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QUARTERLY REPORT
ST. CHARLES COUNTY WELL FIELD
MONITORING PROJECT

GRANT NO. DE-FG05-89OR21864

Prepared by: Stanley Remington
January, February and March, 1996

MONTHLY REPORT

JANUARY 1996²

BY

Stanley M. Remington

Consulting Hydrologist

I. CHEMICAL ANALYSES

The test samples from the raffinate pits, taken on January 2, 1996, were received. The results all show that treated water contained only minimal amounts of hazardous chemicals, well below the NPDES limits. Subsequently the water was released to the Missouri River. The results are appended.

The third and fourth quarter summary data for 1995 was received by me from the Department of Energy. These show all of the results taken from the quarry and plant sites from July through December 1995. They are appended.

The results from the sampling of wells PW-9 and RMW-2 were received and are appended. These samples were taken on December 11, 1995. These were the quarterly samples and several parameters were added to the usual monthly sampling parameters. As can be noted all of the results show that all chemical parameters were well below the NPDES requirements.

II. CONTRACT

I have requested another year extension of my contract. My present contract expires on March 31, 1996. This request may come up for discussion sometime during February 1996.

III. FUTURE PLANS

I will sample well number PW-5 during the month of February 1996. I had planed to do this during January but adverse weather conditions prevented me from getting to this well. Instead I sampled well PW-7.

IV. MISCELLANEOUS

Appended are two laboratory tests from the Department of Natural Resources provided to me by Joe R. Nichols. The sampling was done by the DNR (State of Missouri) on November 30, 1995 and December 13, 1995. They are for volatile, semi-volatile and various metals. The samples were taken from the booster station at the water treatment plant at Weldon Springs.

Also appended is the St. Charles County Water Department Monthly Water Usage Report dated January 1, 1996. It was for the month of December 1995.

AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

876 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

January 9, 1996

Stanley M. Remington
919 Broadmoor Lane
St. Charles, MO 63301

RE: ATAS #14624.01
Weldon Spring

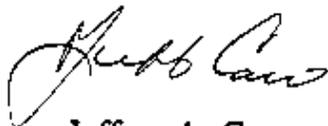
Dear Mr. Remington:

Enclosed is the analytical report for the sample received in our laboratory on January 2, 1996.

If, in your review, you should have any questions or require additional information, please call.

Thank you for choosing ATAS for your analytical needs.

Sincerely,



Jeffrey A. Carr
Project Manager

Enclosures

JAC/dms

ATAS

"Professional Commitment"

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1462401RA(241)
DATE : 01-09-96

SAMPLE MATRIX : WATER
ATAS # : 14624.01
DATE SUBMITTED: 01-02-96
PROJECT : WELDON SPRING
SAMPLE ID : NP-EPS2-010296-C

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
INORGANICS					
NITRATE	1.0	mg/L	9.0	01-09-96	SM 418 B
METALS					
ARSENIC	5.0	ug/L	ND	01-08-96	SW 6010
CHROMIUM	1.0	ug/L	1.4	01-08-96	SW 6010
LEAD	3.0	ug/L	ND	01-08-96	SW 6010
MANGANESE	1.0	ug/L	5.1	01-08-96	SW 6010
SELENIUM	5.0	ug/L	ND	01-08-96	SW 6010
MERCURY	0.25	ug/L	ND	01-09-96	SW 7470

/L = PARTS PER BILLION (PPB)
ug/L = PARTS PER MILLION (PPM)
ND = NOT DETECTED ABOVE REPORTING LIMIT



CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1462401RA(241)

DATE : 01-09-96

QA/QC

DESCRIPTION		PARAMETER	RESULTS
METHOD BLANK	01-08-96	ARSENIC	<5.0 ug/L
METHOD BLANK	01-08-96	CHROMIUM	<1.0 ug/L
METHOD BLANK	01-08-96	LEAD	<3.0 ug/L
METHOD BLANK	01-08-96	MANGANESE	<1.0 ug/L
METHOD BLANK	01-08-96	SELENIUM	<5.0 ug/L
METHOD BLANK	01-09-96	NITRATE	<1.0 mg/L
METHOD BLANK	01-09-96	MERCURY	<0.2 ug/L
CONTROL SPIKE	01-08-96	ARSENIC	101 % RECOVERY
CONTROL SPIKE	01-08-96	CHROMIUM	94 % RECOVERY
CONTROL SPIKE	01-08-96	LEAD	95 % RECOVERY
CONTROL SPIKE	01-08-96	MANGANESE	95 % RECOVERY
CONTROL SPIKE	01-08-96	SELENIUM	99 % RECOVERY
CONTROL SPIKE	01-09-96	NITRATE	110 % RECOVERY
CONTROL SPIKE	01-09-96	MERCURY	96 % RECOVERY

ATAS

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CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1462401RA(241)

DATE : 01-09-96

SAMPLE MATRIX : WATER
ATAS EPISODE : #14624
DATE SUBMITTED: 01-02-96

RESULTS REPORTED IN pCi/L

<u>CLIENT ID</u>	<u>ATAS ID</u>	<u>RADIONUCLIDE</u>	<u>RESULT</u>
NP-EPS2-010296-C	14624.01	GROSS ALPHA	2 +/- 3*
NP-EPS2-010296-C	14624.01	GROSS BETA	16 +/- 5*
IP-EPS2-010296-C	14624.01	TOTAL URANIUM (mg/L)	<0.005

VARIABILITY OF THE RADIOACTIVE DISINTERGRATION PROCESS (COUNTING ERROR) AT THE 95%
CONFIDENCE LEVEL, 1.96σ.

pCi/L = PICO-CURIES PER LITER

mg/L = PARTS PER MILLION (PPM)

ATAS

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CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1462401EX(241)

DATE : 01-09-96

SAMPLE MATRIX : WATER
ATAS # : 14624.01
DATE SUBMITTED: 01-02-96
DATE EXTRACTED: 01-03-96
DATE ANALYZED : 01-08-96
METHOD REF. : SW846-8090, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : NP-EPS2-010296-C

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>REPORTING LIMIT</u>	<u>RESULTS</u>
2,6 DNT	0.0103	ND
2,4 DNT	0.0206	ND

QA/QC SURROGATE RECOVERY

DECACHLOROBIPHENYL(30-150)	97 %
TETRACHLORO-M-XYLENE(30-150)	94 %

ND= NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

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CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1462401EX(241)

DATE : 01-09-96

SAMPLE MATRIX : WATER
ATAS # : METHOD BLANK
DATE SUBMITTED: 01-02-96
DATE EXTRACTED: 01-03-96
DATE ANALYZED : 01-08-96
METHOD REF. : SW846-8090, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>REPORTING LIMIT</u>	<u>RESULTS</u>
2,6 DNT	0.010	ND
2,4 DNT	0.020	ND

QA/QC SURROGATE RECOVERY

DECACHLOROBIPHENYL(30-150)	66 %
TETRACHLORO-M-XYLENE(30-150)	68 %

ND= NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: QC0109EX(241)

DATE : 01-09-96

SAMPLE MATRIX : WATER
ATAS # : LABORATORY CONTROL SAMPLE
DATE SUBMITTED: 01-02-96
DATE EXTRACTED: 01-03-96
DATE ANALYZED : 01-08-96
METHOD REF. : SW846-8090, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : LABORATORY CONTROL SAMPLE

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

	LCS % REC.	LCSD % REC.	RPD
2,6 DNT	94	96	2.1
2,4 DNT	102	100	2.0

ENVIRONMENTAL SAMPLE CHAIN - OF JUSTDY / AUTHORIZATION FORM
 WELDON SPRING SITE REMEDIATION ACTION PROJECT (WSSRAP)
 7295 HIGHWAY 94 SOUTH, ST. CHARLES, MO 63304
 TELEPHONE (314) 441-8086 TELEEX (314) 447-0803

ES&I 1.1.1, Rev 6, Effective 1/93

Validation Documentation

WSSRAP Contact: _____ Dept./Cost Code: _____
 Phone Number: _____ Requisitioner: St. Charles
 Request Number: _____ Turnaround Time: Standard Accelerated Priority Urgent Emergency

#	Sample ID	QC	Date Sampled	Matrix	Cont.	Preserv.	Parameters	Arch. (Y/N)
	AP-EP52-010296 -C		1/2/96	Water	1-1 liter	HNO3	As, Cr, Hg, Mn, Se, Pb	N
					1-1 liter glass	Ice	2, 4-DNT	
					1-1 liter	H2SO4		
					1-4 liter	HNO3	U, Gross alpha, Gross beta	

Requester's Signature: [Signature] Checked By: [Signature] Technical Reviewer: _____

Relinquished By	Received By	Date	Time	Reason for Transfer	Seal Intact? (Y/N)	Cooler Temp
<u>[Signature]</u>	<u>[Signature]</u>	1/2/96	12:03			
<u>[Signature]</u>	<u>[Signature]</u>	1/2/96	10:53			

AUTHORIZATION

ES&I Procurement Date: _____ Date: _____ Date: _____ Site Shipping Officer: _____ Date: _____

AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

January 11, 1996

Stanley M. Remington
919 Broadmoor Lane
St. Charles, MO 63301

RE: ATAS #14494.01-#14494.02
Weldon Spring

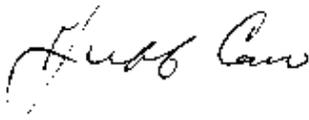
Dear Mr. Remington:

Enclosed are the analytical reports for the samples received in our laboratory on December 11, 1995.

If, in your review, you should have any questions or require additional information, please call.

Thank you for choosing ATAS for your analytical needs.

Sincerely,



Jeffrey A. Carr
Project Manager

Enclosures

JAC/dms

ATAS

"Professional Commitment"

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401RA(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS EPISODE : #14494
DATE SUBMITTED: 12-11-95

RESULTS REPORTED IN pCi/L

CLIENT ID	ATAS ID	RADIONUCLIDE	RESULT
RMW-2	14494.01	GROSS ALPHA	6 +/- 3*
RMW-2	14494.01	GROSS BETA	8 +/- 4*
RMW-2	14494.01	TOTAL URANIUM (mg/L)	<0.014
PW-9	14494.02	GROSS ALPHA	2 +/- 2*
PW-9	14494.02	GROSS BETA	7 +/- 3*
PW-9	14494.02	TOTAL URANIUM (mg/L)	<0.009

* VARIABILITY OF THE RADIOACTIVE DISINTERGRATION PROCESS (COUNTING ERROR) AT THE 95%
CONFIDENCE LEVEL, 1.96σ.

pCi/L = PICO-CURIES PER LITER

mg/L = PARTS PER MILLION (PPM)

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401M(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS # : 14494.01
DATE SUBMITTED: 12-11-95
PROJECT : WELDON SPRING
SAMPLE ID : RMW-2

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
INORGANICS					
NITRATE	1.0	mg/L	ND	12-19-95	SM 418B
METALS					
ARSENIC	5.0	ug/L	107	12-15-95	SW 6010
BERYLLIUM	1.0	ug/L	ND	12-15-95	SW 6010
COPPER	2.0	ug/L	107	12-15-95	SW 6010
IRON	20	ug/L	9880	12-15-95	SW 6010
LEAD	3.0	ug/L	8.1	12-15-95	SW 6010
MANGANESE	1.0	ug/L	1190	12-15-95	SW 6010
MERCURY	0.15	ug/L	ND	01-02-96	SW 7470
ZINC	4.0	ug/L	414	12-15-95	SW 6010

µ/L = PARTS PER BILLION (PPB)
µ/L = PARTS PER MILLION (PPM)
ND = NOT DETECTED ABOVE REPORTING LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401M(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS # : 14494.02
DATE SUBMITTED: 12-11-95
PROJECT : WELDON SPRING
SAMPLE ID : PW-9

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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INORGANICS

NITRATE	1.0	mg/L	ND	12-19-95	SM 418B
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METALS

ARSENIC	5.0	ug/L	ND	12-15-95	SW 6010
BERYLLIUM	1.0	ug/L	ND	12-15-95	SW 6010
COPPER	2.0	ug/L	ND	12-15-95	SW 6010
IRON	20	ug/L	6060	12-15-95	SW 6010
LEAD	3.0	ug/L	ND	12-15-95	SW 6010
MANGANESE	1.0	ug/L	382	12-15-95	SW 6010
MERCURY	0.15	ug/L	ND	01-02-96	SW 7470
ZINC	4.0	ug/L	4.4	12-15-95	SW 6010

ug/L = PARTS PER BILLION (PPB)

mg/L = PARTS PER MILLION (PPM)

ND = NOT DETECTED ABOVE REPORTING LIMIT

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401M(241)

DATE : 01-11-96

QA/QC

<u>DESCRIPTION</u>		<u>PARAMETER</u>	<u>RESULTS</u>	
METHOD BLANK	12-15-95	ARSENIC	<5.0	ug/L
METHOD BLANK	12-15-95	BERYLLIUM	<1.0	ug/L
METHOD BLANK	12-15-95	COPPER	<2.0	ug/L
METHOD BLANK	12-15-95	IRON	<20	ug/L
METHOD BLANK	12-15-95	LEAD	<3.0	ug/L
METHOD BLANK	12-15-95	MANGANESE	<1.0	ug/L
METHOD BLANK	01-02-96	MERCURY	<0.15	ug/L
METHOD BLANK	12-15-95	ZINC	<4.0	ug/L
METHOD BLANK	12-19-95	NITRATE	<1.0	ug/L
CONTROL SPIKE	12-15-95	ARSENIC	104 %	RECOVERY
CONTROL SPIKE	12-15-95	BERYLLIUM	100 %	RECOVERY
CONTROL SPIKE	12-15-95	COPPER	99 %	RECOVERY
CONTROL SPIKE	12-15-95	IRON	97 %	RECOVERY
CONTROL SPIKE	12-15-95	LEAD	99 %	RECOVERY
CONTROL SPIKE	12-15-95	MANGANESE	96 %	RECOVERY
CONTROL SPIKE	01-02-96	MERCURY	87 %	RECOVERY
CONTROL SPIKE	12-15-95	ZINC	98 %	RECOVERY
CONTROL SPIKE	12-19-95	NITRATE	110 %	RECOVERY

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401EX(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS # : 14494.01
DATE SUBMITTED: 12-11-95
DATE ANALYZED : 12-16-95
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : RMW-2

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
o-NITROTOLUENE	12.0	ND
p-NITROTOLUENE	8.0	ND
m-NITROTOLUENE	7.9	ND

NL NOT DETECTED ABOVE QUANTITATION LIMIT

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401EX(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS # : 14494.02
DATE SUBMITTED: 12-11-95
DATE ANALYZED : 12-16-95
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : PW-9

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
o-NITROTOLUENE	12.0	ND
p-NITROTOLUENE	8.0	ND
m-NITROTOLUENE	7.9	ND

ND NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401EX(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS # : METHOD BLANK
DATE SUBMITTED: 12-11-95
DATE ANALYZED : 12-16-95
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
o-NITROTOLUENE	12.0	ND
p-NITROTOLUENE	8.0	ND
m-NITROTOLUENE	7.9	ND

NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1449401EX(241)

DATE : 01-11-96

SAMPLE MATRIX : WATER
ATAS # : LABORATORY CONTROL SAMPLE
DATE SUBMITTED: 12-11-95
DATE ANALYZED : 12-16-95
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : LABORATORY CONTROL SAMPLE

COMPOUND	PERCENT RECOVERY
AMX	97 %
RDX	92 %
1,3,5-TNB	91 %
TRICRYL	*53 %
1,4-DNB	102 %
TNT	94 %
NITROBENZENE	85 %
2,6 DNT	89 %
2,4 DNT	88 %
o-NITROTOLUENE	88 %
p-NITROTOLUENE	87 %
m-NITROTOLUENE	90 %

* - OUTSIDE QC LIMITS



Department of Energy

Oak Ridge Operations
Weldon Spring Site
Remedial Action Project Office
7295 Highway 94 South
St. Charles, Missouri 63304

January 4, 1996

Distribution:

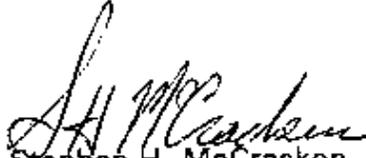
**QUARTERLY SITE AND QUARRY WATER TREATMENT PLANT EFFLUENT DATA
SUMMARY - THIRD AND FOURTH QUARTER 1995**

Enclosed please find the subject effluent data summary sheets for the batches of water treated and discharged during the third and fourth quarter of 1995. Eight batches (S#064 through S#71) and four batches (Q#037 through Q#041, except Q#038) have been treated and discharged from the site and quarry water treatment plants, respectively.

Batch Q#038 was treated and sampled, however, this water was reused within the quarry and not discharged to the Missouri River. Therefore, no data summary sheet is enclosed.

If you have any questions, please call Bruce Ballew at (314)926-7011.

Sincerely,


Stephen H. McCracken
Project Manager
Weldon Spring Site
Remedial Action Project

Enclosure:
As stated

cc w/enclosure:
Martha Windsor/Geri Kountzman, MDNR

SUMMARY OF SWTP (B, CH 064) ANALYTICAL RESULTS

7/21/95 0720

From all parties receiving samples on 7/17/95

PARAMETER	NPDES LIMITS (mg/l) Unless noted:	PMC DATA RESULTS	McDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	9 mg/l		NA	NA	NA
TSS	50 / 30	4 mg/l		NA	NA	NA
ARSENIC	0.1	<0.003 mg/l		NA	NA	0.003 mg/l
CHROMIUM	0.1	<0.006 mg/l	0.002 mg/l	NA	NA	<0.003 mg/l
LEAD	0.1	<0.002 mg/l		NA	NA	<0.003 mg/l
MANGANESE	0.1	0.00395 mg/l	<0.005 mg/l	NA	NA	<0.003 mg/l
MERCURY	0.004	<0.0001 mg/l		NA	NA	<0.0001 mg/l
SELENIUM	0.02	0.00498 mg/l		NA	NA	0.00103 mg/l
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	<0.0035 mg/l
2,4-DNT	0.22 ug/l	<0.04 ug/l	<0.03 ug/l	NA	NA	<0.002 mg/l
FLUORIDE	4.0	2.26 mg/l		NA	NA	2.46 mg/l
NITRATE + NITRITE AS N	20	0.511 mg/l		NA	NA	0.25 mg/l
SULFATE	500	297 mg/l		NA	NA	357 mg/l
CHLORIDE	*	228 mg/l		NA	NA	244 mg/l
GROSS ALPHA	*	<3.96 pCi/l		NA	NA	3.9 ± 1.3 pCi/l
GROSS BETA	*	6.65 ± 1.69 pCi/l		NA	NA	8.5 ± 1.7 pCi/l
URANIUM, TOTAL	**	0.202 ± 0.002 pCi/l	0.3 ± 0.2 pCi/l	NA	NA	<0.3 pCi/l
RADIUM-226 ***	*	1.6 ± 1.1 pCi/l		NA	NA	
RADIUM-228 ***	*	<5 pCi/l		NA	NA	
THORIUM-230 ***	*	3.5 ± 0.9 pCi/l		NA	NA	
THORIUM-232 ***	*	<1.0 pCi/l		NA	NA	
pH (Std. Units)	6 - 9	6.61		NA	NA	
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	*	NA		NA	NA	NA
3. PCBs	****	<0.50 ug/l	0.5 mg/l	NA	NA	NA
4. METALS/OTHERS	*	NA		NA	NA	NA

cc: S. Anderson
B. Fox

Glen Schmidt
Kathy McClintock

Checked By:

= Data received after batch was discharged

* = Monitoring Parameter
 ** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
 *** = Monitoring parameter once per month.
 **** = Effective limit of 1 ug/l
 NA = Not Analyzed

SUMMARY OF SWTP (B, CH 065) ANALYTICAL RESULTS

From all parties receiving samples on 8/7/95

8/21/95 0945

PARAMETER	NPDES LIMITS (mg/l) Unless noted	PMC DATA RESULTS	MoDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	10 mg/l		NA	NA	NA
TSS	50 / 30	2.5 mg/l		NA	NA	NA
ARSENIC	0.1	<0.003 mg/l	<0.002 mg/l	NA	NA	0.012 mg/l
CHROMIUM	0.1	<0.006 mg/l		NA	NA	0.004 mg/l
LEAD	0.1	<0.002 mg/l		NA	NA	0.002 mg/l
MANGANESE	0.004	0.00371 mg/l	0.00333 mg/l	NA	NA	0.0035 mg/l
MERCURY	0.02	<0.0001 mg/l		NA	NA	0.0001 mg/l
SELENIUM	0.0075	<0.004 mg/l		NA	NA	0.003 mg/l
CYANIDE, AMENABLE	0.22 ug/l	<0.004 mg/l	<0.003 mg/l	NA	NA	0.002 mg/l
2,4-DNT	4.0	3.26 mg/l		NA	NA	2.66 mg/l
FLUORIDE	20	0.166 mg/l		NA	NA	0.23 mg/l
NITRATE + NITRITE AS N	500	197 mg/l		NA	NA	230 mg/l
SULFATE	*	312 mg/l		NA	NA	334 mg/l
CHLORIDE	*		28.7 mg/l	NA	NA	2.9 ± 1.2 pCi/l
GROSS ALPHA	*	3.2 ± 4.0 pCi/l	12.0 ± 1.3 pCi/l	NA	NA	9.2 ± 1.1 pCi/l
GROSS BETA	**	0.454 ± 0.024 pCi/l	0.5 ± 0.2 pCi/l	NA	NA	<1.0 pCi/l
URANIUM, TOTAL	*	1.2 ± 0.5 pCi/l		NA	NA	
RADIUM-226 ***	*	2.2 ± 1.0 pCi/l		NA	NA	NA
RADIUM-228 ***	*	0.0 ± 0.5 pCi/l		NA	NA	NA
THORIUM-230 ***	*	0.0 ± 0.4 pCi/l		NA	NA	NA
THORIUM-232 ***	6-9	7.25		NA	NA	NA
pH (Std. Units)	(SEE BELOW)	NA		NA	NA	NA
PRIORITY POLLUTANTS						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	****	<50 ug/l	<0.5 mg/l	NA	NA	NA
3. PCBs	*	NA		NA	NA	NA
4. METALS/OTHERS	*	NA		NA	NA	NA

* = Data received after batch was discharged

Glen Schmidt
Kathy McClintock

Checked By: _____

cc: S. Anderson
N. DeYong

* = Monitoring Parameter
** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
*** = Monitoring parameter once per month.
**** = Effective limit of 1 µg/l
NA = Not Analyzed

SUMMARY OF SWTP (BACH 066) ANALYTICAL RESULTS

6/31/95 1055

From all parties receiving samples on 6/24/95

PARAMETER	NPDES LIMITS (mg/l) Unless noted 30/50 50/30	PMC DATA RESULTS	MoDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD		<5.00 mg/l		NA	NA	NA
TSS		<2.00 mg/l		NA	NA	NA
ARSENIC	0.1	<0.002 mg/l	<0.002 mg/l	NA	NA	0.0014 mg/l
CHROMIUM	0.1	<0.003 mg/l		NA	NA	<0.003 mg/l
LEAD	0.1	<0.002 mg/l		NA	NA	<0.003 mg/l
MANGANESE	0.1	<0.003 mg/l	0.00055 mg/l	NA	NA	0.00355 mg/l
MERCURY	0.004	0.00013 mg/l		NA	NA	<0.0001 mg/l
SELENIUM	0.02	0.00352 mg/l		NA	NA	0.0016 mg/l
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	<0.0002 mg/l
2,4-DNT	0.22 ug/l	<0.04 ug/l	<0.10 ug/l	NA	NA	<0.052 ug/l
FLUORIDE	4.0	3.22 mg/l		NA	NA	3.46 mg/l
NITRATE + NITRITE AS N	20	0.0484 mg/l	40.06 mg/l	NA	NA	8.16 mg/l
SULFATE	500	252 mg/l		NA	NA	264 mg/l
CHLORIDE	*	212 mg/l		NA	NA	225 mg/l
GROSS ALPHA	*	0.00 ± 2.5 pCi/l	5.5 ± 2.1 pCi/l	NA	NA	5.5 ± 1.2 pCi/l
GROSS BETA	*	16.3 ± 3.6 pCi/l	10.0 ± 7.7 pCi/l	NA	NA	7.5 ± 1.5 pCi/l
URANIUM, TOTAL	**	0.227 ± 0.015 pCi/l	0.5 ± 0.2 pCi/l	NA	NA	<0.6 pCi/l
RADIUM-226 ***	*	NA		NA	NA	
RADIUM-228 ***	*	NA		NA	NA	
THORIUM-230 ***	*	NA		NA	NA	NA
THORIUM-232 ***	*	NA		NA	NA	NA
pH (Std. Units)	6 - 9	7.95		NA	NA	
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	*	NA		NA	NA	NA
3. PCBs	****	<.50 ug/l	<.50 ug/l	NA	NA	NA
4. METALS/OTHERS	*	NA		NA	NA	NA

* = Monitoring Parameter
 ** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
 *** = Monitoring parameter once per month. Sampled previously this month.
 **** = Effective limit of 1 ug/l
 NA = Not Analyzed

cc: S. Anderson
 N. DeYong

Glen Schmidt
 Kathy McClintock

Checked By: _____

SUMMARY OF SWTP (BA. CH 067) ANALYTICAL RESULTS

9/20/95 1335

From all parties receiving samples on 9/12/95

PARAMETER	NPDES LIMITS (mg/l) Unless noted	PMC DATA RESULTS	ModNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COO	90 / 60	8 mg/l		NA	NA	NA
TSS	50 / 30	<2.00 mg/l		NA	NA	NA
ARSENIC	0.1	<0.002 mg/l		NA	NA	
CHROMIUM	0.1	<0.003 mg/l		NA	NA	
LEAD	0.1	<0.002 mg/l		NA	NA	
MANGANESE	0.1	<0.003 mg/l		NA	NA	
MERCURY	0.004	0.00012 mg/l		NA	NA	
SELENIUM	0.02	0.0052 mg/l		NA	NA	
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	
2,4-DNT	0.22 ug/l	<0.04 ug/l		NA	NA	
FLUORIDE	4.0	3.05 mg/l		NA	NA	
NITRATE + NITRITE AS N	20	0.143 mg/l		NA	NA	
SULFATE	500	250 mg/l		NA	NA	
CHLORIDE	*	194 mg/l		NA	NA	
GROSS ALPHA	*	1.8 ± 3.5 pCi/l	5.1 ± 2.3 pCi/l	NA	NA	9.4 ± 1.4 pCi/l
GROSS BETA	*	13.1 ± 4.8 pCi/l	12.5 ± 3.6 pCi/l	NA	NA	7.9 ± 1.1 pCi/l
URANIUM, TOTAL	**	0.528 ± 0.027 pCi/l	0.6 ± 0.2 pCi/l	NA	NA	<1.0 pCi/l
RADIUM - 226 ***	*	DUE 9/20/95		NA	NA	
RADIUM - 228 ***	*	DUE 9/20/95		NA	NA	
THORIUM - 230 ***	*	DUE 9/20/95		NA	NA	NA
THORIUM - 232 ***	*	DUE 9/20/95		NA	NA	NA
pH (Std. Units)	6 - 9	6.69		NA	NA	
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	*	NA		NA	NA	NA
3. PCBs	****	<50 ug/l		NA	NA	NA
4. METALS/OTHERS	*	NA				

* = Monitoring Parameter

** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l

*** = Monitoring parameter, once per month.

**** = Effective limit of 1 µg/l

NA = Not Analyzed

█ = Data received after batch was discharged

cc: S. Anderson
N. DeYong

Glen Schmidt
Kathy McClintock

Checked By: _____

SUMMARY OF SWTP (BA CH 068) ANALYTICAL RESULTS

From all parties receiving samples on 10/3/95

10/10/95 1336

PARAMETER	NPDES LIMITS (mg/l) Unless noted	PMC DATA RESULTS	MO DNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	8.43 mg/l		NA	NA	NA
TSS	50 / 30	6.30 mg/l		NA	NA	NA
ARSENIC	0.1	<0.0051 mg/l		NA	NA	NA
CHROMIUM	0.1	<0.0012 mg/l		NA	NA	NA
LEAD	0.1	<0.0017 mg/l		NA	NA	NA
MANGANESE	0.1	0.0022 mg/l		NA	NA	NA
MERCURY	0.004	<0.0001 mg/l		NA	NA	NA
SELENIUM	0.02	<0.004 mg/l		NA	NA	NA
CYANIDE, AMENABLE	0.0075	<0.005 mg/l		NA	NA	NA
2,4-DNT	0.22 ug/l	<0.195 ug/l		NA	NA	NA
FLUORIDE	4.0	3.5 mg/l		NA	NA	NA
NITRATE + NITRITE AS N	20	0.083 mg/l		NA	NA	NA
SULFATE	500	199 mg/l		NA	NA	NA
CHLORIDE	*	188 mg/l		NA	NA	NA
GROSS ALPHA	*	4.7 ± 3.5 pCi/l		NA	NA	1.6 ± 1.1 pCi/l
GROSS BETA	*	16.0 ± 8.5 pCi/l		NA	NA	9.6 ± 1.1 pCi/l
URANIUM, TOTAL	**	0.666 ± 0.034 pCi/l		NA	NA	<1.0 pCi/l
RADIUM-226 ***	*	0.41 ± 0.30 pCi/l		NA	NA	
RADIUM-228 ***	*	0.37 ± 0.39 pCi/l		NA	NA	
THORIUM-230 ***	*	0.005 ± 0.057 pCi/l		NA	NA	NA
THORIUM-232 ***	*	0.00 ± 0.047 pCi/l		NA	NA	NA
pH (Std. Units)	6 - 9	7.81		NA	NA	
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	*	NA		NA	NA	NA
3. PCBs	****	<0.50 µg/l		NA	NA	NA
4. METALS/OTHERS	*	NA		NA	NA	NA

* = Monitoring Parameter

** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l

*** = Monitoring parameter once per month.

**** = Effective limit of 1 µg/l

NA = Not Analyzed

= Data received after batch was discharged

Glen Schmidt

Kathy McClintock

cc: S. Anderson

N. DeYong

Checked By: _____

SUMMARY OF SWTP (BA...CH 069) ANALYTICAL RESULTS

11/27/95 11107

From all parties receiving samples on 11/6/95

PARAMETER	NPDES LIMITS (mg/l) Unless noted	PMC DATA RESULTS	MoDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	5 mg/l		NA	NA	NA
TSS	50 / 30	<2.00 mg/l		NA	NA	NA
ARSENIC	0.1	<0.002 mg/l		NA	NA	NA
CHROMIUM	0.1	0.004 mg/l		NA	NA	NA
LEAD	0.1	0.00314 mg/l		NA	NA	NA
MANGANESE	0.1	<0.004 mg/l		NA	NA	NA
MERCURY	0.004	<0.0001 mg/l		NA	NA	NA
SELENIUM	0.02	0.00920 mg/l		NA	NA	NA
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	NA
2,4-DNT	0.22 ug/l	<0.016 ug/l		NA	NA	NA
FLUORIDE	4.0	3.28 mg/l		NA	NA	NA
NITRATE + NITRITE AS N	20	4.41 mg/l		NA	NA	NA
SULFATE	500	174 mg/l		NA	NA	NA
CHLORIDE	*	196 mg/l		NA	NA	NA
GROSS ALPHA	*	0.9 ± 3.2 pCi/l		NA	NA	1.6 ± 1.0 pCi/l
GROSS BETA	*	7.3 ± 4.3 pCi/l		NA	NA	7.6 ± 1.0 pCi/l
URANIUM, TOTAL	**	0.361 ± 0.020 pCi/l		NA	NA	<1.0 pCi/l
RADIUM-226 ***	*	1.33 ± 0.77 pCi/l		NA	NA	
RADIUM-228 ***	*	1.30 ± 0.60 pCi/l		NA	NA	
THORIUM-230 ***	*	0.24 ± 0.22 pCi/l		NA	NA	NA
THORIUM-232 ***	*	0.00 ± 0.00 pCi/l		NA	NA	NA
pH (Std. Units)	6 - 9	7.32		NA	NA	NA
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	*	NA		NA	NA	NA
3. PCBs	****	<0.50 ug/l		NA	NA	NA
4. METALS OTHERS	*	NA		NA	NA	NA
* = Monitoring Parameter						
** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l						
*** = Monitoring parameter once per month.						
**** = Effective limit of 1 ug/l						
NA = Not Analyzed						

= Data received after batch was discharged

Glen Schmidt

Kathy McClintock

cc: S. Anderson

N. DeYang

Checked By: _____

SUMMARY OF SWTP (BA 3H 070) ANALYTICAL RESULTS

12/13/95 0900

From all parties receiving samples on 12/4/95

PARAMETER	NPDES LIMITS (mg/l) Unless noted	PMC DATA RESULTS	MoDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	<20 mg/l		NA	NA	NA
TSS	50 / 30	<12 mg/l		NA	NA	NA
ARSENIC	0.1	0.00034 mg/l		NA	NA	NA
CHROMIUM	0.1	0.0049 mg/l		NA	NA	NA
LEAD	0.1	<0.001 mg/l		NA	NA	NA
MANGANESE	0.1	<0.00099 mg/l		NA	NA	NA
MERCURY	0.004	<0.0002 mg/l		NA	NA	NA
SELENIUM	0.02	0.00555 mg/l		NA	NA	NA
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	NA
2,4-DNT	0.22 ug/l	<0.20 ug/l		NA	NA	NA
FLUORIDE	4.0	2.6 mg/l		NA	NA	NA
NITRATE + NITRITE ASN	20	14 mg/l		NA	NA	NA
SULFATE	500	290 mg/l		NA	NA	NA
CHLORIDE	*	200 mg/l		NA	NA	NA
GROSS ALPHA	*	6.5 ± 5.6 pCi/l		NA	NA	1.2 ± 1.0 pCi/l
GROSS BETA	*	15.7 ± 4.9 pCi/l		NA	NA	9.2 ± 1.1 pCi/l
URANIUM, TOTAL	**	0.339 ± 0.015 pCi/l		NA	NA	<1.0 pCi/l
RADIUM-226 ***	*	0.46 ± 0.29 pCi/l		NA	NA	NA
RADIUM-228 ***	*	0.95 ± 0.43 pCi/l		NA	NA	NA
THORIUM-230 ***	*	-0.014 ± 0.053 pCi/l		NA	NA	NA
THORIUM-232 ***	*	0.026 ± 0.023 pCi/l		NA	NA	NA
pH (Std. Units)	6 - 9	6.09		NA	NA	NA
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*			NA	NA	NA
2. VOA	*			NA	NA	NA
3. PCBs/PESTICIDES	****/*			NA	NA	NA
4. METALS/OTHERS	*			NA	NA	NA

* = Monitoring Parameter
 ** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
 *** = Monitoring parameter once per month.
 **** = Effective limit of 1 µg/l
 ***** Be[(<0.001), Ni(0.0052), Cu(0.00162), Zn(0.00595), Ag(<0.001), Cd(0.00119), Sb(0.001197), CN - total(<0.0119) mg/l
 NA = NOT ANALYZED
 = Data received after batch was discharged
 cc: S. Anderson
 N. DeYong
 Glen Schmidt
 Kathy McClintock
 Checked By: _____

SUMMARY OF SWTP (BA CH 071) ANALYTICAL RESULTS

From all parties receiving samples on 12/18/95

12/22/95 1245

PARAMETER	NPDES LIMITS (mg/l) Unless noted	PMC DATA RESULTS	MO DNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	18 mg/l		NA	NA	NA
TSS	50 / 30	<2.00 mg/l		NA	NA	NA
ARSENIC	0.1	0.0034 mg/l		NA	NA	NA
CHROMIUM	0.1	<0.003 mg/l		NA	NA	NA
LEAD	0.1	<0.001 mg/l		NA	NA	NA
MANGANESE	0.1	<0.002 mg/l		NA	NA	NA
MERCURY	0.004	<0.0001 mg/l		NA	NA	NA
SELENIUM	0.02	mg/l		NA	NA	NA
CYANIDE, AMENABLE	0.0075	< mg/l		NA	NA	NA
2,4-DNT	0.22 ug/l	<0.016 ug/l		NA	NA	NA
FLUORIDE	4.0	3.02 mg/l		NA	NA	NA
NITRATE + NITRITE AS N	20	7.73 mg/l		NA	NA	NA
SULFATE	500	214 mg/l		NA	NA	NA
CHLORIDE	*	193 mg/l		NA	NA	NA
GROSS ALPHA	*	4.40 ± 1.40 pCi/l		NA	NA	NA
GROSS BETA	*	16.4 ± 5.10 pCi/l		NA	NA	NA
URANIUM, TOTAL	**	0.26 ± 0.01 pCi/l		NA	NA	NA
RADIUM-226 ***	*	NA		NA	NA	NA
RADIUM-228 ***	*	NA		NA	NA	NA
THORIUM-230 ***	*	NA		NA	NA	NA
THORIUM-232 ***	*	NA		NA	NA	NA
pH (Std. Units)	6 - 9	7.26		NA	NA	NA
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA		NA	NA	NA
2. VOA	*	NA		NA	NA	NA
3. PCBs/PESTICIDES	****/*	<0.5 ug/l/ NA		NA	NA	NA
4. METALS/OTHERS	*	NA		NA	NA	NA

NA = NOT ANALYZED

█ = Data received after batch was discharged

cc: S. Anderson

Glen Schmidt

N. DeYong

Kathy McClintock

Checked By: _____

* = Monitoring Parameter

** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l

*** = Monitoring parameter once per month. Sampled in batch S070.

**** = Effective limit of 1 ug/l

SUMMARY OF QWTP (B...CH 037) ANALYTICAL RESULTS

7/18/95 0830

FROM ALL AGENCIES RECEIVING SAMPLES ON 7/11/95

PARAMETER	NPDES LIMITS (mg/l)	PMC DATA RESULTS	MODNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	<5 mg/l		NA	NA	NA
TSS	50 / 30	2.0 mg/l		NA	NA	NA
ARSENIC	0.1	<0.003 mg/l		NA	NA	NA
CHROMIUM	0.1	<0.009 mg/l		NA	NA	20.00 mg/l
COPPER ***	1	<0.007 mg/l		NA	NA	<0.003 mg/l
LEAD	0.1	0.00304 mg/l		NA	NA	
MANGANESE	0.1	0.009 mg/l		NA	NA	
MERCURY	0.004	0.00014 mg/l		NA	NA	0.0002 mg/l
SELENIUM	0.02	0.00566 mg/l		NA	NA	<0.001 mg/l
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	0.0017 mg/l
2,4-DNT	0.22 ug/l	<0.04 ug/l		NA	NA	<0.002 mg/l
FLUORIDE	4.0	0.34 mg/l		NA	NA	0.37 mg/l
NITRATE+NITRITE AS N	*	<0.10 mg/l		NA	NA	0.29 mg/l
SULFATE	500	260 mg/l		NA	NA	367 mg/l
CHLORIDE	*	193 mg/l		NA	NA	235 mg/l
GROSS ALPHA	*	0.4 ± 2.5 pCi/l		NA	NA	3.0 ± 1.3 pCi/l
GROSS BETA	*	5.6 ± 2.9 pCi/l		NA	NA	6.6 ± 0.9 pCi/l
URANIUM, TOTAL	**	0.846 ± 0.044 pCi/l		NA	NA	<1.0 pCi/l
RADIUM-226 ***	*	<0.9 pCi/l		NA	NA	NA
RADIUM-228 ***	*	<5 pCi/l		NA	NA	NA
THORIUM-230 ***	*	<1 pCi/l		NA	NA	NA
THORIUM-232 ***	*	<1 pCi/l		NA	NA	NA
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA	NA	NA	NA	NA
2. VOA	*	NA	NA	NA	NA	NA
3. PCBs	*	<0.50 ug/l		NA	NA	NA
4. PESTICIDES	*	NA		NA	NA	NA
5. METALS / OTHERS	*	NA		NA	NA	NA
PH	6.0 - 9.0 SU	6.31	NA	NA	NA	NA

NA = Not analyzed.

* = MONITORING ONLY, NO PERMIT DISCHARGE LIMITS

** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l

*** = Parameter required once/month. Sampled this batch.

cc: S. Anderson
J. Peters

Glen Schmidt
Bruce Fox
Kathy McClintock

= Data received after batch was discharged

Checked by: _____

SUMMARY OF QWTP (B. (CH 039) ANALYTICAL RESULTS

6/23/95 0745

FROM ALL AGENCIES RECEIVING SAMPLES ON 6/18/95

PARAMETER	NPDES LIMITS (mg/l)	PMC DATA RESULTS	MOENR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90/60	<5 mg/l		NA	NA	NA
TSS	50/30	<2.00 mg/l		NA	NA	NA
ARSENIC	0.1	<0.003 mg/l	<0.0025 mg/l	NA	NA	0.0030 mg/l
CHROMIUM	0.1	0.00610 mg/l		NA	NA	<0.0001 mg/l
COPPER ***	1	<0.003 mg/l		NA	NA	<0.0001 mg/l
LEAD	0.1	0.00227 mg/l		NA	NA	<0.0001 mg/l
MANGANESE	0.1	0.0165 mg/l	0.010 mg/l	NA	NA	<0.0001 mg/l
MERCURY	0.004	<0.0001 mg/l		NA	NA	<0.0001 mg/l
SELENIUM	0.02	<0.004 mg/l		NA	NA	<0.0001 mg/l
CYANIDE, AMENABLE	0.0075	<0.004 mg/l		NA	NA	<0.0001 mg/l
2,4-DNT	0.22 ug/l	<0.04 ug/l	<0.10 ug/l	NA	NA	<0.0001 mg/l
FLUORIDE	4.0	1.12 mg/l		NA	NA	<0.0001 mg/l
NITRATE+NITRITE AS N	*	<0.01 mg/l	<0.05 mg/l	NA	NA	
SULFATE	500	213 mg/l		NA	NA	
CHLORIDE	*	193 mg/l		NA	NA	
GROSS ALPHA	*	1.4 ± 2.8 pCi/l	5.1 ± 1.7 pCi/l	NA	NA	2.1 ± 1.2 pCi/l
GROSS BETA	*	7.9 ± 2.9 pCi/l	17.3 ± 3.8 pCi/l	NA	NA	6.6 ± 1.0 pCi/l
URANIUM, TOTAL	**	0.775 ± 0.040 pCi/l	0.8 ± 0.2 pCi/l	NA	NA	1.0 ± 0.2 pCi/l
RADIUM - 226 ***	*	DUE 8/26/95 ***		NA	NA	NA
RADIUM - 228 ***	*	DUE 8/26/95 ***		NA	NA	NA
THORIUM - 230 ***	*	DUE 8/26/95 ***		NA	NA	NA
THORIUM - 232 ***	*	DUE 8/26/95 ***		NA	NA	NA
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA	NA	NA	NA	NA
2. VOA	*	NA	NA	NA	NA	NA
3. PCBs	*	<0.50 ug/l	59.5 ug/l	NA	NA	NA
4. PESTICIDES	*	NA		NA	NA	NA
5. METALS / OTHERS	*	NA		NA	NA	NA
pH	6.0 - 9.0 S.U.	6.9	NA	NA	NA	NA

NA = Not analyzed.

█ = Data received after batch was discharged

Glen Schmidt
Bruce Fox
Kathy McClintock

cc: S. Anderson
J. Peters

Checked by: _____

* - MONITORING ONLY, NO PERMIT DISCHARGE LIMITS
 ** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
 *** = Parameter required once/month. Sampled this batch.

SUMMARY OF QWTP (B...CH 040) ANALYTICAL RESULTS

9/18/95 1500

FROM ALL AGENCIES RECEIVING SAMPLES ON 9/7/95

PARAMETER	NPOES LIMITS (mg/l)	PMC DATA RESULTS	MoDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 60	0 mg/l		NA	NA	NA
TSS	50 / 30	<2.00 mg/l	12 mg/l	NA	NA	NA
ARSENIC	0.1	<0.002 mg/l	<0.0025 mg/l	NA	NA	NA
CHROMIUM	0.1	<0.003 mg/l	0.0031 mg/l	NA	NA	NA
COPPER ***	1	<0.005 mg/l	<0.004 mg/l	NA	NA	NA
LEAD	0.1	<0.002 mg/l	0.0105 mg/l	NA	NA	NA
MANGANESE	0.004	0.0113 mg/l	<0.0025 mg/l	NA	NA	NA
MERCURY	0.02	0.0015 mg/l	<0.002 mg/l	NA	NA	NA
SELENIUM	0.0075	0.00522 mg/l	<0.002 mg/l	NA	NA	NA
CYANIDE, AMENABLE	0.22 ug/l	<0.004 mg/l	<0.002 mg/l	NA	NA	NA
2,4-DNT	4.0	0.41 mg/l	<0.25 mg/l	NA	NA	<0.002 mg/l
FLUORIDE	*	<0.10 mg/l	0.05 mg/l	NA	NA	0.002 mg/l
NITRATE + NITRITE AS N	500	265 mg/l	0.05 mg/l	NA	NA	0.25 mg/l
SULFATE	*	307 mg/l	0.19 mg/l	NA	NA	0.04 mg/l
CHLORIDE	*	0.5 ± 4.3 pCi/l	0.1 ± 0.7 pCi/l	NA	NA	0.04 mg/l
GROSS ALPHA	*	10 ± 5 pCi/l	0.1 ± 0.5 pCi/l	NA	NA	0.04 mg/l
GROSS BETA	**	2.2 pCi/l	1.5 ± 0.5 pCi/l	NA	NA	0.04 mg/l
URANIUM, TOTAL	*	0.2 ± 0.3 pCi/l	1.0 ± 1.3 pCi/l	NA	NA	0.04 mg/l
RADIUM - 226 ***	*	1.5 ± 0.7 pCi/l	0.0 ± 0.5 pCi/l	NA	NA	0.04 mg/l
RADIUM - 228 ***	*	0.0 ± 0.5 pCi/l	0.0 ± 0.5 pCi/l	NA	NA	0.04 mg/l
THORIUM - 230 ***	*	0.0 ± 0.4 pCi/l	<0.5 pCi/l	NA	NA	0.04 mg/l
THORIUM - 232 ***	*		<0.5 pCi/l	NA	NA	0.04 mg/l
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	NA	NA	NA	NA	NA
2. VOA	*	NA	NA	NA	NA	NA
3. PCBs	*	<0.50 µg/l		NA	NA	NA
4. PESTICIDES	*	NA		NA	NA	NA
5. METALS / OTHERS	*	NA		NA	NA	NA
pH	6.0 - 9.0 S.U.	7.83	NA	NA	NA	NA

* = MONITORING ONLY, NO PERMIT DISCHARGE LIMITS
 ** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
 *** = Parameter required once/month. Sampled this batch.

NA = Not analyzed.

= Data received after batch was discharged

cc: S. Anderson
 J. Peters
 Glenn Schmidt
 Bruce Fox
 Kathy McClintock

Checked by: _____

SUMMARY OF QWTP (B...CH 041) ANALYTICAL RESULTS

11/16/95 1335

FROM ALL AGENCIES RECEIVING SAMPLES ON 11/7/95

PARAMETER	NPDES LIMITS (mg/l)	PMC DATA RESULTS	MoDNR DATA RESULTS	EPA DATA RESULTS	ST. CHARLES COUNTY DATA RESULTS	ST. LOUIS COUNTY H & W DATA RESULTS
COD	90 / 80	<5.00 mg/l		NA	NA	NA
TSS	50 / 30	<5.00 mg/l		NA	NA	NA
ARSENIC	0.1	<0.00180 mg/l		NA	NA	NA
CHROMIUM	0.1	<0.00960 mg/l		NA	NA	NA
COPPER ***	1	0.0056 mg/l		NA	NA	NA
LEAD	0.1	<0.00080 mg/l		NA	NA	NA
MANGANESE	0.1	0.0101 mg/l		NA	NA	NA
MERCURY	0.004	<0.00010 mg/l		NA	NA	NA
SELENIUM	0.02	<0.00160 mg/l		NA	NA	NA
CYANIDE, AMENABLE	0.0075	<0.005 mg/l		NA	NA	NA
2,4-DNT	0.22 ug/l	<0.20 ug/l		NA	NA	NA
FLUORIDE	4.0	<1.00 mg/l		NA	NA	NA
NITRATE+NITRITE AS N	*	<0.020 mg/l		NA	NA	NA
SULFATE	500	339 mg/l		NA	NA	NA
CHLORIDE	*	241 mg/l		NA	NA	NA
GROSS ALPHA	*	4.7 ± 5.2 pCi/l		NA	NA	2.0 ± 1.2 pCi/l
GROSS BETA	*	-0.3 ± 5.2 pCi/l		NA	NA	6.8 ± 1.1 pCi/l
URANIUM, TOTAL	**	1.165 ± 0.061 pCi/l		NA	NA	1.4 ± 0.3 pCi/l
RADIUM -226 ***	*	0.41 ± 0.26 pCi/l		NA	NA	NA
RADIUM -228 ***	*	0.10 ± 1.10 pCi/l		NA	NA	NA
THORIUM -230 ***	*	0.51 ± 0.33 pCi/l		NA	NA	NA
THORIUM -232 ***	*	0.19 ± 0.19 pCi/l		NA	NA	NA
PRIORITY POLLUTANTS (SEE BELOW)						
1. SEMI-VOA	*	DUE 11/22/95	NA	NA	NA	NA
2. VOA	*	DUE 11/22/95		NA	NA	NA
3. PCBs	*	<1.00 µg/l		NA	NA	NA
4. PESTICIDES	*	NON DETECT		NA	NA	NA
5. METALS / OTHERS	*	****		NA	NA	NA
pH	6.0 - 9.0 S.U.	7.69	NA	NA	NA	NA

* = MONITORING ONLY, NO PERMIT DISCHARGE LIMITS
 ** = Design Value of 30 pCi/l; Not to Exceed 100 pCi/l
 *** = Parameter required once/month. Sampled this batch.
 **** Ba - 0.0648 mg/l, Be - 0.0017 mg/l, Cd - 0.00340 mg/l, Fe - <0.0169 mg/l, Ni - <0.0149 mg/l, Sb - <0.0432 mg/l, Tl - <0.0150 mg/l, Zn - 0.0261 mg/l
 Phenolics - <0.005 mg/l, CN(TOTAL) - <0.005 mg/l

NA = Not analyzed.

cc: S. Anderson
 J. Peters
 Glen Schmidt
 Bruce Fox
 Kathy McClintock

Checked by: _____

STATE OF MISSOURI
McConaughy, Governor • David A. Shaw, Director
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176 Jefferson City, MO 65102-0176

ENVIRONMENTAL SERVICES PROGRAM

ST. CHARLES CO WATER PLANT
1635 SO. HIGHWAY 94
DEFIANCE, MO 63341

Lab Number: 95-A7076

Sample Number: 95-H674

RESULTS OF SAMPLE ANALYSES FOR PUBLIC WATER SUPPLIES

Report Date: December 13, 1995
Date Collected: November 30, 1995
Sample Location: BOOSTER STA.
PWS Name: ST CHARLES CO CT-WELDON SPRING

PWS County: ST CHARLES
PWS ID: MO6079507

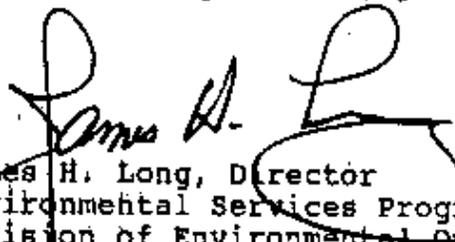
Analysis Performed	Results	MCL	Units
VOC Results:			
Dichlorodifluoromethane	< 2.5	--	ug/L
Chloromethane	< 2.5	--	ug/L
Vinyl Chloride	< 0.5	2.0	ug/L
Bromomethane	Not Analyzed		
Chloroethane	< 2.5	--	ug/L
Trichlorofluoromethane	< 2.5	--	ug/L
1,1-Dichloroethene	< 0.5	7.0	ug/L
Methylene Chloride	< 0.5	5.0	ug/L
Methyl-tert-butyl ether	None Detected		
trans-1,2-Dichloroethene	< 0.5	100	ug/L
1,1-Dichloroethane	< 1.0	--	ug/L
2,2-Dichloropropane	< 1.0	--	ug/L
cis-1,2-Dichloroethene	< 0.5	70.0	ug/L
Chloroform	19.6	--	ug/L
Bromochloromethane	< 1.0	--	ug/L
1,1,1-Trichloroethane	< 0.5	200	ug/L
1,1-Dichloropropene	< 1.0	--	ug/L
Carbon Tetrachloride	< 0.5	5.0	ug/L
Benzene	< 0.5	5.0	ug/L
1,2-Dichloroethane	< 0.5	5.0	ug/L
Trichloroethene	< 0.5	5.0	ug/L
1,2-Dichloropropane	< 0.5	5.0	ug/L
Bromodichloromethane	12.2	--	ug/L
Dibromomethane	< 1.0	--	ug/L
cis-1,3-Dichloropropane	< 2.0	--	ug/L
Toluene	< 0.5	1000	ug/L
trans-1,3-Dichloropropane	< 1.0	--	ug/L
1,1,2-Trichloroethane	< 0.5	5.0	ug/L

Analysis Performed	Results	MCL	Units
Tetrachloroethene	< 0.5	5.0	ug/L
1,3-Dichloropropane	< 2.0	--	ug/L
Dibromochloromethane	7.2	--	ug/L
1,2-Dibromoethane	< 2.0	--	ug/L
Chlorobenzene	< 0.5	100	ug/L
Ethylbenzene	< 0.5	700	ug/L
1,1,1,2-Tetrachloroethane	< 1.0	--	ug/L
Total Xylenes	< 0.5	10000	ug/L
Styrene	< 0.5	100	ug/L
Isopropylbenzene	< 2.0	--	ug/L
Bromoform	1.1	--	ug/L
1,1,2,2-Tetrachloroethane	< 1.0	--	ug/L
1,2,3-Trichloropropane	< 1.0	--	ug/L
n-Propylbenzene	< 2.0	--	ug/L
Bromobenzene	< 1.0	--	ug/L
2-Chlorotoluene	< 2.0	--	ug/L
4-Chlorotoluene	< 2.0	--	ug/L
1,3,5-Trimethylbenzene	< 2.0	--	ug/L
tert-Butylbenzene	< 2.0	--	ug/L
1,2,4-Trimethylbenzene	< 1.0	--	ug/L
sec-Butylbenzene	< 2.0	--	ug/L
p-isopropyltoluene	< 2.0	--	ug/L
1,3-Dichlorobenzene	< 1.0	--	ug/L
1,4-Dichlorobenzene	< 0.5	75.0	ug/L
n-Butylbenzene	< 2.0	--	ug/L
1,2-Dichlorobenzene	< 0.5	600	ug/L
1,2-Dibromo-3-Chlorobenz	< 5.0	--	ug/L
1,2,4-Trichlorobenzene	< 0.5	70.0	ug/L
Hexachlorobutadiene	< 1.0	--	ug/L
Naphthalene	< 2.0	--	ug/L
1,2,3-Trichlorobenzene	< 2.0	--	ug/L

MCL = Maximum Contaminant Level

-- = Not Applicable

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S. Environmental Protection Agency. If you have any questions, please contact Mr. Terry Timmons at 314/751-1188.


 James H. Long, Director
 Environmental Services Program
 Division of Environmental Quality

STATE OF MISSOURI
 DEPARTMENT OF NATURAL RESOURCES

McLennan, Governor • David A. Shaw, Director
 DIVISION OF ENVIRONMENTAL QUALITY
 P.O. Box 176 Jefferson City, MO 65102-0176

ENVIRONMENTAL SERVICES PROGRAM

ST. CHARLES CO WATER PLANT
 1635 SO. HIGHWAY 94
 DEFIANCE, MO 63341

Lab Number: 95-A7022

Sample Number: 95-H536

RESULTS OF SAMPLE ANALYSES FOR PUBLIC WATER SUPPLIES

Report Date: December 20, 1995
 Date Collected: November 30, 1995
 Sample Location: BOOSTER STA.
 PWS Name: ST CHARLES CO CT-WELDON SPRING

PWS County: ST CHARLES
 PWS ID: MO6079507

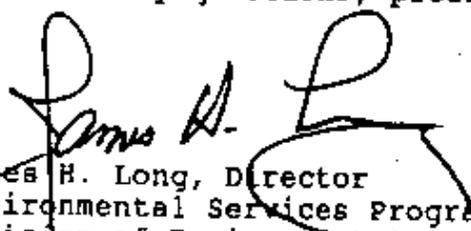
Analysis Performed	Results	MCL	SS	Units
Total Dissolved Solids	230	--	500	mg/L
Hardness as CaCO ₃	150	--	--	mg/L
Fluoride	< 0.20	4.00	2.00	mg/L
Sulfate	76.6	--	250	mg/L
Chloride	18.4	--	250	mg/L
Cyanide	< 0.100	0.200	--	mg/L
Silver, Dissolved	< 5.00	--	100	ug/L
Aluminum, Dissolved	< 10.0	--	200	ug/L
Arsenic, Dissolved	< 2.0	50.0	--	ug/L
Barium, Dissolved	122	2000	--	ug/L
Beryllium, Dissolved	< 1.00	4.00	--	ug/L
Calcium, Dissolved	31.4	--	--	mg/L
Cadmium, Dissolved	< 1.00	5.00	--	ug/L
Chromium, Dissolved	< 2.00	100	--	ug/L
Copper, Dissolved	< 3.00	1300	1000	ug/L
Iron, Dissolved	57.5	--	300	ug/L
Mercury, Dissolved	< 0.20	2.00	--	ug/L
Potassium, Dissolved	4.4	--	--	mg/L
Magnesium, Dissolved	17.6	--	--	mg/L
Manganese, Dissolved	3.91	--	50.0	ug/L
Sodium, Dissolved	24.7	--	--	mg/L
Nickel, Dissolved	< 3.00	100	--	ug/L
Lead, Dissolved	< 4.0	15.0	--	ug/L
Antimony, Dissolved	< 3.0	6.0	--	ug/L
Selenium, Dissolved	< 2.0	50.0	--	ug/L
Thallium, Dissolved	< 1.00	2.00	--	ug/L
Zinc, Dissolved	< 5.00	--	5000	ug/L

Page: 2
Report Date: December 20, 1995

Lab Number: 95-A7022
Sample Number: 95-H536

MCL=Maximum Contaminant Level SS=Secondary Standard ---=Not Applicable

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S. Environmental Protection Agency. If you have any questions, please contact Mr. Terry Timmons at 314/751-1188.



James H. Long, Director
Environmental Services Program
Division of Environmental Quality

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

McDonaldan Governor • David A. Shaw Director

DIVISION OF ENVIRONMENTAL QUALITY
 P.O. Box 176 Jefferson City, MO 65102-0176

ENVIRONMENTAL SERVICES PROGRAM

ST. CHARLES CO WATER PLANT
 1635 SO. HIGHWAY 94
 DEFIANCE, MO 63341

Lab Number: 95-A7076

Sample Number: 95-H674

RESULTS OF SAMPLE ANALYSES FOR PUBLIC WATER SUPPLIES

Report Date: December 13, 1995
 Date Collected: November 30, 1995
 Sample Location: BOOSTER STA.
 PWS Name: ST CHARLES CO CT-WELDON SPRING

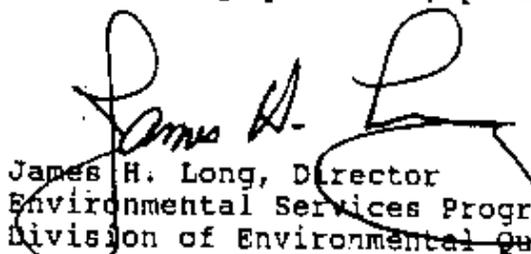
PWS County: ST CHARLES
 PWS ID: MO6079507

Analysis Performed	Results	MCL	Units
OC Results:			
Dichlorodifluoromethane	< 2.5	--	ug/L
Chloromethane	< 2.5	--	ug/L
Vinyl Chloride	< 0.5	2.0	ug/L
Bromomethane	Not Analyzed		
Chloroethane	< 2.5	--	ug/L
Trichlorofluoromethane	< 2.5	--	ug/L
1,1-Dichloroethene	< 0.5	7.0	ug/L
Methylene Chloride	< 0.5	5.0	ug/L
Methyl-tert-butyl ether	None Detected		
trans-1,2-Dichloroethene	< 0.5	100	ug/L
1,1-Dichloroethane	< 1.0	--	ug/L
2,2-Dichloropropane	< 1.0	--	ug/L
cis-1,2-Dichloroethene	< 0.5	70.0	ug/L
Chloroform	19.6	--	ug/L
Bromochloromethane	< 1.0	--	ug/L
1,1,1-Trichloroethane	< 0.5	200	ug/L
1,1-Dichloropropene	< 1.0	--	ug/L
Carbon Tetrachloride	< 0.5	5.0	ug/L
Benzene	< 0.5	5.0	ug/L
1,2-Dichloroethane	< 0.5	5.0	ug/L
Trichloroethene	< 0.5	5.0	ug/L
1,2-Dichloropropane	< 0.5	5.0	ug/L
Bromodichloromethane	12.2	--	ug/L
Dibromomethane	< 1.0	--	ug/L
cis-1,3-Dichloropropane	< 2.0	--	ug/L
Toluene	< 0.5	1000	ug/L
trans-1,3-Dichloropropane	< 1.0	--	ug/L
1,1,2-Trichloroethane	< 0.5	5.0	ug/L

Analysis Performed	Results	MCL	Units
Tetrachloroethene	< 0.5	5.0	ug/L
1,3-Dichloropropane	< 2.0	--	ug/L
Dibromochloromethane	7.2	--	ug/L
1,2-Dibromoethane	< 2.0	--	ug/L
Chlorobenzene	< 0.5	100	ug/L
Ethylbenzene	< 0.5	700	ug/L
1,1,1,2-Tetrachloroethane	< 1.0	--	ug/L
Total Xylenes	< 0.5	10000	ug/L
Styrene	< 0.5	100	ug/L
Isopropylbenzene	< 2.0	--	ug/L
Bromoform	1.1	--	ug/L
1,1,2,2-Tetrachloroethane	< 1.0	--	ug/L
1,2,3-Trichloropropane	< 1.0	--	ug/L
n-Propylbenzene	< 2.0	--	ug/L
Bromobenzene	< 1.0	--	ug/L
2-Chlorotoluene	< 2.0	--	ug/L
4-Chlorotoluene	< 2.0	--	ug/L
1,3,5-Trimethylbenzene	< 2.0	--	ug/L
tert-Butylbenzene	< 2.0	--	ug/L
1,2,4-Trimethylbenzene	< 1.0	--	ug/L
sec-Butylbenzene	< 2.0	--	ug/L
p-isopropyltoluene	< 2.0	--	ug/L
1,3-Dichlorobenzene	< 1.0	--	ug/L
1,4-Dichlorobenzene	< 0.5	75.0	ug/L
n-Butylbenzene	< 2.0	--	ug/L
1,2-Dichlorobenzene	< 0.5	600	ug/L
1,2-Dibromo-3-Chlorobenz	< 5.0	--	ug/L
1,2,4-Trichlorobenzene	< 0.5	70.0	ug/L
Hexachlorobutadiene	< 1.0	--	ug/L
Naphthalene	< 2.0	--	ug/L
1,2,3-Trichlorobenzene	< 2.0	--	ug/L

MCL = Maximum Contaminant Level -- = Not Applicable

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S. Environmental Protection Agency. If you have any questions, please contact Mr. Terry Timmons at 314/751-1188.


 James H. Long, Director
 Environmental Services Program
 Division of Environmental Quality

STATE OF MISSOURI
 DEPARTMENT OF NATURAL RESOURCES

McCannahan, Governor • Davis & Short, Director

DIVISION OF ENVIRONMENTAL QUALITY
 P.O. Box 176 Jefferson City, MO 65102-0176

ENVIRONMENTAL SERVICES PROGRAM

ST. CHARLES CO WATER PLANT
 1635 SO. HIGHWAY 94
 DEFIANCE, MO 63341

Lab Number: 95-A7022

Sample Number: 95-H536

RESULTS OF SAMPLE ANALYSES FOR PUBLIC WATER SUPPLIES

Report Date: December 20, 1995
 Date Collected: November 30, 1995
 Sample Location: BOOSTER STA.
 PWS Name: ST CHARLES CO CT-WELDON SPRING

PWS County: ST CHARLES
 PWS ID: MO6079507

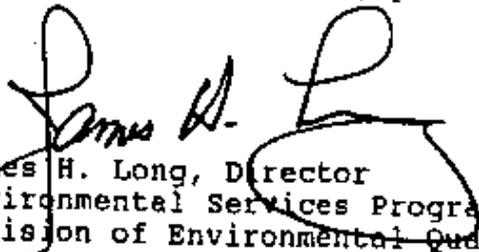
Analysis Performed	Results	MCL	SS	Units
Total Dissolved Solids	230	--	500	mg/L
Hardness as CaCO3	150	--	--	mg/L
Fluoride	< 0.20	4.00	2.00	mg/L
Sulfate	76.6	--	250	mg/L
Chloride	18.4	--	250	mg/L
Cyanide	< 0.100	0.200	--	mg/L
Silver, Dissolved	< 5.00	--	100	ug/L
Aluminum, Dissolved	< 10.0	--	200	ug/L
Arsenic, Dissolved	< 2.0	50.0	--	ug/L
Barium, Dissolved	122	2000	--	ug/L
Beryllium, Dissolved	< 1.00	4.00	--	ug/L
Calcium, Dissolved	31.4	--	--	ug/L
Cadmium, Dissolved	< 1.00	5.00	--	ug/L
Chromium, Dissolved	< 2.00	100	--	ug/L
Copper, Dissolved	< 3.00	1300	1000	ug/L
Iron, Dissolved	57.5	--	300	ug/L
Mercury, Dissolved	< 0.20	2.00	--	ug/L
Potassium, Dissolved	4.4	--	--	mg/L
Magnesium, Dissolved	17.6	--	--	mg/L
Manganese, Dissolved	3.91	--	50.0	ug/L
Sodium, Dissolved	24.7	--	--	mg/L
Nickel, Dissolved	< 3.00	100	--	ug/L
Lead, Dissolved	< 4.0	15.0	--	ug/L
Antimony, Dissolved	< 3.0	6.0	--	ug/L
Selenium, Dissolved	< 2.0	50.0	--	ug/L
Thallium, Dissolved	< 1.00	2.00	--	ug/L
Zinc, Dissolved	< 5.00	--	5000	ug/L

Page: 2
Report Date: December 20, 1995

Lab Number: 95-A7022
Sample Number: 95-H536

MCL=Maximum Contaminant Level SS=Secondary Standard ---=Not Applicable

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S. Environmental Protection Agency. If you have any questions, please contact Mr. Terry Timmons at 314/751-1188.



James H. Long, Director
Environmental Services Program
Division of Environmental Quality

DATE: 01/03/96

ST. CHARLES COUNTY WATER DEPARTMENT

MONTHLY WATER USAGE REPORT

MONTH OF: DEC95	MONTHLY USAGE	AVG MGD	Y TO D USAGE	Y TO D AVG MGD
PLANT PRODUCTION	: 302931000	: 9.70	: 3949517000	: 10.82
PLANT USE	: 21660000	: 0.70	: 173575000	: 0.48
DELIVERED TO SYSTEM	: 281271000	: 9.00	: 3776942000	: 10.34
MISSOURI CITIES WATER	: 192565000	: 6.20	: 2953522000	: 8.09
WATER DISTRICT #2 24" LINE	: 70552000	: 2.30	: 680161000	: 1.86
WATER DIST. #2 NEW MELLE	: 6844000	: 0.20	: 87975000	: 0.24
NATIONAL GUARD AREA	: 000	: 0	: 339000	:
TOTAL METER SALES	: 269961000	: 8.70	: 3721995000	: 10.19
UNMETERED AND UNACCOUNTED	: 11310000	: 0.30	: 000	:

INVENTORY OF CHEMICALS

	LIME	CHLORINE
PREV. BALANCE	+: 283174	+: 8156
RECEIVED	+: 294060	+: 16000
TOTAL	=: 577234	=: 24156
USED	-: 394532	-: 14210
BALANCE	=: 182702	=: 9946
POUNDS PER 1000 GALLONS	=: 1.302	=: 0.045
PARTS PER MILLION	=: 156.16	=: 5.62
AVG. POUNDS PER DAY	=: 12727	=: 458
POUNDS USED YEAR TO DATE	=: 5463948	=: 222220

DATE: 01/03/96

FOR THE MONTH OF: DEC95

METER READINGS

ACCOUNT #	METER	TO:	FROM:	USED
MISSOURI CITIES BOOSTER STATION				
	ULTRA SONIC #1	+	-	=
	ULTRA SONIC #2	+	-	=
	TOTALIZER	+	-	= 190876000
METERS BEFORE MISSOURI CITIES BOOSTER STATION				

ACCOUNT #	METER	TO: 12/05/95	FROM: 11/02/95	USED
04-50-1328350	1. FH ANNEX 4"	+	-	= 30000
04-50-1328500	2. MO STATE SHED	+	-	= 5000
04-50-1330000	3. DOE LAB LARGE	+	-	= 5000
	SMALL	+	-	= 499000
04-50-1330401	4. DOE FIRE LINE	+	-	= 449000
04-50-1330701	5. DOE TRAILERS	+	-	=
04-50-1330100	6. DOE 8" #1 LARGE	+	-	= 291000
	SMALL	+	-	= 5000
04-50-1330200	7. DOE 8" #2 LARGE	+	-	= 12000
	SMALL	+	-	=
04-50-1320200	8. DOE 3"	+	-	= 4000
04-50-1328550	9. FH SCHOOL	+	-	= 389000
	TOTAL			= 1689000

MISSOURI CITIES TOTAL = 192565000

ACCOUNT #	METER	TO: 01/03/96	FROM: 12/01/95	USED
WATER DIST. #2 24" LINE				
	24" EAST	+	-	=
	24" WEST	+	-	= 70552000
	BYPASS	+	-	=
	NEW MELLE	+	-	= 6844000
	WATER DIST. #2 TOTAL			= 70552000

MISSOURI-AMERICAN WATER COMPANY
ST. CHARLES DISTRICT
SYSTEM DELIVERY-DECEMBER, 1995

DECEMBER	1993 ACTUAL	1994 ACTUAL	1995 ACTUAL	3 YEAR AVERAGE	1995 BUDGET	VARIANCE 1995 TO 3 YR AVG	VARIANCE 1995 ACT TO BUDGET	95 ACT VS 95 BUDGET MO-TO-DATE
1	4.874	6.104	7.898	6.292	6.357	1.606	1.541	1.541
2	4.973	6.457	7.898	6.443	6.357	1.455	1.541	3.081
3	5.149	6.457	7.898	6.501	6.357	1.397	1.541	4.622
4	5.185	6.457	6.857	6.166	6.357	0.691	0.500	5.121
5	5.185	6.102	5.632	5.640	6.357	(0.008)	(0.725)	4.396
6	5.186	5.472	5.977	5.545	6.357	0.432	(0.380)	4.015
7	6.003	5.838	5.513	5.785	6.357	(0.272)	(0.844)	3.171
8	4.299	5.871	5.729	5.543	6.357	0.186	(0.628)	2.543
9	4.668	5.988	5.729	5.462	6.357	0.267	(0.628)	1.914
10	4.504	5.988	5.728	5.407	6.357	0.321	(0.629)	1.285
11	5.224	5.988	5.712	5.641	6.357	0.071	(0.645)	0.639
12	5.224	6.230	5.578	5.677	6.357	(0.099)	(0.779)	(0.140)
13	5.225	5.684	5.621	5.510	6.357	0.111	(0.736)	(0.876)
14	4.696	5.757	5.714	5.389	6.357	0.325	(0.643)	(1.520)
15	4.319	5.753	5.449	5.174	6.357	0.275	(0.908)	(2.428)
16	4.514	6.407	6.370	5.764	6.357	0.606	0.013	(2.416)
17	5.123	6.407	6.371	5.967	6.357	0.404	0.014	(2.402)
18	4.884	6.407	5.292	5.528	6.357	(0.236)	(1.065)	(3.468)
19	4.884	6.239	6.168	5.764	6.357	0.404	(0.189)	(3.657)
20	4.885	6.180	5.468	5.511	6.357	(0.043)	(0.889)	(4.546)
21	5.043	6.342	6.115	5.833	6.357	0.282	(0.242)	(4.789)
22	4.122	7.381	6.115	5.873	6.357	0.242	(0.242)	(5.031)
23	4.367	7.381	6.115	5.954	6.357	0.161	(0.242)	(5.274)
	4.368	7.381	6.115	5.955	6.357	0.160	(0.242)	(5.516)
25	4.367	7.381	6.115	5.954	6.357	0.161	(0.242)	(5.758)
26	4.368	7.381	5.605	5.785	6.357	(0.180)	(0.752)	(6.511)
27	4.367	6.047	7.778	6.064	6.357	1.714	1.421	(5.090)
28	4.280	6.542	6.079	5.627	6.357	0.452	(0.278)	(5.369)
29	3.944	6.856	6.079	5.626	6.357	0.453	(0.278)	(5.647)
30	4.685	6.856	6.079	5.873	6.357	0.206	(0.278)	(5.926)
31	4.685	6.856	6.079	5.873	6.357	0.206	(0.278)	(6.204)
TOTALS	147.580	198.190	190.876	179.125	197.080	11.751	(6.204)	(6.204)
BEFORE METERS			1.689					
GRAND TOTAL			192.565					



Joe R. Nichols

County Engineer - Water Dept.

St. Charles County

January 11, 1996

Mr. Stanley M. Remington
919 Broadmoor Lane
St. Charles, MO 63301

RE: Water Samples

Dear Stan:

Attached please find a copy of two (2) laboratory tests furnished by the Department of Natural Resources from tests on samples of St. Charles County Public Water Supplies. Please review these reports, advise of any problems, and include in your monthly report.

If you have any questions, please advise.

Sincerely,

Joe R. Nichols
County Engineer

JRN/bjb
Enclosure

cc: Mr. Tom Engle, Director of Administration
Mr. Tom Aaron, Water Plant Superintendent



MONTHLY REPORT

FEBRUARY 1996

BY

Stanley M. Remington

Consulting Hydrologist

I. CHEMICAL ANALYSES

The results from the sampling of well PW-7 was received and is appended. The well was sampled on January 23, 1996. All of the results showed that every parameter measured, that is, gross alpha, gross beta, total uranium and the nitroaromatics were either non-detect or were well below the NPDES limits. This was the only well tested during the month.

II. REPORT

The quarterly Environmental Data Summary for Fourth Quarter 1995, was received from the Department of Energy. There were six above normal occurrences cited for both NPDES and groundwater. There were none for springs, air or surface water. Each case is discussed in a brief summary. There were apparently plausible reasons for each of the high readings. I am enclosing a copy of the report and one was also sent to the Honorable Joe Ortwerth, County Executive.

III. CONTRACT

The seventh amended contract of mine was approved for another year by the St. Charles County Council members on February 27, 1996. The contract was extended to March

31, 1997,

IV. MISCELLANEOUS

Every year an extensive set of chemical samples are taken to measure chemical constituents which may or may not occur. They are deemed unlikely to occur or occur at above normal values. This is normally done in February but has been delayed until March 1996. I will sample wells RMW-2 and PW-9 for these chemical parameters. These two wells are closest to the recently cleaned out quarry. RMW-2 is about half-way between the quarry and well number PW-9.

Appended is the St. Charles County Monthly Water Sales Report for the month of January 1996. This is only for your information.

My annual completion of contract report will be included in the March 1996 monthly report. This report is a requirement of my contract.

AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0060

February 13, 1996

Stanley M. Remington
919 Broadmoor Lane
St. Charles, MO 63301

RE: ATAS #14723.01
Weldon Spring

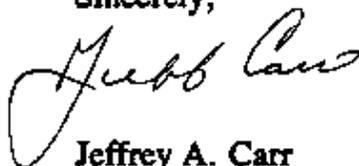
Dear Mr. Remington:

Enclosed is the analytical report for the sample received in our laboratory on January 23, 1996.

If, in your review, you should have any questions or require additional information, please call.

Thank you for choosing ATAS for your analytical needs.

Sincerely,



Jeffrey A. Carr
Project Manager

Enclosures

JAC/dms

ATAS

"Professional Commitment"

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 147231EX(241)

DATE : 02-13-96

SAMPLE MATRIX : WATER
ATAS # : 14723.01
DATE SUBMITTED: 01-23-96
DATE ANALYZED : 01-26-96
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : PW-7

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
O-NITROTOLUENE	12.0	ND
P-NITROTOLUENE	8.0	ND
M-NITROTOLUENE	7.9	ND

ND- NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 147231EX(241)

DATE : 02-13-96

SAMPLE MATRIX : WATER
ATAS # : METHOD BLANK
DATE SUBMITTED: 01-23-96
DATE ANALYZED : 01-26-96
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
o-NITROTOLUENE	12.0	ND
p-NITROTOLUENE	8.0	ND
m-NITROTOLUENE	7.9	ND

ND= NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 147231EX(241)

DATE : 02-13-96

SAMPLE MATRIX : WATER
ATAS # : LABORATORY CONTROL SAMPLE
DATE SUBMITTED: 01-23-96
DATE ANALYZED : 01-26-96
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : LABORATORY CONTROL SAMPLE

COMPOUND	PERCENT RECOVERY
HMX	102 %
RDX	109 %
1,3,5-TNB	110 %
RYL	76 %
1,4-DNB	131 %
TNT	108 %
NITROBENZENE	107 %
2,6 DNT	103 %
2,4 DNT	105 %
o-NITROTOLUENE	109 %
p-NITROTOLUENE	104 %
m-NITROTOLUENE	106 %

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1472301RA(244)

DATE : 02-13-96

SAMPLE MATRIX : WATER
ATAS EPISODE : #14723
DATE SUBMITTED: 01-23-96
PROJECT : WELDON SPRING

RESULTS REPORTED IN pCi/L

CLIENT ID	ATAS ID	RADIONUCLIDE	RESULT
PW-7	14723.01	GROSS ALPHA	3 +/- 2*
PW-7	14723.01	GROSS BETA	8 +/- 4*
PW-7	14723.01	TOTAL URANIUM (mg/L)	<0.005

* VARIABILITY OF THE RADIOACTIVE DISINTEGRATION PROCESS (COUNTING ERROR) AT THE 95%
CONFIDENCE LEVEL, 1.96σ.

pCi/L = PICO-CURIES PER LITER
mg/L = PARTS PER MILLION (PPM)



Department of Energy

Oak Ridge Operations
Weldon Spring Site
Remedial Action Project Office
7295 Highway 94 South
St. Charles, Missouri 63304

February 7, 1996

DISTRIBUTION:

QUARTERLY ENVIRONMENTAL DATA SUMMARY FOR FOURTH QUARTER 1995

A copy of the Quarterly Environmental Data Summary for Fourth Quarter of 1995 in support of the Weldon Spring Site Remedial Action Project (WSSRAP) Federal Facilities Agreement (FFA) is enclosed.

The data presented in this letter and attachments, are contained in the *Quarterly Environmental Data Summary* (QEDS). In addition to data generated by *Environmental Monitoring Plan* (EMP) sampling, data generated by Groundwater Operable Unit remedial investigation characterization sampling is included in the groundwater and springs tables. Also included in the surface water section are data results that support the ecological risk assessment for the Groundwater Operable Unit and the Engineering Evaluation/Cost Assessment for the Southeast Drainage. The data were received from the contract laboratories, verified by the Weldon Spring Site verification group, and merged into the database during the fourth quarter of 1995.

Significant data, defined as data values that have exceeded defined "above normal" values, are discussed in this letter for EMP-generated data only. Data collected under Groundwater Operable Unit sampling were not evaluated in accordance with above-normal procedures. Above-normal values are based, in ES&H procedures, on historic high values, DOE Derived Concentration Guides (DCGs), NPDES limits, and other guidelines. The procedures also establish actions to be taken in the event that "above normal" data occur.

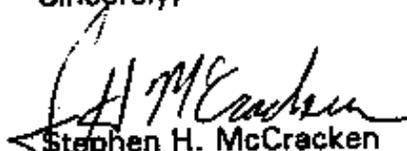
All data received and verified during the fourth quarter were within a permissible range of variability with the exception of those detailed below. Above-normal occurrences are cited for both NPDES and groundwater data. There were none for springs, air, or surface water. The following discussion offers a brief summary of the data that met the above-normal criteria merged during the fourth quarter and updates on past reported above-normal data. The attached tables present all data merged into the database during the Fourth Quarter 1995.

DISTRIBUTION

-2-

If you have any questions or comments, contact Tom Pauling at (314)441-8978.

Sincerely,



Stephen H. McCracken
Project Manager
Weldon Spring Site
Remedial Action Project

Enclosure:
As stated

NPDES

NP-0005

On one occasion, the uranium concentration exceeded the above-normal reporting value of 600 pCi/l for uranium. The 600 pCi/l level is not an NPDES limit but is a DOE health-based administrative level that is applied as an annual average. The WSSRAP uses the reference level of 600 pCi/l annual average as an internal administrative level to indicate that controls should be considered. The sample was collected at Outfall NP-0005 on November 13, 1995, and had a uranium concentration of 727 pCi/l. Uranium concentrations are often high at this outfall during low flows because of high levels of contamination around the Building 301 foundation. Practical actions have been taken to lower the uranium levels until foundation removal is completed. A sample collected on December 18, 1995, had a uranium concentration below the DCG at 115 pCi/l. The uranium annual average for Outfall NP-0005 is well below 600 pCi/l; however, subsequent analytical results will be evaluated for trends in uranium concentrations at this outfall. No permit levels were exceeded.

NP-0006

On October 19, 1995, the fecal coliform at the waste water treatment plant serving the administration building exceeded the NPDES permit limit of 1000 colonies per 100 ml. The count was 15,000 colonies per 100 ml. Since there were adequate chlorine tablets in the chlorinator, the cause of this high value is suspected to be the use of contaminated equipment for sampling. A subsequent sample taken on October 31, 1995, using properly decontaminated sampling equipment, showed fecal coliform at non-detectable levels.

The analytical results for the NPDES outfalls are reported in the quarterly discharge monitoring report as well as in this report.

GROUNDWATER

Weldon Spring Chemical Plant Site

Site Water Treatment Plant

- * Sample # GW-2039-Q395

A 7.3 $\mu\text{g/l}$ concentration of 1,3,5-trinitrobenzene was reported for the 1995 third quarter (July 17, 1995) groundwater sampling event at MW-2039 near the site water treatment plant. This value is a new high for the waste facility monitoring network. The MW-2039 location has no historical detection of nitroaromatic compounds, and it is suspected that the labels for the GW-2039 sample and the GW-2006 sample were switched or the sample IDs were transposed at the laboratory. The MW-2006 location samples have historically had detectable nitroaromatic compounds. None were detected in the third quarter GW-2006-Q395 sample that was sampled and shipped the same day as the GW-2039-Q395 sample. Subsequently, the fourth quarter sample, GW-2039-Q495, had no detectable nitroaromatics.

Chemical Plant Vicinity

No elevated contaminants were reported in groundwater at the chemical plant area, with the exception of that reported for MW-2039.

Weldon Spring Quarry Site

Quarry Water Treatment Plant

* Sample # GW-1035-Q295

This second quarter sample collected on 06/15/95 from the MW-1035 monitoring well had concentrations exceeding baselines for chloride (25.2 mg/l), barium (324 $\mu\text{g/l}$), chromium (8.9 $\mu\text{g/l}$), lead (2.3 $\mu\text{g/l}$), and silver (9.3 $\mu\text{g/l}$). Though these values are elevated above baseline values, they are below EPA Maximum Contaminant Level primary drinking water standards (MCLs). The First Quarter 1995 sample from this location was also elevated above baselines for chloride (19.7 mg/l), chromium (11.3 $\mu\text{g/l}$), and lead (2.4 $\mu\text{g/l}$). This monitoring well is located hydraulically upgradient from the water treatment basins and is constructed of stainless steel, which is known to contribute trace concentrations of barium, chromium, and lead. Additionally, the first quarter event marked the initial sampling during which unfiltered groundwater was analyzed rather than filtered groundwater. The analytical results from the second quarter event are very similar to those from the first quarter. The elevated values likely reflect stainless steel well construction material metals interferences and/or changes in sample preparation methods rather than degradation of groundwater quality. Subsequent analytical data from third quarter monitoring suggest downward trending of these concentrations.

* Sample # GW-1037-Q395

The sample for the 1995 third quarter (July 11, 1995) at the quarry water treatment plant Monitoring Well MW-1037 was reported to have an elevated concentration (27.3 $\mu\text{g/l}$) for chromium. The baseline for chromium from this well is $< 3.0 \mu\text{g/l}$. Samples from previous 1995 sampling events at this location were also elevated (6.3 $\mu\text{g/l}$ and 3.2 $\mu\text{g/l}$) above baseline. These values were initially attributed to changes in sample preparation; however, the third quarter datum suggests an upward trending in chromium concentrations at this location. This monitoring well is constructed with stainless steel, which can interfere with trace concentrations of chromium. The chromium concentration in the upgradient well, MW-1035, was also elevated suggesting that the excursion is not related to quarry remediation or quarry water treatment facility operations. Analytical results from fourth quarter sampling of MW-1037 will be used to assess any continued upward trending.

* Sample #'s GW-1041-Q295 and GW-1041-Q395

The second quarter 1995 sample collected from Monitoring Well MW-1041, which is constructed of stainless steel materials, was reported to have levels of cadmium (3.1 $\mu\text{g/l}$), chromium (15.7 $\mu\text{g/l}$), lead (4.8 $\mu\text{g/l}$), and silver (8.9 $\mu\text{g/l}$) elevated above baselines (< 2.0 , < 3.0 , < 2.0 , and $< 3.0 \mu\text{g/l}$, respectively). These concentrations, with the exception of lead, were higher than those from the previously reported quarters from this location.

The analytical report for the third quarter sample from MW-1041 (GW-1041-Q395) suggests that the concentrations for the metals reported above-normal for the second quarter are on a downward trend. Concentrations of chromium and lead for this sample still exceed (13.5 $\mu\text{g/l}$ and 3.8 $\mu\text{g/l}$, respectively) baseline values, but cadmium and silver are at or below their respective baseline values. It should also be noted that upgradient monitoring well MW-1035 was reported to have an elevated chromium concentration, which suggests that the increases are not due to water treatment facility operations. The third quarter results indicate no upward trends in contaminant concentrations, but analytical results from future sampling events will be closely monitored for indications of any upward trending at this monitoring location.

Quarry Area

* Sample # GW-1005-0495

The elevated sulfate concentration from an April 1995 sampling event for this monitoring well was previously reported, and it was suggested that the increased sulfate was a result of quarry bulk waste removal activities. Subsequent data have not been available because the well became dry (due to quarry pond dewatering) in May 1995. Future sampling will be used to monitor the sulfate concentrations at this location.

Sample # GW-1031-B195

The elevated total uranium value of 75 pCi/l from the first bimonthly sampling of 1995 for this location was reported previously. Subsequent third quarter data for this location shows that the concentration (at 62.5 pCi/l) has decreased. Future sample results will be used to further evaluate the uranium trends.

St. Charles County Water Well Production Field

Sample # GW-PW03-Q395

A new gross beta high of 130 pCi/l was reported for the third quarter sample from Pumping Well #3 in the well field. It is suspected that contamination of the sample occurred at the analytical laboratory. No radiological isotopes were detected in the sample, and no elevated gross beta values were seen in the water treatment plant influent to which PW03 pumps groundwater. Subsequent fourth quarter sample analytical results showed the gross beta to be 5.4 pCi/l, which is typical for this location.

Sample # GW-RAWW-Q495

This sample from the St. Charles County Water Treatment Facility influent had an elevated gross beta value of 34.9 pCi/l for Fourth Quarter 1995. This value is suspected to be a laboratory error because all pumping wells that contribute to the influent were within their normal ranges of between 5 pCi/l and 10 pCi/l. Reanalysis of the sample was requested, and that result and those from any subsequent analyses will be discussed in the next report.

QEDS Distribution List

The Honorable Joe Ortwerth
County Executive
St. Charles County Courthouse
100 North Third Street, Ste. 318
St. Charles, Missouri 63301

Project Manager
U.S. Army Environmental Center
SPIM-AEC-1R
Building E4480
Aberdeen Proving Ground, Maryland 21010-5401

Mr. Marvin Sherrill
U.S. Department of Interior
Geological Survey, Mail Stop 200
1400 Independence Road
Rolla, Missouri 65401

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Manager
Missouri Cities Water Co.
1290 Motherhead Rd.
P.O. Box 390
Cottleville, Missouri 63338-0390

Mr. Tim Vitkus
ORISE/ORAU
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Oak Ridge, Tennessee 37831-0117

Ms. Mary Picel (3 copies)
Energy and Environmental Systems Division
Argonne National Laboratory
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Argonne, Illinois 60439

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Consulting Hydrologist
919 Broadmoor Lane
St. Charles, Missouri 63301

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515 West Point Avenue
University City, Missouri 63130

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4023 Graybridge East
St. Peters, Missouri 63376

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St. Charles County Citizens Commission
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St. Charles, Missouri 63301

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St. Charles, Missouri 63303

Mr. John Urbanowicz
St. Charles County Citizens Commission
100 North Third St.
St. Charles, Missouri 63301

Mr. Jon Getzinger
St. Charles County Citizens Commission
100 North Third Street
St. Charles, Missouri 63301

Ms. Mary Halliday
SCCAHW
3655 Highway D
Defiance, Missouri 63341

Mr. George Farhner
892 California Trail
St. Charles, Missouri 63304

Mr. Steve Iverson, Project Manager
Program and Project Management Division
ATTN: CEMRK-MD-H
U.S. Army Corps of Engineers
Kansas City District
601 East 12th Street
Kansas City, Missouri 64106

Mr. Karl J. Daubel
Environmental Coordinator
Weldon Spring Training Area
7301 Highway 94 South
St. Charles, Missouri 63304

Mr. Robert Dempsey, EW-90
Assistant Manager for Environmental Restoration
& Waste Management
Oak Ridge Field Office
U.S. Department of Energy
Post Office Box 2001
Oak Ridge, Tennessee 37831-8541

Mr. Dan Wall
U.S. Environmental Protection Agency
Region VII
726 Minnesota Ave.
Kansas City, Kansas 66101

Mr. O.R. Hartmann
Environmental Sanitarian
Missouri Department of Health
Eastern District
Two Campbell Plaza, Suite 200
59th and Arsenal Streets
St. Louis, Missouri 63139

Ms. Martha Windsor
Missouri Department of Natural Resources
7045 Highway 94 South
St. Charles, Missouri 63304

Mr. Don McQueen
Francis Howell High School Consultant
Shannon & Wilson Inc.
11500 Olive Blvd. Suite 3276
St. Louis, Missouri 63141

Mr. Larry Erickson
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

ST. CHARLES COUNTY MONTHLY WATER SALES REPORT

DATE OF REPORT 02-05-96

MONTH OF REPORT JAN. 96

WATER PRODUCTION 270,783,000
 WASHWATER USED 6,879,000
 DELIVERED TO SYSTEM 263,904,000

MD. AMERICAN WATER

	BOOSTER STATION	167,566,000
67004132835-007	FRANCIS HOWELL	46,000
67004132850-007	MD. HWYS & TRANS.	3,500
67004133000-004	M.K. FERGUSEN	638,000
67004133040-015	M.K. FERGUSEN	4,260
67004133010-002	M.K. FERGUSEN	202,000
67004133020-000	M.K. FERGUSEN	34,500
67004132855-002	FRANCIS HOWELL	178,000
67004132890-009	M.K. FERGUSEN	39,000
67095018237-000	M.K. FERGUSEN	0
	TOTAL	168,711,260

WATER DISTRICT #2

24" EAST LINE	0
24" WEST LINE	65,656,000
BYPASS	0
TOTAL	65,656,000

WATER DISTRICT #2

NEW MELLE	TOTAL	5,501,000
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NATIONAL GUARD AREA

BLGD S-61	0
WASH RACK	0
TOTAL	0

TOTAL WATER SALES ***** 239,868,260

ST. CHARLES COUNTY WATER DEPARTMENT

INVENTORY OF CHEMICALS

DATE OF REPORT	02/05/96		
MONTH OF REPORT	JAN96	LIME	CHLDRIN
PREVIOUS BALANCE		182,702	9,946
RECIEVED	INV. # DATE		INV. # DATE
	179578.01/02	48,780	01/11 8,000
	180641.01/09	49,800	01/29 8,000
	181027.01/12	48,980	
	181796.01/17	48,700	
	182530.01/23	48,440	
	182872.01/25	50,200	
	183476.01/30	50,020	
	*****	344,920	***** 16,000
	TOTAL AMOUNT	527,622	25,946
	USED	386,718	15,300
	BALANCE	140,904	10,646
	#/1000 GALLON	1.42	0.0565
	PARTS/MILLION	156	6.15
	AVG. #/DAY	12,475	494
	# USED Y TO D	386,718	15,300

MISSOURI-AMERICAN WATER COMPANY
ST. CHARLES DISTRICT

1994	1995	1996	3 YEAR	1996	VARIANCE	VARIANCE	96 ACT VS
ACTUAL	ACTUAL	ACTUAL	AVERAGE	BUDGET	1996 TO	1996 ACT	96 BUDGET
					3 YR AVG	TO BUDGET	MO-TO-DATE
1	4.685	6.856	6.036258	3.847	6.402	2.015	(0.540)
2	4.685	6.856	5.911258	3.718	6.402	2.019	(0.665)
3	4.686	6.683	5.689258	3.501	6.402	2.014	(0.887)
4	4.499	6.462	5.589258	3.302	6.402	2.113	(0.987)
5	3.936	5.750	5.646258	3.082	6.402	2.390	(0.930)
6	3.938	7.202	5.646258	3.140	6.402	2.332	(0.930)
7	3.971	7.202	5.645258	3.040	6.402	2.431	(0.931)
8	4.707	7.202	3.772258	1.978	6.402	1.620	(2.804)
9	4.708	6.456	5.288258	2.426	6.402	2.688	(1.288)
10	4.708	6.327	5.577258	2.429	6.402	2.974	(0.999)
11	4.055	6.374	5.584258	2.254	6.402	3.156	(0.992)
12	3.523	6.518	5.699258	2.165	6.402	3.360	(0.877)
13	3.999	6.661	5.699258	2.136	6.402	3.389	(0.877)
14	4.253	6.661	5.698258	2.066	6.402	3.458	(0.878)
15	4.474	6.661	5.290258	1.767	6.402	3.349	(1.286)
16	4.474	6.782	5.620258	1.821	6.402	3.625	(0.956)
17	4.475	6.098	8.528258	3.254	6.402	5.100	1.952
18	4.123	6.132	7.382258	2.799	6.402	4.409	0.806
19	4.458	5.608	5.895258	2.041	6.402	3.680	(0.681)
20	4.416	6.356	5.895258	2.044	6.402	3.677	(0.681)
21	7.784	6.356	5.896258	2.343	6.402	3.379	(0.680)
22	5.138	6.356	4.160258	1.009	6.402	2.977	(2.416)
23	5.138	5.591	5.148258	1.205	6.402	3.769	(1.428)
24	5.138	5.874	4.776258	0.871	6.402	3.731	(1.800)
25	5.731	5.903	4.681258	0.687	6.402	3.820	(1.895)
26	6.966	5.927	4.383258	0.451	6.402	3.758	(2.193)
27	5.527	6.439	4.383258	0.104	6.402	4.105	(2.193)
28	4.569	6.439	4.383258	(0.246)	6.402	4.455	(2.193)
29	5.259	6.439	5.128258	0.001	6.402	4.953	(1.448)
30	5.259	6.230	4.104258	(0.752)	6.402	4.682	(2.472)
31	5.259	6.177	4.427258	(0.853)	6.402	5.106	(2.149)
TOTALS	148.539	198.578	167.586	57.630	198.465	104.534	(36.301)
BEFORE METERS			1.145				
GRAND TOTAL			168.711				

Francis Howell	67004132835-00 7	46000
MO Hwy & Trans	67004132850-00 7	3500
MK Ferguson	67004133000-00 4	638000
MK Ferguson	67004133040-01 5	4260
MK Ferguson	67004133010-00 2	202000
MK Ferguson	67004133020-00 0	34500
Francis Howell	67004132855-00 2	178000
MK Ferguson	67004132890-00 9	39000
MK Ferguson	67095018237-00 0	0

TOTAL 1145260
= 1.145

MONTHLY REPORT

MARCH 1996

BY

Stanley M. Remington
Consulting Hydrologist

I. CHEMICAL ANALYSES

The results from the measurement of well number PW-5 has been received and is appended. This was the only sampling done during February 1996. Wells numbered RMW-2 and PW-9 were sampled on March 21, 1996. This was a yearly sampling with the Department of Energy and the Missouri Department of Natural Resources. Several additional chemical constituents or parameters were included in this yearly sampling. This is done once a year. The results have not yet been received.

In my last report (February 1996) I mentioned six wells in which higher than normal results were detected and reported by the Department of Energy in their Fourth Quarter 1995 Report. Since then the DOE has either rerun the samples or taken new samples to check on the validity of their results. This information has been sent to Joe R. Nichols, the County Engineer, who will send them to me for my own analyses. This will appear in next month's report.

II. FUTURE PLANS

I will sample well numbers PW-2 and PW-3 during April 1996. Well number PW-3 was one of the wells which showed a very

high gross Beta reading last fall when the DOE tested it. No such results were ever detected in any of my own samplings, but as a check on their results I will sample both wells to make sure that they do not have the radiation units reported by the DOE. The DOE has since resampled the well and the results showed a normal reading, well below the NPDES limits, which indicated that their sample was contaminated from some outside source, and not from the well.

III. MISCELLANEOUS

Appended is the St. Charles County Monthly Water Sales Report.

Also appended is my End-Of-Contract Report. This is required according to my contract. My total expenditures for the period April 1, 1995 through March 31, 1996 was \$27,865.78. Last year it was \$34,502.84, or a reduction of \$6637.06.

END-OF-CONTRACT REPORT

April 1, 1995

through

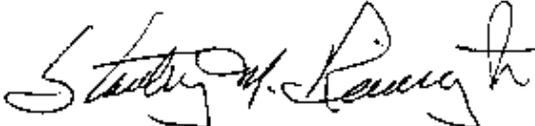
March 31, 1996

Under Article IV - Accounting, I am required to submit an annual accounting for all of my expenditures for the duration of my contract. The report should also include statistics on the consultant's overall activities, all business revenues received by the organization and moneys spent.

MONEY EXPENDED UNDER THE CONTRACT FROM APRIL 1, 1995 THROUGH
MARCH 31, 1996.

1. Chemical Analyses - - - - -	\$13,235.00
2. Hydrology Consulting Services - - - - -	11,577.00
3. Clerical - - - - -	1,850.00
4. Mileage - - - - -	921.60
5. Hotel - - - - -	172.18
6. Meals - - - - -	60.00
7. Drafting - - - - -	<u>50.00</u>
Grand Total	\$27,865.78

I had no other sources of business revenues during this fiscal year.


Stanley M. Remington
Consulting Hydrologist

ACTIVITIES

Monthly sampling has been carried out on at least one pumping well of the eight in use. In addition one yearly sampling, which includes many chemical parameters not tested for in the monthly sampling, was done during March 1996. This sampling was done in conjunction with the Department of Energy and the Department of Natural Resources, State of Missouri. In addition samples were split with the DOE on a quarterly basis. More than the monthly chemical parameters are tested for, but not as many as the once-yearly testing. I usually sample one pumping well each month and two wells on a quarterly and yearly basis. The testing by me is done on a random basis. Those sampled by the DOE include all of the St. Charles County Wells plus all of their observation wells, including the four observation wells drilled by St. Charles County in 1988.

Significant accomplishments were completed by the Department of Energy during the past fiscal year. The first was the demolition of all of the old Chemical Plant Site buildings. These are now categorized and stored on site awaiting a final decision as to where the permanent storage of these contaminated building remnants will be.

Secondly, the completion of the removal of all the contaminants

from the quarry was completed during the fall of 1995. The contaminants were taken to the old Chemical Plant Site for temporary storage until a final site is located. Most probably both the chemical plant remnants and the hazardous materials from the quarry will be stored permanently at the plant site.

Progress is still under way at the raffinate pits in removing and treating the contaminated sludge located in them. These raffinate pits are all located at the old plant site.

I attended three meetings during the fiscal year. Two of them were one-day meetings and the third was a two-day meeting held annually in Columbia, Missouri, sponsored by the Missouri Waste Control and Coalition.

Activities under my contract have decreased somewhat, since the quarry is now cleaned out, and no more treatment of the quarry waters is taking place. You will note that by total expenditures dropped from \$34,502.84 to \$27,865.78 during the past fiscal year. This is a decrease of \$6637.06. This is probably where the expenditure rate will remain unless some unforeseen problems arise, requiring additional testing.



Stanley M. Remington
Consulting Hydrologist

AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

March 11, 1996

Stanley M. Remington
919 Broadmoor Lane
St. Charles, MO 63301

RE: ATAS #14885.01
Weldon Spring

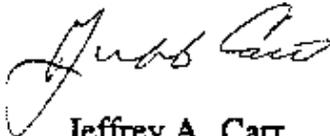
Dear Mr. Remington:

Enclosed is the analytical report for the sample received in our laboratory on February 15, 1996.

If, in your review, you should have any questions or require additional information, please call.

Thank you for choosing ATAS for your analytical needs.

Sincerely,



Jeffrey A. Carr
Project Manager

Enclosures

JAC/dms

ATAS

"Professional Commitment"

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1488501RA(244)

DATE : 03-11-96

SAMPLE MATRIX : WATER
ATAS EPISODE : #14885
DATE SUBMITTED: 02-15-96
PROJECT REF. : WELDON SPRING

RESULTS REPORTED IN pCi/L

<u>CLIENT ID</u>	<u>ATAS ID</u>	<u>RADIONUCLIDE</u>	<u>RESULT</u>
PW-5	14885.01	GROSS ALPHA	2 +/- 2*
PW-5	14885.01	GROSS BETA	8 +/- 4*
PW-5	14885.01	TOTAL URANIUM (mg/L)	<0.005

* VARIABILITY OF THE RADIOACTIVE DISINTERGRATION PROCESS (COUNTING ERROR) AT THE 95%
CONFIDENCE LEVEL, 1.96σ.

L = PICOCURIES PER LITER
mg/L = PARTS PER MILLION (PPM)

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1488501RA(244)

DATE : 03-11-96

SAMPLE MATRIX : WATER
ATAS # : 14885.01
DATE SUBMITTED: 02-15-96
DATE ANALYZED : 02-21-96
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : PW-5

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
o-NITROTOLUENE	12.0	ND
p-NITROTOLUENE	8.0	ND
m-NITROTOLUENE	7.9	ND

NOT DETECTED ABOVE QUANTITATION LIMIT

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1488501RA(244)

DATE : 03-11-96

SAMPLE MATRIX : WATER
ATAS # : METHOD BLANK
DATE SUBMITTED: 02-15-96
DATE ANALYZED : 02-21-96
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

<u>EXPLOSIVE</u>	<u>QUANTITATION LIMIT</u>	<u>RESULTS</u>
HMX	13.0	ND
RDX	14.0	ND
1,3,5-TNB	7.3	ND
TETRYL	10.0	ND
1,3-DNB	4.0	ND
NITROBENZENE	7.0	ND
2,6 DNT	9.4	ND
2,4 DNT	5.7	ND
2,4,6 TNT	6.4	ND
o-NITROTOLUENE	12.0	ND
p-NITROTOLUENE	8.0	ND
m-NITROTOLUENE	7.9	ND

NOT DETECTED ABOVE QUANTITATION LIMIT

ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: STANLEY M. REMINGTON
919 BROADMOOR LANE
ST. CHARLES, MO 63301
ATTN: STANLEY M. REMINGTON

REPORT: 1488501RA(244)

DATE : 03-11-96

SAMPLE MATRIX : WATER
ATAS # : LABORATORY CONTROL SAMPLE
DATE SUBMITTED: 02-15-96
DATE ANALYZED : 02-21-96
METHOD REF. : SW846-8330, EPA METHODOLOGY
PROJECT : WELDON SPRING
SAMPLE ID : LABORATORY CONTROL SAMPLE

COMPOUND	PERCENT RECOVERY
HMX	106 %
RDX	108 %
2,5-TNB	104 %
RYL	38*%
1,3-DNB	132 %
TNT	102 %
NITROBENZENE	102 %
2,6 DNT	101 %
2,4 DNT	100 %
o-NITROTOLUENE	101 %
p-NITROTOLUENE	101 %
m-NITROTOLUENE	103 %

ST. CHARLES COUNTY MONTHLY WATER SALES REPORT

DATE OF REPORT 03/01/96

MONTH OF REPORT FEB96

WATER PRODUCTION 258,849,000
 WASHWATER USED 5,013,000
 DELIVERED TO SYSTEM 253,836,000

MO. AMERICAN WATER

	BOOSTER STATION	163,631,000
	FRANCIS HOWELL	3,000
	MO. HWYS & TRANS.	5,900
67004132835-007	M.K. FERGUSEN	483,500
67004132850-007	M.K. FERGUSEN	107,000
67004133000-004	M.K. FERGUSEN	46,500
67004133040-015	M.K. FERGUSEN	500
67004133010-002	M.K. FERGUSEN	71,000
67004133020-000	FRANCIS HOWELL	20,100
67004132855-002	M.K. FERGUSEN	25,400
67004132890-009	M.K. FERGUSEN	
67095018237-000	M.K. FERGUSEN	
	TOTAL	164,393,900

WATER DISTRICT #2

24" EAST LINE	0
24" WEST LINE	70,258,000
BYPASS	0
TOTAL	70,258,000

WATER DISTRICT #2

NEW MELLE	TOTAL	4,924,000
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NATIONAL GUARD AREA

BLGD S-61	8,000
WASH RACK	3,000
TOTAL	11,000

TOTAL WATER SALES ***** 239,586,900

ST. CHARLES COUNTY WATER DEPARTMENT

INVENTORY OF CHEMICALS

DATE OF REPORT	03/01/96			
MONTH OF REPORT	FEB96	LIME		CHLORIN
PREVIOUS BALANCE		140,904		10,646
RECIEVED	INV. # DATE		INV. # DATE	
	184592.02/06	48,200	02/15	8,000
	185631.02/13	49,840	02/28	8,000
	186011.02/15	48,440		
	184006.02/20	49,560		
	186930.02/22	48,700		
	187575.02/27	48,960		
	187987.02/29	48,020		
	*****	341,720	*****	16,000
	TOTAL AMOUNT	482,624		26,646
	USED	356,881		13,096
	BALANCE	125,743		13,550
	#/1000 GALLON	1.42		0.0565
	PARTS/MILLION	156		6.15
	AVG. #/DAY	12,306		505
	# USED Y TO D	743,599		28,396