

Rocky Flats Environmental Technology Site

2-J76-ER-ADM-08.05

REVISION 0

INFO ONLY

DATA COMPLETENESS CHECK AND CONTRACT-COMPLIANCE SCREENING

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 Quality Assurance Program Manager Print Name Date
 Data Management and Reporting Services

DOE RFFO/ER Concurrence on file Yes No N/A

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Responsible Organization Environmental Restoration Program Division Effective Date _____

CONCURRENCE BY THE FOLLOWING DISCIPLINES WILL BE DOCUMENTED IN THE PROCEDURE HISTORY FILE

- Data Management and Reporting Services
- Geoscience Core
- Performance Assurance

USE CATEGORY 3

ORC review not required

The following have been incorporated in this revision
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Periodic review frequency 1 year from the effective date

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1. PURPOSE

This procedure establishes the requirements for performing data completeness checks and contract-compliance screening for Rocky Flats Plant (RFP) Environmental Restoration Program Division (ERPD) data packages in accordance with 2-J77-ER-ADM-08 03, Graded Validation

2. SCOPE

This procedure applies to ERPD employees and subcontractors

This procedure supports the sampling activities of ERPD and applies to all sample delivery groups (SDGs) generated by and received from laboratories performing analyses for the Sample Management Office (SMO)

This procedure addresses the following topics

- Data completeness checks
- Contract-compliance screening

3. OVERVIEW

SDGs consist of the following items

- Cover sheet or transmittal letter
- Case narrative specific to the SDG
- Data summary forms
- Copies of items listed on the checklists in the appendixes

All SDGs receive the data completeness check. However, only the SDGs selected for validation in accordance with 2-J77-ER-ADM-08 03 receive the contract-compliance screening

Copies of supporting documentation are organized by SDG, and originals are maintained by the laboratories

4. DEFINITIONS

Contract Compliance Screening (CCS). The screen that is performed during data validation to ensure laboratory compliance with the statement of work for analytical services. This screen ensures that all requisite data and documentation are included within the SDG

Contractor Technical Representative (CTR). The primary contact(s) within the SMO with responsibility for enforcing the technical contractual obligations of the subcontractors

4. DEFINITIONS (continued)

Data Completeness Check. The verification that is performed on laboratory data packages to ensure that the required deliverables have been submitted. This check ensures that each package contains the minimum requirements to proceed with data validation.

Data Completeness Technician (DCT). The technician who performs the data completeness check.

General Radiochemistry and Routine Analytical Services Protocol (GRRASP). The statement of work for radiochemistry and general chemistry analytical services.

Missing Data Request (MDR). The formal document used to create a written record that tracks the requested missing documentation.

Missing Package Request (MPR). The formal document used to create a written record that tracks the requested missing package(s).

Package. Paperwork submitted with SDGs that may consist of

- Quality control data
- Raw sample data.
- Standards data
- Raw quality control data
- Standard preparation logs
- Sample digestion logs
- Resolution
- Calibrations

Sample Delivery Group (SDG). Samples received at the laboratory in one or more shipments. Samples from more than one chain-of-custody may be combined to form a single SDG. Samples in a SDG are validated as a group.

Sample Management Office (SMO). The ERPD SMO at RFP that manages the laboratory contracts, sample tracking, data receipt, data validation, and data dissemination.

Subcontractor Laboratories. EG&G Rocky Flats, Inc. approved offsite analytical laboratories.

Validation Technician. The person who performs the qualification of the data by using functional guidelines developed for the validation process.

5. **RESPONSIBILITIES**

5.1 **Data Completeness Technician**

Performs data completeness checks on SDGs

Initiates MPRs

5.2 **Validation Subcontractor**

Ensures that SDGs are complete and comply with the appropriate checklists as in the appendixes

Manages quality records generated by this procedure

5.3 **Validation Technician**

Performs contract compliance screening on SDGs

Initiates MDRs

6. INSTRUCTIONS

6.1 Data Completeness Checks

DCT

- [1] Perform data completeness checks as SDGs are received from laboratories

The data completeness checks do not require that the DCT be in receipt of the electronic deliverable

- [2] Complete the appropriate data completeness checklist on
- Appendix 1, Radiochemistry Data Completeness Checklists.
 - Appendix 2, Organics Data Completeness Checklist, Pesticides
 - Appendix 3, Organics Data Completeness Checklist, Volatiles/Semi-volatiles
 - Appendix 4, Metals Data Completeness Checklist
 - Appendix 5, Water Quality Parameters Data Completeness Checklist
- [3] Record *Yes* or *No* beside each required item listed on the appropriate checklist
- [4] **IF** the requisite documentation is missing from the SDG,
THEN
- [A] Initiate MPRs (See Appendix 11 for sample MPR)
 - [B] Require that the laboratory respond to the MPR with the missing documentation within 3 working days of the MPR
 - [C] Facsimile (Fax) a copy of the MPR to the SMO for evaluation
 - [D] Verify the receipt of the missing package
 - [E] Close the MPR when the receipt is verified
 - [F] File the MPR with the appropriate SDG and notify the SMO that the MPR has been closed
- [5] **IF** the requisite documentation is missing from an SDG,
AND a laboratory fails to submit the missing documentation within the required 3 working days,
THEN notify the appropriate CTR

6.2 Contract-compliance Screening

Validation Technician

- [1] Perform the contract-compliance screening on selected SDGs

Radiochemistry SDGs are segregated by instrumentation, or method, as applicable, for validation. SDGs are randomly selected for validation in accordance with 2-J77-ER-ADM-08 03

The contract-compliance screening does not require that the validation technician be in receipt of the electronic deliverable

- [2] Complete the appropriate contract-compliance checklist on
- Appendix 6, Radiochemistry Contract Compliance Checklist
 - Appendix 7, Organics Contract Compliance Checklist, Pesticides
 - Appendix 8, Organics Contract Compliance Checklist, Volatiles/Semi-volatiles
 - Appendix 9, Metals Contract Compliance Checklist
 - Appendix 10, Water Quality Parameters Contract Compliance Checklist
- [3] Record *Yes* or *No* beside each required item listed on the appropriate checklist
- [4] **IF** the requisite documentation is missing from the SDG,
THEN
- [A] Initiate MDRs (See Appendix 12 for sample MDR)
 - [B] Require that the laboratory respond to the MDR with the missing documentation within 3 working days of the faxed request
 - [C] Fax a copy of the MDR to the SMO for evaluation
 - [D] Verify the receipt of the missing documentation
 - [E] Close MDRs when the analysis is complete
 - [F] File the MDR with the appropriate SDG and notify the SMO that the MDR has been closed
 - [G] Validate the SDG after the missing data has been received and verified
- [5] **IF** the requisite documentation is missing from an SDG,
AND a laboratory fails to submit the requisite documentation within the required 3 working days,
THEN notify the appropriate CTR

7. RECORDS

Management of all records is consistent with 1-77000-RM-001, Records Management Guidance for Records Sources.

The records generated as a result of this procedure are considered quality records and are managed in accordance with 2-G18-ER-ADM-17 01, Records Capture and Transmittal

There are no nonquality records generated by this procedure

Validation Subcontractor

[1] Manage records in accordance with 1-77000-RM-001

[2] Manage documentation generated as a result of this procedure in accordance with 2-G18-ER-ADM-17 01

8. REFERENCES

1-77000-RM-001, Records Management Guidance for Records Sources

2-G18-ER-ADM-17 01, Records Capture and Transmittal

2-J77-ER-ADM-08 03, Graded Validation

APPENDIX 1

Page 2 of 8

Tritium

- A _____ Cover Sheet or Transmittal Letter
- B _____ Case Narrative
 _____ Copy of Chain-of-Custody
- C _____ Calibration and Instrument Performance Verification Data Package
- D _____ Background Water and Preparation Blanks Data Package
- E _____ Replicate Sample Data Package
- F _____ LCSs Data Package
- G _____ Quench and Efficiency Package
- H _____ Sample Data Package

Technician

Date

APPENDIX 1

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Gross Alpha and Beta

- A _____ Cover Sheet or Transmittal Letter
- B _____ Case Narrative
 _____ Copy of Chain-of-Custody
- C _____ Gross Alpha Self-absorption Curve Data Package
 _____ Gross Beta Self-absorption Curve Data Package
- D _____ Gross Alpha Instrument Performance Verification Data Package
 _____ Gross Beta Instrument Performance Data Package
- E _____ Gross Alpha Laboratory Blanks Data Package
 _____ Gross Beta Laboratory Blanks Data Package
- F _____ Gross Alpha Lab Replicate Sample Data Package
 _____ Gross Beta Lab Replicate Sample Data Package
- G _____ Gross Alpha LCSs Data Package
 _____ Gross Beta LCSs Data Package
- H _____ Gross Alpha Sample Data Package
 _____ Gross Beta Sample Data Package

Technician

Date

APPENDIX 1

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²²⁶Radium by Radon Emanation

- A _____ Cover Sheet or Transmittal Letter
- B _____ Case Narrative
 _____ Copy of Chain-of-Custody
- C _____ Calibration and Instrument Performance Verification Data Package
- D _____ Laboratory Blanks Data Package
- E _____ Replicate Sample Data Package
- F _____ LCSs Data Package
- G _____ Cell Constant Data Package
- H _____ Sample Data Package

Technician

Date

APPENDIX 1

Page 6 of 8

Radiometric Strontium, Cesium, and ²²⁸Radium by Gas Proportional Counter (GPC)

- A _____ Cover Sheet or Transmittal Letter

- B _____ Case Narrative
 _____ Copy of Chain-of-Custody

- C _____ Strontium Initial Calibration Data Package
 _____ Cesium Initial Calibration Data Package
 _____ ²²⁸Ra Initial Calibration Data Package

- D _____ Instrument Performance Verification Data

- E _____ Strontium Laboratory Blanks Data
 _____ Cesium Laboratory Blanks Data
 _____ ²²⁸Ra Laboratory Blanks Data Package

- F _____ Strontium Replicate Sample Data Package
 _____ Cesium Replicate Sample Data Package
 _____ ²²⁸Ra Replicate Sample Data Package

- G _____ Strontium LCSs Data Package
 _____ Cesium LCSs Data Package
 _____ ²²⁸Ra LCSs Data Package

- H _____ Strontium Chemical Recovery Factors Package
 _____ Cesium Chemical Recovery Factors Package
 _____ ²²⁸Ra Chemical Recovery Factors Package

- I _____ Strontium Efficiency Factors Data Package
 _____ Cesium Efficiency Factors Data Package
 _____ ²²⁸Ra Efficiency Factors Data Package

APPENDIX 6

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RADIOCHEMISTRY CONTRACT COMPLIANCE CHECKLIST

Alpha Spectrometry

- A _____ **Case Narrative**
- _____ Copy of Chain-of-Custody
 - _____ SDG Number, cross reference lab sample identification (ID) to client ID
 - _____ Preparation Batch Code
 - _____ Abnormalities, reanalyses, or standard operating procedure (SOP) deviations explained
 - _____ Matrix problems explained
 - _____ Instrument problems explained
 - _____ Failure to achieve required detection limits (RDLs)
- B _____ **Calibrations Data Package**
- _____ Detector ID
 - _____ Spreadsheet with dates of last efficiency check including disintegration per minute (DPMs) of check sources, counts obtained, count duration, and, channels selected for regions of interest (ROIs)
 - _____ Proper channel numbers of isotopes of interest, based on calibration data of plutonium (Pu), americium (Am), and uranium (U) standards
 - _____ Total memory (channels per detector)
 - _____ Spreadsheet with dates of last background including count duration, counts obtained, and channels selected for ROIs
- C _____ **Laboratory Blanks Data**
- _____ Detector ID
 - _____ Analysis date
 - _____ Aliquot
 - _____ Blank ID
 - _____ Aliquot
 - _____ Calculated activities, uncertainties, and minimum detectable activity (MDA)

APPENDIX 6

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Tritium

A _____ **Case Narrative**

- _____ Copy of Chain-of-Custody
- _____ SDG number, cross reference lab sample ID to client ID
- _____ Preparation Batch Code
- _____ Abnormalities, reanalyses, or SOP deviations explained
- _____ Matrix problems explained
- _____ Instrument problems explained
- _____ Improper preservation explained
- _____ RDLs met, explained if not met

B _____ **Calibration and Instrument Performance Verification Data Package**

- _____ Instrument ID number, manufacturer, and model number,
with program settings
- _____ Date of performance check
- _____ National Institute of Standards and Technology (NIST)- traceable
reference material certificates with expiration date and DPM activity
of unquenched standard
- _____ Raw data from instrument
- _____ Efficiency obtained for unquenched standard
- _____ Quench monitor values and counts per min (CPM) for standard used
to check long term performance of cocktail and instrument
- _____ Background water and preparation blank vials CPMs

C _____ **Background Water and Preparation Blanks Data**

- _____ Instrument ID
- _____ Date background water and preparation blanks were analyzed
- _____ Aliquot of background water and preparation blanks

APPENDIX 6

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Tritium (continued)

- G _____ Sample Data Package
- _____ Printed report of results for sample, reruns
 - _____ Computer calculations sheet including sample IDs, sample counts, background counts, sample aliquot, distillation date, count date, count duration, instrument efficiency, and activities, uncertainties, and MDAs
 - _____ Raw data from counter, copies of notebook pages
 - _____ Instrument counting logs

Technician

Date

APPENDIX 6

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Gamma Spectrometry

- A _____ **Case Narrative**
- _____ Copy of Chain-of-Custody
 - _____ SDG Number, cross reference lab sample ID to client ID
 - _____ Preparation Batch Code
 - _____ Abnormalities, reanalyses, or SOP deviations explained
 - _____ Detector problems explained
 - _____ RDLs met, explained if not met
- B _____ **Biannual Energy Calibration**
- _____ Detector ID
 - _____ Date of the calibration check, channel by channel printout, identification and DPS values of checksources, counts and count duration, calibrated energy (in keV) for each peak of interest, calibrated centroid channel number for each peak of interest, observed channel number for each peak of interest, offset value, and, calculated slope from the least squares fit of the calibration data
 - _____ FWHM of the peaks
 - _____ Energy range (in keV) of the gamma detection system, channels of memory
- C _____ **Biannual Efficiency Calibration**
- _____ Detector ID
 - _____ Date of the efficiency calibration to include geometry, matrix, weight for which the efficiency curve is constructed, line intensity of each nuclide of interest, counts per second observed for each peak of interest, identification, certification, expiration dates and DPS values of checksource, observed efficiency, observed energy, observed channel number of each nuclide, and plot of energy versus efficiency
 - _____ Integrated area of the peak ROIs, count duration

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Gamma Spectrometry (continued)

- D _____ **Instrument Performance Verification**
- _____ Daily energy checksource raw data submitted with each SDG
 - _____ Daily efficiency verification performed with same source and submitted with each SDG
 - _____ Dates of last background spectra including spectra and/or channel by channel printout, count duration, counts obtained for the peak ROIs, and compared to a long term background spectra
- E _____ **Laboratory Blanks Data**
- _____ Detector ID
 - _____ Blank ID
 - _____ Background counts and count duration
 - _____ Blank counts and count duration of blanks
 - _____ Date blanks were analyzed
 - _____ Aliquot, weight, matrix, and geometry
 - _____ Calculated activities, uncertainties, and MDA
- F _____ **LCSs Data**
- _____ Detector ID
 - _____ Analysis date
 - _____ ID, aliquot, weight, and geometry of LCS
 - _____ LCS counts and count duration
 - _____ Background counts and count duration
 - _____ Calculated activities, uncertainties, and MDA
 - _____ Expected value of LCSs with uncertainty

APPENDIX 6

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Gross Alpha and Beta

A _____ Case Narrative

- _____ Copy of Chain-of-Custody
- _____ SDG Number, cross reference lab sample ID to client ID
- _____ Preparation Batch Code
- _____ Abnormalities, reanalyses, or SOP deviations explained
- _____ Matrix problems explained
- _____ Instrument problems explained
- _____ RDLs met, explained if not met

B _____ Gross Alpha Self-Absorption Curve Data Package

_____ Gross Beta Self-Absorption Curve Data Package

Alpha

Beta

- _____ Detector ID
- _____ Date and time curve generated, curve checked
- _____ Radionuclide standard name, NIST certification and expiration dates, and DPM value
- _____ Aliquot of standards used
- _____ Raw data from counters showing counts obtained and count duration for each weight of salt
- _____ Weights of salts
- _____ Efficiencies
- _____ Best fit curve coefficients

APPENDIX 6

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Gross Alpha and Beta (continued)

- C _____ Gross Alpha Instrument Performance Verification Data
 _____ Gross Beta Instrument Performance Data
- | <u>Alpha</u> | <u>Beta</u> | |
|--------------|-------------|--|
| _____ | _____ | Detector ID |
| _____ | _____ | Date of verification check, |
| _____ | _____ | Reliability checksource name, NIST certification,
expiration and DPM activity |
| _____ | _____ | Raw data from counters showing counts obtained
and count duration for reliability checksource |
| _____ | _____ | Efficiency obtained for checksource |
| _____ | _____ | Background counts obtained and count duration for
each detector |
- D _____ Gross Alpha Laboratory Blanks Data
 _____ Gross Beta Laboratory Blanks Data
- | <u>Alpha</u> | <u>Beta</u> | |
|--------------|-------------|---|
| _____ | _____ | Detector ID |
| _____ | _____ | Analysis date |
| _____ | _____ | Count duration |
| _____ | _____ | Aliquot |
| _____ | _____ | Calculated activities, uncertainties, and
MDAs |
| _____ | _____ | Blank ID and matrix used |
- E _____ Gross Alpha Lab Replicate Sample Data
 _____ Gross Beta Lab Replicate Sample Data
- | <u>Alpha</u> | <u>Beta</u> | |
|--------------|-------------|---|
| _____ | _____ | Detector ID |
| _____ | _____ | Analysis date |
| _____ | _____ | Replicate IDs |
| _____ | _____ | Count duration |
| _____ | _____ | Aliquot |
| _____ | _____ | Calculated activities, uncertainties, and
MDAs |

APPENDIX 6

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²²⁶Radium by Radon Emanation

- A _____ **Case Narrative**
- _____ Copy of Chain-of-Custody
 - _____ SDG Number, cross reference lab sample ID to client ID
 - _____ Preparation Batch Code
 - _____ Abnormalities, reanalyses, or SOP deviations explained
 - _____ Matrix problems explained
 - _____ Instrument problems explained
 - _____ RDLs met, explained if not met
- B _____ **Calibration and Instrument Performance Verification Data Package**
- _____ Detector ID
 - _____ Calibration dates for each detector
 - _____ Identification, certification dates, expiration date, and DPM values of the standard reference material used to prepare standards
 - _____ Raw data from counters showing counts obtained and count duration for standards
 - _____ Midpoint voltage of the plateau curve for the photomultiplier tube
 - _____ Statistical analysis of the weekly checksources
 - _____ Background counts obtained for each Lucas-type cell with count duration
- C _____ **Laboratory Blanks Data**
- _____ ID of each cell/instrument combination used
 - _____ Analysis date
 - _____ Blank ID and matrix used
 - _____ Aliquot
 - _____ Calculated activities, uncertainties, and MDAs

APPENDIX 6

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Total Radiostrontium, Total Radiocesium, and Radium-228 by Gas Proportional Counter (GPC)

- A _____ Case Narrative
- _____ Copy of Chain-of-Custody
 - _____ SDG Number, cross reference lab sample ID to client ID
 - _____ Preparation Batch Code
 - _____ Abnormalities, reanalyses, or SOP deviations explained
 - _____ Matrix problems explained
 - _____ Instrument problems explained
 - _____ RDLs met, explained if not met

- B _____ Strontium Initial Calibration Data Package
- _____ Cesium Initial Calibration Data Package
 - _____ Ra-228 Initial Calibration Data Package

<u>Sr</u>	<u>Cs</u>	<u>Ra-228</u>	
_____	_____	_____	Detector ID
_____	_____	_____	Date and time calibrated, calibration check
_____	_____	_____	Radionuclide standard ID, NIST certification and expiration dates, and DPM value
_____	_____	_____	Aliquot of standards used
_____	_____	_____	Raw data from counters showing counts obtained and count duration for each weight of salt
_____	_____	_____	Weights of salts
_____	_____	_____	Efficiencies
_____	_____	_____	Best-fit curve coefficients
_____	_____	_____	Carrier weights added to planchets

APPENDIX 6

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Total Radiostrontium, Total Radiocesium, and Radium-228 by GPC (continued)

F	_____	Strontium LCSs Data			
	_____	Cesium LCSs Data			
	_____	Ra-228 LCSs Data			
		<u>Sr</u>	<u>Cs</u>	<u>Ra-228</u>	
		_____	_____	_____	Detector ID
		_____	_____	_____	Analysis date
		_____	_____	_____	LCS IDs
		_____	_____	_____	Expected value obtained for LCSs with uncertainty
		_____	_____	_____	Calculated activities, uncertainties, and MDAs
		_____	_____	_____	Count duration
G	_____	Strontium Chemical Recovery Factors			
	_____	Cesium Chemical Recovery Factors			
	_____	Ra-228 Chemical Recovery Factors			
		<u>Sr</u>	<u>Cs</u>	<u>Ra-228</u>	
		_____	_____	_____	Aliquot
		_____	_____	_____	Amount of carrier added to the sample
		_____	_____	_____	Weight of sample precipitate
	_____	_____	_____	Results of Atomic Absorption analysis if the amount of stable strontium exceeded a few milligrams	
	_____	_____	_____	Fractional chemical recovery of the nuclide of interest	

APPENDIX 6

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Total Radiostrontium, Total Radiocesium, and Radium-228 by GPC (continued)

- H _____ Strontium Efficiency Factors Data Package
 _____ Cesium Efficiency Factors Data Package
 _____ Ra-228 Efficiency Factors Data Package

<u>Sr</u>	<u>Cs</u>	<u>Ra-228</u>	
_____	_____	_____	Certification date and DPM value of the standard
_____	_____	_____	Aliquot of standards
_____	_____	_____	Net CPMs obtained for standards
_____	_____	_____	Count date
_____	_____	_____	Efficiency derived from latest self-absorption curve

- I _____ Strontium Sample Data Package
 _____ Cesium Sample Data Package
 _____ Ra-228 Sample Data Package

<u>Sr</u>	<u>Cs</u>	<u>Ra-228</u>	
_____	_____	_____	Printed report of results for sample, reruns
_____	_____	_____	Raw data from counter, copies of notebook pages
_____	_____	_____	Calculations sheet including Sample ID, detector ID, obtained sample and background counts and count duration observed, aliquot of sample, analysis date or time, weights of solids counted, detector efficiency, activities, uncertainties, and MDAs
_____	_____	_____	Precipitation date or time

Technician

Date

APPENDIX 6

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Total Uranium by Kinetic Laser Phosphorescence

- A _____ **Case Narrative**
- _____ Copies of Chain-of-Custody
 - _____ SDG Number, cross reference lab sample ID to client ID
 - _____ Preparation Batch Code
 - _____ Abnormalities explained
 - _____ Matrix problems explained
 - _____ Instrument problems explained
- B _____ **Calibrations, Background, and Reference Cell Data Package**
- _____ Instrument ID
 - _____ Dates of last calibration including analyzer output,
reference cell preparation, standard reference material
certificates and DPMs of calibration and reference cell
solutions
 - _____ Date of last background measurement including intensity
(pulses) obtained, midpoint standard used for background,
average activity and uncertainty obtained for the last ten
backgrounds
- C _____ **Laboratory Blanks Data**
- _____ Instrument ID
 - _____ Analysis date
 - _____ Blank ID and matrix used
 - _____ Aliquot
 - _____ Instrument output obtained
 - _____ Calculated activities, uncertainties, and MDAs

APPENDIX 7

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Organics Contract Compliance Checklist (Continued)

- E _____ Raw QC Data Package
- _____ Method Blank Data
 - _____ Pesticide Organics Analysis Data Sheet (Form 1D)
 - _____ GC Chromatograms
 - _____ GC Data System Printouts (Quantitation Reports)
 - _____ Matrix Spike/Matrix Spike Duplicate Data
 - _____ Pesticide Organics Analysis Data Sheet (Form 1D)
 - _____ GC Chromatograms
 - _____ GC Data System Printouts (Quantitation Reports)
- F _____ Sample Tracking Package
- _____ Chain-of-Custody Records
 - _____ Sample Preparation/Extraction Logbook Pages/Benchsheets
 - _____ Instrument Run Logs

Technician

Date

APPENDIX 9

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METALS CONTRACT COMPLIANCE CHECKLIST

- A _____ Cover Sheet/Transmittal Letter (one per data package shipment)
 _____ Case Narrative
- B _____ Forms
 _____ Inorganic Analysis Data Sheets (Form 1)
 _____ Initial and Calibration Verification Results (Form 2A)
 _____ Contract Required Detection Limit (CRDL) Standard for AA
 and ICP (Form 2B)
 _____ Blank Analysis Results (Form 3)
 _____ ICP Interference Check Sample Results (Form 4)
 _____ Spiked Sample Recovery Results (Form 5A)
 _____ Post/Digest Spiked Sample Recovery Results (Form 5B)
 _____ Duplicate Sample Results (Form 6)
 _____ Laboratory Control Sample Results (Form 7)
 _____ Standard Addition Result (Form 8)
 _____ ICP Serial Dilution Results (Form 9)
 _____ Instrument Detection Limits (Form 10)
 _____ ICP Interelement Correction Factors (Form 11A, 11B)
 _____ ICP Linear Ranges (Form 12)
 _____ Preparation Log (Form 13)
 _____ Analysis Run Log (Form 14)
- C _____ Raw Data
 _____ ICP Raw Data
 _____ Flame Emission AA Raw Data
 _____ Graphite Furnace AA Raw Data
 _____ Mercury Raw Data
- D _____ Sample Digestion Logs
 _____ ICP/Flame Digestion Logs
 _____ Graphite Furnace Digestion Logs
 _____ Mercury Digestion Logs
- E _____ Standard Preparation Logs
 _____ Standard Source and Expiration Dates
 _____ Percent Solids Calculations (Solids only)
- F _____ Chain-of-Custody Records
 _____ Sample Description

_____/_____
Technician Date

APPENDIX 11

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MISSING PACKAGE REQUEST (SAMPLE)

Laboratory Contact _____

REQUEST

Project # _____ SDG/Batch # _____

Contact History

<u>Contact#</u>	<u>Date of Request</u>	<u>Request Format</u>	<u>Individual Contacted</u>
(1)	_____	Phone / Fax / Letter	_____
(2)	_____	Phone / Fax / Letter	_____
(3)	_____	Phone / Fax / Letter	_____

RECEIPT

Date Resubmittal Data Received _____

VERIFICATION

Data Verified By _____ Date Verified _____

Are the resubmittal data adequate? Yes/No

If no, initiate another Data Resubmittal Tracking Form and indicate Request Continuance and this Form # at the top of it

Original Data Package, Yellow Copy-CTR, Pink Copy-Laboratory Contact

Laboratory _____ Project # _____

Laboratory SDG/Batch# _____

Deficiency Identified By _____ Date Deficiency Identified _____

Date of Laboratory Contact (From Top Half of Form) _____

Fraction Organics / Metals / Radiochemistry / Water Quality Parameter _____

Describe the deficiency

Original Data Package, Yellow Copy-CTR, Pink Copy-Laboratory Contact

APPENDIX 12

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MISSING DATA REQUEST (SAMPLE)

Laboratory Contact: _____

REQUEST

Project # _____ SDG/Batch # _____

Contact History

<u>Contact#</u>	<u>Date of Request</u>	<u>Request Format</u>	<u>Individual Contacted</u>
(1)	_____	Phone / Fax / Letter	_____
(2)	_____	Phone / Fax / Letter	_____
(3)	_____	Phone / Fax / Letter	_____

RECEIPT

Date Resubmittal Data Received: _____

VERIFICATION

Data Verified By _____ Date Verified _____

Are the resubmittal data adequate? Yes/No _____

If no, initiate another Data Resubmittal Tracking Form and indicate Request Continuance and this Form # at the top of it

Original Data Package, Yellow Copy-CTR, Pink Copy-Laboratory Contact

SAMPLE

Laboratory _____ Project # _____

Laboratory SDG/Batch# _____

Deficiency Identified By _____ Date Deficiency Identified _____

Date of Laboratory Contact # (From Top Half of Form) _____

Fraction Organics / Metals / Radiochemistry / Water Quality Parameter: _____

Describe the deficiency (Include Laboratory Sample #s and the Client Sample #s)

Original Data Package, Yellow Copy-CTR, Pink Copy-Laboratory Contact