BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AUTHORIZING ISSUANCE OF A REQUEST FOR PROPOSALS FOR LABORATORY SERVICES FOR ST. JOHNS LANDFILL	))))	RESOLUTION NO. 93-1827 Introduced by Rena Cusma Executive Officer

WHEREAS, It is in the public interest that the St. Johns Landfill closure process move forward in an expeditious manner; and

WHEREAS, Water quality monitoring is required by the Oregon Department of Environmental Quality (DEQ), the Revised Closure and Financial Assurance Plan for St. Johns Landfill, and the Smith and Bybee Lakes Management Plan; and,

WHEREAS, This Request for Proposals (RFP) will provide laboratory services as required to implement the Water Quality Monitoring Plan for St. Johns Landfill; and

WHEREAS, This resolution along with the Request for Proposals and contract form for the work described above were submitted to the Executive Officer for consideration and all were forwarded to the Council for approval; now therefore,

BE IT RESOLVED,

That the Metro Council authorizes issuance of an RFP for work associated with Laboratory Services for sampling at the St. Johns Landfill.

ADOPTED by the Metro Council this 22nd day of July, 1993.

Judy Wyers, Presiding Officer

JK:clk
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Laboratory Services

for St. Johns Landfill

RFP #93R-39SW

Metro
Solid Waste Department
600 NE Grand Ave.
Portland, OR 97232-2736

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REQUEST FOR PROPOSALS

FOR

LABORATORY SERVICES AT ST. JOHNS LANDFILL (1993-1996)

I. INTRODUCTION

The Solid Waste Department of Metro, a metropolitan service district organized under the laws of the State of Oregon and the 1992 Metro Charter, located at 600 NE Grand Avenue, Portland, OR 97232-2736, is requesting proposals for laboratory services for St. Johns Landfill (1993-1996). Proposals will be due no later than 3:00 p.m., PDT, Monday, August 16 , 1993 in Metro's business offices at 600 NE Grand Avenue, Portland, Oregon 97232-2736. Details concerning the project and proposal are contained in this document.

Interviews, if required, will be held Tuesday, August 24, 1993 or Wednesday, August 25, 1993.

II. BACKGROUND/HISTORY OF PROJECT

The half-century-old St. Johns Landfill, which served nearly all of the Portland metropolitan region, is currently being closed. Metro, which is responsible for managing all asepcts of solid waste disposal in the Portland metropolitan area, owns the St. Johns Landfill, and has operated it since 1980. Metro is currently in the second year of the five-year closure.

To monitor the environmental impact of St. Johns Landfill, Metro performs groundwater, surface water, stormwater, sediment, biological, and leachate sampling. Metro staff collects the samples, to be tested/analyzed by a laboratory.

III. PROPOSED SCOPE OF WORK/SCHEDULE

Metro is seeking proposals from qualified firms to perform the following services and to deliver the products described in the attached Scope of Work (Attachment 3). Initial sampling will be conducted as soon as possible after award of contract. (It is contemplated that such award can take place as early as Friday, September 10, 1993).

IV. QUALIFICATIONS/EXPERIENCE

Each proposal must include a description of both the firm's experience and qualifications which directly relates to the work identified in the Scope of Work.

V. PROJECT ADMINISTRATION

Metro's project manager is Joanna Karl, Senior Solid Waste Engineer.

Proposers must identify a single person as project manager to work with Metro. The Contractor must assure responsibility for any subcontractor work and shall be responsible for the day-to-day direction and internal management of the project. The prime contractor shall have, or be capable of obtaining, professional liability insurance, general liability insurance, business automobile insurance, and workers compensation insurance covering the services to be performed, as shown in Attachment 2 (Personal Services Agreement). Metro shall be named as an additional insured.

VI. PROPOSAL INSTRUCTIONS

A. Submission of Proposals

Five (5) copies of the proposal shall be furnished to Metro, addressed to:

Joanna Karl, PE
Metro
600 NE Grand Avenue
Portland, OR 97232-2736

B. Deadline

Proposals will not be considered if received after 3:00 pm, PDT, Monday, August 16, 1993.

C. RFP as Basis for Proposals:

This Request for Proposals represents the most definitive statement Metro will make concerning the information upon which Proposals are to be based. Any verbal information which is not contained in this RFP will not be considered by Metro in evaluating the Proposal. All questions relating to this RFP should be addressed to Joanna Karl, PE, Senior Engineer at (503) 797-1650. Any questions, which in the opinion of Metro, warrant a written reply or RFP amendment will be furnished to all parties receiving this RFP. Metro will not respond to questions received after Friday, August 6, 1993.

D. Contract Type

Metro intends to award a Personal Services Agreement with the selected Contractor. A copy of the standard contract form approved by Metro General Counsel is attached (Attachment 2). Any proposed changes in the language, construction or requirements of these documents must be raised and resolved as a part of the RFP process. All respondents are therefore advised to review, and include a well-supported response to this document in their proposal.

E. Information Release

All proposers are hereby advised that Metro may solicit and secure background information based upon the information, including references, provided in response to this RFP. By submission of a proposal all proposers agree to such activity and release Metro from all claims arising from such activity.

F. Disadvantaged, Minority and Women-Owned Business Program

In the event that any subcontracts are to be utilized in the performance of this agreement, the proposer's attention is directed to Metro Code ~~provisions~~ sections 2.04.100, 200 ~~& 300~~.

Copies of that document are available from the Procurement and Contracts Division of Regional Facilities, Metro, 600 NE Grand Avenue, Portland, Or 97232-2736 or call (503) 797-1713. Ms. Amila Hazena,

VII. PROPOSAL CONTENTS

The text of the proposal should contain not more than ten (10) pages of written material (excluding biographies and brochures, which may be included in an appendix), describing the ability of the consultant to perform the work requested, as outlined below:

A. Transmittal Letter: Indicate who will be assigned to the project, who will be project manager, and that the proposal will be valid for ninety (90) days.

B. Approach/Project Work Plan: Describe how the work will be done within the given timeframe and budget. Include a proposed work plan and schedule.

C. Staffing/Project Manager Designation: Identify specific personnel assigned to major project tasks, their roles in relation to the work required, percent of their time on the project, and special qualifications they may bring to the project.

Metro intends to award this contract to a single firm to provide the services required. Proposals must identify a single person as project manager to work with Metro. The consultant must assure responsibility for any subconsultant work and shall be responsible for the day-today direction and internal management of the consultant effort.

Designate which tasks will be done by subcontractors.

D. Experience: List projects conducted over the past five years similar to the work required here. For each project, include the name of the contact person, his/her title, role on the project, and telephone number. Identify persons on the proposed team who worked on each project, and their respective roles. Include resumes of individuals proposed for this contract.

E. Cost/Budget: Present the proposed cost of the project. List hourly rates for personnel assigned to the project, total personnel expenditures, support services, and subconsultant fees (if any). Requested expenses should also be listed. A budget not to exceed $240,000 has been established for all lab monitoring work at St. Johns Landfill in fiscal year 1993-1994.

The Cost Proposal Form (Attachment 1, Form 2), to be filled out, is divided into 4 separate years, as well as a summary page (first page) to show the total contract price. Phase II testing may not be required in full by regulators in the future. A contingency, based on the Phase II sampling costs, shall be established for this contract. This contingency, if not required in full by Metro for Phase II sampling, may be used for other required testing, if requested by Metro. Cost of such testing shall be at the unit costs in this proposal.

Indicate the following on the form: (1) unit cost per lab test for each year, (2) the annual cost for each test, (3) the total annual cost for all testing, (4) total contract cost. All costs should be shown on the summary form (first page of the Cost Proposal Form), as well as the detailed forms (pages 2-5). Also, include the proposed test method if not specified by Metro.

F. Technical Information:

(1) Certification and membership.

A. Indicate whether you are certified as a drinking water sample test lab.

B. Indicate whether you are or have been a member of the EPA Contract Lab Program.

(2) Describe the QA/QC, and how it will meet or exceed Metro's Water Quality Sampling and Analysis Plan (Appendix B).

(3) Provide a sample diskette of lab results in ASCII (or compatible with Metro's software). Metro has a water quality data base, and will use the sample to determine what manipulation will be required to input the data.

(4) Provide an expected minimum detection limit or practical quantitation limit for each test parameter and each matrix listed in the RFP.

G. Exceptions and Comments: To facilitate evaluation of proposals, Metro wishes that all responding firms adhere to the format outlined within this RFP.

Firms wishing to take exception to, or comment on, any specified criteria within this RFP are encouraged to document their concerns in this part of their proposal. Exceptions or comments should be succinct, thorough and organized.

VIII. GENERAL PROPOSAL/CONTRACT CONDITIONS

A. Limitation and Award: This RFP does not commit Metro to the award of a contract, nor to pay any costs incurred in the preparation and submission of proposals in anticipation of a contract. Metro reserves the right to waive minor irregularities, accept or reject any or all proposals received as the result of this request, negotiate with all qualified sources, or to cancel all or part of this RFP.

B. Contract Type: Metro intends to award a personal services contract with the selected firm for this project. A copy of the standard form contract which the successful consultant will be required to execute is attached.

C. Billing Procedures: Proposers are informed that the billing procedures of the selected firm are subject to the review and prior approval of Metro before reimbursement of services can occur. A monthly billing, accompanied by a progress report, will be prepared for review and approval.

D. Validity Period and Authority: The proposal shall be considered valid for a period of at least ninety (90) days and shall contain a statement to that effect. The proposal shall contain the name, title, address, and telephone number of an individual or individuals with authority to bind any company contacted during the period in which Metro is evaluating the proposal.

IX. EVALUATION OF PROPOSALS

A. Evaluation Procedure: Proposals received that conform to the proposal instructions will be evaluated. The evaluation will take place using the evaluation criteria identified in the following section. The evaluation process will result in Metro developing a short list of the firms who, in its opinion, are most qualified. Interviews with these firms may be requested prior to final selection of one firm.

B. Evaluation Criteria: This section provides a description of the criteria which will be used in the evaluation of the proposals submitted to accomplish the work defined in the RFP.

PROJECT WORK PLAN/APPROACH (35%)

- Clarity, understandability, and completeness of proposal
- Demonstration of understanding of the project objectives.
- Responsiveness of proposal to project objectives
- Understanding of work schedule deadlines
- Quality assurance/quality control

PROJECT STAFFING EXPERIENCE (35%)

- Project organization: project management and assignment of personnel; project manager clearly designated; and use of subconsultants clearly described.
- Qualifications and favorable references indicating the directly relevant experience of the project manager, project team, and subconsultants.
- Certified drinking water sample test lab
- Current or past membership in EPA Contract Laboratory Program (CLP)
- Demonstrated knowledge of similar services
- Work schedule deadlines adequately met in previous jobs

BUDGET/COST PROPOSAL (30%)

- Stated ability to complete project within budget
- Completed cost proposal with pricing most advantageous to Metro.

X. NOTICE TO ALL PROPOSERS -- STANDARD AGREEMENT

The personal services agreement (Attachment 2) included herein is a standard agreement approved for use by Metro's General Counsel. As such, it is included for your review prior to submitting a proposal.

Any changes in the included standard agreement must be requested and resolved as part of the proposal process or as a condition attached to the proposal.

Consider the language carefully. Conditioned proposals may be considered nonresponsive. Subsequent requests for modification may not only be rejected, but interpreted as a request to modify and withdraw the original proposal.

Form 1. TECHNICAL INFORMATION

(1) Certification and membership.

A. Indicate whether you are certified as a drinking water sample test lab.

B. Indicate whether you are or have been a member of the EPA Contract Lab Program.

(2) Describe quality assurance/quality control (QA/QC) proacedures, and how they will meet or exceed Metro's sampling plan.

(3) Provide a sample diskette of lab results in ASCII. Metro has a water quality data base, and will use the sample to determine what manipulation will be required to input the data.

(4) Provide an expected minimum detection limit or practical quantitation limit for each parameter and each matrix listed in the RFP.

Attachment 1. PROPOSAL FORMS

FORM 2. COST PROPOSAL

COST PROPOSAL FORM-Summary																								
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Year:									1993				1994					1995					1996	TOTAL
SUMMARY (from following pages):																								
GROUNDWATER									+				+					+					+	
SURFACE WATER									+				+					+					+	
STORMWATER									+				+					+					+	
SEDIMENT SAMPLING									+				+					+					+	
BIOLOGICAL SAMPLING									+				+					+					+	
LEACHATE COLLECTION SYSTEM									+				+					+					+	
TOTAL									-				-					-					-	-

COST PROPOSAL FORM (cont)																							
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						1993	1993	1993	1993	1994	1994	1994	1994	1995	1995	1995	1995	1996	1996	1996	1996	Total
		Sample			Samples/	Freq/	Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	
	Method	Points	DupL	Blanks	Event	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	
GROUNDWATER																						
Leachate Indicators																						
Alkalinity, CaCO3	310.1	31	3		34	1	34			2	68			2	68			2	68			
Ammonium, HN4-N	350.3	31	3		34	1	34			2	68			2	68			2	68			
Bicarbonate, HCO3	SM2320B	31	3		34	1	34			2	68			2	68			2	68			
Calcium (field filtered)	6010	31	3		34	1	34			2	68			2	68			2	68			
Carbonate, CO3 (field filtered)	SM2320B	31	3		34	1	34			2	68			2	68			2	68			
Chemical Oxygen Demand (COD)	410.2	31	3		34	1	34			2	68			2	68			2	68			
Chloride (field filtered)	300.0	31	3		34	1	34			2	68			2	68			2	68			
Conductivity	120.1	31	3		34	1	34			2	68			2	68			2	68			
Hardness, CaCO2	6010	31	3		34	1	34			2	68			2	68			2	68			
Iron	6010	31	3		34	1	34			2	68			2	68			2	68			
Magnesium (field filtered)	6010	31	3		34	1	34			2	68			2	68			2	68			
Manganese, dissolved (field filtered)	6010	31	3		34	1	34			2	68			2	68			2	68			
Nitrate, as N (field filtered)	300.0	31	3		34	1	34			2	68			2	68			2	68			
Phosphorus, Dissolved		31	3		34	1	34			2	68			2	68			2	68			
Potassium (field filtered)	6010	31	3		34	1	34			2	68			2	68			2	68			
Sodium (field filtered)	6010	31	3		34	1	34			2	68			2	68			2	68			
Sulfate, SO4 (field filtered)	300.0	31	3		34	1	34			2	68			2	68			2	68			
Total Dissolved Solids (TDS)	160.1	31	3		34	1	34			2	68			2	68			2	68			
Total Organic Carbon (TOC)	415.1	31	3		34	1	34			2	68			2	68			2	68			
Total Suspended Solids (TSS)	160.2	31	3		34	1	34			2	68			2	68			2	68			
Trace Metals (total recoverable, unfiltered)	EPA 6010	31	3		34	1	34			2	68			2	68			2	68			
Volatile Organic Compounds - Appendix I	EPA 8260	31	3	1	35	1	35			2	70			2	70			2	70			
Volatile Organic Compounds - Other	EPA 8260	31	3	1	35	1	35			2	70			2	70			2	70			
Herbicides	EPA 8150	12	1	1	14	1	14			1	14			1	14			1	14			
Pesticides/PCBs	EPA 608	12	1	1	14	1	14			1	14			1	14			1	14			
EPA Acid/Base Neutral Priority Pollutants	EPA 8270	12	1	1	14	1	14			1	14			1	14			1	14			
SUBTOTAL									+				+				+				+	+
PHASE II Parameters (Appendix II)																						
Metals (15 Metals)	6010 & 7000						60				60				60				60			
Cyanide	9010						60				60				60				60			
Sulfide	9030						60				60				60				60			
Volatile Organics (60 Analytes)	8260						60				60				60				60			
Semivolatile Organics (103 Analytes)	8270						60				60				60				60			
Chlorinated Pesticides/PCBs (28 Analytes)	8080						60				60				60				60			
Chlorinated Herbicides (4 Analytes)	8150						60				60				60				60			
Organophosphorus Pesticides (9 Analytes)	8140						60				60				60				60			
SUBTOTAL (Phase II only)									+				+				+				+	+
SUBTOTAL (All groundwater parameters)									+				+				+				+	

COST PROPOSAL FORM (cont)																							
p.3/5																							
						1993	1993	1993	1993	1994	1994	1994	1994	1995	1995	1995	1995	1996	1996	1996	1996	Total
		Sample			Samples/		Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	
	Method	Locations	Dupl.	Blanks	Event	Freq/yr	year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	
SURFACE WATER																						
Basics - BOD	405.1	8	1		9	2	18			2	18			2	18			2	18			
Nutrients																						
NO2-NO3		8	1		9	4	36			4	36			4	36			4	36			
Total Kjeldahl Nitrogen (TKN)		8	1		9	4	36			4	36			4	36			4	36			
Total Phosphorus		8	1		9	4	36			4	36			4	36			4	36			
Dissolved Phosphorus (Available Phos.)		8	1		9	2	18			2	18			2	18			2	18			
Bacteria	SM9221C																					
Enterococci Bacteria		8	1		9	4	36			4	36			4	36			4	36			
Fecal Coliform Bacteria		8	1		9	4	36			4	36			4	36			4	36			
Toxins-Total Halogentd Org (TOX)	9020	8	1		9	2	18			2	18			2	18			2	18			
Leachate Indicators																						
Ammonium, NH4-N	350.3	8	1		9	2	18			2	18			2	18			2	18			
Chemical Oxygen Demand (COD)	410.2	8	1		9	2	18			2	18			2	18			2	18			
Conductivity	120.1	8	1		9	2	18			2	18			2	18			2	18			
Hardness, as Ca CO3	6010	8	1		9	2	18			2	18			2	18			2	18			
Total Dissolved Solids (TDS)	160.1	8	1		9	2	18			2	18			2	18			2	18			
Total Solids	160.3	8	1		9	2	18			2	18			2	18			2	18			
Total Suspended Solids (TSS)	160.2	8	1		9	2	18			2	18			2	18			2	18			
Total Organic Carbon (TOC)	415.1	8	1		9	2	18			2	18			2	18			2	18			
Leachate Indicator - Anions & Cations																						
Bicarbonate, HCO3 (field filtered)	SM2320B	8	1		9	2	18			2	18			2	18			2	18			
Calcium, Ca (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Chloride, Cl (field filtered)	300.0	8	1		9	2	18			2	18			2	18			2	18			
Iron, Fe (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Magnesium, Mg (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Manganese, Mn (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Nitrate, NO3-N (field filtered)	300.0	8	1		9	2	18			2	18			2	18			2	18			
Potassium (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Silica, SiO2 (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Sodium, Na (field filtered)	6010	8	1		9	2	18			2	18			2	18			2	18			
Sulfate, SO4 (field filtered)	300.0	8	1		9	2	18			2	18			2	18			2	18			
Critical Parameters																						
Trace Metals (total recoverable, unfiltered)	6010	8	1		9	1	9			1	9			1	9			1	9			
VOCs	EPA 8260	8	1	1	10	1	10			1	10			1	10			1	10			
SUBTOTAL																						

COST PROPOSAL FORM (cont)

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						1993	1993	1993	1993	1994	1994	1994	1994	1995	1995	1995	1995	1996	1996	1996	1996	Total
		Sample			Samples/		Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	
	Method	Points*	DupL	Blanks	Event	Freq/yr	year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year*	Unit Cost	Cost/yr	
STORMWATER SAMPLING																						
Metals	6010	5	1		6	1	6			2	12			2	12			2	10			
Other																						
pH	150.1	5	1		6	1	6			2	12			2	12			2	10			
Oil & grease	413.1	5	1		6	1	6			2	12			2	12			2	10			
Conductivity	120.1	5	1		6	1	6			2	12			2	12			2	10			
COD	410.2	5	1		6	1	6			2	12			2	12			2	10			
TOC	415.1	5	1		6	1	6			2	12			2	12			2	10			
Total suspended solids	160.2	5	1		6	1	6			2	12			2	12			2	10			
Total phosphorus	365.3	5	1		6	1	6			2	12			2	12			2	10			
Dissolved Ortho phosphorus	365.3	5	1		6	1	6			2	12			2	12			2	10			
Fecal coliform	SM9221C	5	1		6	1	6			2	12			2	12			2	10			
Enterococci	SM9230B	5	1		6	1	6			2	12			2	12			2	10			
SUBTOTAL									+				+				+				+	
*No. of sampling points decreases to 4 in 1998.																						
SEDIMENT SAMPLING																						
Total Metals	6010	4	1		5	1	5			1	5			1	5			1	5			
PAH's	8100	4	1	1	6	1	6			1	6			1	6			1	6			
Pesticides and PCBs	8080	4	1	1	6	1	6			1	6			1	6			1	6			
Other																						
2,4-D	8150	4	1	1	6	1	6			1	6			1	6			1	6			
Total Organic Carbon	STM 4129-82-M	4	1		5	1	5			1	5			1	5			1	5			
Acid Volatile Sulfides (cold acid soluble)	8/91 EPA dr.	4	1		5	1	5			1	5			1	5			1	5			
SUBTOTAL									+				+				+				+	+
BIOLOGICAL SAMPLING																						
Invertebrate																						
Mercury, Total	EPA 7471	1	0		1	1	1			1	1			1	1			1	1			
Cadmium, Total	EPA 7131	1	0		1	1	1			1	1			1	1			1	1			
Pesticides and PCBs	EPA 8080	1	0	1	2	1	2			1	2			1	2			1	2			
PAH's		1	0	1	2	1	2			1	2			1	2			1	2			
Lead, Total	EPA 7421	1	0		1	1	1			1	1			1	1			1	1			
	& 3540																					
Fish Tissue																						
Mercury, Total	EPA 7471	1	0		1	1	1			1	1			1	1			1	1			
Cadmium, Total	EPA 7131	1	0		1	1	1			1	1			1	1			1	1			
Pesticides and PCBs	EPA 8080	1	0	1	2	1	2			1	2			1	2			1	2			
PAH's		1	0	1	2	1	2			1	2			1	2			1	2			
Lead, Total	EPA 7421	1	0		1	1	1			1	1			1	1			1	1			
	& 3540																					
SUBTOTAL									+				+				+				+	+

COST PROPOSAL FORM (cont)

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						1993	1993	1993	1993	1994	1994	1994	1994	1995	1995	1995	1995	1996	1996	1996	1996	% Total
		Sample			Samples/		Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	Freq/	Samples/		Total	
	Method	Locations	Dupl.	Blanks	Event	Freq/yr	year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	Year	Year	Unit Cost	Cost/yr	
LEACHATE COLLECTION SYSTEM MONITORING																						
Sulfide	376.2	1	0		1	3	3			12	12			12	12			12	12			
pH	150.1	1	0		1	3	3			12	12			12	12			12	12			
Ammonia (grab)	350.3	1	0		1	3	3			12	12			12	12			12	12			
Cadmium (composite)	6010	1	0		1	2	2			4	4			4	4			4	4			
Chromium, Total (composite)	6010	1	0		1	2	2			4	4			4	4			4	4			
Copper (composite)	6010	1	0		1	2	2			4	4			4	4			4	4			
Lead (composite)	7421	1	0		1	2	2			4	4			4	4			4	4			
Nickel (composite)	6010	1	0		1	2	2			4	4			4	4			4	4			
Zinc (composite)	6010	1	0		1	2	2			4	4			4	4			4	4			
Sulfate (composite)	300.0	1	0		1	1	1			2	2			2	2			2	2			
Mercury (composite)	7470	1	0		1	1	1			2	2			2	2			2	2			
Fats, oils, and grease (grab)	413.1	1	0		1	1	1			2	2			2	2			2	2			
TTO (grab)	608/624/625	1	0	1	2	1	2			2	4			2	4			2	4			
SUBTOTAL									+				+				+				+	+
TOTAL									=				=				=				=	=

Attachment 2. PERSONAL SERVICES AGREEMENT

Project:
Contract No:

PERSONAL SERVICES AGREEMENT

THIS AGREEMENT is between Metro, a metropolitan service district organized under the laws of the State of Oregon and the 1992 Metro Charter, located at 600 NE Grand Avenue, Portland, OR 97232, and _____, referred to herein as "Contractor," located at _____, 97___.

In exchange for the promises and other consideration set forth below, the parties agree as follows:

1. Duration. This personal services agreement shall be effective _____, and shall remain in effect until and including _____, unless terminated or extended as provided in this Agreement.

2. Scope of Work. Contractor shall provide all services and materials specified in Attachment 3 -- Scope of Work," which is incorporated into this Agreement by reference. All services and materials shall be provided by Contractor in accordance with the Scope of Work, in a competent and professional manner. To the extent that the Scope of Work contains additional contract provisions or waives any provision in the body of this Agreement, the Scope of Work shall control.

3. Payment. Metro shall pay Contractor for services performed and materials delivered in the amount(s), manner and at the time(s) specified in the Scope of Work for a maximum sum not to exceed _____ ($_____).

4. Insurance.

a. Contractor shall purchase and maintain at the Contractor's expense, the following types of insurance, covering the Contractor, its employees, and agents:

(1) Broad form comprehensive general liability insurance covering bodily injury and property damage, with automatic coverage for premises, operations, and product liability. The policy must be endorsed with contractual liability coverage; and

(2) Automobile bodily injury and property damage liability insurance.

b. Insurance coverage shall be a minimum of $500,000 per occurrence. If coverage is written with an annual aggregate limit, the aggregate limit shall not be less than $1,000,000.

c. Metro, its elected officials, departments, employees, and agents shall be named as ADDITIONAL INSUREDS. Notice of any material change or policy cancellation shall be provided to Metro 30 days prior to the change or cancellation.

d. Contractor, its subcontractors, if any, and all employers working under this Agreement that are subject employers under the Oregon Workers' Compensation Law shall comply with ORS 656.017, which requires them to provide Workers' Compensation coverage for all their subject workers. Contractor shall provide Metro with certification of Workers' Compensation insurance including employer's liability. If Contractor has no employees and will perform the work without the assistance of others, a certificate to that effect may be attached, as Exhibit B, in lieu of the certificate showing current Workers' Compensation.

e. If required by the Scope of Work, Contractor shall maintain for the duration of this Agreement professional liability insurance covering personal injury and property damage arising from errors, omissions, or malpractice. Coverage shall be in the minimum amount of $500,000. Contractor shall provide to Metro a certificate of this insurance, and 30 days' advance notice of material change or cancellation.

5. Indemnification. Contractor shall indemnify and hold Metro, its agents, employees and elected officials harmless from any and all claims, demands, damages, actions, losses and expenses, including attorney's fees, arising out of or in any way connected with its performance of this Agreement, or with any patent infringement or copyright claims arising out of the use of Contractor's designs or other materials by Metro and for any claims or disputes involving subcontractors.

6. Maintenance of Records. Contractor shall maintain all of its records relating to the Scope of Work on a generally recognized accounting basis and allow Metro the opportunity to inspect and/or copy such records at a convenient place during normal business hours. All required records shall be maintained by Contractor for three years after Metro makes final payment and all other pending matters are closed.

7. Ownership of Documents. All documents of any nature including, but not limited to, reports, drawings, works of art and photographs, produced by Contractor pursuant to this Agreement are the property of Metro, and it is agreed by the parties that such documents are works made for hire. Contractor hereby conveys, transfers, and grants to Metro all rights of reproduction and the copyright to all such documents.

8. Project Information. Contractor shall share all project information and fully cooperate with Metro, informing Metro of all aspects of the project including actual or potential problems or defects. Contractor shall abstain from releasing any information or project news without the prior and specific written approval of Metro.

9. Independent Contractor Status. Contractor shall be an independent contractor for all purposes and shall be entitled only to the compensation provided for in this Agreement. Under no circumstances shall Contractor be considered an employee of Metro. Contractor shall provide all tools or equipment necessary to carry out this Agreement, and shall exercise complete control in achieving the results specified in the Scope of Work. Contractor is solely responsible for its performance under this Agreement and the quality of its work; for obtaining and maintaining all licenses and certifications necessary to carry out this Agreement; for payment of any fees, taxes, royalties, or other expenses necessary to complete the work except as otherwise specified in the Scope of Work; and for meeting all other requirements of law in carrying out this Agreement. Contractor shall identify and certify tax status and identification number through execution of IRS form W-9 prior to submitting any request for payment to Metro.

10. Right to Withhold Payments. Metro shall have the right to withhold from payments due to Contractor such sums as necessary, in Metro's sole opinion, to protect Metro against any loss, damage, or claim which may result from Contractor's performance or failure to perform under this Agreement or the failure of Contractor to make proper payment to any suppliers or subcontractors.

11. State and Federal Law Constraints. Both parties shall comply with the public contracting provisions of ORS chapter 279, and the recycling provisions of ORS 279.545 - 279.650, to the extent those provisions apply to this Agreement. All such provisions required to be included in this Agreement are incorporated herein by reference. Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations including those of the Americans with Disabilities Act.

12. Situs. The situs of this Agreement is Portland, Oregon. Any litigation over this agreement shall be governed by the laws of the state of Oregon and shall be conducted in the circuit court of the state of Oregon, for Multnomah County, or, if jurisdiction is proper, in the U.S. District Court for the District of Oregon.

13. Assignment. This Agreement is binding on each party, its successors, assigns, and legal representatives and may not, under any circumstance, be assigned or transferred by either party.

14. Termination. This Agreement may be terminated by mutual consent of the parties. In addition, Metro may terminate this Agreement by giving Contractor five days prior written notice of intent to terminate, without waiving any claims or remedies it may have against Contractor. Termination shall not excuse payment for expenses properly incurred prior to notice of termination, but neither party shall be liable for indirect or consequential damages arising from termination under this section.

15. No Waiver of Claims. The failure to enforce any provision of this Agreement shall not constitute a waiver by Metro of that or any other provision.

16. Modification. Notwithstanding and succeeding any and all prior agreement(s) or practice(s), this Agreement constitutes the entire Agreement between the parties, and may only be expressly modified in writing(s), signed by both parties.

_____	METRO
By: _____	By: _____
_____	_____
Print name and title	Print name and title
Date: _____	Date: _____

Attachment 3. SCOPE OF WORK

ATTACHMENT 3

SCOPE OF WORK
LABORATORY SERVICES AT ST. JOHNS LANDFILL (1993-1996)

Metro is seeking proposals from qualified firms to perform the following services and to deliver the products described. The landfill is located in North Portland at 9363 N. Columbia Boulevard.

The Contractor shall identify a single person as project manager to work with Metro. The Contractor shall be responsible for any subcontractor work and shall be responsible for the day-to-day direction and internal management of the Contractor and subcontractor effort.

The Contractor shall provide professional liability insurance, as discussed in Section 4e of the Personal Services Agreement.

The work shall begin in the late summer/early fall of 1993, and continue through the end of 1996. Metro will collect all samples to be analyzed.

TASK 1: Contractor shall adhere to Metro's Sampling and Analysis Plan (Appendix A), which specifies the following: cleaning of sampling containers, use of a laboratory logbook, and laboratory quality assurance/quality control (QA/QC).

All records of testing must be available for inspection if required by Metro. Lab should provide Metro a copy of their QA/QC plan.

TASK 2: Contractor shall analyze parameters, as shown in Appendices A1 (Sampling Parameters) and A2 (TTO's). Note that the number of stormwater monitoring locations decrease from 5 to 4 in 1996.

Sampling parameters or frequency could change, due to sampling results or regulatory requirements. The lab shall be notified at least twenty four hours before each sampling event, of what tests and how many will be required. Field duplicates (one per ten samples) shall be included as well.

Dates of sample collection may vary by a month or so. The analysis shall be completed within thirty (30) days of the Contractor's receipt of each sample. The August 1993 sampling will take place as soon as possible following contract award.

When doing any scan using GC/MS, report the quantitative results for listed parameters. Also, tentatively identify (but not quantify) other observed significant peaks.

The Phase II parameters (Appendix A3) will be tested, only if required by the regulators. A regulatory contingency shall be established for the cost of this sampling. This contingency money, if not required in full for Phase II sampling, shall be available for other testing, if requested by Metro. Cost of such testings shall be at the unit costs established by the proposal.

TASK 3: Lab shall provide all sample containers, delivered to St. Johns Landfill. Samples shall be picked up from the landfill by the lab. The lab will be notified at least 24 hours before a sampling event of the containers required.

TASK 4: Lab report shall specify each test method and minimum detection limits or practical quantitation limits achieved. The lab report shall contain an explanation of any deviation from the minimum detection limits or practical quantitation limits set forth in the proposal.

TASK 5: An ASCII file (or file compatible with Metro's software) of the sampling results, as well as hard copy, shall also be provided to Metro.

Payment Provisions

Contractor shall invoice Metro for services in the amounts indicated by Contractor in the Cost Schedule Proposal Form included in Metro's RFP and in Contractor's proposal, all of which are incorporated into this Agreement by this reference.

Metro shall pay Contractor for services performed and materials delivered in the maximum sum of _____ AND NO/100THS DOLLARS ($ _____). This maximum sum includes all fees, costs, and expenses of whatever nature. Contractor's billing statements shall include an itemized statement of the work done during the billing period, and will not be submitted more frequently than once per month. Metro shall pay Contractor within 30 days of receipt of an approved invoice/billing statement.

Invoices shall be sent to: Joanna Karl, Metro, 600 NE Grand Ave., Portland, OR 97232-2736.

Appendix A. PARAMETER LISTS

Appendix A1. ROUTINE PARAMETERS

GROUNDWATER MONITORING WELLS

Sampling Dates	#Sampl'g Points*	Freq/Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
Feb, Aug Feb,May Aug, Nov	31 5	2 4	N/A N/A	**VISUAL INSPECTION** Visual inspection of well: Evidence of disturbance: Cracking or lifting of the concrete base: Change in vertical orientation: Other changes Does the lock need treating with penetrating lubricant? If the lock requires treating, was it done? H-wells only: Distance (within 1/4") between the top of the 2" stainless steel well casing and the top of the 4-1/2" steel surface monument casing:	Metro	82	N/A	N/A
Feb, Aug Feb,May Aug, Nov	31 5	2 4	N/A N/A	**WATER LEVEL** Depth to water: Measuring point elevation (ft)—from survey Water level elevation (ft)	Metro	82	N/A	N/A
Feb, Aug	31	2	N/A	**LEACHATE INDICATOR PARAMETERS**				
				FIELD PARAMETERS Conductivity Dissolved Oxygen (DO) pH Temperature	DEQ	62	N/A	N/A
				Alkalinity (CaCO3)	Ph I	62		
				Ammonium (HN4-N)	DEQ	62		
				Bicarbonate (HCO3) - FIELD FILTERED	Ph I, DEQ	62		
				Calcium - FIELD FILTERED	Ph I, DEQ	62		
				Carbonate (CO3) - FIELD FILTERED	DEQ	62		
				Chemical Oxygen Demand (COD)	Ph I	62		
				Chloride - FIELD FILTERED	Ph I, DEQ	62		
				Conductivity (lab)	DEQ	62		
				Hardness (CaCO2)	DEQ	62		
				Iron	Ph I, DEQ	62		
				Magnesium - FIELD FILTERED	Ph I, DEQ	62		
				Manganese, dissolved - FIELD FILTERED	Ph I, DEQ	62		
				Nitrate (as N) - FIELD FILTERED	Ph I, DEQ	62		
				Potassium - FIELD FILTERED	Ph I, DEQ	62		
				Sodium - FIELD FILTERED	Ph I, DEQ	62		
				Silica - FIELD FILTERED	DEQ	62		
				Sulfate (SO4) - FIELD FILTERED	Ph I, DEQ	62		
				Total Dissolved Solids (TDS)	Ph I	62		
				Total Organic Carbon (TOC)	Ph I	62		
				Total Suspended Solids (TSS)	DEQ	62		

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
Feb, Aug	31	2	EPA 6010	TRACE METALS (Total Recoverable - Unfiltered)		62		
			6010	Antimony (Sb)	DEQ			
			6010	Arsenic (As)	Ph I, DEQ			
			6010	Barium (Ba)	Ph I, DEQ			
			6010	Beryllium (Be)	DEQ			
			6010	Cadmium (Cd)	Ph I, DEQ			
			6010	Chromium (Cr)	Ph I, DEQ			
			6010	Cobalt (Co)	Ph I, DEQ			
			6010	Copper (Cu)	Ph I, DEQ			
			6010	Cyanide	Ph I			
			6010	Lead (Pb)	Ph I, DEQ			
			6010	Nickel (Ni)	DEQ			
			6010	Mercury	Ph I			
			6010	Selenium (Se)	Ph I, DEQ			
			6010	Silver (Ag)	Ph I, DEQ			
			6010	Thallium (Tl)	DEQ			
			6010	Vanadium (V)	DEQ			
			6010	Zinc	DEQ			

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
Feb, Aug	31	2	EPA 8260	VOLATILE ORGANIC COMPOUNDS	Fed. Reg.	62		
				APPENDIX I (Federal Register)				
				Acetone				
				Acrylonitrile				
				Benzene				
				Bromochloromethane				
				Bromodichloromethane				
				Bromoform (Tribromomethane)				
				Carbon disulfide				
				Carbon tetrachloride				
				Chlorobenzene				
				Chloroethane (Ethyl chloride)				
				Chloroform (Trichloromethane)				
				Dibromochloromethane (Chlorodibromomethane)				
				1,2,-Dibromo-3-chloropropane (DBCP)				
				1,2-Dibromoethane (Ethylene dibromide; EDB)				
				o-Dichlorobenzene (1,2-Dichlorobenzene)				
				p-Dichlorobenzene (1,4-Dichlorobenzene)				
				trans-1,4-Dichloro-2-butene				
				1,1-Dichloroethane (Ethylidene chloride)				
				1,2-Dichlorethane (Ethylene dichloride)				
				1,1-Dichloroethylene (1,1-Dichloroethene; Vinylidene chloride)				
				cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene)				
				trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)				
				1,2-Dichloropropane (Propylene dichloride)				
				cis-1,3-Dichloropropene				
				trans-1,3-Dichloropropene				
				Ethylbenzene				
				2-Hexanone (Methyl butyl ketone)				
				Methyl bromide (Bromomethane)				
				Methyl chloride (Chloromethane)				
				Methylene bromide (Dibromomethane)				
				Methylene chloride (Dichoromethane)				
				Methyl ethyl ketone (MEK; 2-Butanone)				
				Methyl iodide (Iodomethane)				
				4-Methyl-2-pentanone (Methyl isobutyl ketone)				
				Styrene				
				1,1,1,2-Tetrachloroethane				
				1,1,2,2,-Tetrachloroethane				
				Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)				
				Toluene				
				1,1,1-Trichloroethane (Methylchloroform)				
				1,1,2-Trichloroethane				
				Trichloroethylene (Trichloroethene)				
				Trichlorofluoromethane (CFC-11)				
				1,2,3-Trichloropropane				
				Vinyl acetate				
				Vinyl chloride				
				Xylenes				

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
			EPA 8260	OTHER VOC's (p.51075, Federal Register 1,2-dibromo-3-chloropropane 1,2-dibromoethane o-dichlorobenzene p-dichlorobenzene 1,2-dichloropropane 1,1,1,2-tetrachloroethane tetrachloroethylene cis-1,2-dichloroethylene	Fed Reg	62		
????	12	1	EPA 8150	**HERBICIDES**	SE/E	12		
				Dalapon Diacamba MCPA MCPP Dichloroprop 2,4-D Silvex (2,4,5-TP) 2,4,5-T 2.4-DB Dinoseb Picloram				
????	12	1	EPA 608	**PESTICIDES/PCBs**	SE/E	12		
				Pesticides Alpha--BHC Gamma-BHC (Lindane) Beta-BHC Heptachlor Delta-BHC Aldrin Heptachlor Epoxide Alpha-Endosulfan 4,4'-DDE Dieldrin Emdrin r,r'-DDD Beta-Endosulfan 4,4'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Toxaphene Chlordane PCB's Aroclor 1016 Arochlor 1221 Arochlor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Total phenols				

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
?????	12	1	EPA 8270	**EPA ACID/BASE NEUTRAL PRIORITY POLLUTANTS**	SE/E	12		
				N-Nitrosodimethylamine				
				Aniline				
				Bis(2-chloroethyl) ether				
				1,3-Dichlorobenzene				
				1,4-Dichlorobenzene				
				1,2-Dichlorobenzene				
				Bis(2-chloroisopropyl) ether				
				N-Nitrososdi-n-propyl anine				
				Hexachloroethane				
				Nitrobenzene				
				Isophorone				
				Bis(2-Chloroethoxy)methane				
				1,2,4-Trichlorobenzen				
				Napthalene				
				4-Chloraniline				
				Hexachlorobutadiene				
				2-Methylnapthalene				
				Hexachlorocyclopentadiene				
				2-Chloronaphthalene				
				2-Nitroaniline				
				Dimethylphthalate				
				Acenaphthylene				
				3-Nitroaniline				
				Acenaphthene				
				Dibenzofuran				
				2,4-Dinitrotoluene				
				2,6-Dinitrotoluene				
				Diethylphthalate				
				4-Chlorophenyl phenyl ether				
				Fluorene				
				4-Nitroaniline				
				N-Nitrosodiphenylamine				
				4-Bromophenyl phenyl ether				
				Hexachlorobenzene				
				Phenanthrene				
				Anthracene				
				Dibutylphthalate				
				Fluoranthene				
				Pyrene				
				Butyl benzyl phthalate				
				3,3'-Dichlorobenzidine				
				Benzo(a)anthracene				
				Bis(2-ethylhexyl)phthalate				
				Chrysene				
				Di-n-octyl phthalate				
				Benzo(b)fluoranthene				
				Benzo(k)fluoranthene				
				Benzo(a)pyrene				
				Indeno(1,2,3-c,d)pyrene				
				Dibenzo(a,h)anthracene				
				Benzo(g,h,i)perylene				

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
				EPA ACID/BASE NEUTRAL PRIORITY POLLUTANTS(cont)				
				Phenol				
				2-Chlorophenol				
				Benzyl Alcohol				
				2-Methylphenol.				
				4-Methylphenol				
				2-Nitrophenol				
				2,4-Dimethylphenol				
				Benzoic Acid				
				2,4-Dichlorophenol				
				4-Chloro-3-methylphenol				
				2,4,6-Trichlorophenol				
				2,4,5-Trichlorophenol				
				2,4-Dinitrophenol				
				4-Nitrophenol				
				2-Methyl-4,6-dinitrophenol				
				Pentachlorophenol				

SURFACE WATER MONITORING

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
Feb, July, Aug, Sept	8	4		**BASICS**				
				FIELD PARAMETERS	S/B, DEQ		N/A	N/A
				Conductivity		32		
				Dissolved Oxygen		32		
				pH		32		
				Temperature		32		
		2		Water Level (required by DEQ only)		16		
???	8	2		BOD	DEQ	16		
				NUTRIENTS				
Feb, July, Aug, Sept	8	4		NO2-NO3-N	S/B	32		
Feb, July, Aug, Sept	8	4		Total Kjeldahl Nitorgen (TKN)	S/B, DEQ	32		
Feb, July, Aug, Sept	8	4		Total Phosphorus	TMDL, S/B	32		
???	8	2		Dissolved Phosphorus (Available Phosphorus)	DEQ	16		
				BACTERIA				
Feb, July, Aug, Sept	8	4		Enteroccocci Bacteria	TMDL, DEQ	32		
Feb, July, Aug, Sept	8	4		Fecal Coliform Bacteria	TMDL, DEQ	32		
???	8	2		Total Coliform Bacteria	DEQ	16		
				TOXINS				
?????	8	2		Total Halogenated Organics (TOX)	DEQ	16		
?????	8	2		????	TMDL			
?????	8	2		**INDICATOR PARAMETERS** - Leachate Indicator Constituents and Related Parameters				
				Ammonium (NH4-N)	DEQ	16		
				Chemical Oxygen Demand (COD)	DEQ	16		
				Conductivity (lab)	DEQ	16		
				Hardness (as CaCO3)	DEQ	16		
				Total Dissolved Solids (TDS)	DEQ	16		
				Total Solids	S/B	16		
				Total Suspended Solids (TSS)	DEQ	16		
				Total Organic Carbon (TOC)	DEQ	16		

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
????	8	2		**INDICATOR PARAMETERS** Anions and Cations - FIELD FILTERED				
				Bicarbonate (HCO3)	DEQ	16		
				Carbonate (CO3)	DEQ	16		
				Calcium (Ca)	DEQ	16		
				Chloride (Cl)	DEQ	16		
				Iron (Fe)	DEQ	16		
				Magnesium (Mg)	DEQ	16		
				Manganese (Mn)	DEQ	16		
				Nitrate (NO3-N)	DEQ	16		
				Potassium (K)	DEQ	16		
				Silica (SiO2)	DEQ	16		
				Sodium (Na)	DEQ	16		
				Sulfate (SO4)	DEQ	16		
????	8	2		**CRITICAL PARAMETERS**				
				TRACE METALS Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Copper (Cu) Lead (Pb) Nickel (Ni) Selenium (Se) Silver (Ag) Thallium (Tl) Vanadium (V) Zinc (Zn)	DEQ	16		
????	8	2	EPA 8260	VOLATILE ORGANIC CONSTITUENTS	DEQ	16		

SEDIMENT SAMPLING

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
???	4	1		**TOTAL METALS - 1/yr**		4		
				Arsenic		4		
				Cadmium		4		
				Chromium		4		
				Copper		4		
				Lead		4		
				Mercury		4		
				Zinc		4		
???	4	1		**PAH's - 1/yr**				
						4		
	4	1	8080	**PESTICIDES and PCBs** (listed in EPA, Method 8080)		4		
				OTHER				
	4	1		2,4-D		4		
	4	1		Total Organic Carbon		4		
	4	1		Acid Volatile Sulfides (cold acid soluble)		4		

BIOLOGICAL SAMPLING

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
		1	EPA 7471	INVERTEBRATE - Mercury, Total		1		
		1	EPA 7131	INVERTEBRATE - Cadmium, Total		1		
		1	EPA 8080	INVERTEBRATE - Pesticides and PCBs		1		
		1	EPA 7421 and 3540	INVERTEBRATE - Lead, Total		1		
		1	EPA 7471	FISH TISSUE - Mercury, Total		1		
		1	EPA 7131	FISH TISSUE - Cadmium, Totall		1		
		1	EPA 8080	FISH TISSUE - Pesticides and PCBs		1		
		1	EPA 7421 and 3540	FISH TISSUE - Lead, Total		1		

*Invertebrate will be crayfish or penned Asian clams (Corbicula fluminea)
Fish from prefereably five specimens, from each of three species.

STORMWATER MONITORING

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
	7	12		**VISUAL OBSERVATIONS** - Monthly (when at least one storm event occurs which produces runoff)		84	N/A	N/A
Fall, 7	7			Color				
				Foam				
				Oil & grease sheen				
Fall, 7	7	2		**METALS** (Grab Samples) - 2/yr (plus whenever leachate seepage is detected or sewage sludge is disposed of at the site)		14		
				Arsenic				
				Cadmium				
				Chromium				
				Copper				
				Orpm				
				Lead				
				Manganese				
				Mercury				
				Nickel				
				Zinc				
Fall, 7	7	2		**OTHER** - 2/yr (plus oil & grease whenever a visible oil sheen is detected in a stormwater discharge)				
				pH		14		
				Oil & Grease (mg/l)		14		
				Conductivity (uMHO/cm)		14		
				COD (mg/l)		14		
				TOC (mg/l)		14		
				Total Suspended Solids (mg/l)		14		
				Total Phosphorus (mg/l)		14		
				Dissolved Ortho Phosphorus (mg/l)		14		
				Fecal Coliform (#/100 ml)		14		
				Enteroccocci (#/100 ml)		14		

LEACHATE COLLECTION SYSTEM MONITORING

Sampling Dates	#Sampl'g Points*	Freq./Yr	Method #	PARAMETER TO BE SAMPLED	Source	Total No.	Cost/Test	Total Cost
Monthly	1	12		Sulfide (Grab)	City Permit	12		
Monthly	1	12		pH (Grab)	City Permit	12		
Monthly	1	12		Ammonia (Grab)	JQ	12		
Mar, June, Sept,Dec	1	4		Cadmium (composite)	City Permit	4		
Mar, June, Sept,Dec	1	4		Chromium, Total (composite)	City Permit	4		
Mar, June, Sept,Dec	1	4		Copper (composite)	City Permit	4		
Mar, June, Sept,Dec	1	4		Lead (composite)	City Permit	4		
Mar, June, Sept,Dec	1	4		Nickel (composite)	City Permit	4		
Mar, June, Sept,Dec	1	4		Zinc (zinc)	City Permit	4		
June, Dec	1	2		Sulfate (composite)	City Permit	2		
June, Dec	1	2		Mercury (composite)	City Permit	2		
June, Dec	1	2		Fats, Oils, and Grease (grab)	City Permit	2		
June, Dec	1	2		TTO (grab)	City Permit	2		
Contin-uously				Flow (metered)	City Permit	N/A		

Appendix A2. TTO's

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
Hexachloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Bis(2-chloroethyl) ether
2-chloroethyl vinyl ether (mixed)
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane
1,3-dichloropropylene(1,3-dichloropropene)
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenolthylamine
4-nitrophenolenylamine
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitroxodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-benzanthracene
(benzo(a)anthracene)
Benzo(a)pyrene(3,4-benzopyrene)
3,4-Benzofluoranthene
(benzo(b)fluoranthene)
11,12-benzofluoranthene
(benzo(k)fluoranthene)
Chrysene
Acenaphthylene
Anthracene
1,12-benzoperylene
(benzo(ghi)perylene)
Fluorene
Phenanthrene
1,2,5,6-dibenzanthracene
(dibenzo(a,h)anthracene)
Indeno(1,2,3-cd pyrene
(2,3-o-phenylene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture
and metabolites)
4,4-DDT
4,4-DDE(p,p-DEX)
4,4-DDD(p,p-TDE)
Alpha-endosulfan
Beta-endolulfan

TOTAL TOXIC ORGANICS (cont)

Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
(BHC-hexachlorocyclohexane)
- Alpha-BHC
- Beta-BHC
- Gamma-BHC
- Delta-BHC

(PCB-polychlorinated biphenyls)
- PCB-1242 (Arochlor 1242)
- PCB-1254 (Arochlor 1254)
- PCB-1221 (Arochlor 1221)
- PCB-1232 (Arochlor 1232)
- PCB-1248 (Arochlor 1248)
- PCB-1260 (Arochlor 1260)
- PCB-1016 (Arochlor 1016)

Toxaphene
2,3,7,8-tetrachlorodibenxo-p-dioxin (TCDD)

Appendix A3. PHASE II PARAMETERS

Appendix II to this Part 258—List of Hazardous Inorganic and Organic Constituents [1]

Common Name [2]	CAS RN [3]	Chemical abstracts service index name [4]	Suggested methods [5]	PQL (µg/L) [6]
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-	8100	200
			8270	10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
			8270	10
Acetone	67-64-1	2-Propanone	8260	100
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-	8270	20
Acrolein	107-02-8	2-Propenal	8030	5
			8260	100
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8260	200
Aldrin	309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro- (1α,4α,4aβ,5α,8α,8aβ)-	8080	0.05
			8270	10
Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8260	10
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	20
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2000
Arsenic	(Total)	Arsenic	7041	30
			6010	500
			7060	10
Barium	(Total)	Barium	7061	20
			6010	20
Benzene	71-43-2	Benzene	7060	1000
			8020	2
			8021	0.1
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene	8260	5
			8100	200
Benzo[b]fluoranthene	205-99-2	Benz[e]acephenanthrylene	8270	10
			8100	200
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene	8270	10
			8100	200
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene	8270	10
			8100	200
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene	8270	10
			8100	200
Benzyl alcohol	100-51-6	Benzenemethanol	8270	10
Beryllium	(Total)	Beryllium	8270	20
			6010	3
			7090	50
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α,2α,3β,4α,5β,6β)-	7091	2
			8080	0.05
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α,2β,3α,4β,5α,6β)-	8270	10
			8080	0.05
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α,2α,3α,4β,5α,6β)-	8270	20
			8080	0.1
			8270	20

Common Name [2]	CAS RN [3]	Chemical abstracts service index name [4]	Suggested methods [5]	POL (µg/L) [6]
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α,2α,3β,4α,5α,6β)-	8080	0.05
			8270	20
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	8110	5
			8270	10
Bis(2-chloroethyl) ether; Dichloroethyl ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-	8110	3
			8270	10
Bis-(2-chloro-1-methylethyl) ether; 2,2'-Dichlorodiisopropyl ether; DCIP, See note 7	108-60-1	Propane, 2,2'-oxybis[1-chloro-	8110	10
			8270	10
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	8060	20
Bromochloromethane; Chlorobromomethane	74-97-5	Methane, bromochloro-	8021	0.1
			8260	5
Bromodichloromethane; Dibromochloromethane	75-27-4	Methane, bromodichloro-	8010	1
			8021	0.2
			8260	5
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-	8010	2
			8021	15
			8260	5
4-Bromophenyl phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-	8110	25
			8270	10
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	8060	5
			8270	10
Cadmium	(Total)	Cadmium	6010	40
			7130	50
			7131	1
Carbon disulfide	75-15-0	Carbon disulfide	8260	100
Carbon tetrachloride	56-23-5	Methane, tetrachloro-	8010	1
			8021	0.1
			8260	10
Chlordane	See Note 8	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	8080	0.1
			8270	50
p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-	8270	20
Chlorobenzene	108-90-7	Benzene, chloro-	8010	2
			8020	2
			8021	0.1
			8260	5
Chlorobenzilate	510-15-6	Benzeneacetic acid, 4-chloro-α-(4-chlorophenyl)-α-hydroxy-, ethyl ester.	8270	10
p-Chloro-m-cresol; 4-Chloro-3-methylphenol	59-50-7	Phenol, 4-chloro-3-methyl-	8040	5
			8270	20
Chloroethane; Ethyl chloride	75-00-3	Ethane, chloro-	8010	5
			8021	1
			8260	10
Chloroform; Trichloromethane	67-66-3	Methane, trichloro-	8010	0.5
			8021	0.2
			8260	5
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro-	8120	10
			8270	10
2-Chlorophenol	95-57-8	Phenol, 2-chloro-	8040	5
			8270	10
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-	8110	40
			8270	10
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-	8010	50
			8260	20
Chromium	(Total)	Chromium	6010	70
			7190	500
			7191	10
Chrysene	218-01-9	Chrysene	8100	200
			8270	10
Cobalt	(Total)	Cobalt	6010	70
			7200	500
			7201	10
Copper	(Total)	Copper	6010	60
			7210	200
			7211	10
m-Cresol; 3-methylphenol	108-39-4	Phenol, 3-methyl-	8270	10
o-Cresol; 2-methylphenol	95-48-7	Phenol, 2-methyl-	8270	10
p-Cresol; 4-methylphenol	106-44-5	Phenol, 4-methyl-	8270	10
Cyanide	57-12-5	Cyanide	9010	200
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	8150	10
4,4'-DDD	72-54-8	Benzene 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	8080	0.1
			8270	10
4,4'-DDE	72-55-9	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	8080	0.05
			8270	10
4,4'-DDT	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	8080	0.1
			8270	10
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-,S-(2,3-dichloro-2-propenyl) ester.	8270	10

Common Name [2]	CAS RN [3]	Chemical abstracts service index name [4]	Suggested methods [5]	PQL (µg/L) [6]
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene	8100	200
			8270	10
Dibenzofuran	132-64-9	Dibenzofuran	8270	10
Dibromochloromethane; Chlorodibromomethane	124-48-1	Methane, dibromochloro-	6010	1
			8021	0.3
			8260	5
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Propane, 1,2-dibromo-3-chloro-	8011	0.1
			8021	30
			8260	25
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	Ethane, 1,2-dibromo-	8011	0.1
			8021	10
			8260	5
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	8060	5
			8270	10
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro-	8010	2
			8020	5
			8021	0.5
			8120	10
			8260	5
			8270	10
m-Dichlorobenzene; 1,3-Dichlorobenzene	541-73-1	Benzene, 1,3-dichloro-	8010	5
			8020	5
			8021	0.2
			8120	10
			8260	5
			8270	10
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro-	8010	2
			8020	5
			8021	0.1
			8120	15
			8260	5
			8270	10
3,3[1]-Dichlorobenzidine	91-94-1	[1,1[1]-Biphenyl]-4,4[1]-diamine, 3,3[1]-dichloro-	8270	20
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-	8260	100
Dichlorodifluoromethane; CFC 12	75-71-8	Methane, dichlorodifluoro-	8021	0.5
			8260	5
1,1-Dichloroethane; Ethylidene chloride	75-34-3	Ethane, 1,1-dichloro-	8010	1
			8021	0.5
			8260	5
1,2-Dichloroethane; Ethylene dichloride	107-06-2	Ethane, 1,1-dichloro-	8010	0.5
			8021	0.3
			8260	5
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	75-35-4	Ethene, 1,1-dichloro-	8010	1
			8021	0.5
			8260	5
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	Ethene, 1,2-dichloro-, (Z)-	8021	0.2
			8260	5
trans-1,2-Dichloroethylene trans-1,2-Dichloroethene	156-60-5	Ethene, 1,2-dichloro-, (E)-	8010	1
			8021	0.5
			8260	5
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-	8040	5
			8270	10
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-	8270	10
1,2-Dichloropropane; Propylene dichloride	78-87-5	Propane, 1,2-dichloro-	8010	0.5
			8021	0.05
			8260	5
1,3-Dichloropropane; Trimethylene dichloride	142-28-9	Propane, 1,3-dichloro-	8021	0.3
			8260	5
2,2-Dichloropropane; Isopropylidene chloride	594-20-7	Propane, 2,2-dichloro-	8021	0.5
			8260	15
1,1-Dichloropropene	563-58-6	1-Propene, 1,1-dichloro-	8021	0.2
			8260	5
cis-1,3-Dichloropropene	10061-01-5	1-Propene, 1,3-dichloro-, (Z)-	8010	20
			8260	10
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3-dichloro-, (E)-	8010	5
			8260	10
Dieldrin	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα,2β,2aα,3β,6β,6aα,7β,7aα)-.	8080	0.05
			8270	10
Diethyl phthalate	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	8060	5
			8270	10
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	Phosphorothioic acid, 0,0-diethyl 0-pyrazinyl ester	8141	5
			8270	20
Dimethoate	60-51-5	Phosphorodithioic acid, 0,0-dimethyl S-[2-(methylamino)-2-oxoethyl] ester.	8141	3
			8270	20
p-(Dimethylamino)azobenzene	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	8270	10
7,12-Dimethylbenz[a]anthracene	57-97-6	Benz[a]anthracene, 7,12-dimethyl-	8270	10

—Continued

Common Name [2]	CAS RN [3]	Chemical abstracts service index name [4]	Suggested methods [5]	POL (μg/L) [6]
3,3'-Dimethylbenzidine	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	8270	10
2,4-Dimethylphenol; m-Xylenol	105-67-9	Phenol, 2,4-dimethyl-	8040	5
			8270	10
Dimethyl phthalate	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	8060	5
			8270	10
m-Dinitrobenzene	99-65-0	Benzene, 1,3-dinitro-	8270	20
4,6-Dinitro-o-cresol 4,6-Dinitro-2-methylphenol	534-52-1	Phenol, 2-methyl-4,6-dinitro	8040	150
			8270	50
2,4-Dinitrophenol;	51-28-5	Phenol, 2,4-dinitro-	8040	150
			8270	50
2,4-Dinitrotoluene	121-14-2	Benzene, 1-methyl-2,4-dinitro-	8090	0.2
			8270	10
2,6-Dinitrotoluene	606-20-2	Benzene, 2-methyl-1,3-dinitro-	8090	0.1
			8270	10
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	8150	1
			8270	20
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	8060	30
			8270	10
Diphenylamine	122-39-4	Benzenamine, N-phenyl-	8270	10
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	8140	2
			8141	0.5
			8270	10
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide,	8080	0.1
			8270	20
Endosulfan II	33213-65-9	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3 oxide, (3α,5aα,6β,9β,9aα)-.	8080	0.05
			8270	20
Endosulfan sulfate	1031-07-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-,3-3-dioxide.	8080	0.5
			8270	10
Endrin	72-20-8	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα, 2β,2aβ,3α,6α, 6aβ,7β,7aα)-.	8080	0.1
			8270	20
Endrin aldehyde	7421-93-4	1,2,4-Methenocyclopenta[cd]pentalene-5-carboxaldehyde, 2,2a,3,3,4,7-hexachlorodecahydro-, (1α,2β,2aβ,4β, 4aβ,5β,6aβ,6bβ,7R*)-.	8080	0.2
			8270	10
Ethylbenzene	100-41-4	Benzene, ethyl-	8020	2
			8221	0.05
			8260	5
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	8015	5
			8260	10
			8270	10
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester	8270	20
Famphur	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester.	8270	20
Fluoranthene	206-44-0	Fluoranthene	8100	200
			8270	10
Fluorene	86-73-7	9H-Fluorene	8100	200
			8270	10
Heptachlor	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-.	8080	0.05
			8270	10
Heptachlor epoxide	1024-57-3	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aα, 1bβ, 2α, 5α, 5aβ, 6β, 6aα).	8080	1
			8270	10
Hexachlorobenzene	118-74-1	Benzene, hexachloro-	8120	0.5
			8270	10
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	8021	0.5
			8120	5
			8260	10
			8270	10
Hexachlorocyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	8120	5
			8270	10
Hexachloroethane	67-72-1	Ethane, hexachloro-	8120	0.5
			8260	10
			8270	10
Hexachloropropene	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	8270	10
2-Hexanone; Methyl butyl ketone	591-78-6	2-Hexanone	8260	50
Indeno(1,2,3-cd)pyrene	193-39-5	Indeno(1,2,3-cd)pyrene	8100	200
			8270	10
Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-	8015	50
			8240	100
Isodrin	465-73-6	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10- hexachloro-1,4,4a,5,8,8a hexahydro- (1α,4α,4aβ,5β,8β,8aβ)-.	8270	20
			8260	10
Isophorone	78-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl-	8090	60
			8270	10
Isosafrole	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	8270	10
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-.	8270	20

—Continued

Common Name [2]	CAS RN [3]	Chemical abstracts service index name [4]	Suggested methods [5]	PQL (µg/L) [6]
Lead	(Total)	Lead	6010	400
			7420	1000
			7421	10
Mercury	(Total)	Mercury	7470	2
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-	8015	5
			8260	100
Methapyrilene	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'1/2-thienylmethyl)-.	8270	100
Methoxychlor	72-43-5	Benzene,1,1'-(2,2,2,trichloroethylidene)bis[4-methoxy-	8080	2
			8270	10
Methyl bromide; Bromomethane	74-83-9	Methane, bromo-	8010	20
			8021	10
Methyl chloride; Chloromethane	74-87-3	Methane, chloro-	8010	1
			8021	0.3
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	8270	10
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	2-Butanone	8015	10
			8260	100
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-	8010	40
			8260	10
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester	8015	2
			8260	30
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester	8270	10
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-	8270	10
Methyl parathion; Parathion methyl	298-00-0	Phosphorothioic acid, 0,0-dimethyl 0-(4-nitrophenyl) ester	8140	0.5
			8141	1
			8270	10
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl-	8015	5
			8260	100
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-	8010	15
			8021	20
			8260	10
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-	8010	5
			8021	0.2
			8260	10
Naphthalene	91-20-3	Naphthalene	8021	0.5
			8100	200
			8260	5
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione	8270	10
1-Naphthylamine	134-32-7	1-Naphthalenamine	8270	10
2-Naphthylamine	91-59-8	2-Naphthalenamine	8270	10
Nickel	(Total)	Nickel	6010	150
			7520	400
o-Nitroaniline; 2-Nitroaniline	88-74-4	Benzenamine, 2-nitro-	8270	50
m-Nitroaniline; 3-Nitroanile	99-09-2	Benzenamine, 3-nitro-	8270	50
p-Nitroaniline; 4-Nitroaniline	100-01-6	Benzenamine, 4-nitro	8270	20
Nitrobenzene	98-95-3	Benzene, nitro-	8090	40
			8270	10
o-Nitrophenol; 2-Nitrophenol	88-75-5	Phenol, 2-nitro-	8040	5
			8270	10
p-Nitrophenol; 4-Nitrophenol	100-02-7	Phenol, 4-nitro-	8040	10
			8270	50
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, N-butyl-N-nitroso-	8270	10
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl-N-nitroso-	8270	20
N-Nitrosodimethylamine	62-75-9	Methanamine, N-methyl-N-nitroso-	8070	2
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl-	8070	5
N-Nitrosodipropylamine; N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine.	621-64-7	1-Propanamine, N-nitroso-N-propyl-	8070	10
N-Nitrosomethylethalamine	10595-95-6	Ethanamine, N-methyl-N-nitroso-	8270	10
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitroso-	8270	20
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitroso-	8270	40
5-Nitro-o-toluidine	99-55-8	Benzenamine, 2-methyl-5-nitro-	8270	10
Parathion	56-38-2	Phosphorothioic acid, 0,0-diethyl 0-(4-nitrophenyl) ester	8141	0.5
			8270	10
Pentachlorobenzene	608-93-5	Benzene, pentachloro-	8270	10
Pentachloronitrobenzene	82-68-8	Benzene, pentachloronitro-	8270	20
Pentachlorophenol	87-86-5	Phenol, pentachloro-	8040	5
			8270	50
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenl)	8270	20
Phenanthrene	85-01-8	Phenanthrene	8100	200
			8270	10
Phenol	108-95-2	Phenol	8040	1
p-Phenylenediamine	106-50-3	1,4-Benzenediamine	8270	10
Phorate	298-02-2	Phosphorodithioic acid, 0,0-diethyl S-[(ethylthio)methyl] ester	8140	2
			8141	0.5
			8270	1

—Continued

Common Name [2]	CAS RN [3]	Chemical abstracts service index name [4]	Suggested methods [5]	POL (µg/L) [6]
Polychlorinated biphenyls; PCBs; Aroclors	See Note 9	1,1'-Biphenyl, chloro derivatives	8080	50
Pronamide	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	8270	200
Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile	8270	10
			8015	60
Pyrene	129-00-0	Pyrene	8260	150
			8100	200
Safrole	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-	8270	10
Selenium	(Total)	Selenium	8270	10
			6010	750
			7740	20
Silver	(Total)	Silver	7741	20
			6010	70
			7760	100
Silvex; 2,4,5-TP	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	7761	10
Styrene	100-42-5	Benzene, ethenyl-	8150	2
			8020	1
			8021	0.1
Sulfide	18496-25-8	Sulfide	8260	10
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	9030	4000
1,2,4,5-Tetrachlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-	8150	2
1,1,1,2-Tetrachloroethane	630-20-6	Ethane, 1,1,1,2-tetrachloro-	8270	10
			8010	5
			8021	0.05
1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-tetrachloro-	8260	5
			8010	0.5
			8021	0.1
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4	Ethene, tetrachloro-	8260	5
			8010	0.5
			8021	0.5
2,3,4,6-Tetrachlorophenol	58-90-2	Phenol, 2,3,4,6-tetrachloro-	8260	5
Thallium	(Total)	Thallium	8270	10
			6010	400
			7840	1000
Tin	(Total)	Tin	7841	10
Toluene	108-88-3	Benzene, methyl-	6010	40
			8020	2
			8021	0.1
o-Toluidine	95-53-4	Benzenamine, 2-methyl-	8260	5
Toxaphene	See Note 10	Toxaphene	8270	10
1,2,4-Trichlorobenzene	120-82-1	Benzene, 1,2,4-trichloro-	8080	2
			8021	0.3
			8120	0.5
			8260	10
1,1,1-Trichloroethane; Methylchloroform	71-55-6	Ethane, 1,1,1-trichloro-	8270	10
			8010	0.3
			8021	0.3
1,1,2-Trichloroethane	79-00-5	Ethane, 1,1,2-trichloro-	8260	5
			8010	0.2
Trichloroethylene; Trichloroethene	79-01-6	Ethene, trichloro-	8260	5
			8010	1
			8021	0.2
Trichlorofluoromethane; CFC-11	75-69-4	Methane, trichlorofluoro-	8260	5
			8010	10
			8021	0.3
2,4,5-Trichlorophenol	95-95-4	Phenol, 2,4,5-trichloro-	8260	5
2,4,6-Trichlorophenol	88-06-2	Phenol, 2,4,6-trichloro-	8270	10
			8040	5
1,2,3-Trichloropropane	96-18-4	Propane, 1,2,3-trichloro-	8270	10
			8010	10
			8021	5
0,0,0-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, 0,0,0-triethylester	8260	15
sym-Trinitrobenzene	99-35-4	Benzene, 1,3,5-trinitro-	8270	10
Vanadium	(Total)	Vanadium	8270	10
			6010	8
			7910	2000
			7911	40
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester	8260	50
Vinyl chloride; Chloroethene	75-01-4	Ethene, chloro-	8010	2
			8021	0.4
Xylene (total)	See Note 11	Benzene, dimethyl-	8260	10
			8020	5
			8021	0.2
Zinc	(Total)	Zinc	8260	5
			6010	20
			7950	50
			7951	0.5

Notes

[1] The regulatory requirements pertain only to the list of substances; the right hand columns (Methods and POL) are given for informational purposes only. See also footnotes 5 and 6.

[2] Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3] Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

[4] CAS Index are those used in the 9th Collective Index.

[5] Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste", third edition, November 1986, as revised, December 1987. Analytical details can be found in SW-846 and in documentation on file at the agency. CAUTION: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

[6] Practical Quantitation Limits (POLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The POLs listed are generally stated to one significant figure. POLs are based on 5 mL samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The POL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; POLs are not a part of the regulation.

[7] This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2'-oxybis[2-chloro- (CAS RN 39638-32-9).

[8] Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6). POL shown is for technical chlordane. POLs of specific isomers are about 20 μg/L by method 8270.

[9] Polychlorinated biphenyls (CAS RN 1336-36-3): this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5). The POL shown is an average value for PCB congeners.

[10] Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

[11] Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7). POLs for method 8021 are 0.2 for o-xylene and 0.1 for m- or p-xylene. The POL for m-xylene is 2.0 μg/L by method 8020 or 8260.

TABLE 1.—ADDITIONS TO APPENDIX II

Common name	CAS RN
2-Chloroethyl ethyl ether	628-34-2
m-Cresol; 3-Methylphenol	108-39-4
Diallate	2303-16-4
cis-1,2-Dichloroethylene	156-59-2
1,3-Dichloropropene; Trimethylene dichloride	142-28-9
2,2-Dichloropropane; Isopropylidene chloride	594-20-7
1,1-Dichloropropene	563-58-6
Dimethoate	60-51-5
Endosulfan sulfate	1031-07-8
Ethyl methanesulfonate	62-50-0
p-Phenylenediamine	106-50-3
o-Toluidine	95-53-4
O,O,O-Triethyl phosphorothioate	126-68-1
sym-Trinitrobenzene	99-35-4

TABLE 2.—DELETIONS FROM APPENDIX II

Common name	CAS RN
Allyl alcohol	107-18-6
Aluminum	7429-90-5
Aniline	62-53-3
Benzidine	92-87-5
Benzoic acid	65-85-0
p-Benzoquinone	106-51-4
Calcium	7440-43-9
2-Chloroethyl vinyl ether	110-75-8
3-Chloropropionitrile	542-76-7
Dibenzo[a,j]pyrene	189-55-9
Dibenzo[a,e]pyrene	192-65-4
Dibenzo[a,h]pyrene	189-64-0
Dibenzofurans (tetra-, penta-, and hexachlorodibenzofurans)	132-64-9
1,4-Dioxane	123-91-1
3,3'-Dimethoxybenzidine	119-90-4
alpha,alpha-Dimethylphenethylamine	122-09-8
1,2-Diphenylhydrazine	122-66-7
Ethylene oxide	75-21-8
Fluoride	16984-48-8
Hexachlorophene	70-30-4
Iron	7439-89-6
Magnesium	7439-39-4
Malononitrile	109-77-3
Manganese	7439-96-5

TABLE 2.—DELETIONS FROM APPENDIX II—Continued

Common name	CAS RN
4,4'-Methylenebis(2-chloroaniline)	101-14-4
N-Nitrosomorpholine	59-89-2
Osmium	7440-04-2
Pentachloroethane	76-01-7
2-Picoline	109-06-8
Potassium	7440-09-7
2-Propyn-1-ol; Propargyl alcohol	107-19-7
Pyridine	110-86-1
Resorcinol	108-46-3
Sodium	7440-23-5
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
Tetraethyl dithiopyrophosphate; Sulfotepp	3689-24-5
Thiophenol; Benzenethiol	108-98-5
Trichloromethanethiol	75-70-7
Tris(2,3-dibromopropyl) phosphate	126-72-7

Appendix B. SAMPLING AND ANALYSIS PLAN

A sampling and analysis plan is included to insure that the water monitoring plan is carried out in a prudent manner. The purpose of this plan is to optimize the accuracy and validity of the collected samples and resulting analysis. The elements of this plan include: presampling procedures; monitoring well purging; sample collection procedures and preservation; chain-of-custody control; and both field and laboratory quality assurance/quality control. The personnel who will implement the water monitoring plan for Metro shall, at a minimum, be required to adhere to the program described in this sampling and analysis plan.

LEACHATE AND GROUND WATER MONITORING WELLS

I. Presampling Procedures.

Several processes shall be undertaken and information collected prior to purging and sampling of a monitoring well.

A. Decontamination of Equipment

1. All equipment that will be placed within the well casing will be cleaned prior to use on the site and after use at each monitoring well.

2. Decontamination of non-dedicated sampling and monitoring equipment shall use the following procedure: wash with a non-phosphate laboratory grade detergent; rinse with tap water and distilled water; and let air dry.

3. Sample containers shall be decontaminated according to Section III.B.10.

B. Static Water Level Elevation

1. Measurements shall be taken from an established reference point on the well. The reference point shall be:

   a. established by licensed surveyor to an established National Geodetic Vertical Datum (NGVD);

   b. periodically re-surveyed;

   c. permanent and easily identified; and

   d. located on the top of the well casing with the locking cap removed.

2. Measurements in all wells for each hydrogeological unit shall be performed as close to low tide as is feasible, and the time of day of each measurement will be recorded.

3. Equipment used shall be sufficiently sensitive so that a measurement to $\pm$ O.OI foot can be obtained reliably. The equipment shall:

   a. be constructed of inert materials;
   b. be the same water level indicator used to measure levels in all wells; and
   c. be a steel tape or preferably be a electronic device, which has been decontaminated.

C. Total Depth of the Well

1. Measurements shall be taken from an established reference point on the well. The reference point shall be located as described above for static water level elevations.

2. Equipment used shall be sufficiently sensitive so that a measurement to ± O.OI foot can be obtained reliably. The equipment shall:

   a. be constructed of inert materials;
   b. be the same depth level indicator used to measure depths in all wells; and
   c. preferably be a project-dedicated steel tape.

D. Air Monitoring

1. If needed, the air above the well head shall be monitored for an explosive and toxic environment including but not limited to, methane, hydrogen sulfide, and carbon monoxide.

2. Personal protective equipment and safety procedures shall be suitable to meet health and safety regulations.

E. Documentation

1. A field logbook shall be maintained. Field measurements, procedures, and observations shall be recorded. Copies shall be submitted to Metro with laboratory sample analysis results.

II. Monitoring Well Purging

Standing water in the well and filter pack shall be removed so that formation water can replace the stagnant well water. The equipment used for purging the monitoring wells shall minimize the introduction of contamination into the well. Adherence to a proper procedure should allow for the extraction of a water quality sample representative of the in-situ groundwater.

A. Purging Equipment

1. The equipment used will be:

   a. a positive-gas-displacement, fluorocarbon resin bladder pump; or
   b. a fluorocarbon resin or stainless steel bottom-emptying bailer.
   c. Where the use of the above devices is not feasible, a peristaltic pump, gas-lift pump, centrifugal pump, or venture pump will be utilized.

2. Twenty-four (24) hours will be allowed for the well water to stabilize prior to sampling.

3. Measures will be taken to prevent contact between surface soils and the purging equipment and lines.

4. The equipment and methods used for purging the individual wells shall be consistently used for each well for the life of the monitoring plan.

B. Purging Procedure

1. Well Volume Calculation

   Prior to purging, the volume of water in the well shall be calculated using the following formula:

   CASING VOLUME = $D^2 \times 0.0055 \times (TD - DTW)$, where:
   D = Diameter of the well casing (in),
   TD = Total Depth of Well (ft) from top of casing, and
   DTW = Depth To Water (ft) from top of casing

2. Purging of Low Yielding Wells (incapable of yielding three casing volumes with continuous bailing)

   a. Purge the well dry once, at a rate that does not cause recharge water to be excessively agitated.

   b. The procedure and all readings shall be recorded in the field logbook.

3. Purging of High Yielding Wells (wells capable of yielding three casing volumes with continuous bailing).

   a. Purge the well of a minimum of three casing volumes prior to sampling at a rate that does not cause recharge water to be excessively agitated.

   b. The procedure and all readings shall be recorded in the field logbook.

4. Disposal of Purged Monitoring Well Water.

   a. Water removed from landfill perimeter and offsite groundwater monitoring wells may be disposed of on the surrounding ground unless the well water has been previously shown to contain toxic substances at concentrations above the Maximum Contaminant Levels for drinking water.

   b. Water removed from interior leachate monitoring wells and from monitoring wells previously shown to contain toxic substances at concentration above the Maximum Contaminant Levels shall be deposited in the leachate pump station wet well.

C. Documentation

1. A field logbook shall be maintained. Measurements and procedures shall be recorded. Copies shall be submitted to Metro with laboratory sample analysis results.

III. Sample Collection Procedures and Preservation.

Alteration of the physical and chemical characteristics of the water sample shall be minimized during the sampling process. Adherence to proper protocol should result in delivery to the laboratory of a water quality sample representative of the *in situ* ground water. Sampling of wells shall occur at least 24 hours after purging of wells to allow the wells to stabilize.

A. Sampling Equipment

1. Sampling bailers dedicated to each individual monitoring well will be used. The bailers will be either PVC, fluorocarbon resin, or stainless steel and have bottom emptying valves. Currently, dedicated PVC bailers are being used for purging and sampling.

2. The chain/cable used to lower and raise the bailers will be an inert material. (e.g., polypropylene cord, fluorocarbon resin-coated wire, single strand stainless steel wire, monofilament). Currently, dedicated polypropylene cord is being used.

B. Sample Collection

1. The sampling bailer shall be slowly immersed into the well water;

2. Contents of the bailer shall be slowly emptied directly into the sample container in a manner that minimizes agitation and aeration of the sample;

3. Containers are filled with zero headspace to minimize loss of volatiles. Containers of samples for heavy metal analysis shall not be allowed to overflow;

4. Samples will be collected and containerized in the order of the decreasing volatilization sensitivity of the parameters of interest. In general, the order is as listed below:

   Volatile organics (VOA)
   Purgeable organic carbon (POC)
   Purgeable organic halogens (POX)
   Total organic halogens (TOX)
   Total organic carbon (TOC)
   Extractable organics
   Total recoverable metals
   Dissolved metals
   Phenols
   Cyanide
   Sulfate and chloride
   Turbidity
   Nitrate and ammonia
   Radionuclides

5. Types of sample containers used are dependent on the parameters of interest and are listed in Table 1.

6. Preservation procedures that will be observed are dependent on the parameters of interest and are listed in Table 1. In most cases samples should be immediately stored in a chest of ice.

7. Dissolved metals samples shall be filtered and preserved immediately in the field.

   a. Use a separate 0.45 micron membrane filter for each sample; and

   b. Develop a standard written procedure and equipment list.

8. The sample containers shall be:

   a. cleaned in the laboratory based on the analyte of interest.

      (1) Metals - wash with nonphosphate detergent and tap water; rinse with (1:1) nitric acid, tap water, (1:1) hydrochloric acid, tap water, and Type II water

      (2) Organics - wash with nonphosphate detergent in hot water, rinse with tap water, distilled water, acetone, and pesticide-quality hexane

   b. verified in the laboratory for cleanliness.

9. Chemically unstable parameters will only be determined in the field using a test probe or a field test kit as soon as possible after the sample is collected.

   a. These parameters include:

      (1) temperature
      (2) specific conductance
      (3) pH
      (4) dissolved oxygen

   b. A sample not intended for laboratory analysis shall be used for field readings.

   c. Calibration of any *in situ* or field test probes will be performed twice each day of use according to the manufacturers' specifications and in accordance with EPA, Test Methods for Evaluating Solid Waste - Physical/Chemical Methods, SW-846. A log book shall be used to document all calibration results.

10. Decontamination of Equipment

   a. Prior to use at each well, all test probes that will be placed within the well casing will be cleaned initially and after each use.

   b. Non-dedicated equipment shall be decontaminated using the following procedure: wash with a non-phosphate detergent; rinse with tap water and distilled water; and let air dry.

C. Documentation

1. A field logbook shall be maintained as specified in Section IV. Measurements and procedures shall be recorded. Copies shall be submitted to Metro with laboratory sample analysis results.

IV. Chain of Custody Control

The tracing of the sampling methodologies, the sample possession and sample handling from the time of field laboratory analysis shall be possible with the proper documentation.

A. Field Log

A field logbook will be maintained, including the following information:

Identification of well
Well depth
Static water level depth and measurement technique
Purge volume and pumping rate, if applicable
Time well purged
Well evacuation procedure/equipment, if varies from the sampling/analysis plan
Sample withdrawal procedure/equipment, if varies from the sampling/analysis plan
Date and time of collection
Sampling sequence of samples per well, if varies from the sampling/analysis plan
Preservative(s) used, if varies from the sampling/analysis plan
Field analysis data
Sample distribution and transporter, if unusual
Field observations on sampling event, including:
  Unusual well recharge rates
  Equipment malfunction(s)
  Possible sample contamination
Name(s) of collector(s)
Climatic conditions
Documentation of date, procedure, and maintenance for equipment calibration
Documentation of any deviations from plan approved procedures due to differing or unanticipated site conditions

B. Sample Labels

1. Sample labels shall include a unique sample identification for each sample and provide the following information:

   a. location is St. Johns Landfill
   b. date & time of collection
   c. collector's name
   d. sample test parameter

2. The sample label shall not provide an indication of whether the sample is a quality assurance/quality control sample such as a field blank or duplicate sample.

3. The sample labels shall be marked with permanent waterproof ink.

C. Sample seals shall be placed on the shipping or individual sample containers, if directed by Metro.

D. Chain-of-Custody Record

1. Shall accompany each sample.

2. Shall include the identification number for each sample and provide the following information:

   a. date & time of collection
   b. sample matrix type
   c. number of containers
   d. sample test parameters requested
   e. signatures of all persons involved in the chain-ofpossession, including field, office, and laboratory personnel
   f. inclusive dates of possession

E. Sample Analysis Request Sheet

1. Shall accompany each sample delivered to the laboratory

2. Shall provide the following information:
   a. name of person receiving the sample
   b. date of sample receipt
   c. laboratory sample identification number (may be different than field identification number)
   d. analysis to be performed

F. Laboratory Logbook

1. Shall be maintained a minimum of three (3) years to document the sample processing steps

2. Shall provide the following information:

   a. sample preparation technique (e.g., extraction)
   b. analytical procedures/instrumental methods
   c. experimental conditions

3. Shall be available for review and duplication by Metro representatives for a reasonable period after testing per a written agreement with Metro

V. Field Quality Assurance/Quality Control

The field QA/QC program helps to insure the reliability and validity of the gathered field samples and data. The field QA/QC program consists of carefully following all of the procedures above and recording any unavailable changes. QA/QC samples help assess the validity of the information gained from the field samples. All QA/QC samples shall be coded such that their identity as QA/QC samples is unknown to the analytical laboratory.

A.. If a sampling contractor is used, a field quality assurance plan shall be submitted to Metro by the sampling contractor prior to start of the field sampling program.

B. Transport Blanks

1. Transport blanks shall be prepared and analyzed per sampling event if volatile or extractable organics are to be tested;

2. Containers shall be filled at the laboratory with Type II reagent grade water transported and stored with the sample containers, and transported from the sampling site to the laboratory with the sample containers. At no time are these trip blank containers opened or exposed.

3. Transport blanks shall be given a unique identification number, transported, processed, and analyzed at the laboratory like a sample

C. Equipment (Field) Blanks

1. Equipment (field) blanks shall be collected when non-dedicated sampling equipment is used. Date, time, location, and exact procedure used to prepare the equipment blank shall be recorded in the log book.

2. Collection frequency shall be at least one per day or one per ten samples.

3. Equipment (field) blanks shall uniquely identified, transported, processed, and analyzed at the laboratory like a sample.

D. Field Duplicates

1. Field duplicates shall be two samples collected simultaneously or collected one after the other (co-sampled) and shall be analyzed for all parameters;

2. Collection frequency shall be at least one per ten sample locations; and

3. Field duplicates shall be given a unique identification number, transported, processed, and analyzed at the laboratory like a sample

E. Field Measurement Equipment

1. Field measurement equipment shall be calibrated prior to field use; and
2. Field measurement equipment shall be recalibrated in the field twice per day

VI. Laboratory Quality Assurance/Quality Control

The laboratory QA/QC program shall insure the reliability and validity of the sample data. The results from the laboratory QC samples shall be used as a measure of performance or as an indicator of potential sources of cross-contamination. They will be submitted to Metro with the monitoring test results. At a minimum the following shall be included:

A. Laboratory Quality Assurance Plan

1. Shall be submitted in writing to Metro by the laboratory that will perform the sample analysis prior to the start of the field sampling program.

2. Shall include routine equipment calibration procedures to standards of known concentration on a schedule appropriate for the analytes of concern and analytical methods used.

3. Shall include sample analytical methods and results, of laboratory QC samples including blanks,

duplicates, and matrix spikes on a schedule appropriate for the analytes of concern. Water samples shall be spiked to a concentration not more than 10 times the drinking water standard (MCL).

4. Shall report percent recovery of surrogate spikes and matrix spikes in each sample analyzed for organic analytes.

5. Shall include the methods for preparing all sample containers and trip blanks. These shall be of equal or better quality to those listed in this water monitoring sampling and analysis plan.

B. Analytical Laboratory

1. Shall analyze all samples within the specified holding time limit of the analyte(s) of concern. Date of receipt and date of test will be noted on report.

2. Shall report the analytical method(s) used and the method detection limits (MDLs) or method reporting limits (MRLs)and the primary or secondary drinking water Maximum Contaminant (MCL), as applicable, with the laboratory data reports.

3. Shalll use only RCRA or EPA equipment or methods for surface and groundwater samples [SW 846 or 40 CFR 136].

4. Shall achieve Method Detection or Reporting Limits (and practical quantitation limits, if any) which must be met by laboratories participating in the EPA Contract Laboratory program.

SURFACE WATER AND ASSOCIATED SAMPLES

I. Presampling Procedure.

A. Decontamination of Equipment

1. All equipment will be decontaminated prior to use at each sampling location and after each use.

2. Non-dedicated sampling and monitoring equipment shall be decontaminated using the following procedure or equivalent: wash with a non-phosphate laboratory grade detergent; rinse with tap water and distilled water; and let air dry.

3. Sample containers shall be decontaminated according to Section II.D.

II. Sample Collection Procedure.

A. Water Column Sampling

1. Grab samples will be collected at each monitoring location at approximately 6 inches below the water surface.

2. Grab samples shall be collected in a manner which minimizes the risk that the sample will contain floating oil or debris, or water which has touched the hands, outside of the sample container, the boat, the motor, and its combustion products. Collecting the sample in an upstream direction will usually minimize the risks.

3. Chemically unstable parameters will only be measured in the field. These parameters include: temperature, specific conductance, pH, and dissolved oxygen.

B. Sediment Sampling

1. Samples shall be collected from the top six inches or less, utilizing a standard sampler. Caution shall be exerted to prevent sample contamination from the sampler.

   a. Metals - utilize plastic sampler and a decontaminated plastic spoon
   b. Organics - utilize metal sampler and a decontaminated stainless steel spoon

C. Sample Preservation

1. Sample preservation procedures shall be equivalent to groundwater preservation methods addressed in Table 1. In most cases samples should be stored in a chest of ice as soon as feasible. Maximum holding time for bacteria testing is 30 hours.

2. Any modifications to preparation and preservation of the sample for laboratory analysis will be as prescribed by DEQ.

D. Sample Containers

1. Type of sample containers used are dependent on the parameters of interest and are listed in Table 1.

2. Sample containers shall be cleaned in the laboratory using the following procedure:

   a. Bacteria test sample containers - wash with a nonphosphate detergent, rinse with tap water, rinse with distilled water, and sterilize in an autoclave or oven.

   b. Non-bacteria test sample containers - wash with laboratory grade nonphosphate detergent in hot water, rinse with tap water, distilled water, acetone, and pesticide-quality hexane.

3. Cleanliness of the sample containers will be verified by the laboratory.

E. Documentation

1. A field logbook shall be maintained as specified in Section IV, below. Measurements and procedures shall be recorded. Copies shall be submitted to Metro with laboratory sample analysis results.

III. Sample Collection Procedure - Biological Sampling

A. Fish and Invertebrate

1. Edible portions of the sample fish and the crayfish shall be removed using an acid-washed stainless steel filet knife;

2. One composite sample of at least 100 grams of tissue shall be collected for each species sample; and

3. Each sample shall be placed in a clean sample jar and frozen prior to transport and analysis at the laboratory.

IV. Chain of Custody Control Program

The tracing of the sampling methodologies, the sample possession and sample handling from the time of field collection through laboratory analysis shall be possible with the proper documentation. Elements of the program include, field logbook, sample labels, sample seals, chain-of-custody records, sample analysis, request sheet, and laboratory logbook. The documentation and chain of custody program for the surface water monitoring shall be equivalent to the well monitoring chain of custody control program, Section IV, with the omission of references to monitoring wells.

V. Field Quality Assurance/Quality Control Program

The field QA/QC program shall insure the reliability and validity of the gathered field samples and data. Elements of the program include a field quality assurance plan, transport blanks, equipment blanks, field duplicates, spiked samples, and field measurement equipment protocol. The field QA/QC program for the surface water monitoring shall be equivalent to the field QA/QC well monitoring program, section V.

VI. Laboratory Quality Assurance/Quality Control Program

The laboratory QA/QC program shall insure the reliability and validity of the sample data. The results from the QC samples shall be used as a measure of performance or as an indicator of potential sources of cross-contamination. These results will be submitted to DEQ with the surface water monitoring sample results. The laboratory QA/QC program for surface water monitoring shall be equivalent to the QA/QC well monitoring program, Section VI.

STORMWATER

I. Presampling Procedure

A. Decontamination of Equipment

1. All equipment will be cleaned prior to use at each sampling location and after each use.

2. Equipment shall be decontaminated using a procedure equivalent to the surface water decontamination procedure.

3. Sample containers shall be decontaminated according to Section II,D.

II. Sample Collection Procedure

A. Grab Samples (routinely collected)

Grab samples shall be collected beneath the water surface during the first 30 minutes of a storm. event.

B. Flow-weighted Composite Samples (if collected)

1. Shall be collected for the entire discharge or for the first three hours of discharge, whichever is less;

2. Sampling may be continuous or may be a composite of a minimum of three sample aliquots per hour of discharge; and

3. Sampling equipment will include:

a. Parshall flumes at sediment basin outlets

b. automatic proportional sampling device connected to a flow measurement device and programmed (either variable time interval or variable volume) such that the volume of one composite sample is proportional to stormwater flow during the sampling period.

C. Sample Preservation

1. Sample container types, holding times, sampling volumes, and preservation procedures shall be equivalent to groundwater preservation methods addressed in Table 1 and Table 3.

2. Maximum holding time for fecal colilform and fecal streptococcus bacteria is 30 hours[1].

D. Sample container types and methods for cleaning depend on the test parameter of interest and shall be equivalent to the type and methods utilized for surface water sample containers, Section II.D, Table 1, and Table 3.

E. Chemically unstable parameters will only be determined in the field including temperature and specific conductance as per procedures addressed in ground water monitoring sample collection, section III.A.9.

---

[1]3/91, Dianna Coulter, Public Health Laboratory, OSHD, personal communication with Dennis O'Neil, Metro.

III. Chain of Custody Control Program

The chain of custody program for the stormwater monitoring shall be equivalent to the well monitoring chain of custody program, section IV.

IV. Field Quality Assurance/Quality Control Program

The field QA/QC program for the stormwater monitoring program shall be equivalent to the field QA/QC program for the well monitoring program, Section V.

V. Laboratory Quality Assurance/Quality Control Program

The laboratory QA/QC program for the stormwater monitoring program shall be equivalent to the laboratory QA/QC program for the well monitoring program, Section VI.

LEACHATE SYSTEM DISCHARGE

I. Presampling Procedure.

Sampling equipment shall be decontaminated as addressed in the surface water decontamination of equipment section, I.A.

II. Sample Collection Procedure.

Sampling procedures shall meet the City of Portland discharge permit #400-018 conditions, Schedule B (included in main text of the water monitoring plan).

A. Grab and composite samples shall be collected from Isco sampler at the landfill bridge.

B. Sample container types and methods for cleaning depend on the test parameter of interest and are similar to the type and methods utilized for surface water sample containers, Section II,D.

C. Chemically unstable parameters will be determined in the field including pH as per procedures addressed in ground water monitoring sample collection, section III.B.9, Table 1, and Table 3.

III. Chain of Custody Control Program

The chain of custody program for the leachate monitoring shall be equivalent to the well monitoring chain of custody program, Section IV.

IV. Field Quality Assurance/Quality Control Program

The field QA/QC program for the leachate monitoring program shall be equivalent to the field QA/QC program for the well monitoring program, Section V.

V. Laboratory Quality Assurance/Quality Control Program

The laboratory QA/QC program for the leachate monitoring program shall be equivalent to the laboratory QA/QC program for the well monitoring program, Section VI.

TABLE 1

SAMPLING AND PRESERVATION PROCEDURES FOR DETECTION MONITORING[a]

Parameter	Recommended Container[b]	Preservative	Maximum Holding Time	Minimum Volume Required for Analysis
Indicators of Ground-Water Contamination[c]				
pH	T, P, G	Field determined	None	100-150 ~~25~~ ml
Specific conductance	T, P, G	Field determined	None	~~100~~ 250 ml
TOC	G, amber, T-lined cap[e]	Cool 4°C,[d] HCl to pH <2	28 days	4 x 15 ml
TOX	G, amber, T-lined septa or caps	Cool 4°C, add 1 ml of 1.1M sodium sulfite	7 days	4 x 15 ml
Ground-Water Quality Characteristics				
Chloride	T, P, G	4°C	28 days	50 ml
Iron Manganese Sodium	T, P	Field acidified to pH <2 with HNO_3	6 months	200 ml
Phenols	G	4°C/H_2SO_4 to pH <2	28 days	500 ml
Sulfate	T, P, G	Cool, 4°C	28 days	50 ml
EPA Interim Drinking Water Characteristics				
Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	T, P Dark Bottle	Total Metals Field acidified to pH <2 with HNO_3 Dissolved Metals 1. Field filtration (0.45 micron) 2. Acidify to pH <2 with HNO_3	6 months 6 months	1,000 ml 1,000 ml
Fluoride	T, P	Cool, 4°C	28 days	300 ml
Nitrate/Nitrite	T, P, G	4°C/H_2SO_4 to pH <2	14 days	1,000 ml

(Continued)

Source: RCRA Ground-Water Monitoring Technical Enforcement Guidance Document September, 1986

TABLE 1
(Continue)

SAMPLING AND PRESERVATION PROCEDURES FOR DETECTION MONITORING

Parameter	Recommended Container[b]	Preservative	Maximum Holding Time	Minimum Volume Required for Analysis
Endrin Lindane Methoxychlor Toxaphene 2,4 D 2,4,5 TP Silvex	T, G	Cool, 4°C	7 days	2,000 ml
Radium Gross Alpha Gross Beta	P, G	Field acidified to pH <2 with HNO_3	6 months	1 gallon
Coliform bacteria	PP, G (sterilized)	Cool, 4°C	6 hours	200 ml
	Other Ground-Water Characteristics of Interest			
Cyanide	P, G	Cool, 4°C, NaOH to pH >12, 0.6 g ascorbic acid[f]	14 days[g]	500 ml
Oil and Grease	G only	Cool, 4°C H_2SO_4 to pH <2	28 days	100 ml
Semivolatile, nonvolatile organics	T, G	Cool, 4°C	14 days	60 ml
Volatiles	G, T-lined	Cool, 4°C	14 days	60 ml

[a]References: Test Methods for Evaluating Solid Waste – Physical/Chemical Methods, SW-846 (2nd edition, 1982).
Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020.
Standard Methods for the Examination of Water and Wastewater, 16th edition (1985).

[b]Container Types:
P = Plastic (polyethylene)
G = Glass
T = Fluorocarbon resins (PTFE, Teflon®, FEP, PFA, etc.)
PP = Polypropylene

(Continued)

TABLE 1
(Cont.)

SAMPLING AND PRESERVATION PROCEDURES FOR DETECTION MONITORING

[c]Based on the requirements for detection monitoring (§265.93), the owner/operator must collect a sufficient volume of ground water to allow for the analysis of four separate replicates.

[d]Shipping containers (cooling chest with ice or ice pack) should be certified as to the 4°C temperature at time of sample placement into these containers. Preservation of samples requires that the temperature of collected samples be adjusted to the 4°C immediately after collection. Shipping coolers must be at 4°C and maintained at 4°C upon placement of sample and during shipment. Maximum-minimum thermometers are to be placed into the shipping chest to record temperature history. Chain-of-custody forms will have Shipping/Receiving and In-transit (max/min) temperature boxes for recording data and verification.

[e]Do not allow any head space in the container.

[f]Use ascorbic acid only in the presence of oxidizing agents.

[g]Maximum holding time is 24 hours when sulfide is present. Optionally, all samples may be tested with lead acetate paper before the pH adjustment in order to determine if sulfide is present. If sulfide is present, it can be removed by addition of cadmium nitrate powder until a negative spot test is obtained. The sample is filtered and then NaOH is added to pH 12.

TABLE 2

Field Standard And Sample Spiking Solutions

Sample Type	Volume	Composition	Field Standard (Concentration)	Stock Solution for Field Spike of Split Samples: Solvent	Concentration of Components	Field Spike Volume
Alkalinity	50 mL	Na^+, HCO_3^-	10.0; 25 (ppm)	H_2O	10,000; 25,000 (ppm)	(50 µL)
Anions	1 L	K^+, Na^+, Cl^-, SO_4^- F^-, NO_3^-, $PO_4^{\equiv}$, SI	25, 50 (ppm)	H_2O	25,000; 50,000 (ppm)	(1 mL)
Cations	1 L	Na^+, K^+ Ca^{++}, Mg^{++}, Cl^-, NO_3^-	5.0; 10.0 (ppm)	H_2O, H^+ (acid)	5,000; 10,000 (ppm)	(1 mL)
Trace Metals	1 L	Cd^{++}, Cu^{++}, Pb^{++} Cr^{+++}, Ni^{2+}, Ag^+ Fe^{+++}, Mn^{++}	10.0; 25.0 (ppm)	H_2O, H^+ (acid)	10,000; 25,000 (ppm)	(1 mL)
TOC	40 mL	Acetone KHP	0.2; 0.5 (ppm-C) 1.8; 4.5 (ppm-C)	H_2O	200; 500 (ppm-C) 1,800; 4,500 (ppm-C)	(40 µL)
TOX	50 mL	Chloroform 2,4,6 Trichlorophenol	12.5; 25 (ppb) 12.5; 25 (ppb)	H_2O/poly* (ethylene glycol)	12,500; 25 (ppm) 12,500; 25 (ppm)	(500 µL)
Volatiles	40 mL	Dichlorobutane, Toluene Dibromopropane, Xylene	25; 50 (ppb)	H_2O/poly* (ethylene glycol)	25; 50 (ppm)	(40 µL)
Extractables A	1 L	Phenol Standards	25; 50 (ppb)	Methanol**	25; 50 (ppm)	(1 mL)
Extractables B	1 L	Polynuclear Aromatic Standards	25; 50 (ppb)	Methanol	25; 50 (ppm)	(1 mL)
Extractables C	1 L	Standards as Required	25; 50 (ppb)	Methanol	25; 50 (ppm)	(1 mL)

*75:25 water/polyethylene glycol (400 amu) mixture.

**Glass distilled methanol.

Source: Barcelona et al., 1981.

Table 3

PARAMETER	RECOMMENDED CONTAINER	PRESERVATIVE	MAXIMUM HOLDING TIME	MINIMUM VOLUME
Suspended Solids	P, G	4°c	7 days	100
Biochemical Oxygen Demand	P, G	4°c	2 "	500
Chemical Oxygen Demand	P, G	4°c (H_2SO_4)	7 " (28 days)	250
Total Phosphorus	P, G	4°c (H_2SO_4)	28 "	100
Dissolved Phosphorus	P, G	4°c (filtered)	2 "	100

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 93-1827 FOR THE PURPOSE OF AUTHORIZING THE ISSUANCE OF A REQUEST FOR PROPOSALS FOR LABORATORY SERVICES FOR ST. JOHNS LANDFILL

Date: July 12, 1993 Presented by: Jim Watkins

PROPOSED ACTION

Adopt Resolution No. 93-1827 which authorizes the issuance of a Request for Proposals (RFP) for Laboratory Services at St. Johns Landfill.

FACTUAL BACKGROUND AND ANALYSIS

Water quality monitoring is required at St. Johns Landfill by both the Oregon Department of Environmental Quality's (DEQ's) Solid Waste Disposal Site Closure Permit (#116, issued July 19, 1988) and the U.S. Environmental Protection Agency's October 9, 1991 Final Rule (40 CFR, Part 258, Subpart E - Groundwater Monitoring and Corrective Action).

As part of the closure of St. Johns Landfill, a draft water quality monitoring plan was submitted to DEQ. DEQ responded with modifications on August 25, 1992. A final plan is being submitted to DEQ. This RFP will provide laboratory services, required to implement the Water Quality Monitoring Plan.

The Request for Proposals (RFP) is for a 3-1/2 year contract to handle laboratory testing for water quality monitoring at St. Johns Landfill throughout the remaining closure period. The contract will provide for routine testing, as well as a contingency to provide for additional testing if required by regulators.

BUDGET IMPACT

$200,000 is budgeted within the Operations Division for groundwater monitoring at St. Johns Landfill, $27,007 for surface water and sediment monitoring at the landfill, and $16,500 for stormwater monitoring at the landfill in the 1993-94 fiscal year.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 93-1828.

JK:clk
s:\karl\staf0712.rpt

SOLID WASTE COMMITTEE REPORT

CONSIDERATION OF RESOLUTION NO. 93-1827, FOR THE PURPOSE OF AUTHORIZING ISSUANCE OF A REQUEST FOR PROPOSALS FOR LABORATORY SERVICES FOR ST. JOHNS LANDFILL

Date: July 21, 1993 Presented by: Councilor McFarland

Committee Recommendation: At the July 20 meeting the Committee voted unanimously to recommend Council adoption of Resolution No. 93-1827. Voting in favor: Councilors Buchanan, McFarland, McLain, Washington and Wyers.

Committee Issues/Discussion: Jim Watkins, Solid Waste Engineering Manager, explained that the purpose of the resolution was to release an RFP for various water monitoring work at the St. Johns Landfill. He noted that this work is being required by DEQ as part of a larger effort to assess the impact of the landfill on adjacent environmentally sensitive areas. Watkins indicated that Metro has installed a total of 31 wells and nine piezometers at the landfill to facilitate the monitoring program.

Watkins indicated that the monitoring program would evaluate: 1) leacheate, 2) stormwater, 3) groundwater in the wells, 4) surface water, 5) sediment in the North Slough and 6) the impact on fish and other water-based animals. Watkins noted that the results of initial monitoring will be used to develop a future monitoring plan in conjunction with the DEQ.

The contract would be for 3 1/2 years. Watkins explained that this would allow the same contractor to provide these services for the remainder of the closure work. He indicated that this was important because it would allow for consistent testing throughout the length of the closure work.

Councilor Buchanan asked what types of materials the monitoring would be likely to find. Watkins responded that it is unclear what will be found and that one of the primary reasons for conducting the monitoring will be to identify what types of materials are present in the water. He indicated that they would specifically be looking for certain metals and chemicals.

Councilor McFarland asked if we will need to meet the DEQ monitoring requirements throughout the entire length of the closure period. Joanna Karl, Solid Waste Staff, responded that monitoring will likely continue for up to 30 years after closure work is completed.

M E M O R A N D U M

METRO

To: Solid Waste Committee Members

From: John Houser, Council Analyst

Date: July 14, 1993

Re: Resolution No. 93-1827, For the Purpose of Authorizing the Issuance of a Request for Proposals for Laboratory Services for St. Johns Landfill

Resolution No. 93-1827 is scheduled for committee consideration at the July 20 meeting. At the request of the Solid Waste Department, the Presiding Officer has tenatively scheduled the resolution for consideration by the full Council at its July 22 meeting, subject to committee action at the July 20 meeting.

Background

The Council budgeted a total of $700,000 for a multi-year contract to provide groundwater, surface water and stormwater monitoring at the St. Johns Landfill. A total of $200,000 was allocated for expenditure during the current fiscal year. This work is being completed to comply with various state and federal requirements placed on the closure of the landfill. The proposed contract would be for 3 1/2 years, the remainder of the closure period. It will be difficult to estimate the total cost of the work because the scope of future work will be determined based on ongoing testing results.

Issues and Questions

The committee may wish to consider the following issues and questions related to this resolution:

1) In a memo dated July 9 Joanna Karl, Senior Engineer, requests that the Council expedite its consideration of the resolution. The reason given for the request is that the DEQ "requires that sampling and analysis of the groundwater monitoring wells take place during the month of August. It is contemplated that Metro will be late (September) due to the minimum time required for the RFP process." The committee may wish to ask:

a) Why the RFP process was not begun early enough to meet the DEQ requirement?

b) Are there environmental or other considerations that are affected by the timing of the monitoring?

c) Has DEQ indicated that data from a later test date will be acceptable?

d) Will Metro be subject to any monetary or other types of penalties for failing to meet the August testing date?

2) In light of the uncertainty about the future scope and cost of the monitoring work, why is Metro proposing a multi-year contract for this work?

M E M O R A N D U M

METRO

DATE: July 15, 1993

TO: Metro Council
Executive Officer
Interested Parties

FROM: Paulette Allen, Clerk of the Council

RE: AGENDA ITEM NO. 7.5; RESOLUTION NO. 93-1827

Presiding Officer Judy Wyers has given permission for Solid Waste Department staff to submit the above-referenced resolution for the July 20 Solid Waste Committee meeting and then the July 22 Council meeting because of a Department of Environmental Quality (DEQ) deadline staff must meet. Committee reports will be distributed in Councilors' mailboxes as soon as possible after the meeting and available at the Council meeting July 22.

M E M O R A N D U M

METRO

DATE: July 9, 1993

TO: Paulette Allen, Council Clerk

FROM: Joanna Karl, Senior Engineer

RE: RFP #93R-39-SW, Laboratory Services for St. Johns Landfill

The Oregon Department of Environmental Quality (DEQ) requires that sampling and analysis of the groundwater monitoring wells take place during the month of August. It is contemplated that Metro will be late (September) due to the minimum time required for the RFP process.

Thus, it is highly desirable that this Request for Proposals (RFP) go before the Solid Waste Committee on Tuesday, July 20, 1993, and before the full Council on Thursday, July 22, 1993, to try and minimize how late we will be in meeting the regulatory requirements.

JK:jc

M E M O R A N D U M

METRO

DATE: August 10, 1993

TO: Procurement Division
Attn: Cathy Newton

FROM: Paulette Allen, Clerk of the Council PA

RE: ADDENDUM NO. 1 TO REQUEST FOR PROPOSALS FOR LABORATORY SERVICES AT ST. JOHNS LANDFILL (RFP 93R-39-SW)

I certify that the above-referenced Addendum was filed in the Council Department on August 10, 1993.

This addendum will be filed in the Resolution No. 93-1827 file for updating and future reference.

c: Metro Council
John Houser
Dan Cooper
Dennis O'Neil
Craig Lewis

M E M O R A N D U M

METRO

RECEIVED AUG 1 0 1993

Date: August 9, 1993

TO: Paulette Allen, Council Clerk
Dan Cooper, General Counsel

FROM: Dennis O'Neil, Senior Solid Waste Planner D.O'N.

RE: Addendum No. 1 to Request for Proposals for Laboratory Services at St. Johns Landfill (RFP 93R-39-SW)

Per Metro Code 2.04.032 I am filing the above mentioned Addendum with you (see attached). Some changes in the Addendum are language clarifications in response to questions from potential proposers. Some changes are corrections of typographic errors. Some changes are changes in analytical method requirements which allow more competition without loss of information quality or result in an improved information quality. In my opinion, these changes do not materially alter the RFP document. I submitted this Addendum to Todd Sadlo of the General Counsel office. He concurs with this opinion.

DON:jc

Attachment

ADDENDUM NO. 1
TO THE REQUEST FOR PROPOSALS
FOR LABORATORY SERVICES AT ST. JOHNS LANDFILL

The following additions and deletions to RFP #93R-39-SW, dated July 1993, hereby become part of the RFP document. It is essential that all potential proposers note the contents of Addendum No. 1 and that Metro be made aware that each proposer received this addendum. Therefore, please state in the proposal that you received this addendum.

1. Page 4, paragraph 2; E. Cost/Budget

   ADD "If more than one listed parameter can be quantified using the same analytical method at no additional cost to Metro, list in the cost column the cost of the analytical method for one parameter followed by a code letter such as A, B, etc., for each separate analytical method. For other parameters also quantifiable by one method at no additional cost to Metro, list the same code letter but no cost number in the cost column. For the purposes of calculating subtotals and totals, assume zero cost for all code letters presented without cost numbers."

2. Page 4, paragraph 4; E. Cost/Budget

   ADD "All cost shall include sample container preparation, transport of sample containers to the landfill, and transport of samples to the laboratory. All costs shall be presented on a calendar year basis."

3. Page 5; F. Technical Information

   ADD "(5) If this laboratory is or has been certified by a state agency or is or has been a member of the EPA Contract Lab Program, submit proficiency examination results for the most recent three years of certification or membership."

4. Page 5; F. Technical Information

   ADD "(1) a. List the name and telephone number of a state agency contact who can provide information about your certification. List analytical methods you are certified for.

   ADD "(1) b. List the name and telephone number of an EPA contact who can provide information about your membership. List the analytical you had or have a contract to perform for the EPA.

5. FORM 2. COST PROPOSAL FORM

   UNDER "Biological Sampling"
   For "Lead, Total" in "Method" column **DELETE** "and 3540"
   For "Pesticides and PCB's" in "Method" column **ADD** "and 3540"

UNDER "Groundwater and Surface Water"
For "Chloride" in "Method" column **ADD** "or 325.3"
For "Nitrate" in "Method" column **ADD** "or 353.3"
For "Sulfate" in "Method" column **ADD** "or 375.4"
For "Trace Metals" in "Method" column **DELETE** "and 7000"
For "Trace Metals" in "Method" column **ADD** "7470, 7421,7061,7741"

UNDER "Phase II Parameters (Appendix II)"
For "Metals" **DELETE** "(15 metals)"
For "Metals" in "Method" column **DELETE** "& 7000" **ADD** "7470, 7421,7061,7741"

6. FORM 2. COST PROPOSAL FORM

UNDER "Sediment Sampling"
For "Metals" in "Method" column **ADD** "7470, 7421,7061,7741"

7. FORM 2. COST PROPOSAL FORM

UNDER "Stormwater Sampling"
For "Metals" in "Method" column **ADD** "7470, 7421,7061,7741"
For "Fecal Coliform" in "Method" column **ADD** ",SM9222D"
For "Enterococci" in "Method" column **ADD** ",SM9230C"

8. FORM 2. COST PROPOSAL FORM

UNDER "Surfacewater Sampling"
For "Bacteria" in "Method" column **DELETE** "SM9221C"
For "Fecal Coliform" in "Method" column **ADD** "SM9221C,9222D"
For "Enterococci" in "Method" column **ADD** "SM9230B,9230C"

9. APPENDIX A1 "GROUNDWATER MONITORING WELLS" and "SURFACE WATER MONITORING"

For "Chloride-Field Filtered" in "Method #" column **ADD** "or 325.3"
For "Nitrate (as N)" in "Method #" column **ADD** "or 353.3"
For "Sulfate (as SO4)" in "Method #" column **ADD** "or 375.4"
For "Trace Metals" in "Method #" column **ADD** ",7470, 7421,7061,7741"
For "Bacteria" in "Method" column **DELETE** "SM9221C"
For "Enterococci Bacteria" in "Method" column **ADD** "SM9230B,9230C"
For "Fecal Coliform Bacteria" in "Method" column **ADD** "SM9221C,9222D"
For "Trace Metals" in "Method" column **ADD** ",7470, 7421,7061,7741"

10. APPENDIX A1 "BIOLOGICAL SAMPLING"

For "Lead, Total" in "Method" column **DELETE** "and 3540"
For "Pesticides and PCB's" in "Method" column **ADD** "and 3540"

11. APPENDIX A1 "STORMWATER MONITORING"

For "Metals" in "Method #" column **ADD** ",7470, 7421,7061,7741"
For "Enterococci" in "Method" column **ADD** ",9230C"
For "Fecal Coliform" in "Method" column **ADD** ",9222D"

Dennis O'Neil, Senior Solid Waste Planner

August 10, 1993
Date

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August 9, 1993
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