

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: EPA Required Contaminant Testing for Drinking Water
DATE: April 1, 2008

NEEDS: For City Council to consider awarding analytical laboratory work to Basic Laboratory, Inc. for drinking water testing required by the United States Environmental Protection Agency's (EPA).

- FACTS:**
1. In 1996, amendments to the Safe Drinking Water Act were implemented that require the EPA to establish monitoring criteria for unregulated contaminants and to identify a maximum of thirty contaminants to monitor every five years. As a result, the Unregulated Contaminant Monitoring Regulation (UCMR) program was developed.
 2. The UCMR2 is the second cycle of monitoring required under the UCMR program, and was enacted on December 20, 2006. The UCMR2 requires public water producers to monitor for twenty-five contaminants using five analytical methods.
 3. Under the UCMR2 program the City of Paso Robles is required to perform both the Assessment Monitoring and Screening Survey during a twelve-month period between January 2008 and December 2010.

Assessment Monitoring: All public water systems serving more than 10,000 people are required to monitor for ten specified contaminants.

Screening Survey: Public water systems serving more than 100,000 people, 320 representative Systems serving 10,000–100,000 people, and 480 representative public water systems serving less than 10,000 people are required to monitor for an additional fifteen specified contaminants.

4. Quotes were requested and received from three EPA-approved California Laboratories for twenty-five contaminants. The following quotes were received:

Basic Laboratory Inc.....	\$37,950
MWH Laboratories.....	\$41,000
BSK Laboratories.....	\$45,270

5. The quote submitted by Basic Laboratory Inc. is complete and satisfies UCMR2 requirements.

**ANALYSIS &
CONCLUSION:**

The EPA is requiring this monitoring effort to collect occurrence data for potentially harmful contaminants that may be present in drinking water. The data collected are used to support analysis and review of contaminant occurrence, to guide the regulatory process, and to support the EPA's determination of whether to regulate a contaminant.

POLICY

REFERENCE: EPA, 40 CFR Parts 141 and 142

FISCAL

IMPACT: The Maintenance and Operations Budget of the Water Division has a line item for Special Projects (Budget NO 600.310.5235.165). Of the \$119,900 budgeted for Special Projects, there exists a balance of \$98,898.

- OPTIONS:**
- a.** City Council authorize staff to contract with Basic Laboratory to perform analytical laboratory services for UCMR2 for a not-to-exceed budget \$37,950.
 - b.** Amend, modify, or reject the above option.

Attachments (4)

- 1) Resolution
- 2) UCMR2 Fact Sheet published by the United States EPA for List 1 contaminants
- 3) UCMR2 Fact Sheet published by the United States EPA for List 2 contaminants
- 4) Price quote from Basic Laboratory Inc.

RESOLUTION NO. 08-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
AWARDING ANALYTICAL LABORATORY SERVICES FOR DRINKING WATER REQUIRED
UNDER THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S UCMR
PROGRAM

WHEREAS, the United States Environmental Protection Agency (EPA) implements and enforces regulations under the Permit issued to the City as a water purveyor; and

WHEREAS, two rounds of laboratory testing of the City's water supply will comply with the requirements of the second cycle of the EPA's Unregulated Contamination Monitoring Rule (UCMR2); and

WHEREAS, the cost of two rounds of samples and testing required for UCMR2 compliance are estimated at \$37, 950.

NOW, THEREFORE, BE IT RESOLVED, AS FOLLOWS:

SECTION 1. The City Council of the City of El Paso de Robles does hereby award Basic Laboratory Inc. analytical laboratory services as required for UCMR2 compliance.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 1st day of April 2008 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

Frank R. Mecham, Mayor

ATTEST:

Deborah D. Robinson, Deputy City Clerk

UCMR 2: Fact Sheet for Assessment Monitoring of List 1 Contaminants

Overview of the Rule			
Title	Unregulated Contaminant Monitoring Regulation (UCMR) for Public Water Systems (PWSs) Revisions		
Purpose	To collect occurrence data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act. Assessment Monitoring targets contaminants that are analyzed with methods that utilize existing and widely used technology. The UCMR monitoring program is the primary source of drinking water contaminant occurrence data used by EPA in regulatory determinations.		
General Description	The second cycle of the revised UCMR (UCMR 2) includes Assessment Monitoring (List 1) for 10 contaminants using 2 analytical methods. PWSs subject to Assessment Monitoring will sample within a twelve month period during 2008 - 2010. Monitoring results for PWSs serving over 10,000 people are reported to EPA's UCMR electronic data reporting system (i.e., the Safe Drinking Water Accession and Review System [SDWARS].)		
Utilities Covered	Community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) that serve a total population of more than 10,000 people and a representative sample of 800 systems serving 10,000 or fewer people are required to conduct Assessment Monitoring.		
UCMR 2 List 1 Contaminants			
Contaminant and CAS ¹ Registry Number	MRL ² (µg/L)	Use or Environmental Source	Health Effects ³
2 Priority Compounds (1 insecticide and 1 insecticide degradate), by EPA Method 527			
Dimethoate 60-51-5	0.7	Insecticide used on cotton and other field crops, orchard crops, vegetable crops, in forestry, and for residential uses	EPA classified as a "possible human carcinogen," with a reference dose (RfD) of 0.0002 milligrams per kilogram per day (mg/kg/day)
Terbufos sulfone 56070-16-7	0.4	Degradate of the parent compound, terbufos; terbufos used for systemic control of soil-borne insects and nematodes in fields of corn, grain sorghum, and sugar beets	EPA derived chronic RfD of 0.00005 mg/kg/day for the parent compound, based on no observed adverse effect level for plasma cholinesterase inhibition
5 Flame Retardants, by EPA Method 527			
2,2',4,4'-tetrabromodiphenyl ether (BDE-47) 5436-43-1	0.3	Flame retardants added to plastics (for products such as computer monitors, televisions, textiles, and plastic foams)	Animal studies suggest thyroid and liver effects, as well as possible reduced immune system function and neurobehavioral alteration
2,2',4,4',5-pentabromodiphenyl ether (BDE-99) 60348-60-9	0.9		
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153) 68631-49-2	0.8		
2,2',4,4',6-pentabromodiphenyl ether (BDE-100) 189084-64-8	0.5		
2,2',4,4',5,5'-hexabromobiphenyl (HBB) 59080-40-9	0.7		
3 Explosives, by EPA Method 529			
2,4,6-trinitrotoluene (TNT) 118-96-7	0.8	Used as an explosive in bombs and grenades, also used as a propellant; small amounts used for industrial explosive applications, such as deep well and underwater blasting; chemical intermediate in manufacture of dyestuffs and photographic chemicals	EPA classified as possible human carcinogen (Group C) based on urinary bladder papilloma and carcinoma in female rats and activity in Salmonella, with and without metabolic activation
1,3-dinitrobenzene 99-65-0	0.8	Used in explosives; also formed as a by-product during the manufacture of the explosive TNT; used in the manufacture of aramid fibers, spandex, and dyes	EPA derived chronic oral RfD of 0.0001 mg/kg/day, based on increased spleen weight
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) 121-82-4	1.0	Used in detonators, primers, mines, rocket boosters, and plastic explosives; used in fireworks and demolition blocks, and as a rodenticide	EPA derived chronic oral RfD of 0.0003 mg/kg/day, based on prostate inflammation observed in rats in a 2-year feeding study, and has classified RDX as a possible human carcinogen (Group C), based on adenomas and carcinomas in female mice
¹ Chemical Abstracts Service ² Minimum reporting level ³ Unregulated Contaminant Monitoring Regulation (UCMR) for Public Water Systems Revisions; Proposed Rule. Fed. Reg. Vol. 70, No. 161, p. 49093, August 22, 2005.			

Monitoring

	Groundwater	Surface Water or Groundwater Under the Direct Influence of Surface Water (GUDI)
Time frame	One consecutive 12-month period during January 2008 - December 2010.	
Frequency	Monitoring will occur twice in a consecutive 12-month period. Sample events must occur 5 - 7 months apart.	Monitoring will occur in 4 consecutive quarters, with sampling events occurring 3 months apart. Therefore, a system could conduct monitoring in either: (1) January, April, July, October; (2) February, May, August, November; or (3) March, June, September, December. ----- EPA will assign a monitoring schedule; however, PWSs have the opportunity to change this schedule prior to the onset of monitoring.
Location	Entry point to the distribution system.	
Laboratories	Samples must be analyzed by EPA-approved laboratories. EPA-approved laboratories will be listed on the UCMR Web site at http://www.epa.gov/safewater/ucmr/ucmr2/labs.html .	

Critical Deadlines and Requirements

Due Date	Requirement	Report through SDWARS ¹	Contact UCMR Sampling Coordinator ²
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Following Rule Publication

Within 90 days of rule publication	Systems must submit contact information to SDWARS. (Any subsequent changes must be submitted within 30 days of the change.)	X	
	Laboratories wanting to be approved must submit a registration form to participate in the laboratory approval process. For more information see: http://www.epa.gov/safewater/ucmr/ucmr2/labs.html .		X
Within 120 days of rule publication	Groundwater systems that wish to monitor from representative EPTDSs must submit either approval documentation or proposed alternate sampling plan.		X
Within 210 days of rule publication	Deadline for systems to change their monitoring schedule (after 210 days systems must provide an explanation for the requested schedule change).	X	X (after 210 days)
	PWSs review, and edit if necessary, inventory information for sampling locations.	X	X (after 210 days)

Following Sample Collection

Within 120 days of sample collection	Laboratories post data to SDWARS.	X	
Within 60 days of laboratory posting of data	PWSs review and approve the data. If after 60 days the PWS has not taken action, the data are considered approved and ready for concurrent State and EPA review.	X	

¹ Accessed through <http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html>

² Contact via e-mail at: UCMR_Sampling_Coordinator@epa.gov

UCMR 2 List 1 Data Elements

PWS Identification (PWSID)	Sample Collection Date	Analytical Result - Sign
PWS Facility Identification	Sample Identification	Analytical Results - Value
Water Source Type	Contaminant	Laboratory Identification
Sample Point Identification	Analytical Method	Sample Event
Sample Point Type	Sample Analysis Type	

Consumer Confidence Report

Under the Consumer Confidence Report (CCR) Rule, as specified in 40 CFR §141.153(d), CWSs must report the monitoring results whenever unregulated contaminants are detected. CCRs are to be sent to all billing customers each year by July 1. (The CCR Rule does not apply to non-community water systems.) Details on these reporting requirements can be found on the CCR Home Page at: <http://www.epa.gov/safewater/ccr/index.html>

For More Information....

Contact	Telephone
UCMR Message Center	800 - 949 - 1581
Safe Drinking Water Hotline	800 - 426 - 4791
CDX/SDWARS Help Desk	888 - 890 - 1995

Public Notification Rule

The Public Notification Rule (40 CFR §141.207), published on May 4, 2000 (65 FR 25981), requires PWSs to notify the public annually that the results of monitoring for unregulated contaminants are available (includes both CWSs and NTNCWSs). CWSs may include their public notice within their CCRs. Details on these reporting requirements can be found in the document: Public Notification Handbook (EPA 816-R-00-010), available on EPA's Web site at: <http://www.epa.gov/safewater/pws/pn/handbook.pdf>.

UCMR 2: Fact Sheet for Screening Survey of List 2 Contaminants

Overview of the Rule

Title	Unregulated Contaminant Monitoring Regulation (UCMR) for Public Water Systems (PWSs) Revisions
Purpose	To collect occurrence data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act. Screening Survey (List 2) monitoring targets contaminants that are analyzed by methods that utilize new technologies and are not commonly used by drinking water laboratories. The UCMR monitoring program is the primary source of drinking water contaminant occurrence data used by EPA in regulatory determinations.
General Description	The second cycle of the revised UCMR (UCMR 2) includes the Screening Survey (List 2) for 15 chemicals using 3 analytical methods. PWSs subject to the Screening Survey will sample within a twelve month period during 2008 - 2010. Monitoring results for PWSs serving over 10,000 people, will be reported using EPA's UCMR electronic data reporting system (i.e., the Safe Drinking Water Accession and Review System [SDWARS].)
Utilities Covered	Community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) that serve a total population of more than 100,000 people, and a representative sample of 800 systems serving 100,000 or fewer will be required to participate in the Screening Survey.

UCMR 2 List 2 Contaminants

Contaminant and CAS ¹ Registry Number	MRL ² (µg/L)	Use or Environmental Source	Health Effects ³
3 Acetanilide Parent Herbicides, by EPA Method 525.2			
Acetochlor 34256-82-1	2.0	Used as an herbicide on corn	EPA reference dose (RfD) is 0.02 milligrams per kilogram per day (mg/kg/day)
Alachlor 15972-60-8	2.0	Widely used herbicide, primarily used in the Midwest to control annual grasses and broadleaf weeds on crops such as corn, sorghum, and soybeans	EPA RfD is 0.01 mg/kg/day
Metolachlor 51218-45-2	1.0	Broad spectrum herbicide used for general weed control in non-crop areas; widely used on crops such as corn, cotton, peanuts, grass for seed production, nurseries, hedgerows/fencerows, and landscape plantings	EPA RfD is 0.15 mg/kg/day
6 Acetanilide Herbicide Degradates, by EPA Method 535			
Acetochlor ethane sulfonic acid (ESA) 187022-11-3	1.0	Degradation product of acetochlor	EPA RfD for parent herbicide, acetochlor, is 0.02 mg/kg/day
Acetochlor oxanilic acid (OA) 184992-44-4	2.0		
Alachlor ESA 142363-53-9	1.0	Degradation product of alachlor	EPA RfD for parent herbicide, alachlor, is 0.01 mg/kg/day
Alachlor OA 171262-17-2	2.0		
Metolachlor ESA 171118-09-5	1.0	Degradation product of metolachlor	EPA RfD for parent herbicide metolachlor is 0.15 mg/kg/day
Metolachlor OA 152019-73-3	2.0		
6 Nitrosamines, by EPA Method 521			
N-nitrosodiethylamine (NDEA) 55-18-5	0.005	Nitrosamines can form as intermediates and byproducts in chemical synthesis and manufacture of rubber, leather, andastics; can form spontaneously by reaction of precursor amines with nitrosating agents (nitrate and related compounds), or by action of nitrate-reducing bacteria. Foods such as bacon and malt beverages can contain nitrosamines; there is also evidence that they form in the upper GI tract	EPA considers all six compounds to be probable human carcinogens.
N-nitrosodimethylamine (NDMA) 62-75-9	0.002		
N-nitroso-di-n-butylamine (NDBA) 924-16-3	0.004		
N-nitroso-di-n-propylamine (NDPA) 621-64-7	0.007		
N-nitrosomethylethylamine (NMEA) 10595-95-6	0.003		
N-nitrosopyrrolidine (NPYR) 930-55-2	0.002		

¹ Chemical Abstracts Service

² Minimum reporting level

³ Unregulated Contaminant Monitoring Regulation (UCMR) for Public Water Systems Revisions; Proposed Rule. Fed. Reg. Vol. 70, No. 161, p. 49093, August 22, 2005.

Monitoring

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EPA will assign a monitoring schedule; however, PWSs have the opportunity to change this schedule prior to the onset of monitoring.		
Location	Entry point to the distribution system for all List 2 contaminants. Additional sampling for nitrosamines (Method 521) is required at the distribution system maximum residence time.	
Laboratories	Samples must be analyzed by EPA-approved laboratories. EPA-approved laboratories will be listed on the UCMR Web site at http://www.epa.gov/safewater/ucmr/ucmr2/labs.html .	

Critical Deadlines and Requirements

Due Date	Requirement	Report through SDWARS ¹	Contact UCMR Sampling Coordinator ²
Following Rule Publication			
Within 90 days of rule publication	Systems must submit contact information to SDWARS. (Any subsequent changes must be submitted within 30 days of the change.)	X	
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Within 120 days of rule publication	Groundwater systems that wish to monitor from representative EPTDSs must submit either approval documentation or proposed alternate sampling plan.		X
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Following Sample Collection

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Within 60 days of laboratory posting of data	PWSs review and approve the data. If after 60 days the PWS has not taken action, the data are considered approved and ready for concurrent State and EPA review.	X	

¹ Accessed through <http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html>

² Contact via e-mail at: UCMR_Sampling_Coordinator@epa.gov

UCMR 2 List 2 Data Elements

PWS Identification (PWSID)	Sample Collection Date	Analytical Result - Sign
PWS Facility Identification	Sample Identification	Analytical Results - Value
Water Source Type	Contaminant	Laboratory Identification
Sample Point Identification	Analytical Method	Sample Event
Sample Point Type	Sample Analysis Type	Disinfectant Residual Type

Consumer Confidence Report

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Basic Laboratory, Inc.
 2218 Railroad Avenue
 Redding, CA 96001
 (888) 511-4804 EXT 204
 (530) 243-7234
 (530) 243-7494 Fax

UCMR2 ANALYTICAL QUOTE

CLIENT: City of Paso Robles Water Division
 1230 Paso Robles St.
 Paso Robles, CA 93446

DATE: 2/20/2008
PHONE: (805) 237-3866
FAX: (805) 237-6596

ATTENTION: Kelly Dunham

DESCRIPTION: UCMR2 Testing (Groundwater)

QUOTE#: UCMR2-02202008
START DATE: 2/20/2008
EXPIRATION: 12/31/2010

TURN AROUND TIME: Standard 15 Working Days

<u>DESCRIPTION</u>	<u>MATRIX</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>EXTENDED PRICE</u>
List 1: Assessment Monitoring				
EPA Method 527	DW	38	\$180.00	\$6,840.00
EPA Method 529	DW	38	\$180.00	\$6,840.00
List 2: Screening Survey				
EPA Method 525.2	DW	38	\$140.00	\$5,320.00
EPA Method 535	DW	38	\$250.00	\$9,500.00
EPA Method 521 (Subcontract)	DW	42	\$225.00	\$9,450.00
Grand Total (Covers 2 Sampling Events):				\$37,950.00

NOTE: ALL PRICES ARE CONFIDENTIAL. ANY BREACH OF CONFIDENTIALITY WILL VOID ALL QUOTATIONS.

Basic Laboratory, Inc.
 UCMR2 Project Manager:

John M. Cady

Date: 2/20/2008

All Shipping and Handling costs to and from UCMR2 Sampling Site will be incurred by Basic Laboratory. Coolers will be shipped to contract location with return shipping labels. There is no charge for Sampling Kits, QA/QC, and Hard Copy Report. PDF Reporting is also included at no cost, if requested. There will be no fee for SDWARS-EDT Reporting to EPA CDX. No other costs will be incurred with this quote.