPA 907.0	EPA 907.0
EPA 908	Uranium by Radiochemical, Method 908
EPA 908.0	Uranium by Radiochemical, Method 908
ESM430	ESM430
HASL 300	Unknown HASL 300 Method
INSITG	In-situ Gamma Spectrometry with portable intrinsic germanium detector
NAS 1960	Thorium Isotopes / Strontium-90
NAS 1962	Uranium Isotopes
NAS 1965	Plutonium Isotopes
NDI 1986	Gamma Spectrometry
NDI1986	Gamma Spectrometry
PD8030-1302	Plutonium in Large Soil Samples by an Acid-Leach Anion Exchange Method
PD8030-1343	Plutonium in Small Soil Samples by an Acid-Leach Anion Exchange Method
PD8030-2403	Tritium in Urine
PD8030-3605	Uranium, Thorium Lead-210 in Coal and other Solid Environmental Samples
SW846 8010	Halogenated Volatile Organics., SW846 Method 8010
SW846 8021	Volatile Organics by Purge & Trap GC/PID, SW846 Method 8021
SW846 8030	Acrolein, Acrylonitrile, Acetonitrile
SW846 8080	Organochlorine Pesticides/PCBs, SW846 Method 8080
SW846 8120	Chlorinated Hydrocarbons, SW846 Method 8120
SW846 8240	Volatiles by GC/MS, SW846 Method 8240

METHOD	Description
SW846 8270	Semi-Volatiles by GC/MS Capillary Column, SW846 Method 8270
SW846 8280	Polychlorinated Dibenzo-p-Dioxins/Dibenzofurans
SW846 8290	SW846 8290
SW846 8330	Explosives
SW846 8460	SW846 8460
SW846 9036	Sulfate by Colorimetric Automated Methyl Thymol Blue AA II, SW846 Method 9036
SW846 9045	SW846 9045
SW846 9081	SW846 9081
SW846 9250	Chloride by SW846 Method 9250
TDMS	Total Aromatics
UNKNOWN	Unknown method

PAR_CODE	Parameter name	Database table
100	% Clay	CHEMICAL
54100	% Gravel	CHEMICAL
8000	% Sand	CHEMICAL
8400	% Silt	CHEMICAL
630-20-6	1,1,1,2-Tetrachloroethane	CHEMICAL
71-55-6	1,1,1-Trichloroethane	CHEMICAL
79-34-5	1,1,2,2-Tetrachloroethane	CHEMICAL
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	CHEMICAL
79-00-5	1,1,2-Trichloroethane	CHEMICAL
75-34-3	1,1-Dichloroethane	CHEMICAL
75-35-4	1,1-Dichloroethene	CHEMICAL
563-58-6	1,1-Dichloropropene	CHEMICAL
35822-46-9	1,2,3,4,6,7,8-HpCDD	CHEMICAL
67562-39-4	1,2,3,4,6,7,8-HpCDF	CHEMICAL
55673-89-7	1,2,3,4,7,8,9-HpCDF	CHEMICAL
39227-28-6	1,2,3,4,7,8-HxCDD	CHEMICAL
70648-26-9	1,2,3,4,7,8-HxCDF	CHEMICAL
57653-85-7	1,2,3,6,7,8-HxCDD	CHEMICAL
57117-44-9	1,2,3,6,7,8-HxCDF	CHEMICAL
19408-74-3	1,2,3,7,8,9-HxCDD	CHEMICAL
72918-21-9	1,2,3,7,8,9-HxCDF	CHEMICAL
40321-76-4	1,2,3,7,8-PeCDD	CHEMICAL
57117-41-6	1,2,3,7,8-PeCDF	CHEMICAL
87-61-6	1,2,3-Trichlorobenzene	CHEMICAL
96-18-4	1,2,3-Trichloropropane	CHEMICAL
120-82-1	1,2,4-Trichlorobenzene	CHEMICAL
95-63-6	1,2,4-Trimethylbenzene	CHEMICAL
156-59-2	1,2-cis-Dichloroethene	CHEMICAL
96-12-8	1,2-Dibromo-3-chloropropane	CHEMICAL
106-93-4	1,2-Dibromoethane	CHEMICAL
95-50-1	1,2-Dichlorobenzene	CHEMICAL
107-06-2	1,2-Dichloroethane	CHEMICAL
540-59-0	1,2-Dichloroethene	CHEMICAL
78-87-5	1,2-Dichloropropane	CHEMICAL
135-01-3	1,2-Diethylbenzene	CHEMICAL

PAR_CODE	Parameter name	Database table
156-60-5	1,2-trans-Dichloroethene	CHEMICAL
108-67-8	1,3,5-Trimethylbenzene	CHEMICAL
99-35-4	1,3,5-Trinitrobenzene	CHEMICAL
10061-01-5	1,3-cis-Dichloropropene	CHEMICAL
541-73-1	1,3-Dichlorobenzene	CHEMICAL
142-28-9	1,3-Dichloropropane	CHEMICAL
141-93-5	1,3-Diethylbenzene	CHEMICAL
99-65-0	1,3-Dinitrobenzene	CHEMICAL
10061-02-6	1,3-trans-Dichloropropene	CHEMICAL
106-46-7	1,4-Dichlorobenzene	CHEMICAL
105-05-5	1,4-Diethylbenzene	CHEMICAL
544-10-5	1-Chlorohexane	CHEMICAL
108-60-1	2,2'-oxybis(1-chloropropane)	CHEMICAL
594-20-7	2,2-Dichloropropane	CHEMICAL
60851-34-5	2,3,4,6,7,8-HxCDF	CHEMICAL
57117-31-4	2,3,4,7,8-PeCDF	CHEMICAL
1746-01-6	2,3,7,8-TCDD	CHEMICAL
51207-31-9	2,3,7,8-TCDF	CHEMICAL
95-95-4	2,4,5-Trichlorophenol	CHEMICAL
88-06-2	2,4,6-Trichlorophenol	CHEMICAL
118-96-7	2,4,6-Trinitrotoluene	CHEMICAL
120-83-2	2,4-Dichlorophenol	CHEMICAL
105-67-9	2,4-Dimethylphenol	CHEMICAL
51-28-5	2,4-Dinitrophenol	CHEMICAL
121-14-2	2,4-Dinitrotoluene	CHEMICAL
606-20-2	2,6-Dinitrotoluene	CHEMICAL
35572-78-2	2-Amino-4,6-dinitrotoluene	CHEMICAL
120-32-1	2-Benzyl-4-Chlorophenol	CHEMICAL
78-93-3	2-Butanone	CHEMICAL
110-75-8	2-Chloroethylvinylether	CHEMICAL
91-58-7	2-Chloronaphthalene	CHEMICAL
95-57-8	2-Chlorophenol	CHEMICAL
95-49-8	2-Chlorotoluene	CHEMICAL
591-78-6	2-Hexanone	CHEMICAL
91-57-6	2-Methylnaphthalene	CHEMICAL
95-48-7	2-Methylphenol	CHEMICAL
88-74-4	2-Nitroaniline	CHEMICAL
88-75-5	2-Nitrophenol	CHEMICAL
88-72-2	2-Nitrotoluene	CHEMICAL
91-94-1	3,3'-Dichlorobenzidine	CHEMICAL
618-87-1	3,5-Dinitroaniline	CHEMICAL
99-09-2	3-Nitroaniline	CHEMICAL
99-08-1	3-Nitrotoluene	CHEMICAL
72-54-8	4,4'-DDD	CHEMICAL
72-55-9	4,4'-DDE	CHEMICAL
50-29-3	4,4'-DDT	CHEMICAL
534-52-1	4,6-Dinitro-o-Cresol	CHEMICAL
1946-51-0	4-Amino-2,6-Dinitrotoluene	CHEMICAL
101-55-3	4-Bromophenyl-phenyl Ether	CHEMICAL

PAR_CODE	Parameter name	Database table
59-50-7	4-chloro-3-methylphenol	CHEMICAL
106-47-8	4-Chloroaniline	CHEMICAL
7005-72-3	4-Chlorophenyl-phenylether	CHEMICAL
106-43-4	4-Chlorotoluene	CHEMICAL
108-10-1	4-Methyl-2-pentanone	CHEMICAL
106-44-5	4-Methylphenol	CHEMICAL
100-01-6	4-Nitroaniline	CHEMICAL
100-02-7	4-Nitrophenol	CHEMICAL
99-99-0	4-Nitrotoluene	CHEMICAL
83-32-9	Acenaphthene	CHEMICAL
208-96-8	Acenaphthylene	CHEMICAL
67-64-1	Acetone	CHEMICAL
75-05-8	Acetonitrile	CHEMICAL
107-13-1	Acrylonitrile	CHEMICAL
AC-227	Actinium-227	CHEMICAL
14331-83-0	Actinium-228	CHEMICAL
309-00-2	Aldrin	CHEMICAL
ALK	Alkalinity	CHEMICAL
ALHCO3	Alkalinity: HCO3	CHEMICAL
5103-71-9	Alpha Chlordane	CHEMICAL
ALPHA	Alpha, Total	CHEMICAL
319-84-6	Alpha-BHC	CHEMICAL
7429-90-5	Aluminum	CHEMICAL
14596-10-2	Americium-241	CHEMICAL
AMM	Ammonia	CHEMICAL
120-12-7	Anthracene	CHEMICAL
7440-36-0	Antimony	CHEMICAL
SB-124	Antimony-124	CHEMICAL
SB-125	Antimony-125	CHEMICAL
12674-11-2	Aroclor-1016	CHEMICAL
11104-28-2	Aroclor-1221	CHEMICAL
11141-16-5	Aroclor-1232	CHEMICAL
53469-21-9	Aroclor-1242	CHEMICAL
12672-29-6	Aroclor-1248	CHEMICAL
11097-69-1	Aroclor-1254	CHEMICAL
11096-82-5	Aroclor-1260	CHEMICAL
7440-38-2	Arsenic	CHEMICAL
7440-39-3	Barium	CHEMICAL
BA-133	Barium-133	CHEMICAL
BA-140	Barium-140	CHEMICAL
71-43-2	Benzene	CHEMICAL
92-87-5	Benzidine	CHEMICAL
56-55-3	Benzo(a)anthracene	CHEMICAL
50-32-8	Benzo(a)pyrene	CHEMICAL
205-99-2	Benzo(b)fluoranthene	CHEMICAL
191-24-2	Benzo(g,h,i)perylene	CHEMICAL
207-08-9	Benzo(k)fluoranthene	CHEMICAL
65-85-0	Benzoic Acid	CHEMICAL
100-51-6	Benzyl Alcohol	CHEMICAL

PAR_CODE	Parameter name	Database table
7440-41-7	Beryllium	CHEMICAL
13966-02-4	Beryllium-7	CHEMICAL
BETA	Beta, Total	CHEMICAL
319-85-7	Beta-BHC	CHEMICAL
BOD	Bio Oxygen Demand	CHEMICAL
111-91-1	Bis(2-chloroethoxy)methane	CHEMICAL
111-44-4	Bis(2-chloroethyl)ether	CHEMICAL
117-81-7	Bis(2-ethylhexyl)phthalate	CHEMICAL
7440-69-9	Bismuth	CHEMICAL
BI-207	Bismuth-207	CHEMICAL
BI-210	Bismuth-210	CHEMICAL
BI-210M	Bismuth-210M	CHEMICAL
BI-211	Bismuth-211	CHEMICAL
14913-49-6	Bismuth-212	CHEMICAL
14733-03-0	Bismuth-214	CHEMICAL
7440-42-8	Boron	CHEMICAL
108-86-1	Bromobenzene	CHEMICAL
74-97-5	Bromochloromethane	CHEMICAL
75-27-4	Bromodichloromethane	CHEMICAL
75-25-2	Bromoform	CHEMICAL
74-83-9	Bromomethane	CHEMICAL
85-68-7	Butyl Benzyl Phthalate	CHEMICAL
C4C8	C4-C8 Cycloalkanes/Alkenes	CHEMICAL
7440-43-9	Cadmium	CHEMICAL
7440-70-2	Calcium	CHEMICAL
86-74-8	Carbazole	CHEMICAL
75-15-0	Carbon Disulfide	CHEMICAL
56-23-5	Carbon Tetrachloride	CHEMICAL
153861900	Cation Exchange	CHEMICAL
CEC	Cation Exchange Capacity as Na	CHEMICAL
CERADA	Ceridaphnia	CHEMICAL
7440-45-1	Cerium	CHEMICAL
CE-139	Cerium-139	CHEMICAL
CE-141	Cerium-141	CHEMICAL
CE-144	Cerium-144	CHEMICAL
13967-70-9	Cesium-134	CHEMICAL
10045-97-3	Cesium-137	CHEMICAL
COD	Chemical Oxygen Demand	CHEMICAL
57-74-9	Chlordane	CHEMICAL
CL	Chloride	CHEMICAL
7782-50-5	Chlorine	CHEMICAL
108-90-7	Chlorobenzene	CHEMICAL
75-00-3	Chloroethane	CHEMICAL
67-66-3	Chloroform	CHEMICAL
74-87-3	Chloromethane	CHEMICAL
25168-05-2	Chlorotoluene	CHEMICAL
7440-47-3	Chromium	CHEMICAL
CR6	Chromium, Hexavalent	CHEMICAL
CR-51	Chromium-51	CHEMICAL

PAR_CODE	Parameter name	Database table
218-01-9	Chrysene	CHEMICAL
7440-48-4	Cobalt	CHEMICAL
CO-57	Cobalt-57	CHEMICAL
CO-58	Cobalt-58	CHEMICAL
10198-40-0	Cobalt-60	CHEMICAL
7440-50-8	Copper	CHEMICAL
57-12-5	Cyanide	CHEMICAL
319-86-8	Delta-BHC	CHEMICAL
84-74-2	Di-n-butyl Phthalate	CHEMICAL
117-84-0	Di-n-octyl Phthalate	CHEMICAL
53-70-3	Dibenzo(a,h)anthracene	CHEMICAL
132-64-9	Dibenzofuran	CHEMICAL
124-48-1	Dibromochloromethane	CHEMICAL
74-95-3	Dibromomethane	CHEMICAL
75-71-8	Dichlorodifluoromethane	CHEMICAL
60-57-1	Dieldrin	CHEMICAL
DRO	Diesel Range Organics	CHEMICAL
84-66-2	Diethyl Phthalate	CHEMICAL
131-11-3	Dimethyl Phthalate	CHEMICAL
DO	Dissolved Oxygen	CHEMICAL
TDS	Dissolved Solids	CHEMICAL
7429-91-6	Dypsprosium	CHEMICAL
ECOLI	E. Coli	CHEMICAL
959-98-8	Endosulfan I	CHEMICAL
33213-65-9	Endosulfan II	CHEMICAL
1031-07-8	Endosulfan Sulfate	CHEMICAL
72-20-8	Endrin	CHEMICAL
7421-93-4	Endrin Aldehyde	CHEMICAL
53494-70-5	Endrin Ketone	CHEMICAL
7440-52-0	Erbium	CHEMICAL
100-41-4	Ethylbenzene	CHEMICAL
7440-53-1	Europium	CHEMICAL
14683-23-9	Europium-152	CHEMICAL
15585-10-1	Europium-154	CHEMICAL
EU-155	Europium-155	CHEMICAL
FECAL	Fecal Coliform Bac	CHEMICAL
206-44-0	Fluoranthene	CHEMICAL
86-73-7	Fluorine	CHEMICAL
FL	Fluoride	CHEMICAL
462-06-6	Fluorobenzene	CHEMICAL
7440-54-2	Gadolinium	CHEMICAL
GD-153	Gadolinium-153	CHEMICAL
5103-74-2	Gamma Chlordane	CHEMICAL
58-89-9	Gamma-BHC (Lindane)	CHEMICAL
GRO	Gasoline Range Organics	CHEMICAL
HARDCA	Hardness as CaCO3	CHEMICAL
76-44-8	Heptachlor	CHEMICAL
1024-57-3	Heptachlor Epoxide	CHEMICAL
118-74-1	Hexachlorobenzene	CHEMICAL

PAR_CODE	Parameter name	Database table
87-68-3	Hexachlorobutadiene	CHEMICAL
77-47-4	Hexachlorocyclopentadiene	CHEMICAL
67-72-1	Hexachloroethane	CHEMICAL
110-54-3	Hexane	CHEMICAL
2691-41-0	HMX	CHEMICAL
7440-60-0	Holmium	CHEMICAL
37871-00-4	HpCDD	CHEMICAL
38998-75-3	HpCDF	CHEMICAL
34465-46-8	HxCDD	CHEMICAL
55684-94-1	HxCDF	CHEMICAL
193-39-5	Indeno(1,2,3-cd)pyrene	CHEMICAL
IOD	Iodide	CHEMICAL
I-131	Iodine-131	CHEMICAL
74-88-4	Iodomethane	CHEMICAL
IR-192	Iridium-192	CHEMICAL
7439-89-6	Iron	CHEMICAL
FE-59	Iron-59	CHEMICAL
78-59-1	Isophorone	CHEMICAL
98-82-8	Isopropyl Benzene	CHEMICAL
7439-91-0	Lanthanum	CHEMICAL
LA-140	Lanthanum-140	CHEMICAL
7439-92-1	Lead	CHEMICAL
PB-210	Lead-210	CHEMICAL
15092-94-1	Lead-212	CHEMICAL
15067-28-4	Lead-214	CHEMICAL
7439-93-2	Lithium	CHEMICAL
7439-94-3	Lutetium	CHEMICAL
13777-61-2	m&p-Xylene	CHEMICAL
7439-95-4	Magnesium	CHEMICAL
7439-96-5	Manganese	CHEMICAL
MN-54	Manganese-54	CHEMICAL
5711900	Maximum Density	CHEMICAL
571582400	Maximum Dry Density	CHEMICAL
7439-97-6	Mercury	CHEMICAL
HG-203	Mercury-203	CHEMICAL
72-43-5	Methoxychlor	CHEMICAL
75-09-2	Methylene Chloride	CHEMICAL
717423200	Minimum Dry Density	CHEMICAL
3711900	Minimum Density	CHEMICAL
45800	Moisture	CHEMICAL
7439-98-7	Molybdenum	CHEMICAL
MORO	Motor Oil Range Organics	CHEMICAL
104-51-8	n-Butylbenzene	CHEMICAL
621-64-7	N-Nitroso-di-n-propylamine	CHEMICAL
86-30-6	N-Nitrosodiphenylamine	CHEMICAL
103-65-1	n-Propylbenzene	CHEMICAL
91-20-3	Naphthalene	CHEMICAL
7440-00-8	Neodymium	CHEMICAL
NP-237	Neptunium-237	CHEMICAL

PAR_CODE	Parameter name	Database table
7440-02-0	Nickel	CHEMICAL
NB-95	Niobium-95	CHEMICAL
NO3	Nitrate	CHEMICAL
NO2/NO3	Nitrate-Nitrite-N	CHEMICAL
1497-55-8	Nitrate/Nitrite	CHEMICAL
NO2	Nitrite	CHEMICAL
98-95-3	Nitrobenzene	CHEMICAL
NITROGEN	Nitrogen	CHEMICAL
55-63-0	Nitroglycerin	CHEMICAL
348-51-6	O-Chlorofluorobenzene	CHEMICAL
95-47-6	o-Xylene	CHEMICAL
3268-87-9	OCDD	CHEMICAL
39001-02-0	OCDF	CHEMICAL
OIL	Oil	CHEMICAL
OMC	Optimum Moisture Content	CHEMICAL
TOC	Organic Carbon	CHEMICAL
7683200	Organic Content	CHEMICAL
MOIST	Organic Content / Moisture	CHEMICAL
99-87-6	p-Isopropyltoluene	CHEMICAL
36088-22-9	PeCDDl	CHEMICAL
30402-15-4	PeCDF	CHEMICAL
87-86-5	Pentachlorophenol	CHEMICAL
%MOISTURE	Percent Moisture	CHEMICAL
%SOLIDS	Percent Solids	CHEMICAL
PERM	Permeability	CHEMICAL
78-11-5	PETN	CHEMICAL
1006	pH	CHEMICAL
85-01-8	Phenanthrene	CHEMICAL
108-95-2	Phenol	CHEMICAL
PHENOLICS	Phenolics	CHEMICAL
PHENOLS	Phenols	CHEMICAL
PO4T	Phosphate	CHEMICAL
PHOS	Phosphorous	CHEMICAL
7723-14-0	Phosphorous	CHEMICAL
PIMEP	Pimephales	CHEMICAL
PU-238/239	Plutonium 238/239	CHEMICAL
13981-16-3	Plutonium-238	CHEMICAL
PU-239/240	Plutonium-239/240	CHEMICAL
PU-242	Plutonium-242	CHEMICAL
PO-210	Polonium-210	CHEMICAL
1336-36-3	Polychlorinated Biphenyl (PCB)	CHEMICAL
7440-09-7	Potassium	CHEMICAL
13966-00-2	Potassium-40	CHEMICAL
7440-10-0	Praseodym	CHEMICAL
13981-14-1	Protactinium-233	CHEMICAL
15100-28-4	Protactinium-234 metastable	CHEMICAL
15117-48-3	Pu-239	CHEMICAL
129-00-0	Pyrene	CHEMICAL
15623-45-7	Radium-223	CHEMICAL

PAR_CODE	Parameter name	Database table
13233-32-4	Radium-224	CHEMICAL
RA-225	Radium-225	CHEMICAL
13982-63-3	Radium-226	CHEMICAL
RA-228	Radium-228	CHEMICAL
121-82-4	RDX	CHEMICAL
EH	Redox Potential	CHEMICAL
RU-103	Ruthenium-103	CHEMICAL
13967-48-1	Ruthenium-106	CHEMICAL
7440-19-9	Samarium	CHEMICAL
7319568600	Saturated Hydraulic Conductivity	CHEMICAL
SC-46	Scandium-46	CHEMICAL
135-98-8	sec-Butylbenzene	CHEMICAL
7782-49-2	Selenium	CHEMICAL
7440-21-3	Silicon	CHEMICAL
7440-22-4	Silver	CHEMICAL
AG-110	Silver-110	CHEMICAL
7440-23-5	Sodium	CHEMICAL
13966-32-0	Sodium-22	CHEMICAL
EC	Specific Conductance	CHEMICAL
79125400	Specific Gravity	CHEMICAL
SG	Specific Gravity	CHEMICAL
SR-85	Strontium-85	CHEMICAL
14158-27-1	Strontium-89	CHEMICAL
10098-97-2	Strontium-90	CHEMICAL
100-42-5	Styrene	CHEMICAL
SO4	Sulfate	CHEMICAL
18496-25-8	Sulfide	CHEMICAL
TSS	Suspended Solids	CHEMICAL
7440-25-7	Tantalum	CHEMICAL
41903-57-5	TCDD, Total	CHEMICAL
30402-14-3	TCDF	CHEMICAL
TC-99	Techetium-99	CHEMICAL
7440-27-9	Terbium	CHEMICAL
98-06-6	tert-Butylbenzene	CHEMICAL
127-18-4	Tetrachloroethene	CHEMICAL
479-45-8	Tetryl	CHEMICAL
7440-28-0	Thallium	CHEMICAL
14913-50-9	Thallium-208	CHEMICAL
TH-227	Thorium-227	CHEMICAL
14274-82-9	Thorium-228	CHEMICAL
14269-63-7	Thorium-230	CHEMICAL
7440-29-1	Thorium-232	CHEMICAL
15065-10-8	Thorium-234	CHEMICAL
7440-30-4	Thulium	CHEMICAL
7440-31-5	Tin	CHEMICAL
SN-113	Tin-113	CHEMICAL
SN-126	Tin-126	CHEMICAL
108-88-3	Toluene	CHEMICAL
AHYD	Total Aromatic Hydrocarbons	CHEMICAL

PAR_CODE	Parameter name	Database table
TOGRHY	Total C5 TO C11 Petroleum Hydrocarbons	CHEMICAL
THAHYC	Total Halogenated Hydrocarbons	CHEMICAL
TOX	Total Organic Halides	CHEMICAL
IPHC	Total Recoverable Petroleum Hydrocarbon	CHEMICAL
RATOT	Total Radium	CHEMICAL
TSVHYC	Total Semivolatile Hydrocarbons	CHEMICAL
8001-35-2	Toxaphene	CHEMICAL
79-01-6	Trichloroethene	CHEMICAL
75-69-4	Trichlorofluoromethane	CHEMICAL
10028-17-8	Tritium	CHEMICAL
7440-61-1	Uranium	CHEMICAL
UDAUGH	Uranium Daughters	CHEMICAL
U-233	Uranium-233	CHEMICAL
13966-29-5	Uranium-234	CHEMICAL
15117-96-1	Uranium-235	CHEMICAL
U-235/236	Uranium-235/236	CHEMICAL
U-236	Uranium-236	CHEMICAL
24678-82-8	Uranium-238	CHEMICAL
7440-62-2	Vanadium	CHEMICAL
108-05-4	Vinyl Acetate	CHEMICAL
75-01-4	Vinyl Chloride	CHEMICAL
1330-20-7	Xylenes, Total	CHEMICAL
7440-64-4	Ytterbium	CHEMICAL
Y-88	Yttrium-88	CHEMICAL
7440-66-6	Zinc	CHEMICAL
ZN-65	Zinc-65	CHEMICAL
ZR-95	Zirconium-95	CHEMICAL
ALK	Alkalinity	FIELD_DATA
COND	Conductivity	FIELD_DATA
CCCH1	Contamination Criteria Channel 1	FIELD_DATA
CCCH2	Contamination Criteria Channel 2	FIELD_DATA
CCCOC	Contamination Criteria Out Channel	FIELD_DATA
DO	Dissolved Oxygen	FIELD_DATA
FIDCH1	Fidler Channel 1	FIELD_DATA
FIDCH2	Fidler Channel 2	FIELD_DATA
FIDOC	Fidler Out Channel	FIELD_DATA
WFLO	Flow	FIELD_DATA
PH	Potential of Hydrogen	FIELD_DATA
EH	Redox Potential	FIELD_DATA
EC	Specific Conductance	FIELD_DATA
TEMP	Temperature	FIELD_DATA
TURB	Turbidity	FIELD_DATA
WLEVEL	Water Level	FIELD_DATA

PAR_UNIT	Description	Database table
BQ/L	Bequerels per Liter	LAB_SAMP
DPM/G	Disintegrations per Minute per Gram	LAB_SAMP
MG/KG	Milligrams per Kilogram	LAB_SAMP

PAR_UNIT	Description	Database table
MG/L	Milligrams per Liter	LAB_SAMP
NCI/L	NanoCuries per Liter	LAB_SAMP
NG/G	Nanograms per Gram	LAB_SAMP
PCI/G	PicoCuries per Gram	LAB_SAMP
PCI/L	PicoCuries per Liter	LAB_SAMP
PCI/ML	PicoCuries per Milliliter	LAB_SAMP
PG/G	Picograms per Gram	LAB_SAMP
UG/G	Micrograms per Gram	LAB_SAMP
UG/KG	Micrograms per Kilogram	LAB_SAMP
UG/L	Micrograms per Liter	LAB_SAMP
UG/ML	Micrograms per Liter	LAB_SAMP
%	Percent	FLD_DATA
C	Degrees Celsius	FLD_DATA
CFU/G	Colony Forming Units/Gram	FLD_DATA
CFU/G	Colony Forming Units/Gram Oven Drie	FLD_DATA
CFU/ML	Colony Forming Units/Milliliter	FLD_DATA
CFU/ML	Colony Forming Units/ML	FLD_DATA
CM/S	Centimeters/Second	FLD_DATA
COL/10	Coliform/100 milliliters	FLD_DATA
CPM	Counts per Minute	FLD_DATA
F	Degrees Fahrenheit	FLD_DATA
G/CC	Grams per Cubic Centimeter	FLD_DATA
L/MIN	Liters per Minute	FLD_DATA
MEQ/100	Milliequivalents/100 Grams	FLD_DATA
NTU	National Thermal Units	FLD_DATA
PCF	Pounds per Cubic Foot	FLD_DATA
STD UN	pH Standard Units	FLD_DATA

RES_TYPE	Description
DIL	Result from a dilution analysis
FLD	Result from a field analysis
REA	Result from a reanalysis
REG	Result from a normal analysis
REO	Result before a reanalysis
SCR	Result from a screening analysis

S_METHOD	Description
	Unknown
AC	Auger, continuous flight
AH	Auger, hand
AO	Auger, hollow stem
AP	Pump, air lift
B	Bailer
CN	Air canister
CS	Clam shell
DP	Dipper
KS	Kemmerer Sampler

S_METHOD	Description
NA	Not Applicable
PC	Pump, centrifugal
PI	Pump, piston
PL	Pump, suction lift
PP	Pump, peristaltic
PS	Pump, submersible
SC	Scoop
SS	Split spoon
SV	Shovel
TR	Trowel
W	Swab or Wipe

STA_TYPE	Description
W	Well
BH	Borehole
NA	Not Applicable
SL	Surface location
OT	Other

3.3. Example RTL EDD Format

Example of SPATIAL.CSV format:

```
"OU4","Miami-Erie Canal","XXX","XXX CANAL
    POINT",1463628.58900,594510.70770,694.50000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","W","W CANAL POINT",1463716.19730,595029.06630,691.20000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YS","YS CANAL POINT",1463884.72550,595821.19190,693.40000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YYS1","YYS1 WEST BANK LOW
    POINT",1463982.99500,596328.21550,691.90000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YYS2","YYS2 WEST BANK HIGH
    POINT",1464008.53230,596317.84430,699.50000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YYS3","YYS3 WEST CANAL
    POINT",1464033.33360,596308.39740,694.50000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YYS4","YYS4 EAST CANAL
    POINT",1464042.89950,596311.84160,695.90000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YYS5","YYS5 EAST BANK HIGH
    POINT",1464054.75130,596304.82690,701.20000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YYS6","YYS6 EAST BANK LOW
    POINT",1464064.46470,596301.36540,700.40000,"OH83","","SURVEY","BH"
"OU4","Miami-Erie Canal","YQ1","YQ1 WEST BANK LOW
    POINT",1464201.94930,596986.45170,696.40000,"OH83","","SURVEY","BH"
```

Example of FLD_DATA.CSV format:

```
"MND21-2305","900000050",19940919,"1100","DO","10.4","MG/L","1","","SWSD"
"MND21-2305","900000050",19940919,"1100","PH","9.08","SU","1","","SWSD"
"MND21-2305","900000050",19940919,"1100","EC","1.10","UMHOS","1","","SWSD"
"MND21-2305","900000050",19940919,"1100","TEMP","21.0","C","1","","SWSD"
"MND21-2305","900000050",19940919,"1100","ALK","34.0","MG/L","1","","SWSD"
"MND21-2305","900000050",19940919,"1100","EH","147","MVOLTS","1","","SWSD"
"MND21-2305","900000051",19940919,"1100","EH","147","MVOLTS","1","","SWSD"
"MND21-2305","900000051",19940919,"1100","EC","1.10","UMHOS","1","","SWSD"
"MND21-2305","900000051",19940919,"1100","TEMP","21.0","C","1","","SWSD"
"MND21-2305","900000051",19940919,"1100","PH","9.08","SU","1","","SWSD"
```

Example of FLD_SAMP.CSV format:

```
"XXX","MND40","012001","MND40-2001-0001",T,19920727,"1057","","GR","0",0.0,1.0,"FT","","","SS",""
"XXX","MND40","012002","MND40-2001-0002",T,19920727,"1111","","GR","0",1.0,2.0,"FT","","","SS",""
"XXX","MND40","012003","MND40-2001-0003",T,19920727,"1145","","GR","0",2.0,3.0,"FT","","","SS",""
"YS","MND40","022001","MND40-2002-0001",T,19920728,"848","","GR","0",0.0,1.0,"FT","","","SS",""
"YS","MND40","022002","MND40-2002-0002",T,19920728,"907","","GR","0",1.0,2.0,"FT","","","SS",""
"YS","MND40","022003","MND40-2002-0003",T,19920728,"926","","GR","0",2.0,3.0,"FT","","","SS",""
"YS","MND40","022004","MND40-2002-0004",T,19920728,"950","","GR","0",3.0,4.0,"FT","","","SS",""
"YS","MND40","022005","MND40-2002-0005",T,19920728,"1013","","GR","0",4.0,5.0,"FT","","","SS",""
"YYS1","MND40","MC0032001","MND40-2003-0001",T,19920721,"1605","","GR","0",0.0,1.0,"FT","","","SS",""
"YYS1","MND40","MC0032002","MND40-2003-0002",T,19920721,"1625","","GR","0",1.0,2.0,"FT","","","SS",""
```

Example of LAB_SAMP.CSV format:

```
"INORG","012001","DATACH","SOIL","UNKNOWN","MG/KG","REG","SAIM02",,        ,
,19920728,0.000,"","","CLP105","LOW",87.00,         ,0.0,"0",0.0000,""
"ORSVO","012002","DATACH","SOIL","CLPSVO","UG/KG","REG","SAIS02",,19920823,19920731,19920728,1.000,"","5100-
D","CLP10594","LOW",85.00,         ,7.6,"1607",30.0000,"G"
"ORPPB","012003","DATACH","SOIL","CLPPCB","UG/KG","REG","SAIP02",,19920814,19920731,19920728,1.000,"SONC",""
,"CLP-10594","NA",85.00,         ,7.6,"0",30.0000,"G"
"INORG","022001","DATACH","SOIL","CLPMET","MG/KG","REG","SAIM02",,19920804,         ,19920728,1.000,"","TAA-
II-C","CLP105","LOW",87.00,         ,0.0,"1833",0.0000,""
"INORG","022002","DATACH","SOIL","CLPMET","MG/KG","REG","SAIM02",,        ,
,19920728,0.000,"","","CLP105","LOW",87.00,         ,0.0,"0",0.0000,""
"INORG","022003","DATACH","SOIL","CLPMET","MG/KG","REG","SAIM02",,        ,
,19920728,0.000,"","","CLP105","LOW",87.00,         ,0.0,"0",0.0000,""
"INORG","022004","DATACH","SOIL","CLPMET","MG/KG","REG","SAIM02",,19920813,         ,19920728,1.000,"","AAS-
CVC","CLP105","LOW",87.00,         ,0.0,"1522",0.0000,""
"INORG","022005","DATACH","SOIL","CLPMET","MG/KG","REG","SAIM02",,        ,
,19920728,0.000,"","","CLP105","LOW",87.00,         ,0.0,"0",0.0000,""
"INORG","MC0032001","DATACH","SOIL","CLPMET","MG/KG","REG","SAIM02",,        ,
,19920728,0.000,"","","CLP105","LOW",87.00,         ,0.0,"0",0.0000,""
"ORVOA","MC0032002","DATACH","SOIL","CLPVOA","UG/KG","REG","SAIV02",,19920803,
,19920728,1.000,"","5100-E","CLP10594","LOW",85.00,         ,0.0,"1449",5.0000,"G"
"RAD","MC0032003","PACE","SOIL","EPA 906","PCI/G","REG","D20729501",,19920910,        ,
,0.000,"","LSC1","65-0126714","NA",86.30,         ,0.0,"0",107.8000,"G"
"RAD","MC0042001","PACE","SOIL","EERF-00-07","PCI/G","REG","D20729501",,19921006,        ,
,0.000,"","ASD5","65-0126714","NA",86.30,         ,0.0,"0",1.0000,"G"
"RAD","MC0042002","PACE","SOIL","EERF-00-07","PCI/G","REG","D20729501",,19921006,        ,
,0.000,"","ASD5","65-0126714","NA",86.30,         ,0.0,"0",1.0000,"G"
"RAD","MC0042003","PACE","SOIL","EERF-00-07","PCI/G","REG","D20729501",,19921006,        ,
,0.000,"","ASD5","65-0126714","NA",86.30,         ,0.0,"0",1.0000,"G"
"RAD","MC0042004","PACE","SOIL","EPA 908","PCI/G","REG","D20729501",,19921013,        ,
,0.000,"","ASD2","65-0126714","NA",86.30,         ,0.0,"0",0.5000,"G"
"RAD","MC0042005","PACE","SOIL","EPA 908","PCI/G","REG","D20729501",,19921013,        ,
,0.000,"","ASD2","65-0126714","NA",86.30,         ,0.0,"0",0.5000,"G"
"RAD","052001","PACE","SOIL","EPA 908","PCI/G","REG","D20729501",,19921013,        ,
,0.000,"","ASD2","65-0126714","NA",86.30,         ,0.0,"0",0.5000,"G"
"RAD","052002","PACE","SOIL","E-PU-06","PCI/G","REG","D20729501",,19920923,        ,
,0.000,"","ASD2","65-0126714","NA",86.30,         ,0.0,"0",1.0000,"G"
"RAD","052003","PACE","SOIL","E-PU-06","PCI/G","REG","D20729501",,19920923,        ,
,0.000,"","ASD2","65-0126714","NA",86.30,         ,0.0,"0",1.0000,"G"
"RAD","062001","PACE","SOIL","EPA 901","PCI/G","REG","D20729501",,19920917,        ,        ,0.000,"","GS
1","65-0126714","NA",86.30,         ,0.0,"0",77.3000,"G"
```

Example of CHEMICAL.CSV format:

```
"INORG","012001","REG","CLPMET","7440-47-3","19.20","","0.9","","",T,T,""
"INORG","012001","REG","CLPMET","7440-48-4","4.50","","","B","",T,T,""
"INORG","012001","REG","CLPMET","7440-70-2","94200.00","","","*","J",T,T,""
"INORG","012001","REG","CLPMET","7440-41-7","0.23","","0.23","U","U",T,T,""
"INORG","012001","REG","CLPMET","7440-43-9","0.69","","0.69","U","U",T,T,""
"INORG","012001","REG","CLPMET","7440-36-0","8.70","","8.70","UN","R",T,T,""
```

```
"INORG","012001","REG","CLPMET","7440-39-3","47.70","","","","",T,T,""
"INORG","012001","REG","CLPMET","7440-50-8","26.70","","","","",T,T,""
"INORG","012001","REG","CLPMET","7439-89-6","10200.00","","","","",T,T,""
"INORG","012001","REG","CLPMET","7440-62-2","12.60","","","","",T,T,""
"INORG","012001","REG","CLPMET","7440-66-6","74.60","","","E","J",T,T,""
"INORG","012001","REG","CLPMET","7440-23-5","129.00","","","B","",T,T,""
"INORG","012001","REG","CLPMET","7440-02-0","10.10","","","","",T,T,""
"INORG","012001","REG","CLPMET","7440-22-4","0.69","","0.69","U","U",T,T,""
"INORG","012001","REG","CLPMET","7439-95-4","32000.00","","","*","J",T,T,""
"INORG","012001","REG","CLPMET","7439-96-5","324.00","","","","",T,T,""
"INORG","012001","REG","CLPMET","71-55-6","5200.00","","5","","",T,T,""
"INORG","012001","REG","CLPMET","7440-09-7","943.00","","","B","",T,T,""
"ORSVO","012002","REG","CLPSVO","84-66-2","390","","390","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","121-14-2","390","","390","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","7005-72-3","390","","390","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","100-01-6","940","","940","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","86-73-7","89","","390","J","J",T,T,""
"ORSVO","012002","REG","CLPSVO","86-30-6","390","","390","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","534-52-1","940","","940","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","132-64-9","390","","390","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","51-28-5","940","","940","U","UJ",T,T,""
"ORSVO","012002","REG","CLPSVO","100-02-7","940","","940","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","88-74-4","940","","940","U","U",T,T,""
"ORSVO","012002","REG","CLPSVO","91-58-7","390","","390","U","U",T,T,""
```

Example of TICS.CSV format:

```
"ORSVO","012002","REG","CLPSVO","",33.37,"ALKDEHYDE","210","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",31.57,"ALKANE + PNA","130","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",31.92,"PNA + MIXED SPECTRA","310","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",34.32,"OXY HYDROCARBON","560","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",35.24,"PNA, MW=252","1300","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",34.46,"PNA, MW=252","400","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",9.29,"OXY HYDROCARBON","520","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",35.89,"PNA, MW=252","480","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",37.94,"ALKANE @ C32","880","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",31.44,"C1 ALKYL CHRYSENE","360","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",34.19,"ALKANE @ C29","480","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",28.04,"PNA, MW=215","370","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",28.16,"C1 ALKYL PYRENE","330","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",30.52,"PNA, MW=228","310","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",29.24,"OXY PNA","260","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",26.29,"C4 PCB","270","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",27.87,"PNA, MW=216","670","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",29.76,"PNA, MW=230","240","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",29.51,"PNA, MW=234","330","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",29.66,"PNA, MW=226","330","J","NJ",,T,""
"ORSVO","012002","REG","CLPSVO","",29.59,"PNA, MW=228","530","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",34.21,"ALKANE @C29","280","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",33.39,"UNSATURATED HYDROCARBON","85","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",31.59,"ALKANE @C27","130","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",34.37,"POLY-CHLORINATED HYDROCARBON","160","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",35.87,"PNA MW=252","220","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",34.44,"UNSATURATED HYDROCARBON","270","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",30.52,"PNA MW=228","160","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",35.24,"PNA MW=252","630","J","NJ",,T,""
"ORSVO","072001","REG","CLPSVO","",37.96,"ALKANE @C32","420","J","NJ",,T,""
```

DATA VALIDATION METHODS

Table of Contents

DATA VALIDATION METHODS

Data validation methods were included in the Compendium to provide consistency to subcontractors who perform data validation and data assessment. The numbers assigned to the data validation methods match the numbers assigned to the corresponding analytical method. These methods describe when a qualification should be applied to a data point and what qualification should be applied. The data validation report format is described in Quality Assurance Procedure Q-006.

The first 18 data validation methods were developed from Appendix H of Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan (QAPP). The subsequent data validation methods were developed for the analytical methods that were not in the original QAPP, but were added to the Compendium. As new data validation methods are required, the methods will be introduced into the Compendium. If appropriate, the title page of the quality assurance procedure will reference a Source Document and Document Date. If the method is not introduced as part of a sample plan, then only the Document Date will be included. When a new method is added, the revised table of contents for the section and the method will be distributed to the copyholders of the Compendium.

The forms described within the methods are available on electronic media as Microsoft ™ Office95® binders. The electronic binder files include method text and the forms in a single file. The electronic files will be provided upon request.

MOUND

Environmental
Restoration
Program

Method: Q-010

Electronic Data Deliverable Format Specification - MEIMS Standard Format for CLP Organic Analyses

Revision 1.0

Mound Plant
Miamisburg, OH

Source Document: Compendium (November 1996)

1. INTRODUCTION

This procedure contains the specifications for the standard Mound Environmental Information Management System (MEIMS) CLP electronic data deliverable (EDD) format.

2. RESPONSIBILITIES

Laboratory Reporting Staff - The reporting staff is responsible for accurately transferring the laboratory data to 3.5 inch floppy diskettes in the format specified in this procedure.

Database Clerk - The database clerk is responsible for loading the EDD into MEIMS and reporting entry errors to the database administrator.

Database Administrator - The database administrator is responsible for maintaining the format specification in this procedure and resolving laboratory EDD problems. The database administrator may designate an individual to resolve laboratory EDD problems.

3. PROCEDURE

The EDDs for MEIMS are prepared at the laboratory and stored on 3.5 inch floppy disks. EDDs for CLP data shall follow the attached specifications for file Format A, as described in Appendix H of the CLP SOW. The information in the EDD must correspond exactly with the information submitted in the hardcopy data package and on the hardcopy data package forms.

Attachment A presents the Format A specifications for volatile and semivolatile organic analyses and pesticide/PCB analyses per the CLP SOW (2/88).

MOUND

Environmental
Restoration
Program

Method: A-001

Volatile Organic Analysis by CLP SOW OLM01.8

Revision 3.0

Mound Plant
Miamisburg, OH

Source Document: QAPP (April 1995)

1. INTRODUCTION

1.1 Description

Soil/sediment and surface water samples will be analyzed for VOCs by the CLP SOW using gas chromatography and mass spectometry as a means for compound identification. Capillary columns as specified in the method will be employed. A modification to the CLP SOW (Attachment A) has been prepared to account for seven additional volatile organic compounds: acrylonitrile, acetonitrile, trichlorotrifluoroethane, iodomethane, hexane, vinyl acetate, and 1,2-diethylbenzene.

1.2 References

EPA 1990a. "U.S. EPA Contract Laboratory Program, Statement of Work for Organic Analysis, Multimedia, Multi-Concentration." Document No. ILM1.0 including Revisions 1.1 through 1.8. Environmental Protection Agency, March, 1990.

DOE 1995. "Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan," Final Revision 4, U.S. Department of Energy, April 1995.

2. PRESERVATION

Table 2.1 - Volatile Organic Analysis - CLP SOW OLM01.8 Sample Containers, Volumes, Preservation, and Holding Times

Matrix	Parameters	Analytical Method	Container	Minimum Volume	Preservation	Holding Time
Water	Volatile Organic Compounds	CLP SOW	Glass vial with Teflon-lined septum (no headspace)	Two 40 mL vials	HCl to pH≤2 Cool 4°C	14 days
Soil	Volatile Organic Compounds	CLP SOW	Glass bottle with Teflon-lined septum	120 mL (no headspace)	Cool 4°C	14 days

3. CALIBRATION

Gas Chromatograph/Mass Spectrometry (GC/MS) will be used for analysis of volatile organic compounds. Mass spectral abundance criteria must be met prior to sample analysis. Bromofluorobenzene (BFB) is used to verify instrument performance of the GC/MS system and must meet specific ion abundance criteria established in the CLP SOW. Meeting these criteria is demonstrated daily or once during every 12-hour time period, whichever is more frequent. The instrument performance is also verified whenever a corrective action to the GC/MS system is taken that affects the tuning (e.g., ion source cleaning or repair).

Initial calibration of the GC/MS system is accomplished with a minimum of five concentrations of target compounds. Relative Response Factors (RRFs) must be greater than or equal to 0.05. Relative standard deviations for the RRFs must be less than or equal to 30%. Initial calibration is

not valid if this criterion is not met. The relative retention times of each compound in each standard run must agree within 0.06 units.

The initial calibration is verified every 12-hour period with a continuing calibration standard containing all target volatile compounds and surrogate compounds. RRFs are compared to the average RRF from the initial calibration. The minimum RRF for the target compounds must be met. The percent difference between the initial RRFs and the continuing RRF must be less than or equal to 25 percent for the initial calibration to be valid. Prior to sample analysis, the GC/MS system is evaluated and corrective action taken if these criteria are not met.

4. QC CRITERIA

Table 4.1 - Volatile Organic Analysis CLP SOW OLM01.8 Field QC Sample Frequency

Parameter	Quality Control Check	Frequency	Acceptance Criteria	Corrective Action
VOA, CLP SOW	Trip blank	1 per shipping container to lab	≤ 10 x level in associated samples	Evaluate potential sources; Evaluate associated data for usability.
	Equipment (rinsate) blank	1 every 10 or fewer field samples (**water**)	≤ 10 x level in associated samples	Evaluate potential sources; Evaluate associated data for usability.
	Sample bank blank	1 every 20 or fewer field samples	≤ 10 x level in associated samples	Evaluate potential sources; Evaluate associated data for usability.
	Ambient blank	1 every 20 or fewer field samples	≤ 10 x level in associated samples	Evaluate potential sources; Evaluate associated data for usability.
	Field duplicate	1 every 10 or fewer field samples (**water**) 1 every 10 or fewer field samples (**soil**)	≤ 25% RPD N/A	Evaluate data for usability. Evaluate variability.

Table 4.2 - Volatile Organic Analysis CLP SOW OLM01.8 Laboratory QC Sample Frequency

Parameter	Quality Control Check	Frequency	Acceptance Criteria	Corrective Action
VOA, CLP SOW	Method blank	Once per 12-hour period	≤ 5 x CRQL of common lab contaminants ≤ CRQL others	Investigate source; reanalyze associated samples.
	Matrix spike	1 per 20 samples of a given matrix in a case or fewer; see CLP SOW	See Table 4.3	Evaluate data for usability.
	Matrix spike duplicate	1 per 20 samples of a given matrix in a case or fewer; see CLP SOW	See Table 4.3	Evaluate data for usability.
	Laboratory control sample	Once per 12-hour period	See Table 4.3	Evaluate associated data for usability.
	System monitoring compounds	All lab and field samples	CLP SOW	See CLP SOW.
	Instrument performance check	Daily or each 12-hour period, whichever is more frequent	CLP SOW	Retune: Reanalyze associated samples
	Calibration	CLP SOW	±0.06 relative retention time units (sample and standard)	Recalibrate before sample analysis
	Retention time window	CLP SOW	CLP SOW	See CLP SOW.
	Qualitative verification	When a detection occurs in a sample	CLP SOW	See CLP SOW.
	Calibration check	With every calibration	CLP SOW	Recalibrate.
	Internal standard	Every standard and sample	CLP SOW	See CLP SOW.
	Continuing calibration check	Once each 12-hour period	CLP SOW	Identify source and correct. Recalibrate if source not found and corrected.

Table 4.3 - Volatile Organic Analysis CLP SOW OLM01.8 Laboratory Surrogate and Matrix Spike Limits

Analytical Method	Spiking Compounds	Spike Concentration		Advisory Limits Percent Recovery		Advisory Limits Relative Percent Difference (%)	
		Water (µg/L)	*Soil (µg/kg)*	*Water*	*Soil*	*Water*	*Soil*
CLP SOW Volatile Organic Compounds	*Matrix Spike/LCS*						
	1,1-DCE	per CLP SOW	per CLP SOW	61-145	59-172	≤14	≤22
	Trichloroethene	per CLP SOW	per CLP SOW	71-120	62-137	≤14	≤24
	Benzene	per CLP SOW	per CLP SOW	76-127	66-142	≤11	≤21
	Toluene	per CLP SOW	per CLP SOW	76-125	59-139	≤13	≤21
	Chlorobenzene	per CLP SOW	per CLP SOW	75-130	60-133	≤13	≤21
	Surrogates						
	Toluene-d8	per CLP SOW	per CLP SOW	88-110	84-138	NA	NA
	4-Bromo-fluorobenzene	per CLP SOW	per CLP SOW	86-115	59-113	NA	NA
	1,2-Dichloroethane-d4	per CLP SOW	per CLP SOW	76-114	70-121	NA	NA

5. ANALYTE LIST AND REPORTING LIMITS

These are expected quantitation limits based on reagent grade water or a purified solid matrix. Actual quantitation limits may be higher depending upon the nature of the sample matrix. The limit reported on final laboratory reports will take into account the actual sample volume or weight, percent moisture (where applicable), and the dilution factor, if any.

Table 5.1 - Volatile Organic Analysis CLP SOW OLM01.8 Target Analyte List

Analyte	Water (µg/L)	Soil (µg/kg)
Chloromethane	10	10
Bromomethane	10	10
Vinyl Chloride	10	10
Chloroethane	10	10
Methylene chloride	5	5
Acetone	10	10
Carbon disulfide	5	5
1,1-Dichloroethene	5	5
1,1-Dichloroethane	5	5
1,2-Dichloroethene (total)	5	5
Chloroform	5	5
1,2-Dichloroethane	5	5
2-Butanone	10	10
1,1,1-Trichloroethane	5	5
Carbon Tetrachloride	5	5
Bromodichloromethane	5	5
1,2-Dichloropropane	5	5
cis-1,3-Dichloropropene	5	5
Trichloroethene	5	5
Dibromochloromethane	5	5
1,1,2-Trichloroethane	5	5
Benzene	5	5
trans-1,3-Dichloropropene	5	5
Tribromomethane	5	5
4-Methyl-2-pentanone	10	10
2-Hexanone	10	10
Tetrachloroethene	5	5
Toluene	5	5
1,1,2,2-Tetrachloroethane	5	5
Chlorobenzene	5	5
Ethylbenzene	5	5
Styrene	5	5
Xylenes (total)	5	5
Additional Compounds:		
Acrylonitrile	100	100
Acetonitrile	100	100
Diethylbenzene	5	20
Trichlorotrifluoroethane	5	10
Hexane	10	10
Iodomethane	NA	10
Vinyl Acetate	10	10

ATTACHMENT TO METHOD A-001

Attachment to Method A-001

Modification to CLP Organic SOW OLM01.8
"Statement of Work for Organic Analysis,
Multi-media, Multi-concentration"

The purpose of this addendum is to outline modifications to the Contract Laboratory Program (CLP) "Statement of Work for Organic Analysis, Multi-media, Multi-concentration" which are project specific to the QAPP prepared by Roy F. Weston, Inc. for investigative activities at the Department of Energy Mound Plant, Miamisburg, Ohio.

This addendum extends the analysis to include acetonitrile, acrylonitrile, 1,2-diethylbenzene, hexane, iodomethane 1,1,2-trichloro-1,2,2-trifluoroethane, and vinyl acetate for volatiles.

Exhibit A - Summary of Requirements

No modifications to this section.

Exhibit B - Reporting and Deliverables Requirements

Section I: Contract Reports/Deliverables Distribution
No modifications to this section.

Section II: Report Descriptions and Order of Data Deliverables
No modifications to this section.

Section III: Form Instructions
No modifications to this section.

Section IV: Data Reporting Forms:
The following compounds must be added on Form I (Data Sheets).

CAS No.	Analyte
75-05-8	Acetonitrile
107-13-1	Acrylonitrile
76-13-1	1,2,2-Trichloro-1,2,2-trifluoroethane
74-88-4	Iodomethane
110-54-3	Hexane
135-01-3	1,2-Diethylbenzene
108-05-04	Vinyl acetate

Form VI VOA (Initial Calibration), and Form VII VOA (Continuing Calibration) must be modified to include these additional seven VOA compounds.

Exhibit C - Target Compound List (TCL) and Contract Required Quantitation Limits (CRQL)

The following should be added to the Target Compound List (TCL) and Contract required Quantitation Limits (CRQL, Page C-2 and Page C-4):

Analyte	CAS No.	CRQL			On Col. (ng)
		Low Water ug/L	Low Soil ug/kg	Med. Soil ug/kg	
Acetonitrile	75-05-8	100	100	6000	300
Acrylonitrile	107-13-1	100	100	6000	300
1,2,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	10	1200	50
Iodomethane	74-88-4	NA	10	1200	50
Hexane	110-54-3	10	10	1200	50
1,2-Diethylbenzene	135-01-3	5	20	1200	50
Vinyl acetate	108-05-04	10	10	1200	50

Form III

VOA-1 Water: Add: Acrylonitrile and acetonitrile QC Limits for Recovery 70-130% and RPD 15%.

VOA-2 Soil: Add: Acrylonitrile and acetonitrile QC Limits for Recovery 60-140% and RPD 25%.

Exhibit D - Analytical Methods for Volatiles:

Section I: Introduction:

1.1 Scope and Application: No modifications to this section

1.2 Problems: This section is modified to include:

Acetonitrile may have poor purge efficiency;

Iodomethane can be easily degraded.

Section II: Sample Preparation and Storage

No modifications to this section.

Section III: Optional Screening

No modifications to this section.

Section IV: GC/MS Analysis of Volatiles:

1. Summary of Methods: No modifications to this section.
2. Interferences: No modifications to this section.
3. Apparatus and Materials: No modifications to this section.
4. Reagents: No modifications to this section.
5. Standards:

5.1 - 5.4 The above seven additional compounds must be added to the TCL of standards for preparation of stock standard solutions, secondary dilution standards, and working standards.

5.4.5 Add: Acrylonitrile is be added to the matrix spike solution at a concentration of 250 ug/L.

5.5 Aqueous Calibration Standard Solutions

5.5.1 Prepare five aqueous initial calibration standard solutions containing all purgeable TCL and additional compounds and system monitoring compounds at 10, 20, 50, 100, 200 ug/L levels except acetonitrile and acrylonitrile which will be prepared at 50, 100, 250, 500, 1000 ug/L.

5.5.2 No modifications to this section.

5.5.3 The 50 ug/L aqueous calibration standard solution for all TCL except acetonitrile and acrylonitrile which will be at 250 ug/L is the continuing calibration solution.

5.6 No modifications to this section.

6. Instrument Operating Conditions:

6.1 No modifications to this section.

6.2.1 Final hold time is changed to "Until all target compounds elute."

6.3 and 6.4 No modifications to this section.

7. Calibration:

7.1 - 7.4.5 No modifications to this section.

7.4.6 The additional compounds acetonitrile, acrylonitrile, 1,2-diethylbenzene, hexane, iodomethane, vinyl acetate, and 1,1,2-trichlorotrifluoroethane must be added to the list of compounds. The maximum %RSD of 25 and maximum percent difference of 25 is acceptable for all the additional compounds, except acetonitrile and acrylonitrile. Acetonitrile may have a maximum %RSD of 35 and acrylonitrile may have a maximum %RSD of 30. The maximum percent difference for acetonitrile and acrylonitrile is 30. However, these compounds must meet the minimum RRF criteria of 0.01.

These are advisory limits and final limits will be established after method validation.

7.4.7 - 7.4.8 No modifications to this section.

7.5 - 7.9 No modifications to this section.

8. Sample Analysis:

8.1.1 -8.1.15 No modifications to this section.

8.1.16 Add: The concentration of acrylonitrile and acetonitrile, the additional matrix spike compound, is 250 ug/L.

8.1.17 - 8.1.18 No modifications to this section.
8.2.1.1 - 8.2.1.7 No modifications to this section.
8.2.1.8 Add: The concentration of the additional matrix spike compound acrylonitrile and acetonitrile would be 250 ug/kg.
8.2.1.9 - 8.2.1.10 No modifications to this section.
8.2.2.1 - 8.2.2.8 No modifications to this section.
8.2.2.9 Add: The resulting concentration of the additional matrix spike compound in the soil is 31,250 ug/kg.
9. Qualitative Analysis: No modifications to this section.
10. Quantitative Analysis: No modifications to this section.

Table 3 No modifications to this section.

Table 4 The following is added to Table 4:

Analyte	Primary Ion	Secondary Ions
Acetonitrile	41	40
Acrylonitrile	53	52,51
1,1,2-Trichlorotrifluoroethane	101	103, 151,153
Iodomethane	142	127
Hexane	57	86,43,41
1,2-Diethylbenzene	119	134, 115
Vinyl Acetate	43	86

Table 5 Add: The additional compounds acetonitrile, acrylonitrile, 1,2-diethylbenzene, hexane, iodomethane, vinyl acetate and 1,1,2-trichlorotrifluoroethane must be quantitated using the nearest eluting internal standard.

Table 6 No modifications to this section.

Table 7 Add:

	Water		Soil	
Compound	% Recovery	RPD	% Recovery	RPD
Acetonitrile	70-130	15	60-140	25
Acrylonitrile	70-130	15	60-140	25

Exhibit E - QA/QC Requirements

I. Overview:
No modifications to this section.

II. Quality Assurance Plan:
No modifications to this section.

III. Standard Operating Procedure:
No modifications to this section.

IV. QA/QC Requirements: Volatile QA/QC requirements

1. GC/MS Mass Calibration and Ion Abundance Patterns:
   No modifications to this section.
2. GC/MS Initial Calibration:
   Reference to Exhibit D includes the modifications to Exhibit D presented in this addendum.
3. Continuing Calibration:
   Reference to Exhibit D includes the modifications to Exhibit D presented in this addendum.
4. Internal Standards Responses and Retention Times:
   No modifications to this section.
5. Method Blank Analysis:
   No modifications to this section.
6. System Monitoring Compound Recoveries:
   No modifications to this section.
7. Matrix Spike and Matrix Spike Duplicate Analysis:
   Reference to Exhibit D includes the modifications to Exhibit D presented in this addendum.
8. Dilution of Samples, MS and MSD
   No modifications to this section.

V Analytical Standards Requirements
No modifications to this section.

VI Contract Compliance Screening
No modifications to this section.

VII Regional Data Review
No modifications to this section.

VIII Laboratory Evaluation Samples
No modifications to this section.

IX GC/MS Tape Audits
No modifications to this section.

X Data Package Audits
No modifications to this section.

XI On Site Laboratory Evaluations
No modifications to this section.

XII Quality Assurance and Data Management
No modifications to this section.

XIII Data Management
No modifications to this section.

Exhibit F - Chain-of-Custody, Document Control, and Standard Operating Procedures

No modifications to this section.

Exhibit G - Glossary of Terms

No modifications to this section.

Exhibit H - Data Dictionary and Format for Data Deliverables in Computer-Readable Format

No modifications to this section.

FIELD METHODS

Table of Contents

FIELD METHODS

Field methods describe the quality control requirements for methods of analysis performed on-site at the Mound Plant. Typically, field methods will be used when there are less stringent data reporting requirements, fast turn around time is needed, or the on-site method is capable of meeting the designated data quality objective and is cost competitive. Because the field methods described in the Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan (QAPP) were only intended to provide basic field screening information and lacked many specific quality control requirements, the methods were not incorporated into this section of the Compendium.

As new field methods are identified, Section 1.1 of each of the methods must briefly describe how the method will be used to meet the data quality objective for the potential release site. This description is required to facilitate using the method by reference for other potential release site investigations. When a new method is approved for use with a specific release site, then:

- the Source Document and Document Date on the title page of the method must be updated; and
- both the method and a revised table of contents for the section must distributed to the copy holders.

QUALITY ASSURANCE METHODS

Table of Contents

QUALITY ASSURANCE METHODS

Quality assurance methods were included in the compendium to provide consistency between and within different subcontractors who will perform sampling and analysis of the release sites at the Mound Plant. The first three procedures in this section, Q-001 to Q-003, were extracted from the Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan (QAPP). The procedures describe documenting problems, maintaining chain-of-custody, and managing documentation records. To facilitate the use of these QAPP extracted documents by multiple subcontractors, some of the forms and text were modified, particularly in the Corrective Action Report procedure. The other two methods were changed only slightly to improve the readability of the extracted text. The forms described within the methods are available on electronic media as Microsoft ™ Word® documents. Each of the QAPP extracted methods list the Source Document as QAPP and the Document Date as April 1995.

As new program level quality assurance methods are required, the methods will be introduced into the compendium. If appropriate, the title page of the quality assurance procedure will reference a Source Document and Document Date. If the method is not introduced as part of a sample plan, then only the Document Date will be included. When a new method is added, the revised table of contents for the section and the method will be distributed to the copy holders of record of the Compendium.

QUALITY ASSURANCE METHODS

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QUALITY ASSURANCE METHODS

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MOUND

Environmental
Restoration
Program

Method: Q-006

Validation of Laboratory Data Packages

Revision 2.0

Mound Plant
Miamisburg, OH

Source Document: QAPP (April 1995)

1. INTRODUCTION

1.1 Description

This procedure describes the general data validation requirements for Tier III data packages. Data validation is performed to gain a better understanding of the quality of the data received from the laboratory and to assess data usability for critical decision-making. The default data validation requirement is 90/10 where 90 percent of the data are reviewed and only 10 percent are validated. Depending on the intended data use, the applicable quality assurance documents (Sampling and Analysis Plans, Quality Assurance Project Plans, or Work Plans) may specify higher or lower data validation frequencies. Analysis specific data validation procedures are included in a separate section of the Compendium.

2. RESPONSIBILITIES

Clerk - A clerk may be trained to evaluate data package completeness. No special educational requirements are necessary for this person.

Data Reviewer - A data reviewer must have a minimum of Bachelors degree in chemistry, two years of work experience in an environmental analytical laboratory, or two years of experience performing data validation.

Data Validator - A data validator must have a minimum of Bachelors degree in chemistry, two years of work experience in an environmental analytical laboratory, or two years of experience performing data validation.

Data Validation Reviewer - A data validation reviewer must have a minimum of Bachelors degree in chemistry, two years of work experience in an environmental analytical laboratory, and two years of experience performing data validation

3. PROCEDURES

3.1 Data Completeness Review

As laboratory data packages are received, the package will be reviewed for completeness. The completeness review may be performed by a trained clerk to identify whether sections of the report have been omitted or whether the laboratory failed to report all the applicable samples. The completeness review is performed to verify the data package is ready for data validation.

3.2 Data Quality Review

A data quality review is performed to assess the general quality of the data. The review evaluates the quality control results reported by the laboratory in the summary (surrogate recoveries, matrix spike recoveries, laboratory control sample recoveries, etc.). The data quality review may

be performed exclusively (no data validation) or as a supplement to a partial data validation effort. Data review is performed by a data reviewer. The default requirements is that 90 percent of the data collected for Mound Plant be reviewed and that 10 percent of the data be validated. The frequency requirements for data review and data validation may be altered by project specific documents such as Sampling and Analysis Plans. The results of the data review are reported in the final report to Mound.

If the data reviewer identifies a systematic problem which can not be adequately assessed through data review and the amount of data validation required for the project is inadequate to assess the impact of the problem, then the data reviewer may recommend additional data validation to the project manager.

3.3 Data Validation

In addition to the data review, data validation may be performed. The default Mound Plant requirement is that 10 percent of the data collected be validated. The portion of data submitted for data validation may be altered by project specific documents such as Sampling and Analysis Plans. The samples which are identified for data validation shall be validated by an organization external to the laboratory.

The selection of samples for full data validation will be systematic. One sample from every 10 samples will be selected for validation. Additionally, the selection will be biased so that approximately 10 percent of each analyte group for each matrix is validated. In situations where fewer than 10 samples are generated from an investigation at least one of the samples will be fully validated with the selection biased so that each analyte for each matrix is validated.

The data validator will validate the sample results following the procedures specified in the applicable project document, for instance the OU9 QAPP, or by the procedures specified in the Compendium. After completing the data validation effort, the validator will report the results in a standard report, i.e. Exhibit 3.1. The validation report will be submitted for final approval to a data validation reviewer. If a systematic deficiency is identified during data validation, the data validator/reviewer may advise the project manager that a larger percentage of the data should be validated. The project manager will evaluate the recommendation for additional data validation and will decide whether additional validation will be performed.

3.4 Electronic Data Validation

Mound does not currently perform electronic data validation.

EXHIBIT 3.1

WESTON MANAGERS DESIGNERS/CONSULTANTS
11840-D KEMPERSPRINGS DRIVE
CINCINNATI, OH 45240-1640
513-825-3440 • FAX: 513-825-3336

EXHIBIT 3.1 EXAMPLE

Lab Batch: 37777

PROJECT:	EG&G MOUND	**WESTON W.O. #:**	05376-045-002
TASK:	ER Program FFTA	**DATE:**	
LABORATORY:	WESTON Analytics, Lionville, PA		
FIELD BATCH:	01		
LAB BATCH:	37777		
ANALYSIS:	Total Petroleum Hydrocarbons (E418.1)		

1. CASE SUMMARY

One soil sample was collected on 01 March 1993 and one water sample was collected on 02 March 1993 for total petroleum hydrocarbon analysis by modified method E418.1.Both samples were assigned laboratory Batch No. 37777.The chain-of-custody documentation indicates the samples were received by the laboratory in good condition.

Sample analysis was performed according to Revision 0 of the EG&G Mound FFTA QAPP (DOE 1994) by WESTON Analytics.The following samples apply to this data validation report:

BATCH 37777

Matrix	Field Identification	Laboratory Identification
Soil	MND55-0001-0001	37777-01
Water	MND55-0001-4001	37777-02

2. DATA COMPLETENESS

A complete data package was received from the laboratory on 15 May 1994.

3. SAMPLE HOLDING TIMES

All samples were extracted and analyzed within the required holding times.

WESTON Preparer: _____ Date: _____

WESTON Reviewer: _____ Date: _____

WESTON MANAGERS DESIGNERS/CONSULTANTS
11840-D KEMPERSPRINGS DRIVE
CINCINNATI, OH 45240-1640
513-825-3440 • FAX: 513-825-3336

EXHIBIT 3.1 EXAMPLE

Lab Batch: 37777

4. RESULTS OF LABORATORY QUALITY CONTROL CHECKS

a. Calibration

All initial and continuing calibration requirements were met for these samples.

b. Laboratory Method Blanks

TPH was not detected in the method blanks above the practical reporting limit.

c. Laboratory Control Sample

TPH recoveries in the laboratory control sample were within required limits.

d. Matrix Spike/Matrix Spike Duplicate Recoveries

Neither sample was submitted for matrix spike analysis.

e. Compound Identification

The target compound was properly identified per E418.1.

f. Quantitation and Contract Required Reporting Limits (CRQL)

The target compound was properly quantitated in the samples and the laboratory reported to the required quantitation limit.

5. RESULTS OF ASSOCIATED FIELD QUALITY CONTROL CHECKS

a. Field Duplicates

No field duplicate was included in this batch.

b. Field Blanks

Sample MND55-0001-4001 is an equipment rinsate; no positive results were reported.

WESTON Preparer: _____ Date: _____

WESTON Reviewer: _____ Date: _____

WESTON MANAGERS DESIGNERS/CONSULTANTS
11840-D KEMPERSPRINGS DRIVE
CINCINNATI, OH 45240-1840
513-825-3440 • FAX: 513-825-3336

EXHIBIT 3.1 EXAMPLE

Lab Batch: 37777

6. OVERALL ASSESSMENT OF THE DATA

The data are acceptable without qualification.

7. REFERENCES

USEPA 1988. "Laboratory Data Validation - Functional Guidelines for Evaluation of Organic Analyses."U. S. Environmental Protection Agency, Hazardous Site Evaluation Division.February 1988.

DOE 1993. Remedial Investigation/Feasibility Study,Operable Unit 9, Quality Assurance Project Plan.Mound Plant, Environmental Restoration Program, U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico.March 1993.

USEPA 1983. "Methods of Chemical Analysis of Water and Wastes," U.S. Environmental Protection Agency, EPA 600/4-79-020, March 1983.

WESTON Preparer: _____ Date: _____

WESTON Reviewer: _____ Date: _____

ATTACHMENT I

PP-1 - Exceeded Holding Times
PP-2 - System Monitoring Compound Recovery Outliers
PP-3 - Matrix Spike Recovery Outliers
PP-4 - Blank Outliers
PP-5 - Calibration Outliers
PP-6 - Instrument Performance Check Outliers
PP-7 - Field Duplicate Outliers
PP-8 - GPC Calibration Check Outliers
PP-9 - Florisil Cartridge Check Outliers
PP-10 - Pesticide Identification Summary Table

ATTACHMENT II

QUALIFIED DATA SUMMARY REPORTS

FORM 1s

EXHIBIT 3.1 EXAMPLE

GLOSSARY OF DATA VALIDATION QUALIFIER CODES

ORGANICS AND INORGANICS

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

J - The associated numerical value is an estimated quantity.

R - The data are unusable (compound may or may not be present). Resampling and reanalysis is necessary for verification.

N - Presumptive evidence of presence of material.

NJ - Presumptive evidence of the presence of the material at an estimated quantity.

UJ - The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

SUB-QUALIFIER CODES

ORGANICS

D - Duplicates
B - Qualified due to blank
C - Qualified due to calibration
H - Holding time exceeded
K - Qualified due to surrogate recovery
L - Qualified due to Laboratory Control Sample
S - Qualified due to matrix spike recovery
I - Qualified due to internal standard
N - Tentative identification (only for TICs)
P - Pest/PCB results have >25% difference on two different columns
(+) - Positive bias (added after subqualifier)
(-) - Negative bias (added after subqualifier)

INORGANICS

D - Duplicates
B - Qualified due to blank
C - Qualified due to calibration
H - Holding time exceeded
L - Qualified due to Laboratory Control Sample
S - Qualified due to matrix spike recovery
I - Qualified due to interference
(+) - Positive bias (added after subqualifier)
(-) - Negative bias (added after subqualifier)

ATTACHMENT III

DATA COMPLETENESS CHECKLIST

ATTACHMENT IV

CASE NARRATIVE

EXHIBIT 3.1 EXAMPLE

ATTACHMENT V

CHAIN-OF-CUSTODY

MOUND

Environmental
Restoration
Program

Method: Q-009

Data Validation for Field Measurements

Revision 2.0

Mound Plant
Miamisburg, OH

Source Document: QAPP (April 1995)

1. INTRODUCTION

1.1. Description

This procedure outlines the field data validation requirements. These requirements were originally developed and included in the OU9 QAPP (DOE 1995)

1.2. References

DOE 1995, "Remedial Investigation/Feasibility Study Operable Unit 9, Site-Wide Quality Assurance Project Plan," Final Revision 4, U. S. Department of Energy, April 1995.

2. RESPONSIBILITIES

Field Team Leader — The designated field team leader is responsible for performing the data validation described in this procedure. If the field team leader originated the field data or if no field team leader is designated, then the project manager is responsible for the specified validation.

3. PROCEDURES

Review of technical data integrity will be performed at two levels. On the first level, at the time of collection, field personnel will verify that standard operating procedures are followed, all data are recorded and quality control checks are performed and all forms and notebooks are signed and dated on the day recorded. The field personnel will also evaluate the data for obvious problems. At the second level, data will be reviewed by the field team leader, who will ensure that all data are recorded and reported correctly, including calculations and sample collection information.

3.1. Data Validation during Sample Collection

Data validation during sample collection is limited to verifying the proper operating procedures are being followed, data are being properly recorded, and the field quality control checks are within criteria and no obvious anomalies are encountered. Occasionally a field measurement will result in a value significantly outside the expected range for most field conditions, an outlier. An example of an outlier is a zero reading for specific conductance. When an outlier is identified by the field team, the outlier will be recorded as any other field measurement, the field instrumentation and the instrument calibrations will be checked, and the parameter will be re-measured at least twice. If the two additional measurements match the original measurement, the initial result will be considered valid. If the two additional measurements do not match the outlier, then the initial result will be considered invalid and the average value of the two additional measurements will be used.

No other validation will be performed by the field team while collecting samples.

3.2. Data Validation

The field team leader is responsible for performing data validation on both objective and subjective data.

3.2.1. Objective Data Validation

The field team leader will review all forms and notebooks to verify that the data are properly recorded and complete. If a calculation has been performed by a field team member, the field team leader will verify that the equation for the calculation is included in the records and re-calculate **10 percent** of the reported results. If a deficiency is identified by the field team leader, the field team leader will correct the deficiency and implement a corrective measure to prevent recurrence.

3.2.2. Subject Data Validation

The team leader will review all forms and notebooks to verify that the data are properly recorded and complete. Additionally, for subjective data the field team leader will review the data for reasonableness. If a discrepancy is found, the field team leader will implement a corrective measure. An example of subjective data are lithologic descriptions of samples. In the event the lithology of samples were being described during a field event, the field team leader may choose to inspect several logbooks at random intervals to ensure that the descriptions are consistent within the field team.

3.3. Data Entry

After the validity of data in the field notes and on ER Program forms has been evaluated according to the procedures described above, the data administrator will tabulate the data, wherever possible, by entering the data in computer data files. All data hand-entered into the computer files will be checked 100 percent by another individual. Where appropriate, the data files will be set up for direct input into the project database. Subjective data will be filed as hard copies for later review by the project manager and for incorporation into technical reports, as appropriate.

ATTACHMENT A

FORM FILE FORMAT FOR VOLATILE, SEMIVOLATILE, AND PESTICIDE/PCB ANALYSES PER THE CLP SOW

FORMAT A SPECIFICATION

1. Format Characteristics

1.1 Format A is based upon the structure of the hardcopy reporting forms required by the contract. With two exceptions, Form Suffix and Record Type, all fields in the format correspond directly with entries or items on the hardcopy forms. The record structure is obtained by taking entries in sequence from the appropriate hardcopy form. For example, the Header record (page H-7) from Form 1A is a concatenation of all entries on the hardcopy form that precede the reported results and qualifiers.

1.2 All Format A fields are character. Alphanumeric values should be left justified and numeric values should be right justified in appropriate fields. Field lengths are such that all possible valid values can be written to the file. The maximum format is specified for each field. For example, "Numeric 13.3" is specified for "Result" on Detail Record Dl of Form IA (see page H-7). Numeric values reported may take any form (e.g., integer 13, integer 3, real 13.3, real 5.1, etc.) provided they do not exceed the specifications. (Requirements for the number of significant figures to be reported on the appropriate hardcopy form are given in the Form Instruction Guide, Exhibit B, Section III.)

2. Record Types

2.1 Format A consists of variable length ASCII records. The last two bytes of each record must contain "carriage return" and "line feed", respectively. Unused bytes in partially filled fields must be blank. filled.

2.2 Format A has three types of records: Header Records, Detail Records and Comment Records.

Type	Type ID	Contents
Header	H	Nonrepeating fields which together are unique to the associated hardcopy form
Detail	D	A group of fields that are repeated on a form, and are uniquely positioned by (e.g.) CAS Number or Sequence Number
Comment	C	Nonrepeating fields containing text that coments on information reported on the form

3. Record Length

Table 3.1 summarizes the length and (in parentheses) the number of records in Format A. The maximum number of detail and comment records is shown, corresponding to a submission of hardcopy forms on which information is written on all possible lines. The

Form Totals are the maximum lengths (excluding carriage return/line feed.) required for a complete set of each type of form.

Table 3.1 Format A Summary

Form	Record				
	Header	Detail		Comment	
	H1	D1	D2	C1	C2
1A	153[a] (1)[b]	35 (34)			
1B	168 (1)	35 (33)			
1C	168 (1)	35 (32)			
1D	168 (1)	35 (27)			
1E	155 (1)	71 (30)			
1F	170 (1)	71 (30)			
1 (Total)	982 (6)	8670(186)			
2A	67(1)	37(30)			
2B	70(1)	37(30)			
2C	67(1)	49(30)			
2D	70(1)	49(30)			
2E	67(1)	28(30)			
2F	70(1)	28(30)			
2 (Total)	411(6)	6840(180)			
3A	85 (1)	70 (5)	61 (5)	72 (1)	72 (1)
3B	84 (1)	70 (5)	61 (5)	72 (1)	72 (1)
3C	85 (1)	70 (11)	61 (11)	72 (1)	72 (1)
3D	88 (1)	70 (11)	61 (11)	72 (1)	72 (1)
3E	85 (1)	70 (6)	61 (6)	72 (1)	72 (1)
3F	988 (1)	70 (6)	61 (6)	72 (1)	72 (1)
3 (Total)	519 (6)	3080 (44)	2684 (44)	432 (6)	432 (6)
4A	123 (1)	51 (30)	72 (1)	72 (1)	
4B	135 (1)		55 (30)	72 (1)	72 (1)
4C	177 (1)		49 (26)	72 (1)	72 (1)
4 (Total)	435 (3)	4454 (86m)	216 (3)	216.(3)	
5A	115 (1)	20 (9)	59 (24)		
5B	103 (1)	21 (13)	59 (22)		
5 (Total)	218 (2)	453 (22)	2714 (46)		
6A	173 (1)	69 (37)			
6B	161 (1)	69 (37)			
6C	161 (1)	69 (36)			
6 (Total)	495 (3)	7590 (110)			
7A	129 (1)	49 (37)			

Table 3.1 Format A Summary

Form	Record				
	Header	Detail		Comment	
	H1	D1	D2	C1	C2
7B	117 (1)	49 (37)			
7C	117 (1)	49 (36)			
7 (Total)	363 (3)	5390 (110)			
8A	115 (1)	106 (1)	69 (26)		
8B	103 (1)	106 (1)	69 (22)		
8C	103 (1)	106 (1)	69 (22)		
8D	101 (1)	58 (4)	36 (14)		
8E	103 (1)	51 (38)			
8 (Total)	525 (5)	2488 (45)	5334 (84)		
9	135 (1)	72 (27)			
9 (Total)	135 (1)	1944 (27)			
10	145 (1)	3 (6)	43 (6)	72 (1)	72 (1)
10 (Total)	145 (1)	258 (6)	258 (6)	72 (1)	72 (1)

[a] length of record in bytes (excluding carriage return/line feed)
[b] maximum number of records required for a form.

4. Form Suffix

The fourth and fifth bytes of each record contain the form suffix (AA-ZZ), which must be unique (within a type of form (e.g., Form IA, Form IIC, etc.,) for each set of records that corresponds to one hardcopy form. For example, the form suffix for records for the first occurrence in the file of a Form 1C must be AA. The second occurrence must be AB, and the twenty-eighth must be 3A.

5. Record Listing

The remainder of this section contains detailed specifications for every record required for a full set of hardcopy forms.

FORM I FILE DESCRIPTION
(FORM1)

VOLATILE ORGANICS ANALYSIS DATA SHEET - (FORM IA)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1A'
4-5	2	FORM SUFFIX	'AA '- ' ZZ'
6-7	2	RECORD TYPE	'H1'
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-55	11	CONTRACT	
56-61	6	LAB CODE	
62-66	S	CASE NO.	
67-72	6	SAS NO.	
73-77	5	SDG NO.	
78-82	S	MATRIX	'SOIL ' OR 'WATER'
83-94	12	LAB SAMPLE ID	
95-99	S	SAMPLE WT/VOL	NUMERIC 5.1
100-101	2	SAMPLE WT/VOL UNITS	'G ' OR 'ML'
102-115	14	LAB FILE ID	
116-118	3	LEVEL	'LOW' OR 'MED'
119-126	8	DATE RECEIVED	MM/DD/YY
127-128	2	%MOISTURE NOT DEC	NUMERIC 2
129-136	8	DATE ANALYZED	MM/DD/YY
137-140	4	COLUMN	'PACK' OR 'CAP
141-148	8	DILUTION FACTOR	NUMERIC 8
149-153	5	CONCENTRATION UNITS	'UG/L ' OR 'UG/KG'

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'IA'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'DI'
8-17	10	CAS NO.	
18-30	13	RESULT	NUMERIC 13.3
31-35	5	QUALIFIER (Q)	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET - (FORM IB)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' IB'
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1 '
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-35	11	CONTRACT	
56-61	6	LAB CODE	
62-66	5	CASE NO.	
67-72	6	SAS NO	
73-77	5	SDG NO.	
78-82	5	MATRIX	'SOIL' OR 'WATER'
83-94	12	LAB SAMPLE ID	
95-99	5	SAMPLE WT/VOL	NUMERIC 5.1
100-101	2	SAMPLE WT/VOL UNITS	'G ' OR 'ML'
102-115	14	LAB FILE ID	
116-118	3	LEVEL	'LOW' OR 'MED'
119-126	8	DATE RECEIVED	MM/DD/YY
127-128	2	% MOISTURE NOT DEC	NUMERIC 2
129-130	2	% MOISTURE DEC	NUMERIC 2
131-138	8	DATE EXTRACTED	MM/DD/YY
139-142	4	EXTRACTION	'SEPF', 'CONT' OR 'SONC'
143-150	8	DATE ANALYZED	MM/DD/YY
151	1	GPC CLEANUP	'V' OR 'N'
152-155	4	PH	NUMERIC 4.1
156-163	8	DILUTION FACTOR	NUMERIC 8
164-168	5	CONCENTRATION UNITS	'UG/L' OR 'UG/KG'

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' IB'
4-5	2	FORM SUFFIX	'AA'- 'ZZ'
6-7	2	RECORD TYPE	'DI'
8-17	10	CAS NO.	
18-30	13	RESULT	NUMERIC 13.3
31-35	5	QUALIFIER (Q)	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET - (FORM IC)

HEADER RECORD 1 (HI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1C'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-55	11	CONTRACT	
56-61	6	LAB CODE	
62-66	5	CASE NO.	
67-72	6	SAS NO.	
73-77	5	SDG NO.	
78-82	5	MATRIX	'SOIL' OR 'WATER'
83-94	12	LAB SAMPLE ID	
95-99	5	SAMPLE WT/VOL	NUMERIC 5.1
100-101	2	SAMPLE WT/VOL UNITS	'G ' OR 'ML'
102-115	14	LAB FILE ID	
116-118	3	LEVEL	'LOW' OR 'MED'
119-126	8	DATE RECEIVED	MM/DD/YY
127-128	2	% MOISTURE NOT DEC	NUMERIC 2
129-130	2	% MOISTURE DEC	NUMERIC 2
131-138	8	DATE EXTRACTED	MM/DD/YY
139-142	4	EXTRACTION	'SEPF', 'CONT' OR 'SONC'
143-150	8	DATE ANALYZED	MM/DD/YY
151	1	GPC CLEANUP	'Y' OR 'N'
152-155	4	PH	NUMERIC 4.1
156-163	8	DILUTION FACTOR	NUMERIC 8
164-168	5	CONCENTRATION UNITS	'UG/L ' OR 'UG/KG'

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1C'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'DI'
8-17	10	CAS NO.	
18-30	13	RESULT	NUMERIC 13.3
31-35	5	QUALIFIER (Q)	

PESTICIDE ORGANICS ANALYSIS DATA SHEET - (FORM ID)

HEADER RECORD 1 (HI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1D'
4-5	2	FORM SUFFIX	'AA ' - ' ZZ'
6-7	2	RECORD TYPE	'H1 '
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-55	11	CONTR ACT	
56-61	6	LAB CODE	
62-66	5	CASE NO.	
67-72	6	SAS NO.	
73-77	5	SDG NO.	
78-82	5	MATRIX	'SOIL ' DR 'WATER'
83-94	12	LAB SAMPLE ID	
95-99	5	SAMPLE WT/VOL	NUMERIC 5.1
100-101	2	SAMPLE WT/VOL UNITS	'G' OR 'ML'
102-115	14	LAB FILE ID	
116-118	3	LEVEL	'LOW' OR 'MED'
119-126	8	DATE RECEIVED	MM/DD/YY
127-128	2	% MOISTURE NOT DEC	NUMERIC 2
129-130	2	% MOISTURE DEC	NUMERIC 2
131-138	8	DATE EXTRACTED	MM/DD/YY
139-142	4	EXTRACTION	'SEPF', 'CONT' OR 'SONC'
143-150	8	DATE ANALYZED	MM/DD/YY
131	1	GPC CLEANUP	'Y' OR 'N'
152-155	4	PH	NUMERIC 4.1
156-163	8	DILUTION FACTOR	NUMERIC 8
164-168	5	CONCENTRATION UNITS	'UG/L ' OR 'UG/KG'

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1D'
4-5	2	FORM SUFFIX	' AA ' - ' ZZ '
6-7	2	RECORD TYPE	'DI'
8-17	10	CAS NO.	
18-30	13	RESULT	NUMERIC 13.3
31-35	5	QUALIFIER (Q)	

VOLATILE ORGANICS ANALYSIS DATA SHEET - (FORM IE)
TENTATIVELY IDENTIFIED COMPOUNDS

HEADER RECORD 1 (HI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' IE'
4-5	2	FORM SUFFIX	' AA ' - 'ZZ'
6-7	2	RECORD TYPE	'H1 '
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-55	11	CONTRACT	
56-61	6	LAB CODE	
62-66	5	CASE NO.	
67-72	6	SAS NO.	
73-77	5	SDG NO.	
78-82	5	MATRIX	'SOIL ' OR 'WATER'
83-94	12	LAB SAMPLE ID	
95- 99	5	SAMPLE WT/VOL	NUMERIC 5.1
100-101	2	SAMPLE WT/VOL UNITS	'G ' OR 'ML'
102-115	14	LAB FILE ID	
116-118	3	LEVEL	'LOW' OR 'MED'
119-126	8	DATE RECEIVED	MM/DD/YY
127-128	2	% MOISTURE NOT DEC	NUMERIC 2
129-136	8	DATE ANALYZED	MM/DD/YY
137-140	4	COLUMN	'PACK' OR 'CAP '
141-148	8	DILUTION FACTOR	NUMERIC 8
149-150	2	NUMBER TICS FOUND	NUMERIC 2
151-155	5	CONCENTRATION UNITS	'UG/L ' OR' UG/KG '

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' IE'
4-5	2	FORM SUFFIX	' AA ' - ' ZZ '
6-7	2	RECORD TYPE	'DI'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-19	10	CAS NO.	
20-47	28	COMPOUND	
48-53	6	RT	NUMERIC 6.2
54-66	13	ESTIMATED CONCENTRATION	NUMERIC 13.3
67-71	5	QUALIFIER (Q)	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET - (FORM 1F)
TENTATIVELY IDENTIFIED COMPOUNDS

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1F'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-55	11	CONTRACT	
56-61	6	LAB CODE	
62-66	5	CASE NO.	
67-72	6	SAS NO.	
73-77	5	SDG NO.	
75-82	5	MATRIX	'SOIL' OR 'WATER'
83-94	12	LAB SAMPLE ID	
95-99	5	SAMPLE WT/VOL	NUMERIC 5.1
100-101	2	SAMPLE WT/VOL UNITS	'G' OR 'ML'
102-115	14	LAB FILE ID	
116-118	3	LEVEL	'LOW' OR 'MED'
119-126	8	DATE RECEIVED	MM/DD/YY
127-128	2	% MOISTURE NOT DEC	NUMERIC 2
129-130	2	% MOISTURE DEC	NUMERIC 2
131-138	8	DATE EXTRACTED	MM/DD/YY
139-142	4	EXTRACTION	'SEPF', 'CONT' OR 'SONC'
143-150	8	DATE ANALYZED	MM/DD/YY
151	1	GPC CLEANUP	'Y' OR 'N'
152-155	4	PH	NUMERIC 4.1
156-163	8	DILUTION FACTOR	NUMERIC 8
164-165	2	NUMBER TICS FOUND	NUMERIC 2
166-170	5	CONCENTRATION UNITS	'UG/L' OR 'UG/KG'

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'1F '
4-5	2	FORM SUFFIX	'AA' - ' ZZ '
6-7	2	RECORD TYPE	'DI'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-19	10	CAS NO.	
20-47	28	COMPOUND	
48-53	6	RT	NUMERIC 6.2
54-66	13	ESTIMATED CONCENTRATION	NUMERIC 13.3
67-71	5	QUALIFIER (Q)	

FORM II FILE DESCRIPTION
(FORM2)

WATER VOLATILE SURROGATE RECOVERY - (FORM 2A)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2A'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66	1	PAGE	NUMERIC 1
67	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2A'
4-5	2	FORM SUFFIX	'AA ' -'ZZ'
6-7	2	RECORD TYPE	'D1'
8-9	2	SEQUENCE NUMBER	NUMERIC2
10-21	12	EPA SAMPLE NO.	
22-24	3	S1 (TOL)NUMERIC 3	
25	1	S1 OUT FLAG	BLANK OR 'D' OR '*'
26-28	3	S2 (BFB)	NUMERIC 3
29	1	S2 OUT FLAG	BLANK OR 'D' OR '*'
30-32	3	S3 (DCE)	NUMERIC 3
33	1	S3 OUT FLAG	BLANK OR 'D' OR '*'
34-36	3	OTHER	NUMERIC 3
37	1	TOTAL OUT	NUMERIC 1

SOIL VOLATILE SURROGATE RECOVERY - (FORM 2B)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2B'
4-5	2	FORM SUFFIX	'AA ' -' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-68	3	LEVEL	'LOW' OR 'MED'
69	1	PAGE	NUMERIC I
70	1	OF	NUMERIC 1

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2B'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'DI'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-24	3	S1 (TOL)	NUMERIC 3
25	1	S1 OUT FLAG	BLANK OR 'D' OR '*'
26-28	3	S2 (BFB)	NUMERIC 3
29	1	S2 OUT FLAG	BLANK OR 'D' OR '*'
30-32	3	S3 (DCE)	NUMERIC 3
33	1	S3 OUT FLAG	BLANK OR 'D' OR '*'
34-36	3	OTHER	NUMERIC 3
37	1	TOTAL OUT	NUMERIC 1

WATER SEMIVOLATILE SURROGATE RECOVERY - (FORM 2C)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2C'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66	1	PAGE	NUMERIC 1
67	1	OF	NUMERIC 1

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'DI'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-24	3	S1 (NBZ)	NUMERIC 3
25	1	S1 OUT FLAG	BLANK OR 'D' OR '*'
26-28	3	S2 (FBP)	NUMERIC 3
29	1	S2 OUT FLAG	BLANK OR 'D' OR '*'
30-32	3	S3 (TPH)	NUMERIC 3
33	1	S3 OUT FLAG	BLANK OR 'D' OR '*'
34-36	3	S4 (PHL)	NUMERIC 3
37	1	S4 OUT FLAG	BLANK OR 'D' OR '*'
38-40	3	S5 (2FP)	NUMERIC 3
41	1	S5 OUT FLAG	BLANK OR 'D' OR '*'
42-44	3	S6 (TBP)	NUMERIC 5
45	1	S6 OUT FLAG	BLANK OR 'D' OR '*'
46-48	3	OTHER	NUMERIC 5
49	1	TOTAL OUT	NUMERIC 1

SOIL SEMIVOLATILE SURROGATE RECOVERY - (FORM 2D)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2D'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-68	3	LEVEL	'LOW' OR 'MED'
69	1	PAGE	NUMERIC 1
70	1	OF	NUMERIC 1

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'DI'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-24	3	S1 (NBZ)	NUMERIC 3
25	1	S1 OUT FLAG	BLANK OR 'D' OR '*'
26-28	3	S2 (FBP)	NUMERIC 3
29	1	S2 OUT FLAG	BLANK OR 'D' OR '*'
30-32	3	S3 (TPH)	NUMERIC 3
33	1	S3 OUT FLAG	BLANK OR 'D' OR '*'
34-36	3	S4 (PHL)	NUMERIC 3
37	1	S4 OUT FLAG	BLANK OR 'D' OR '*'
38-40	3	S5 (2FP)	NUMERIC 3
41	1	S5 OUT FLAG	BLANK OR 'D' OR '*'
42-44	3	S6 (TBP)	NUMERIC 5
45	1	S6 OUT FLAG	BLANK OR 'D' OR '*'
46-48	3	OTHER	NUMERIC 5
49	1	TOTAL OUT	NUMERIC 1

WATER PESTICIDE SURROGATE RECOVERY - (FORM 2E)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2E'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66	1	PAGE	NUMERIC 1
67	1	OF	NUMERIC 1

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2E'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'DI'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-24	3	S1 (DBC)	NUMERIC 3
25	1	S1 OUT FLAG	BLANK OR 'D' OR '*'
26-28	3	OTHER	NUMERIC 3

SOIL PESTICIDE SURROGATE RECOVERY - (FORM 2F)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2F'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-68	3	LEVEL	'LOW' OR 'MED'
69	1	PAGE	NUMERIC 1
70	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'2F'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-24	3	S1 (DBC)	NUMERIC 3
25	1	S1 OUT FLAG	BLANK OR 'D' OR '*'
26-28	3	OTHER	NUMERIC 3

FORM III FILE DESCRIPTION
(FORM3)

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY - (FORM3A)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' 3A '
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	MATRIX SPIKE - EPA SAMPLE NO.	
78-79	2	RPD: # OUTSIDE QC LIMITS	NUMERIC2
80-81	2	RPD: TOTAL	NUMERIC2
82-83	2	SPIKE RECOVERY: # OUT	NUMERIC2
84-85	2	SPIKE RECOVERY: TOTAL	NUMERIC2

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
41-53	13	SAMPLE CONC. (UG/L)	NUMERIC 13.3
54-66	13	MS CONC.(UG/L)	NUMERIC 13.3
67-69	3	MS% REC.	NUMERIC 3
70	1	MS% REC. FLAG	BLANK OR '*'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ '
6-7	2	RECQRD TYPE	'DZ'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
4 1-53	13	MSD CONC. (UG/L)	NUMERIC 13.3
54-56	3	MSD% REC.	NUMERIC 3
57	1	MSD% REC. OUT FLAG	BLANK OR '*'
58-60	3	% RPD	NUMERIC 3
61	1	% RPD OUT FLAG	BLANK OR 'U'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY - (FORM3B)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3B'
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	MATRIX SPIKE - EPA SAMPLE NO.	
78-80	3	LEVEL	'LOW' OR 'MED'
81-82	2	RPD: # OUTSIDE QC LIMITS	NUMERIC2
83-84	2	RPD: TOTAL	NUMERIC2
85-86	2	SPIKE RECOVERY: # OUT	NUMERIC2
87-88	2	SPIKE RECOVERY: TOTAL	NUMERIC2

DETAIL RECORD 1 (Dl)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
41-53	13	SAMPLE CONC. (UG/KG)	NUMERIC 13.3
54-66	13	MS CONC. (UG/KG)	NUMERIC 13.3
67-69	3	MS% REC.	NUMERIC 3
70	1	MS% REC. FLAG	BLANK OR '*'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ '
6-7	2	RECQRD TYPE	'D2'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
4 1-53	13	MSD CONC. (UG/KG)	NUMERIC 13.3
54-56	3	MSD% REC.	NUMERIC 3
57	1	MSD% REC. OUT FLAG	BLANK OR '*'
58-60	3	% RPD	NUMERIC 3
61	1	% RPD OUT FLAG	BLANK OR 'U'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY - (FORM3C)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' 3C '
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	MATRIX SPIKE - EPA SAMPLE NO.	
78-79	2	RPD: # OUTSIDE QC LIMITS	NUMERIC2
80-81	2	RPD: TOTAL	NUMERIC2
82-83	2	SPIKE RECOVERY: # OUT	NUMERIC2
84-85	2	SPIKE RECOVERY: TOTAL	NUMERIC2

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
41-53	13	SAMPLE CONC. (UG/L)	NUMERIC 13.3
54-66	13	MS CONC.(UG/L)	NUMERIC 13.3
67-69	3	MS% REC.	NUMERIC 3
70	1	MS% REC. FLAG	BLANK OR '*'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ '
6-7	2	RECQRD TYPE	'DZ'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
4 1-53	13	MSD CONC. (UG/L)	NUMERIC 13.3
54-56	3	MSD% REC.	NUMERIC 3
57	1	MSD% REC. OUT FLAG	BLANK OR '*'
58-60	3	% RPD	NUMERIC 3
61	1	% RPD OUT FLAG	BLANK OR 'U'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY - (FORM3D)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3D'
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	MATRIX SPIKE - EPA SAMPLE NO.	
78-80	3	LEVEL	'LOW' OR 'MED'
81-82	2	RPD: # OUTSIDE QC LIMITS	NUMERIC2
83-84	2	RPD: TOTAL	NUMERIC2
85-86	2	SPIKE RECOVERY: # OUT	NUMERIC2
87-88	2	SPIKE RECOVERY: TOTAL	NUMERIC2

DETAIL RECORD 1 (Dl)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
41-53	13	SAMPLE CONC. (UG/KG)	NUMERIC 13.3
54-66	13	MS CONC. (UG/KG)	NUMERIC 13.3
67-69	3	MS% REC.	NUMERIC 3
70	1	MS% REC. FLAG	BLANK OR '*'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ '
6-7	2	RECQRD TYPE	'D2'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
4 1-53	13	MSD CONC. (UG/KG)	NUMERIC 13.3
54-56	3	MSD% REC.	NUMERIC 3
57	1	MSD% REC. OUT FLAG	BLANK OR '*'
58-60	3	% RPD	NUMERIC 3
61	1	% RPD OUT FLAG	BLANK OR 'U'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY- (FORM3E)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' 3E '
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	MATRIX SPIKE - EPA SAMPLE NO.	
78-79	2	RPD: # OUTSIDE QC LIMITS	NUMERIC2
80-81	2	RPD: TOTAL	NUMERIC2
82-83	2	SPIKE RECOVERY: # OUT	NUMERIC2
84-85	2	SPIKE RECOVERY: TOTAL	NUMERIC2

DETAIL RECORD 1 (Dl)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3E'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
41-53	13	SAMPLE CONC. (UG/L)	NUMERIC 13.3
54-66	13	MS CONC.(UG/L)	NUMERIC 13.3
67-69	3	MS% REC.	NUMERIC 3
70	1	MS% REC. FLAG	BLANK OR '*'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3E'
4-5	2	FORM SUFFIX	'AA' - 'ZZ '
6-7	2	RECQRD TYPE	'DZ'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
4 1-53	13	MSD CONC. (UG/L)	NUMERIC 13.3
54-56	3	MSD% REC.	NUMERIC 3
57	1	MSD% REC. OUT FLAG	BLANK OR '*'
58-60	3	% RPD	NUMERIC 3
61	1	% RPD OUT FLAG	BLANK OR 'U'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3E'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3E'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY- (FORM3F)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3F'
4-5	2	FORM SUFFIX	'AA'-' ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	MATRIX SPIKE - EPA SAMPLE NO.	
78-80	3	LEVEL	'LOW' OR 'MED'
81-82	2	RPD: # OUTSIDE QC LIMITS	NUMERIC2
83-84	2	RPD: TOTAL	NUMERIC2
85-86	2	SPIKE RECOVERY: # OUT	NUMERIC2
87-88	2	SPIKE RECOVERY: TOTAL	NUMERIC2

DETAIL RECORD 1 (Dl)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3F'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
41-53	13	SAMPLE CONC. (UG/KG)	NUMERIC 13.3
54-66	13	MS CONC. (UG/KG)	NUMERIC 13.3
67-69	3	MS% REC.	NUMERIC 3
70	1	MS% REC. FLAG	BLANK OR '*'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3F'
4-5	2	FORM SUFFIX	'AA' - 'ZZ '
6-7	2	RECQRD TYPE	'D2'
8-31	24	COMPOUND	
32-40	9	SPIKE ADDED (UG/L)	NUMERIC 9.3
4 1-53	13	MSD CONC. (UG/KG)	NUMERIC 13.3
54-56	3	MSD% REC.	NUMERIC 3
57	1	MSD% REC. OUT FLAG	BLANK OR '*'
58-60	3	% RPD	NUMERIC 3
61	1	% RPD OUT FLAG	BLANK OR 'U'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3F'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'3F'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	

FORM IV FILE DESCRIPTION
(FORM4)

VOLATILE METHOD BLANK SUMMARY - (FORM 4A)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4A'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	23	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-S4	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID	
80-91	12	LAB SAMPLE ID	
92-99	8	DATE ANALYZED	MM/DD/YY
100-103	4	TIME ANALYZED	HHMM
104-108	5	MATRIX	'SOIL' OR 'WATER'
109-111	3	LEVEL	'LOW' OR 'MED'
112-121	10	INSTRUMENT ID	
122	1	PAGE	NUMERIC 1
123	1	OF	NUMERIC 1

DETAIL RECORD 1 (DI)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4A'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'D1'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-33	12	LAB SAMPLE ID	
34-47	14	LAB FILE ID	
48-51	4	TIME ANALYZED	HHMM

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4A '
4-5	2	FORM SUFFZX	'AA ' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4A '
4-5	2	FORM SUFFZX	'AA ' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 1	

SEMIVOLATILE METHOD BLANK SUMMARY - (FORM 4B)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4B '
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-S4	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID	
80-91	12	LAB SAMPLE ID	
92-99	8	DATE EXTRACTED	MM/DD/YY
100-103	4	EXTRACTION	'SEPF', 'CONT' OR 'SONC'
104-111	8	DATE ANALYZED	MM/DD/YY
112-115	4	TIME ANALYZED	HHMM
116-120	5	MATRIX	'SOIL' OR 'WATER'
121-123	3	LEVEL	'LOW' OR 'MED'
124-133	10	INSTRUMENT ID	
134	1	PAGE	NUMERIC 1
135	1	OF	NUMERIC 1

DETAIL RECORD 1 (Dl)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4B '
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'Dl'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-33	12	LAB SAMPLE ID	
34-47	14	LAB FILE ID	
48-55	8	DATE ANALYZED	MM/DD/YY

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

PESTICIDE METHOD BLANK SUMMARY - (FORM 4C)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-S4	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-77	12	LAB SAMPLE ID	
78-91	14	LAB FILE ID	
92-96	5	MATRIX	'SOIL' OR 'WATER'
97-99	3	LEVEL	'LOW' OR 'MED'
100-107	8	DATE EXTRACTED	MM/DD/YY
108-111	4	EXTRACT ION	'SEPF', 'CONT' OR 'SONC'
112-119	8	DATE ANALYZED (1)	MM/DD/YY
120-127	8	DATE ANALYZED (2)	MM/DD/YY
128-131	4	TIME ANALYZED (1)	HHMM
132-135	4	TIME ANALYZED (2)	HHMM
136-145	10	INSTRUMENT ID (1)	
146-155	10	INSTRUMENT ID (2)	
156-165	10	GC COLUMN ID (1)	
166-175	10	GC COLUMN ID (2)	
176	1	PAGE	NUMERIC 1
177	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-33	12	LAB SAMPLE ID	
34-41	8	DATE LNALYZED 1	MM/DD/YY
42-49	8	DATE ANALYZED 2	MM/DD/YY

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'4C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

FORM V FILE DESCRIPTION
(FORM5)

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - (FORM5A)
BROMOFLUOROBENZENE (BFB)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'5A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID	
80-87	8	BFB INJECTION DATE	MM/DD/YY
88- 97	10	INSTRUMENT ID	
98-101	4	BFB INJECTION TIME	HHMM
102-106	5	MATRIX	'SOIL' OR 'WATER'
107-109	3	LEVEL	'LOW' OR 'MED'
110-113	4	COLUMN	'PACK' OR 'CAP '
114	1	PAGE	NUMERIC 1
115	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'5A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-10	3	M/E	NUMERIC 3
11-15	5	% RELATIVE ABUNDANCE	NUMERIC 5.1
16-20	5	% MASS (WHERE APPLICABLE)	NUMERIC 5.1

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'5A'
4-5	2	FORM SUFFIX	'AA-ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-33	12	LAB SAMPLE ID	
34-47	14	LAB FILE ID	
48-55	8	DATE ANALYZED	MM/DD/YY
56-59	4	TIME ANALYZED	HHMM

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - (FORM 5B)
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'5B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID	
80-87	8	DFTPP INJECTION DATE	MM/DD/YY
88- 97	10	INSTRUMENT ID	
98-101	4	DFTPP INJECTION TIME	HHMM
102	1	PAGE	NUMERIC 1
103	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'5B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-10	3	M/E	NUMERIC 3
11-16	5	% RELATIVE ABUNDANCE	NUMERIC 6.2
17-21	5	% MASS (WHERE APPLICABLE)	NUMERIC 5.1

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'5B'
4-5	2	FORM SUFFIX	'AA-ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-33	12	LAB SAMPLE ID	
34-47	14	LAB FILE ID	
48-55	8	DATE ANALYZED	MM/DD/YY
56-59	4	TIME ANALYZED	HHMM

FORM VI FILE DESCRIPTION
(FORM6)

VOLATILE ORGANICS INITIAL CALIBRATION DATA - (FORM 6A)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'6A'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-83	8	CALIBRATION DATE 1	MM/DD/YY
84-91	8	CALIBRATION DATE 2	MM/DD/YY
92-96	5	MATRIX	'SOIL' OR 'WATER'
97-99	3	LEVEL	'LOW' OR 'MED'
100-103	4	COLUMN	'PACK' OR 'CAP'
104-117	14	RRF20 LAB FILE ID	
118-131	14	RRF50 LAB FILE ID	
132-145	14	RRF100 LAB FILE ID	
146-159	14	RRF150 LAB FILE ID	
160-173	14	RRF200 LAB FILE ID	

DETAIL RECORD 1 (D1)

COLUMN(S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'6A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-34	27	COMPOUND	
35-39	5	RRF20	NUMERIC 5.3
40-44	5	RRF50	NUMERIC 5.3
45-49	5	RRF100	NUMERIC 5.3
50-54	5	RRF150	NUMERIC 5.3
55-59	5	RRF200	NUMERIC 5.3
60-64	5	AVERAGE RRF	NUMERIC 5.3
65-69	5	% RSD	NUMERIC 5.1

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA - (FORM 6B)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'6B'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-83	8	CALIBRATION DATE 1	MM/DD/YY
84-91	8	CALIBRATION DATE 2	MM/DD/YY
92-105	14	RRF20 LAB FILE ID	
106-119	14	RRF50 LAB FILE ID	
120-133	14	RRF80 LAB FILE ID	
134-147	14	RRF120 LAB FILE ID	
148-161	14	RRF160 LAB FILE ID	

DETAIL RECORD 1 (D1)

COLUMN(S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'6B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-34	27	COMPOUND	
35-39	5	RRF20	NUMERIC 5.3
40-44	5	RRF50	NUMERIC 5.3
45-49	5	RRF80	NUMERIC 5.3
50-54	5	RRF120	NUMERIC 5.3
55-59	5	RRF160	NUMERIC 5.3
60-64	5	AVERAGE RRF	NUMERIC 5.3
65-69	5	% RSD	NUMERIC 5.1

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA - (FORM 6C)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'6C'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-83	8	CALIBRATION DATE 1	MM/DD/YY
84-91	8	CALIBRATION DATE 2	MM/DD/YY
92-105	14	RRF20 LAB FILE ID	
106-119	14	RRF50 LAB FILE ID	
120-133	14	RRF80 LAB FILE ID	
134-147	14	RRF120 LAB FILE ID	
148-161	14	RRF160 LAB FILE ID	

DETAIL RECORD 1 (D1)

COLUMN(S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'6C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-34	27	COMPOUND	
35-39	5	RRF20	NUMERIC 5.3
40-44	5	RRF50	NUMERIC 5.3
45-49	5	RRF80	NUMERIC 5.3
50-54	5	RRF120	NUMERIC 5.3
55-59	5	RRF160	NUMERIC 5.3
60-64	5	AVERAGE RRF	NUMERIC 5.3
65-69	5	% RSD	NUMERIC 5.1

FORM VII FILE DESCRIPTION
(FORM7)

VOLATILE CONTINUING CALIBRATION CHECK - (FORM 7A)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'7A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-83	8	CALIBRATION DATE	MM/DD/YY
84-87	4	CALIBRATION TIME	HHMM
88-101	14	LAB FILE ID	
102-109	8	INIT. CALIB. DATE 1	MM/DD/YY
110-117	8	INIT. CALIB. DATE 2	MM/DD/YY
118-122	5	MATRIX	'SOIL' OR 'WATER'
123-125	3	LEVEL	'LOW' OR 'MED'
126-129	4	COLUMN	'PACK' OR 'CAP'

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'7A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'DI'
8-34	27	COMPOUND	
35-39	5	AVERAGE RRF	NUMERIC 5.3
40-44	5	RRF50	NUMERIC 5.3
45-49	5	%D	NUMERIC 5.1

SEMIVOLATILE CONTINUING CALIBRATION CHECK - (FORM 7B)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'7B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-83	8	CALIBRATION DATE	MM/DD/YY
84-87	4	CALIBRATION TIME	HHMM
88-101	14	LAB FILE ID	
102-109	8	INIT. CALIB. DATE 1	MM/DD/YY
110-117	8	INIT. CALIB. DATE 2	MM/DD/YY

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'7B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-34	27	COMPOUND	
35-39	5	AVERAGE RRF	NUMERIC 5.3
40-44	5	RRF50	NUMERIC 5.3
45-49	5	%D	NUMERIC 5.1

SEMIVOLATILE CONTINUING CALIBRATION CHECK - (FORM 7C)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'7C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-83	8	CALIBRATION DATE	MM/DD/YY
84-87	4	CALIBRATION TIME	HHMM
88-101	14	LAB FILE ID	
102-109	8	INIT. CALIB. DATE 1	MM/DD/YY
110-117	8	INIT. CALIB. DATE 2	MM/DD/YY

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'7C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-34	27	COMPOUND	
35-39	5	AVERAGE RRF	NUMERIC 5.3
40-44	5	RRF50	NUMERIC 5.3
45-49	5	%D	NUMERIC 5.1

FORM VIII FILE DESCRIPTION
(FORM8)

VOLATILE INTERNAL STANDARD AREA SUMMARY - (FORM 8A)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID (STANDARD)	
80-87	8	DATE ANALYZED	MM/DD/YY
88-97	10	INSTRUMENT ID	
98-101	4	TIME ANALYZED	HHMM
102-106	5	MATRIX	'SOIL' OR 'WATER'
107-109	3	LEVEL	'LOW' OR 'MED'
110-113	4	COLUMN	'PACK' OR 'CAP'
114	1	PAGE	NUMERIC 1
115	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
		12 HOUR STANDARD -	
8-16	9	IS1 (BCM) AREA	NUMERIC 9
17-22	6	RT	NUMERIC 6.2
23-31	9	IS2 (DFB) AREA	NUMERIC 9
32-37	6	RT	NUMERIC 6.2
38-46	9	IS3 (CBZ) AREA	NUMERIC 9
47-52	6	RT	NUMERIC 6.2
		UPPER LIMIT -	
53-61	9	IS1 (BCM) AREA	NUMERIC 9
62-70	9	IS2 (DFB) AREA	NUMERIC 9
71-79	9	IS3 (CBZ) AREA	NUMERIC 9
		LOWER LIMIT -	
80-88	9	IS1 (BCM) AREA	NUMERIC 9
89-97	9	IS2 (DFB) AREA	NUMERIC 9
98-106	9	IS3 (CBZ) AREA	NUMERIC 9

DETAIL RECORD 2 (D2)

COLUMN(S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8A'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-30	9	IS1 (BCM) AREA	NUMERIC 9
31	1	IS1 (BCM) AREA FLAG	BLANK OR '*'
32-37	6	RT	NUMERIC 6.2
38-46	9	IS2 (DFB) AREA	NUMERIC 9
47	1	IS2 (DFB) AREA FLAG	BLANK OR '*'
48-53	6	RT	NUMERIC 6.2
54-62	9	IS3 (CBZ) AREA	NUMERIC 9
63	1	IS3 (CBZ) AREA FLAG	BLANK OR '*'
64-69	6	RT	NUMERIC 6.2

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY - (FORM 8B)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID (STANDARD)	
80-87	8	DATE ANALYZED	MM/DD/YY
88-97	10	INSTRUMENT ID	
98-101	4	TIME ANALYZED	HHMM
102	1	PAGE	NUMERIC 1
103	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
		12 HOUR STANDARD -	
8-16	9	IS1 (DCB) AREA	NUMERIC 9
17-22	6	RT	NUMERIC 6.2
23-31	9	IS2 (NPT) AREA	NUMERIC 9
32-37	6	RT	NUMERIC 6.2
38-46	9	IS3 (ANT) AREA	NUMERIC 9
47-52	6	RT	NUMERIC 6.2
		UPPER LIMIT -	
53-61	9	IS1 (DCB) AREA	NUMERIC 9
62-70	9	IS2 (NPT) AREA	NUMERIC 9
71-79	9	IS3 (ANT) AREA	NUMERIC 9
		LOWER LIMIT -	
80-88	9	IS1 (DCB) AREA	NUMERIC 9
89-97	9	IS2 (NPT) AREA	NUMERIC 9
98-106	9	IS3 (ANT) AREA	NUMERIC 9

DETAIL RECORD 2 (D2)

COLUMN(S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-30	9	IS1 (DCB) AREA	NUMERIC 9
31	1	IS1 (DCB) AREA FLAG	BLANK OR '*'
32-37	6	RT	NUMERIC 6.2
38-46	9	IS2 (NPT) AREA	NUMERIC 9
47	1	IS2 (NPT) AREA FLAG	BLANK OR '*'
48-53	6	RT	NUMERIC 6.2
54-62	9	IS3 (ANT) AREA	NUMERIC 9
63	1	IS3 (ANT) AREA FLAG	BLANK OR '*'
64-69	6	RT	NUMERIC 6.2

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY - (FORM 8C)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8B'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-79	14	LAB FILE ID (STANDARD)	
80-87	8	DATE ANALYZED	MM/DD/YY
88-97	10	INSTRUMENT ID	
98-101	4	TIME ANALYZED	HHMM
102	1	PAGE	NUMERIC 1
103	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
		12 HOUR STANDARD -	
8-16	9	IS1 (PHN) AREA	NUMERIC 9
17-22	6	RT	NUMERIC 6.2
23-31	9	IS2 (CRY) AREA	NUMERIC 9
32-37	6	RT	NUMERIC 6.2
38-46	9	IS3 (PRY) AREA	NUMERIC 9
47-52	6	RT	NUMERIC 6.2
		UPPER LIMIT -	
53-61	9	IS1 (PHN) AREA	NUMERIC 9
62-70	9	IS2 (CRY) AREA	NUMERIC 9
71-79	9	IS3 (PRY) AREA	NUMERIC 9
		LOWER LIMIT -	
80-88	9	IS1 (PHN) AREA	NUMERIC 9
89-97	9	IS2 (CRY) AREA	NUMERIC 9
98-106	9	IS3 (PRY) AREA	NUMERIC 9

DETAIL RECORD 2 (D2)

COLUMN(S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8C'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-30	9	IS1 (PHN) AREA	NUMERIC 9
31	1	IS1 (PHN) AREA FLAG	BLANK OR '*'
32-37	6	RT	NUMERIC 6.2
38-46	9	IS2 (CRY) AREA	NUMERIC 9
47	1	IS2 (CRY) AREA FLAG	BLANK OR '*'
48-53	6	RT	NUMERIC 6.2
54-62	9	IS3 (PRY) AREA	NUMERIC 9
63	1	IS3 (PRY) AREA FLAG	BLANK OR '*'
64-69	6	RT	NUMERIC 6.2

PESTICIDE EVALUATION STANDARDS SUMMARY - (FORM 8D)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33- 43	11	CONTRACT	
44- 49	6	LAB CODE	
50- 54	5	CASE NO.	
55- 60	6	SAS NO.	
61- 65	5	SDG NO.	
66- 75	10	INSTRUMENT ID	
76- 85	10	GC COLUMN ID	
		DATES OF ANALYSES	
86- 93	8	FROM:	MM/DD/YY
94-101	8	TO:	MM/DD/YY

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8D'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-20	13	PESTIC IDE	
21-31	11	CALIB. FACTOR EVAL MIX A	NUMERIC 11
32-42	11	CALIB. FACTOR EVAL MIX B	NUMERIC 11
43-53	11	CALIB. FACTOR EVAL MIX C	NUMERIC 11
54-58	5	% RSD	NUMERIC 5.1

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8D '
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-17	8	DATE ANALYZED	MM/DD/YY
18-21	4	TIME ANALYZED	HHMM
22-26	5	ENDRIN	NUMERIC 5.1
27-31	5	4, 4'-DDT	NUMERIC 5.1
32-36	5	COMBINED	NUMERIC 5.1

PESTICIDE EVALUATION STANDARDS SUMMARY - (FORM 8E)
EVALUATION OF RETENTION TIME SHIFT FOR DIBUTYLCHLORENDATE

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8E '
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-85	10	GC COLUMN ID	
		DATES OF ANALYSES	
86-93	8	FROM:	MM/DD/YY
94-101	8	TO:	MM/DD/YY
102	1	PAGE	NUMERIC 1
103	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'8E '
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-21	12	EPA SAMPLE NO.	
22-33	12	LAB SAMPLE ID	
34-41	8	DATE ANALYZED	MM/DD/YY
42-45	4	TIME ANALYZED	HHMM
46-50	5	% D	NUMERIC 5.1
51	1	FLAG	BLANK OR '*'

FORM IX FILE DESCRIPTION
(FORM9)

PESTICIDE/PCB STANDARDS SUMMARY - (FORM 9)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' 9'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-32	25	LAB NAME	
33-43	11	CONTRACT	
44-49	6	LAB CODE	
50-54	5	CASE NO.	
55-60	6	SAS NO.	
61-65	5	SDG NO.	
66-75	10	INSTRUMENT ID	
76-85	10	GC COLUMN ID	
86-93	8	DATE OF ANALYSIS FROM:	MM/DD/YY
94-101	8	DATE OF ANALYSIS	MM/DD/YY
102-109	8	DATE OF ANALYSIS TO:	MM/DD/YY
110-113	4	TIME OF ANALYSIS	HHMM
114-117	4	TIME OF ANALYSIS FROM:	HHMM
118-121	4	TIME OF ANALYSIS TO:	HHMM
122 -133	12	EPA SAMPLE NO. (STANDARD)	
134	1	PAGE	NUMERIC 1
135	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	' 9'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'H1'
8-20	13	COMPOUND	
21-26	6	RT	NUMERIC 6.2
27-32	6	RT WINDOW FROM:	NUMERIC 6.2
33-38	6	RT WINDOW TO:	NUMERIC 6.2
39-49	11	CALIBRATION FACTOR	NUMERIC 11
50-55	6	RT	NUMERIC 6.2
56-66	11	CALIBRATION FACTOR	NUMERIC 11
67	1	QUANT	'Y' OR 'N'
68-72	5	% D	NUMERIC 5.1

FORM X FILE DESCRIPTION
(FORM10)

PESTICIDE/PCB IDENTIFICATION - (FORM 10)

HEADER RECORD 1 (H1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'10'
4-5	2	FORM SUFFIX	'AA'-'ZZ'
6-7	2	RECORD TYPE	'H1'
8-19	12	EPA SAMPLE NO.	
20-44	25	LAB NAME	
45-55	11	CONTRACT	
56-61	6	LAB CODE	
62-66	5	CASE NO.	
67-72	6	SAS NO.	
73-77	5	SDG NO.	
78-87	10	GC COLUMN ID (1)	
88- 97	10	GC COLUMN ID (2)	
98-107	10	INSTRUMENT ID (1)	
108-117	10	INSTRUMENT ID (2)	
118-129	12	LAB SAMPLE ID	
130-143	14	LAB FILE ID (IF GC/MS)	
144	1	PAGE	NUMERIC 1
145	1	OF	NUMERIC 1

DETAIL RECORD 1 (D1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'10'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D1'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-23	14	PESTIC IDE/PCB	
24-29	6	RETENTION TIME	
			COLUMN 1
			NUMERIC 6.2
30-35	6	RT WINDOW OF STANDARD	
		FROM:	NUMERIC 6.2
36-41	6	TO:	NUMERIC 6.2
42	1	QUANT?	'Y' OR 'N'
43	1	GC/MS?	'Y' OR 'N'

DETAIL RECORD 2 (D2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'10'
4-5	2	FORM SUFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'D2'
8-9	2	SEQUENCE NUMBER	NUMERIC 2
10-23	14	PESTIC IDE/PCB	
24-29	6	RETENTION TIME	
			COLUMN 2 NUMERIC 6.2
30-35	6	RT WINDOW OF STANDARD	
		FROM:	NUMERIC 6.2
36-41	6	TO:	NUMERIC 6.2
42	1	QUANT?	'Y' OR 'N'
43	1	GC/MS?	'Y' OR 'N'

COMMENT RECORD 1 (C1)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'10'
4-5	2	FORM S'UFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C1'
8-72	65	COMMENT LINE 1	

COMMENT RECORD 2 (C2)

COLUMN (S)	LENGTH	CONTENTS	FORMAT/CONTENTS
1-3	3	FORM NUMBER	'10'
4-5	2	FORM S'UFFIX	'AA' - 'ZZ'
6-7	2	RECORD TYPE	'C2'
8-72	65	COMMENT LINE 2	