APPENDIX 4-3

SHORT FORM

WORK/QA PLAN SHORT FORM

RD/RA at Occidental Chemical Corporation
Hooker/Ruco Site

Occidental Chemical Corporation

Project Officer's Signature _____

Project Officer's Name: Patrick J. Garrity

Project Quality Assurance Officer's Signature _____

Project Quality Assurance Officer's Name: William Leroux

1. **Project:** Hooker/Ruco Remedial Action

2. **Project Requested by:** USEPA

3. **Date of Request:** July 12, 1991

4. **Date of Project Initiation:** N/A

5. **Project Officer:** (QA Program Manager) Patrick Garrity

6. **Quality Assurance Officer:** William Leroux

7. **Project Description:** Detailed description is presented in Section 2.0 RDWP.

   A. **Objective and Scope Statement:** To collect analytical data from surface and subsurface soils, performed pursuant to Section 106(A) of CERCLA, 42 U.S.C. §9606(A).

   B. **Data Usage:** To define the presence, magnitude and extent of residual Aroclor 1248 during the remedial action within the facility's boundaries.

   C. **Monitoring Network Design and Rationale:** Air Sampling (upwind and downwind locations), waste characteristic sampling, Aroclor 1248 verification and confirmation samples. Sample results will determine compliance with performance standards.

   D. **Monitoring Parameters and their Frequency of Collection:** See E. for parameters; will be a single even sampling.

E. Parameter Table

Parameter	Number of samples	Sample matrix	Analytical method reference*	Sample preservation	Holding time	Container
See attached table 1						

* if other than EPA, must be attached.

F. QA Sample Parameter Table

	Parameter	Number of samples	Sample matrix	Analytical method reference*	Sample preservation	Holding time	Containers
Field blank	all as above	10%	all as above				
Field split	all as above	10%	all as above				
Laboratory duplicate	all as above	10%	all as above				

* if other than EPA, must be attached.

8. Project Fiscal Information (Optional):

A. Survey Costs: NA

Salaries: _____

Supplies: _____

Equipment: _____

Mileage: _____

B. Laboratory Services: _____

C. Administrative Overhead: _____

D. Consultant Services: _____

Total Project Costs: _____

9. Schedule of Tasks and Products: Reference RDWP for schedule.

10. Project Organization and Responsibility: The following is a list of key project personnel and their corresponding responsibilities:

Leggette, Brashears & Graham - sampling operations

Leggette, Brashears & Graham - sampling QC

P. Garrity, OCC - laboratory analysis

W. Leroux, OCC - laboratory QC

P. Garrity, OCC - data processing activities

P. Garrity, OCC - data processing QC

P. Garrity, OCC - data quality review

W. Leroux, OCC - performance auditing

W. Leroux, OCC - systems auditing

W. Leroux, OCC - overall QA

A. Weston, OCC - overall project coordination

(Note: an organizational chart should be supplied with this plan) See figure 1.

11. Data Quality Requirements and Assessments:

Parameter	Sample matrix	Detection limit	Quantitation limit	Estimated accuracy	Accuracy protocol	Estimated precision	Precision protocol
See attached table 2							

12. Documentation, Data Reduction and Reporting:

A. Objective and Scope Statement: Data sheets, field logs, photographs and chain of custody will be kept by all applicable personnel until the project is closed.

B. **Data Usage:** The designation laboratory will calculate and report the data to the OCC Site Coordinator, who will transmit the data to the EPA.

13. **Data Validation:** The OCC Quality Assurance Officer (QAO) will evaluate the data based on surrogate recoveries, detection limits, instrument standards and evaluation of chromatogram. The QAO will determine precision and accuracy and utilize the QA criteria set fourth in the methodology of the analysis to validate the data.

14. **Performance and Systems Audits:** Audits will be conducted in accordance with Section 4.0 of RDWP.

15. **Corrective Action:** Corrective Actions will be conducted in accordance with Section 4.0 RDWP.

16. **Reports:** The final output of the project will be a sampling and analysis report. The report shall include the following: a) map of sample locations, b) sample I.D. numbers, c) sample analysis information, d) sample analysis results, e) QA/QC data, f) QA/QC review and g) assessment of the data.

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July 24, 1991
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TABLES

TABLE 1

OCCIDENTAL CHEMICAL CORPORATION
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Parameters

Parameters	Method reference	Matrix	Sample presentation	Holding time	Sample container
Aroclor 1248	NIOSH 5503[1/]	Air	Sealed cartridge	2 months	glass fiber
Particulates	NIOSH 0500[1/]	Air	Sealed cartridge	--	PVC filter
Ignitability	SW-846 1010[2/]	Soil	4°C	--	8 oz. glass
Corrosivity	SW-846 9040/9041	Soil	4°C	--	8 oz. glass
Reactivity					
Cyanide bearing	SW-846 9010	Soil	4°C	--	8 oz. glass
Sulfide bearing	SW-846 9030	Soil	4°C	--	8 oz. glass
Toxicity					
Non-volatile extraction	SW-846 1311	Soil	4°C	56 days[3/] 360 days[4/]	8 oz. glass
Zero-headspace extraction	SW-846 1311	Soil	4°C	28 days[5/] 54 days[6/]	8 oz. glass
Aroclor 1248	SW-846 8080	Soil	4°C	Extract in 10 days Analyze in 40 days	8 oz. glass

TABLE 1
(continued)

OCCIDENTAL CHEMICAL CORPORATION
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Parameters

Parameters	Method reference	Matrix	Sample presentation	Holding time	Sample container
Aroclor 1248	SW-846 8080	Soil	4°C	Extract in 10 days Analyze in 40 days	8 oz. glass
Aroclor 1248	EPA SOW 2/88 7/	Soil	4°C	Extract in 10 days Analyze in 40 days	8 oz. glass

1/ NIOSH Manual of Analytical Methods, Third Edition, Revision 1.0, United States Department of Health, Education and Welfare, Published (NIOSH) 77-157-A (1987).
2/ Test Methods for Evaluating Solid Waste (SW-846), Third Edition, Office of Solid Waste and Emergency Response, November 1986.
3/ Mercury requires extraction within 28 days and analysis within 28 days; total elapsed holding time is 56 days.
4/ Metals, excluding mercury require extraction within 180 days and analysis within 180 days, total elapsed holding time is 360 days.
5/ Volatiles require extraction within 14 days and analysis within 14 days; total elapsed holding time is 28 days.
6/ Semi-volatiles require extraction within 7 days, prepare extraction within 7 days and analysis within 40 days; total elapsed holding time is 54 days.
7/ United States Environmental Protection Agency, "Contract Laboratory Protocols, Statement of Work for Organic Analyses, Multi-Media, Multi-Concentration", February 1988.

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TABLE 2A

OCCIDENTAL CHEMICAL CORPORATION
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Remedial Data Quality
Requirements and Assessments

Parameter	Method reference	Matrix	Precision/accuracy objectives (percent recovery and RSD)	Percent completed
Aroclor 1248	NIOSH 5503	Particulates	Per method	95
Particulates	NIOSH 0500	Air	Per method	95
Ignitability	EPA 1010/1020	Soil/water	Per method	95
Corrosivity	EPA 9040/9041	Soil/water	Per method	95
Reactivity	EPA 9010/9030	Soil/water	Per method	95
Toxicity	EPA 1311	Soil/water	Per method	95
Aroclor 1248	EPA 8080	Soil	Per method	95
Aroclor 1248	EPA SOW 2/88	Soil	Per method	95

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TABLE 2B

OCCIDENTAL CHEMICAL CORPORATION
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Distribution of Analysis

Parameter	Laboratory
Aroclor 1248	Volumetric Techniques
Particulates	Volumetric Techniques
Ignitability	RECRA
Corrosivity	RECRA
Reactivity	RECRA
Toxicity	RECRA
Aroclor 1248	Volumetric Techniques
Aroclor 1248	Weston Analytical

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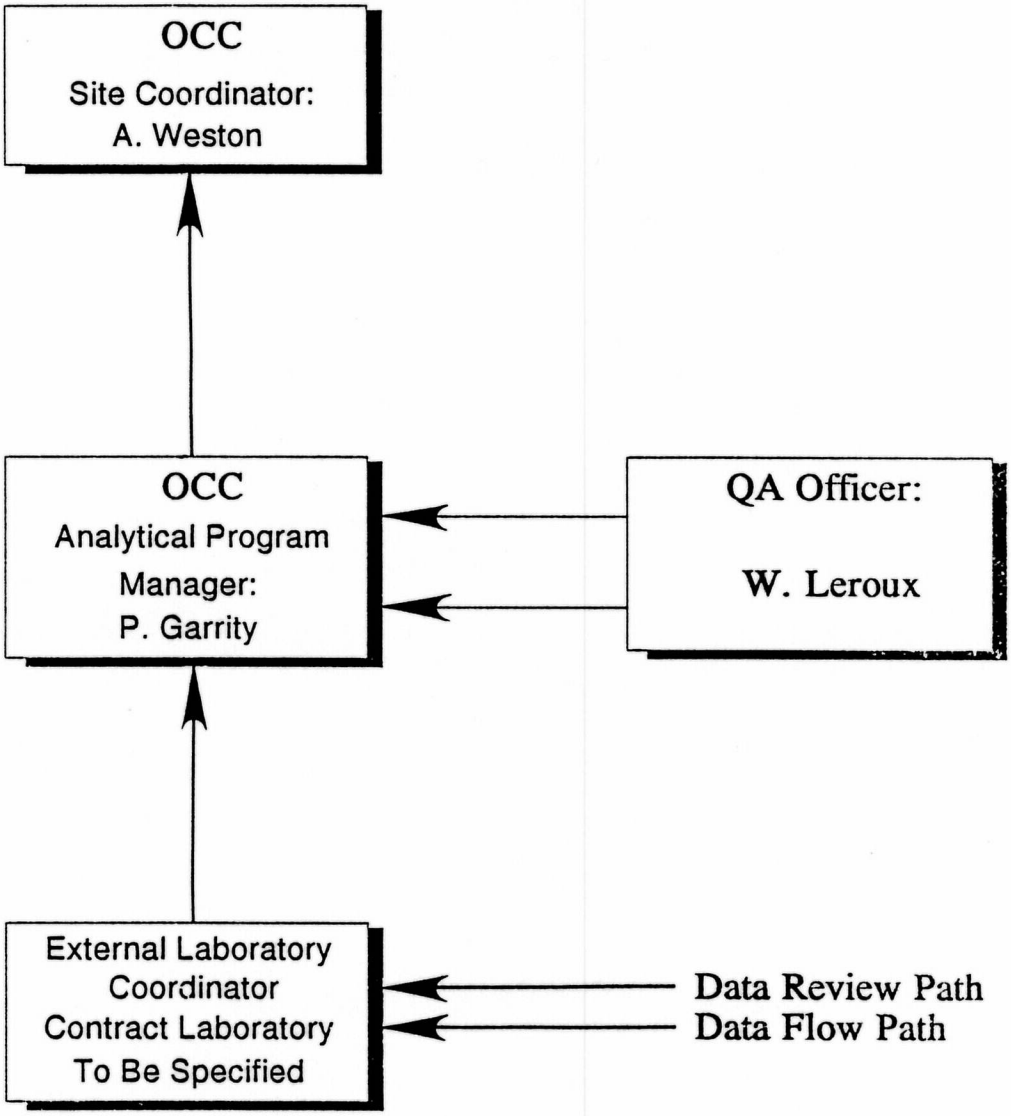
FIGURE

QA PROJECT ORGANIZATION
HOOKER/RUCO SITE

REMEDIAL PROJECT TEAM