KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET
OF INFORMATION REQUESTS

Item 11 of 80

Witness: Sheila Miller

11. In its Response to Commission Staff's First Set of Information Requests Item 1(a), W/P3, pages 45 through 53, Kentucky-American calculates forecasted fuel and power expense for the total company of $2,899,277. In its Application at Schedule C-2, page 1 of 5, Kentucky-American lists forecasted fuel and power expense as $2,986,277. Reconcile the difference.

Response:

The calculation included in the W/P3, pages 45 through 53 is the fuel and power expense for Kentucky River Station, Richmond Road Station, and Boosters. It does not include the fuel and power expense for Owenton which is $87,000.

For electronic version, refer to KAW_R_PSC2#11_061807.pdf

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET
OF INFORMATION REQUESTS

Item 12 of 80

Witness: Sheila Miller

12. Identify all amounts included in the fuel and power expense forecast for Kentucky-American's sewer and non-regulated operations.

Response:

None.

For electronic version, refer to KAW_R_PSCDR2#12_061807.pdf

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 13 of 80

Witness: Sheila Miller

13. Refer to Kentucky-American's Response to Commission Staff's First Set of Information Requests, Item 3.

    a. State the basis for Kentucky-American's forecasted price increases for electricity costs.

    b. Provide the annual percentage increase for Kentucky-American's total electricity purchases for each of the previous 5 calendar years.

Response:

a. The demand costs for Richmond Road in the amount of $6.65 and Kentucky River Station in the amount of $5.31 were taken from the actual bill as of February 2007. The Energy Charge of $2.501 was taken from the tariffs on the Kentucky Utilities Company website. The fuel adjustment and environmental surcharge were calculated on a 12 month average since the rates vary from month to month. The merger surcredit, value delivery surcredit, LP DMS, Program recovery cost, and the franchise fee are the actual rates from the February 2007 invoice.

See the attached tariff pages, copies of the February 2007 invoices for Richmond Road Station and Kentucky River Station, and the calculation of the miscellaneous fees.

b.

2001-2002	-1.0%
2002-2003	+9.2%
2003-2004	-1.6%
2004-2005	+26.6%
2005-2006	+7.1%

For electronic version, refer to KAW_R_PSCDR2#13_061807.pdf

Kentucky-American Water Company
Analysis of 2003 Fuel & Power Bills
Backup for rates used in case
CASE NO: 2007-00143

	Feb-2006	Mar-2006	Apr-2006	May-2006	Jun-2006	Jul-2006	Aug-2006	Sep-2006	Oct-2006	Nov-2006	Dec-2006	Jan-2007	RateCase		
Fuel Adjustment	0.00253	0.00203	0.00440	0.00720	0.00608	0.00723	0.00829	0.00947	0.01299	0.00508	0.00781	0.00439	0.00646	A	
Environmental	0.0232	0.0234	0.0285	0.0308	0.0354	0.0253	0.0358	0.0341	0.0341	0.0352	0.0418	0.0407	0.0324	A	
Merger surcredit	(0.02246)	(0.02246)	(0.02246)	(0.02246)	(0.02246)	(0.02442)	(0.01326)	(0.01326)	(0.01326)	(0.01326)	(0.01326)	(0.01326)	(0.01326)	B	
Franchise Fee	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	C	
Value Delivery Surcredit	(0.0011)	(0.0011)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	B	
LPDSM	0.00005	0.00005	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	C	add w/fuel adj
Program Recovery Cost	0.00001	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	C	add w/fuel adj

A= Twelve Month Average
B= Actual Credit Now.
C= Actual rate.

Kentucky Utilities Company

Second Revision of Original Sheet No. 20
P.S.C. No. 13

ELECTRIC RATE SCHEDULE LP
Large Power Service

APPLICABLE
In all territory served.

AVAILABILITY OF SERVICE
This rate schedule is available for secondary, primary or available transmission line service on an annual basis for lighting and/or heating and/or power.

It is optional with the customer whether service will be billed under this schedule for the entire requirements, or under various other schedules applicable to the various services. The customer having selected this schedule will continue to be billed under it for not less than 12 consecutive months, unless there should be a material and permanent change in the customer's service.

Service under this schedule will be limited to minimum average secondary loads of 200 KW and maximum average loads not exceeding 5,000 KW.

Customers with average single phase loads less than 200KW receiving service under this rate schedule as of July 1, 2004, will continue to be served under this rate schedule.

RATE
Customer Charge: $75.00 per month

Maximum Load Charge:

Secondary Service
$7.20 per kilowatt of the maximum load in the month.

Primary Service
$6.81 per kilowatt of the maximum load in the month

Transmission Service
$6.47 per kilowatt of the maximum load in the month

Plus an Energy Charge of:
2.501 cents per KWH

ADJUSTMENT CLAUSES
The bill amount computed at the charges specified above shall be increased or decreased in accordance with the following:

Fuel Adjustment Clause	Sheet No. 70
Demand-Side Management Surcharge	Sheet No. 71
Environmental Cost Recovery Surcharge	Sheet No. 72
Merger Surcredit Rider	Sheet No. 73
Value Delivery Surcredit Rider	Sheet No. 75
Franchise Fee Rider	Sheet No. 76
School Tax	Sheet No. 77
Program Cost Recovery Mechanism	Sheet No. 62

Date of Issue: February 20, 2007
Canceling First Revision of
Original Sheet No. 20
Issued June 8, 2005

Issued By

Date Effective: With Bills Rendered
On and After
March 5, 2007

John R. McCall, Executive Vice President,
General Counsel, and Corporate Secretary
Lexington, Kentucky
Issued By Authority of an Order of the KPSC in Case No. 2006-00129 dated January 31, 2007

an E.ON company

Customer Service: (859) 367--1200 Mon--Fri 7AM--6PM
Walk--in Center Hours: Mon--Fri 8AM--5PM
www.eon--us.com
Telephone Payments: (800) 807--3596

DATE DUE	AMOUNT DUE
02/05/07	$16,145.80

You can now pay your bill over the telephone with a check or credit card for a minimal fee Call (800) 807--3596 to take advantage of this exciting and convenient new payment option

ACCOUNT INFORMATION

Account Number:	442678--001 2
Account Name:	Ky American Water Co
Service Address:	2400 Richmond Rd Pump Sta Lexington,Ky

Averages for Billing Period	This Year	Last Year
Average Temperature	44 º	39 º
Number of Days Billed	32	34
Electric/kwh per Day	11231.2	11011.7

BILLING SUMMARY

Previous Balance		34,721.59
Payments as of 01/24		(34,721.59)
Balance as of 01/24		0.00
Electric Charges	15,675.53	
Taxes and Fees	470.27	
Utility Charges as of 01/24		16,145.80
Total Amount Due		16,145.80

ELECTRIC CHARGES

Rate Type: LP--SECONDARY PF ADJ

Customer Charge	75.00
Energy Charge	9042.50
Demand Charge ($6.65 x 688.20 kw)	4576.53
91.00% PF Adj to 90.00%	
Other Charges For Above Rates	
Fuel Adjustment ($.00439 x 359400 kwh)	1577.77
LP DSM ($.00007 x 359400 kwh)	25.16
Program Cost Recovery ($.00006 x 359400 kwh)	21.56
Environmental Surcharge (4.070% x $15,318.52)	623.46
Merger Surcredit (1.326% CR x $15,941.98)	--211.39
Value Delivery Surcredit (0.350% CR x $15,730.59)	--55.06
Total Electric Charges	$15,675.53

Please see reverse side for additional charges. Please bring entire bill when paying in person.

Customer Service (859) 367--1200

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

Account Number	Previous Balance	Payment Due Date	Total Amount Due	Winter Care Donation	Amount Enclosed
442678--001 2	$0.00	02/05/07	$16,145.80	$	$

Home Phone # (859) 269--2386

☐ Check here if plan(s) requested on back of stub.

OFFICE USE ONLY: D
C13, R8854, G311

PO BOX 14242
LEXINGTON, KY 40512--4242

#BWNHBWG
#442678001 1 3#
KY AMERICAN WATER CO
C/O SOURCENET SOLUTIONS
PO BOX 30076
COLLEGE STATION, TX 77842--3076

PRINTED ON RECYCLED PAPER

Service Address: 2400 Richmond Rd Pump Sta

02000044267800120000016145800000161458000000000000010

METER AND USAGE INFORMATION

ELECTRIC

	Meter Number	Previous Read Date	Previous Reading	Current Read Date	Current Reading	Read Code	Meter Multiplier	Demand kw	kwh
LP -SECONDARY PF ADJ									
kwh	L156547-A	12/18/06	51216	01/19/07	51815	R	600		359400
demand	L156547-A	12/18/06		01/19/07	1 1470	R	600	688.20	
						Total Usage		688 20	359400

TAXES AND FEES

Franchise Fee-Lexington (3 00% x $15.675.53)	470.27
Total Taxes and Fees	$470.27

BILLING INFORMATION

Meter Read Codes: R - Actual Read; V - Verified Read; E - Estimated Read; S -- Self Read

Franchise Fee: A pass-through of fees paid by the Company to municipalities for the right to serve customers located in those municipalities

IMPORTANT INFORMATION

To request a copy of your rate schedule, please call (859) 367-1200

New enrollment only -- Please check box(es) below and on front of stub.

☐ Automatic Bank Club (voided check must be provided)

Please deduct my Automatic Bank Club payment from my Checking Account.

I hereby authorize KU to debit my bank account for payment of my monthly energy bill. This authorization will remain in effect until revoked by me or KU

Signature _____

Date _____

Kentucky Utilities Company

Second Revision of Original Sheet No. 25
P.S.C. No. 13

ELECTRIC RATE SCHEDULE LCI-TOD
Large Commercial/Industrial Time-of-Day Service

APPLICABLE

In all territory served

AVAILABILITY OF SERVICE

Available to, and mandatory for, all customers served primary or transmission voltage, with an average demand of 5,000 kilowatts or greater, subject to the following guidelines:

(1) Customers being served on this rate whose average demand have subsequently been reduced below 5,000 kilowatts over a period of twelve (12) months or who have had a material and permanent change in operations which will undoubtedly reduce demands below this level will be placed on the appropriate non-time-differentiated rate at the Company's discretion.

(2) It is the responsibility of the customer to keep the Company fully informed of any change or expected change in operations which will affect the customer's qualification to be served on this rate.

(3) Service under this schedule will be limited to maximum loads not exceeding 50,000 KW. Customers with new or increased load requirements that exceed 50,000 KW will have a rate developed as part of their contract based upon their electrical characteristics.

RATE

Customer Charge: $120.00 per month

Maximum Load Charge:	Primary	Transmission
On-Peak Demand	$5.16 per KW	$4.97 per KW
Off-Peak Demand	$ .74 per KW	$ .74 per KW

Energy Charge: 2.501 cents per KWH

5.16
.74
5.90
90%
5.31
Demand Cost

ADJUSTMENT CLAUSES

The bill amount computed at the charges specified above shall be increased or decreased in accordance with the following:

Fuel Adjustment Clause	Sheet No. 70
Demand-Side Management Surcharge	Sheet No. 71
Environmental Cost Recovery Surcharge	Sheet No. 72
Merger Surcredit Rider	Sheet No. 73
Value Delivery Surcredit Rider	Sheet No. 75
Franchise Fee Rider	Sheet No. 76
School Tax	Sheet No. 77

Date of Issue: February 20, 2007
Canceling First Revision of
Original Sheet No. 25
Issued June 8, 2005

Issued By

Date Effective: With Bills Rendered
On and After
March 5, 2007

John R. McCall, Executive Vice President,
General Counsel, and Corporate Secretary
Lexington, Kentucky
Issued By Authority of an Order of the KPSC in Case No. 2006-00129 dated January 31, 2007

an E·ON company

Customer Service: (859) 367-1200 Mon-Fri 7AM-6PM
Walk-in Center Hours: Mon-Fri 8AM-5PM
www.eon-us.com
Telephone Payments: (800) 807-3596

DATE DUE	AMOUNT DUE
02/07/07	$125,474.79

You can now pay your bill over the telephone with a check or credit card for a minimal fee. Call (800) 807-3596 to take advantage of this exciting and convenient new payment option.

ACCOUNT INFORMATION

Account Number: 309918-010 3
Account Name: Ky American Water Co
Service Address: Evans Mill Rd Pump
Lexington,Ky

Averages for Billing Period	This Year	Last Year
Average Temperature	41 °	41 °
Number of Days Billed	30	34
Electric/kwh per Day	100000.0	101823.5

BILLING SUMMARY

Previous Balance		282,291.78
Payments as of 01/26		(282,291.78)
Balance as of 01/26		0.00
Electric Charges	121,820.18	
Taxes and Fees	3,654.61	
Utility Charges as of 01/26		125,474.79
Total Amount Due		125,474.79

ELECTRIC CHARGES

Rate Type: LCI-TOD PRIMARY

Customer Charge	120.00
Energy Charge	75480.00
On Peak Demand ($4.58 x 5695.20 kw)	26084.02
98.36% On PK PF Adj to 90.00%	
Off Peak Demand ($0.73 x 5742.00 kw)	4191.66
98.34% Off PK PF Adj to 90.00%	
Other Charges For Above Rates	
Fuel Adjustment ($.00439 x 3000000 kwh)	13170.00
Environmental Surcharge (4.070% x $119,045.68)	4845.16
Merger Surcredit (1.326% CR x $123,890.84)	-1642.79
Value Delivery Surcredit (0.350% CR x $122,248.05)	-427.87
Total Electric Charges	**$121,820.18**

SNFT
JAN 29 2007

Meter Reading Information

Meter #C523461-A	
Actual Reading on 01/25	61834
Previous Reading on 12/26	61334
Current kwh Usage	500
Meter Multiplier	6.000
Metered kwh Usage	3000000

TAXES AND FEES

Franchise Fee-Rur Fayette- 311 (3.00% x $121,820.18)	3654.61
Total Taxes and Fees	**$3,654.61**

Please see reverse side for additional charges

Please bring entire bill when paying in person.

Customer Service (859) 367-1200

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

Account Number	Previous Balance	Payment Due Date	Total Amount Due	Winter Care Donation	Amount Enclosed
309918-010 3	$0.00	02/07/07	$125,474.79	$	$

Home Phone # (xxx) xxx-xxxx

☐ Check here if plan(s) requested on back of stub

OFFICE USE ONLY:
C17, R7857, G311

PRINTED ON RECYCLED PAPER

PO BOX 14242
LEXINGTON, KY 40512-4242

#BWNHBWG
#309918010 1 5#
210020855 01 MB 0.326
KY AMERICAN WATER CO
C/O SOURCENET SOLUTIONS
PO BOX 30076
COLLEGE STATION, TX 77842-3076

Service Address: Evans Mill Rd Pump

02000030991801030000125474790001254747900000000000016

BILLING INFORMATION

Franchise Fee: A pass-through of fees paid by the Company to municipalities for the right to serve customers located in those municipalities.

IMPORTANT INFORMATION

To request a copy of your rate schedule, please call (859) 367-1200.

New enrollment only - Please check box(es) below and on front of stub.

☐ Automatic Bank Club (voided check must be provided)

Please deduct my Automatic Bank Club payment from my Checking Account.

I hereby authorize KU to debit my bank account for payment of my monthly energy bill. This authorization will remain in effect until revoked by me or KU.

Signature _____

Date _____

2101251020855010

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 14 of 80

Witness: Sheila Miller

14. Refer to Kentucky-American's Response to Commission Staff's First Set of Information Requests, Item 1(a), W/P3, pages 45 through 52.

    a. Provide the calculations and documents used to derive the "kwh/mg" per month.

    b. Provide the calculations and documents used to derive "energy cost/kwh" per month.

Response:

a. The "kwh/mg" in the budget is based on historical data. A running average of the monthly kwh/mg at each location is stored in an Excel spreadsheet. The intake pumps at the Kentucky River Station are being replaced in 2007 with larger units which make the estimation of kwh/mg difficult. This was factored into the higher kwh/mg values in the 2008 budget for KRS.

Historic KAW KWH/MG Annual Averages:

	2002	2003	2004	2005	2006
Kentucky River Station Intake and Second Lift	1407	1372	1411	1267	1772
Kentucky River Station High Service	1441	1509	1573	1553	1692
Kentucky River Station To Jacobson Reservoir	2538	2544	2269	2879	1827
Richmond Road Station Jacobson Reservoir Pumps	1340	0	333	951	718
Richmond Road Station High Service	1061	927	948	943	950
Booster Stations	558	488	476	419	540
Total Company	3293	3263	3130	3126	3322

b. See response to PSC data request 2, question 13 a.

For electronic version, refer to KAW_R_PSCDR2#14_061807.pdf

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET
OF INFORMATION REQUESTS

Item 15 of 80

Witness: Sheila Miller/Linda Bridwell

15. Refer to Kentucky-American's Response to Commission Staff's First Set of Information Requests, Item 1(a), W/P3, page 54. Explain why the low service pumpage is approximately 500,000,000 gallons more than the high service pumpage.

Response:

Approximately 3% of low service pumpage is historically used for washing filters, feeding chemicals, and other in-plant functions. At the Kentucky River Station and at the Richmond Road Station, the in-plant water comes off the mains prior to the final high service meter.

For electronic version, refer to KAW_R_PSCDR2#15_061807.pdf

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 16 of 80

Witness: Sheila Miller

16. Refer to Kentucky-American's Application, Exhibit 37, Schedule C-2, page 5 of 5, Overall Financial Summary - Owenton. Provide all calculations and supporting documents used to derive the forecasted fuel and power expense of $87,000 for the city of Owenton.

Response:

The Company utilized the limited historical information available from Owenton to arrive at the level of fuel and power expense included in the 2007-2008 budget which was prepared in early 2007 and is the basis for the rate filing. Attached is a schedule which shows the average fuel and power costs for the latest 12 month period. Based on the latest information it appears the fuel and power cost included in the rate case for Owenton is understated by $38,705.76.

For electronic version, refer to KAW_R_PSCDR2#16_061807.pdf

Kentucky American Water
PSC DR 2 Question 16

Descriptive Name	Utility Account #	Mo. Avg Amt	Company
Severn Creek	5563412	$5,647.28	Owen Electric
HWY 127 & 227 Pumpstation	5563403	$46.58	Owen Electric
Elk Lake Tower	5563408	$6.00	Owen Electric
Bromley Tank	5563401	$12.28	Owen Electric
Burton Pike Sump	5563413	$16.38	Owen Electric
Hesler Tank	5563402	$22.24	Owen Electric
Monterey Tank	5563414	$9.50	Owen Electric
Elk Lake PRV	5563404	$30.00	Owen Electric
Elk Lake Pump House	5563407	$48.06	Owen Electric
Leaning Oak Master Meter	5563411	$26.39	Owen Electric
Long Ridge Water Tower	5563405	$6.00	Owen Electric
New Columbus Pump Station	5563410	$70.00	Owen Electric
Rockdale Master Meter	5563409	$85.19	Owen Electric
Hwy 127 N New Pumpstation	023031-001	$40.63	KU
Hwy 127 N Chlorination	068278-011	$117.00	KU
Main Office Bdg	154301-012	$227.83	KU
3700 Hwy 127 N	441376-001	$141.00	KU
Ellis Road Tower (Fairgrounds)	458152-002	$50.08	KU
Perry St Water Tower	459355-002	$10.80	KU
Davis Lake Road (WTP)	487198-002	$3,789.00	KU
1075 Hwy 127 N	549931-002	$26.08	KU
1205 Hwy 127 N Nmastermeter	675503-001	$0.00	KU
South Main St	350301-011	$47.16	KU
		$10,475.48	

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 17 of 80

Witness: Sheila Miller/Linda Bridwell

17. Refer to Kentucky-American's Response to Commission Staff's First Set of Information Requests, Item 3.

a. State the basis for the forecasted price increases for chemical and chlorine prices.

b. Provide the annual percentage increases in Kentucky-American's total chemical and chlorine costs for each of the previous 5 calendar years.

Response:

a. The forecasted increases were provided from the Southeast Region Procurement group based upon bids received for each chemical from vendors. The quotes are attached.

b. 2002 – Total Chemical – 15.3% decrease
Chlorine – 23.6% decrease
2003 – Total Chemical – 3.4% increase
Chlorine – 62.0% increase
2004 – Total Chemical – 9.2% increase
Chlorine – 2.0% decrease
2005 – Total Chemical – 22.4% increase
Chlorine – 103.9% increase
2006 – Total Chemical – 9.6% increase
Chlorine – 28.9 % decrease

For electronic version, refer to KAW_R_PSCDR2#17_061807.pdf

Location	Chemical	Recommended Supplier	2007 Price	2008 Price	Comments
Kentucky River Station	Ammonia - Anhydrous	Ulrich	$ 0.2800	$ 0.2690	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Chlorine	Ulrich	$ 0.2440	$ 0.2300	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Hydrofluosilicic Acid	LCI	$ 0.1430	$ 0.1875	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Polyaluminum - Chloride	General Chemical	$ 0.1412	$ 0.1350	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Polymer - Cationic	Nalco	$ 0.2800	$ 0.3100	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Polymer - Nonionic	Nalco	$ 0.8800	$ 0.9800	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Sodium Chloride	Univar	$ 0.1770	$ 0.1400	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Sodium Hydroxide 0.50	Univar	$ 0.1216	$ 0.1200	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Sodium Thiosulfate - Liquid	Bonded	$ 0.1295	$ 0.1345	See Worksheet Jerry for any Supplier comments
Kentucky River Station	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	Carus	$ 0.2613	$ 0.2730	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Sodium Chloride	Univar	$ 0.1770	$ 0.1400	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Ammonia - Anhydrous	Ulrich	$ 0.2800	$ 0.2690	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Carbon - Powdered Activated	Calgon	$ 0.6000	$ 0.6000	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Chlorine	Ulrich	$ 0.2440	$ 0.2300	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Hydrofluosilicic Acid	LCI	$ 0.1430	$ 0.1875	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Polyaluminum - Chloride	General Chemical	$ 0.1412	$ 0.1350	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Polymer - Cationic	Nalco	$ 0.3100	$ 0.3400	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Potassium Permanganate	Univar	$ 1.8500	$ 2.0200	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Sodium Hydroxide 0.50	Univar	$ 0.1216	$ 0.1200	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Sodium Thiosulfate - Dry	Bonded	$ 0.3400	$ 0.3300	See Worksheet Jerry for any Supplier comments
Richmond Road Station	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	Carus	$ 0.2613	$ 0.2730	See Worksheet Jerry for any Supplier comments
TriVillage	Chlorine	Ulrich	$ 0.4500	$ 0.4200	See Worksheet Jerry for any Supplier comments
Owenton Water	Ferric Chloride	Kemira	$ 0.1000	$ 0.1090	See Worksheet Jerry for any Supplier comments
Owenton Water	Polymer Nalco 7766	Nalco	$ 0.9900	$ 1.0300	See Worksheet Jerry for any Supplier comments
Owenton Water	Chlorine	Ulrich	$ 0.4500	$ 0.4200	See Worksheet Jerry for any Supplier comments
Owenton Water	Fluoride	Ulrich	$ 0.1900	$ 0.1670	See Worksheet Jerry for any Supplier comments
Owenton Water	Carbon Hydrodarco B	Univar	$ 0.6000	$ 0.6300	See Worksheet Jerry for any Supplier comments
Owenton Water	Sodium Hydroxide 30%	Bonded	$ 0.1300	$ 0.1100	See Worksheet Jerry for any Supplier comments
Owenton Water	Sodium Hydroxide 50%	Univar	$ 0.1700	$ 0.1700	See Worksheet Jerry for any Supplier comments
Owenton Water	Potassium Permanganate	Univar	$ 2.2000	$ 2.2000	See Worksheet Jerry for any Supplier comments
Owenton Water	Sulfuric Acid	Ulrich	$ 0.1800	$ 0.0809	See Worksheet Jerry for any Supplier comments
Owenton WWTP	Chlorine	Ulrich	$ 0.45000	$ 0.4200	See Worksheet Jerry for any Supplier comments
Owenton WWTP	Sulfur Dioxide	Univar	$ 0.40000	$ 0.4000	See Worksheet Jerry for any Supplier comments
Owenton WWTP	Polymer Del Pac 20/20	Univar	$ 0.35000	$ 0.3100	See Worksheet Jerry for any Supplier comments
Owenton WWTP	Alum	Bonded	$ 0.14000	$ 0.1100	See Worksheet Jerry for any Supplier comments
Owenton WWTP	Bioxide		$ 1.75000	$ 1.7500	See Worksheet Jerry for any Supplier comments

Location	Chemical	Concentration	Annual Volume	Shipment Quantity
KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000
KRS	Chlorine	100%	600,000.00	10
KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000
KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000
KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000
KRS	Polymer - Nonionic	Pol -EZ 652	28,000.00	12
KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98
KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000
KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000
KRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	4,000
RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98
RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000
RRS	Carbon - Powdered Activated	Lignite	16,000.00	2
RRS	Chlorine	100%	250,000.00	6
RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000
RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000
RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750
RRS	Potassium Permanganate	Neat	5,000.00	80
RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000
RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40
RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000
TriVillage	Chlorine	100%	2,000.00	6
Owenton Water	Ferric Chloride	40%	500,000.00	3,000
Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2
Owenton Water	Chlorine	100%	10,000.00	10
Owenton Water	Fluoride	23%	8,000.00	2
Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40
Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10
Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10
Owenton Water	Potassium Permanganate	Neat	4,000.00	5
Owenton Water	Sulfuric Acid	98.00%	50,000.00	10
Owenton WWTP	Chlorine	100%	3,000.00	5
Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8
Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	4
Owenton WWTP	Alum	48%	20,000.00	4
Owenton WWTP	Bioxide	4%	3,800.00	1

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Shipment Type	Supplier	2008 Delivered Price	Revised 4-5-07			
lbs	Alexander Chem	0.269				
Cylinder	Occidental Chem	***.51	460/cyl			
Gallon	n/a	No Quote				
Gallon	Geo Specialties	*.344	0.34			
Gallon	n/a	No Quote				
Drum	n/a	No Quote				
Bags	North America Salt	0.177				
Gallon	Occidental Chem	0.135				
Gallon	Mallinckrodt	.151 + fuel surcharge	0.158	firm 12-31-08		
Gallon	n/a	No Quote				
Bags	North America Salt	0.177				
lbs	Alexander Chem	0.269				
Bags	Norit Americas	1.275				
Cylinder	Occidental Chem	***529/ton	460/cyl			
Gallon	n/a	No Quote				
Gallon	Geo Specialties	*.344				
Gallon	n/a	No Quote				
Drum	Carus Chemical	2.25	2.21	firm 12-31-08/pricing based on 55# pail		
Gallon	Occidental Chem	0.135				
Bags	Mallinckrodt	0.465				
Gallon	n/a	No Quote				
Cylinder	Occidental Chem	***.51	0.42			
Gallons	n/a	No Quote				
Gallons	n/a	No Quote				
Cylinder	Occidental Chem	***.51	0.42			
Gallons	Solvay	0.167				
Bags		1.591				
Gallons	Ulrich Chemical	0.26				
Gallons	Occidental Chem	0.177				
Pail	Carus Chemical	2.21		firm 12-31-08		
Gallons	Ziniflex-Taylor	0.0809				
Cylinder	Occidental Chem	0.51	0.42			
Cylinder	Alexander Chem	0.476	0.43			
Gallons	n/a	No Quote				
Gallons	General Chem Perf	0.138				
Gallons	n/a	No Quote				

Location	Chemical	Concentration	Annual Volume	Shipment Quantity	Shipment Type	Delivered Price	Supplier	2008 price delv
KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000	lbs	$0.30		
KRS	Chlorine	100%	600,000.00	10	Cylinder	$0.23		
KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000	Gallon	N/B		
KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000	Gallon	N/B		
KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000	Gallon	N/B		
KRS	Polymer - Nonionic	Pol-EZ 652	28,000.00	12	Drum	N/B		
KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98	Bags	0	Univar	$ 0.1400
KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000	Gallon	$0.12		
KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000	Gallon	$0.17		
KRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	4,000	Gallon	N/B		
RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98	Bags	0	Univar	$ 0.1400
RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000	lbs	$0.30		
RRS	Carbon - Powdered Activated	Lignite	16,000.00	2	Bags	$0.89		
RRS	Chlorine	100%	250,000.00	6	Cylinder	$0.23		
RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000	Gallon	N/B		
RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000	Gallon	N/B		
RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750	Gallon	N/B		
RRS	Potassium Permanganate	Neat	5,000.00	80	Drum	$2.02		
RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000	Gallon	$0.12		
RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40	Bags	$0.40		
RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000	Gallon	N/B		
TriVillage	Chlorine	100%	2,000.00	6	Cylinder	$0.43		
Owenton Water	Ferric Chloride	40%	500,000.00	3,000	Gallons	N/B		
Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2	Gallons	N/B		
Owenton Water	Chlorine	100%	10,000.00	10	Cylinder	$0.43		
Owenton Water	Fluoride	23%	8,000.00	2	Gallons	$1.90		
Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40	Bags	$0.65		
Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10	Gallons	$0.14		
Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10	Gallons	$0.17		
Owenton Water	Potassium Permanganate	Neat	4,000.00	5	Pail	$2.20		
Owenton Water	Sulfuric Acid	98.00%	50,000.00	10	Gallons	$0.18		
Owenton WWTP	Chlorine	100%	3,000.00	5	Cylinder	$0.43		
Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8	Cylinder	$0.40		
Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	4	Gallons	$0.35		
Owenton WWTP	Alum	48%	20,000.00	4	Gallons	$0.15		
Owenton WWTP	Bioxide	4%	3,800.00	1	Gallons	N/B		

Location	Chemical	Concentration	Annual Volume	Shipment Quantity	Shipment Type	Delivered Price	Supplier	Z/I/B Delivered Price	
KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000	lbs	NB			
KRS	Chlorine	100%	600,000.00	10	Cylinder	NB			
KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000	Gallon	NB			
KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000	Gallon	0.182/lb	Kemira Water	0.182/lb. delivered full TL	
KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000	Gallon	NB			
KRS	Polymer - Nonionic	Pol -EZ 652	28,000.00	12	Drum	NB			
KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98	Bags	NB			
KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000	Gallon	NB			
KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000	Gallon	NB			
KRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	4,000	Gallon	NB			
RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98	Bags	NB			
RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000	lbs	NB			
RRS	Carbon - Powdered Activated	Lignite	16,000.00	2	Bags	NB			
RRS	Chlorine	100%	250,000.00	6	Cylinder	NB			
RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000	Gallon	NB			
RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000	Gallon	0.182/lb	Kemira Water	0.182/lb. delivered full TL	
RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750	Gallon	NB			
RRS	Potassium Permanganate	Neat	5,000.00	80	Drum	NB			
RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000	Gallon	NB			
RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40	Bags	NB			
RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000	Gallon	NB			
TriVillage	Chlorine	100%	2,000.00	6	Cylinder	NB			
Owenton Water	Ferric Chloride	40%	500,000.00	3,000	Gallons	545/dry ton	Kemira Water	$545/dry ton delivered 3000 gallon loads	
Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2	Gallons	NB			
Owenton Water	Chlorine	100%	10,000.00	10	Cylinder	NB			
Owenton Water	Fluoride	23%	8,000.00	2	Gallons	NB			
Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40	Bags	NB			
Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10	Gallons	NB			
Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10	Gallons	NB			
Owenton Water	Potassium Permanganate	Neat	4,000.00	5	Pail	NB			
Owenton Water	Sulfuric Acid	98.00%	50,000.00	10	Gallons	NB			
Owenton WWTP	Chlorine	100%	3,000.00	5	Cylinder	NB			
Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8	Cylinder	NB			
Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	4	Gallons	NB			
Owenton WWTP	Alum	48%	20,000.00	4	Gallons	NB			
Owenton WWTP	Bioxide	4%	3,800.00	1	Gallons	NB			

Location	Chemical	Concentration	Annual Volume	Shipment Quantity	Shipment Type	2008 Delivered Price	
KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000	lbs	NA	
KRS	Chlorine	100%	600,000.00	10	Cylinder	NA	
KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000	Gallon	NA	
KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000	Gallon	NA	
KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000	Gallon	NA	
KRS	Polymer - Nonionic	Pol -EZ 652	28,000.00	12	Drum	NA	
KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98	Bags	NA	
KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000	Gallon	NA	
KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000	Gallon	NA	
KRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	4,000	Gallon	$0.273/lb	Carus
RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98	Bags	NA	
RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000	lbs	NA	
RRS	Carbon - Powdered Activated	Lignite	16,000.00	2	Bags	NA	
RRS	Chlorine	100%	250,000.00	6	Cylinder	NA	
RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000	Gallon	NA	
RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000	Gallon	NA	
RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750	Gallon	NA	
RRS	Potassium Permanganate	Neat	5,000.00	80	Drum	NA	
RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000	Gallon	NA	
RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40	Bags	NA	
RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000	Gallon	$0.273/lb	Carus
TriVillage	Chlorine	100%	2,000.00	6	Cylinder	NA	
Owenton Water	Ferric Chloride	40%	500,000.00	3,000	Gallons	NA	
Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2	Gallons	NA	
Owenton Water	Chlorine	100%	10,000.00	10	Cylinder	NA	
Owenton Water	Fluoride	23%	8,000.00	2	Gallons	NA	
Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40	Bags	NA	
Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10	Gallons	NA	
Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10	Gallons	NA	
Owenton Water	Potassium Permanganate	Neat	4,000.00	5	Pail	NA	
Owenton Water	Sulfuric Acid	98.00%	50,000.00	10	Gallons	NA	
Owenton WWTP	Chlorine	100%	3,000.00	5	Cylinder	NA	
Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8	Cylinder	NA	
Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	4	Gallons	NA	
Owenton WWTP	Alum	48%	20,000.00	4	Gallons	NA	
Owenton WWTP	Bioxide	4%	3,800.00	1	Gallons	NA	

Location	Chemical	Concentration	Annual Volume	Shipment Quantity	Shipment Type	Supplier	2008 Delivered Price
KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000	lbs		N/A
KRS	Chlorine	100%	600,000.00	10	Cylinder		N/A
KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000	Gallon		N/A
KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000	Gallon		N/A
KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000	Gallon	NALCO	0.31
KRS	Polymer - Nonionic	Pol -EZ 652	28,000.00	12	Drum	NALCO	0.98
KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98	Bags		N/A
KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000	Gallon		N/A
KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000	Gallon		N/A
KRS	inc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate bas	(1Zn : 10 PO4)	290,000.00	4,000	Gallon		N/A
RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98	Bags		N/A
RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000	lbs		N/A
RRS	Carbon - Powdered Activated	Lignite	16,000.00	2	Bags		N/A
RRS	Chlorine	100%	250,000.00	6	Cylinder		N/A
RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000	Gallon		N/A
RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000	Gallon		N/A
RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750	Gallon	NALCO	0.34
RRS	Potassium Permanganate	Neat	5,000.00	80	Drum		N/A
RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000	Gallon		N/A
RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40	Bags		N/A
RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000	Gallon		N/A
TriVillage	Chlorine	100%	2,000.00	6	Cylinder		N/A
Owenton Water	Ferric Chloride	40%	500,000.00	3,000	Gallons		N/A
Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2	Gallons	NALCO	1.03
Owenton Water	Chlorine	100%	10,000.00	10	Cylinder		N/A
Owenton Water	Fluoride	23%	8,000.00	2	Gallons		N/A
Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40	Bags		N/A
Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10	Gallons		N/A
Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10	Gallons		N/A
Owenton Water	Potassium Permanganate	Neat	4,000.00	5	Pail		N/A
Owenton Water	Sulfuric Acid	98.00%	50,000.00	10	Gallons		N/A
Owenton WWTP	Chlorine	100%	3,000.00	5	Cylinder		N/A
Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8	Cylinder		N/A
Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	4	Gallons		N/A
Owenton WWTP	Alum	48%	20,000.00	4	Gallons		N/A
Owenton WWTP	Bioxide	4%	3,800.00	1	Gallons		N/A

State	Location	Chemical	Concentration	Annual Volume	Shipment Quantity	Shipment Type	Supplier	2008 Delivered Price
KY	KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000	lbs	N/A	N/A
KY	KRS	Chlorine	100%	600,000.00	10	Cylinder	N/A	N/A
KY	KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000	Gallon	N/A	N/A
KY	KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000	Gallon	Delta Chemical Corp.	> 12/1/07 $0.137/Lb
KY	KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000	Gallon	N/A	N/A
KY	KRS	Polymer - Nonionic	Pol -EZ 652	28,000.00	12	Drum	N/A	N/A
KY	KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98	Bags	N/A	N/A
KY	KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000	Gallon	N/A	N/A
KY	KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000	Gallon	N/A	N/A
KY	KRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	4,000	Gallon	N/A	N/A
KY	RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98	Bags	N/A	N/A
KY	RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000	lbs	N/A	N/A
KY	RRS	Carbon - Powdered Activated	Lignite	16,000.00	2	Bags	N/A	N/A
KY	RRS	Chlorine	100%	250,000.00	6	Cylinder	N/A	N/A
KY	RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000	Gallon	N/A	N/A
KY	RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000	Gallon	Delta Chemical Corp.	> 12/1/07 $0.137/Lb
KY	RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750	Gallon	N/A	N/A
KY	RRS	Potassium Permanganate	Neat	5,000.00	80	Drum	N/A	N/A
KY	RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000	Gallon	N/A	N/A
KY	RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40	Bags	N/A	N/A
KY	RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000	Gallon	N/A	N/A
KY	TriVillage	Chlorine	100%	2,000.00	6	Cylinder	N/A	N/A
KY	Owenton Water	Ferric Chloride	40%	500,000.00	3,000	Gallons	N/A	N/A
KY	Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2	Gallons	N/A	N/A
KY	Owenton Water	Chlorine	100%	10,000.00	10	Cylinder	N/A	N/A
KY	Owenton Water	Fluoride	23%	8,000.00	2	Gallons	N/A	N/A
KY	Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40	Bags	N/A	N/A
KY	Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10	Gallons	N/A	N/A
KY	Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10	Gallons	N/A	N/A
KY	Owenton Water	Potassium Permanganate	Neat	4,000.00	5	Pail	N/A	N/A
KY	Owenton Water	Sulfuric Acid	98.00%	50,000.00	10	Gallons	N/A	N/A
KY	Owenton WWTP	Chlorine	100%	3,000.00	5	Cylinder	N/A	N/A
KY	Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8	Cylinder	N/A	N/A
KY	Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	4	Gallons	N/A	N/A
KY	Owenton WWTP	Alum	48%	20,000.00	4	Gallons	N/A	N/A
KY	Owenton WWTP	Bioxide	4%	3,800.00	1	Gallons	N/A	N/A
		** Alternate Product for River Road and Richmond Road:						
		Polyaluminum Chloride -						
		DelPAC 3000 @ $0.142/Lb (As Available)						
		John D. Besson, President						
		Delta Chemical Corporation						
		16-Mar-07						

State	Location	Chemical	Concentration	Annual Volume	Unit of Measure	Container Type	Shipment Quantity	Shipment Type	Delivered Price	Supplier	2007 Delivered Price
KY	Kentucky River Station	Ammonia - Anhydrous	Neat	90,000.00	wet lbs	Bulk	20,000	lbs	No Bid	-	No Bid
KY	Kentucky River Station	Chlorine	100%	600,000.00	wet lbs	ton cylinder	10	Cylinder	No Bid	-	No Bid
KY	Kentucky River Station	Hydrofluosilicic Acid	23%	300,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Kentucky River Station	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Kentucky River Station	Polymer - Cationic	Catfloc LS	230,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Kentucky River Station	Polymer - Nonionic	Pol-EZ 652	28,000.00	wet lbs	55 gallon drum	12	Drum	No Bid	-	No Bid
KY	Kentucky River Station	Sodium Chloride	Neat (99% Pure)	23,000.00	dry lbs	50 lb bag	98	Bags	No Bid	-	No Bid
KY	Kentucky River Station	Sodium Hydroxide 0.50	50%	400,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Kentucky River Station	Sodium Thiosulfate - Liquid	30%	340,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Kentucky River Station	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	290,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Richmond Road Station	Sodium Chloride	Neat (99% Pure)	15,000.00	dry lbs	50 lb bag	98	Bags	No Bid	-	No Bid
KY	Richmond Road Station	Ammonia - Anhydrous	Neat	34,000.00	wet lbs	Bulk	10,000	lbs	No Bid	-	No Bid
KY	Richmond Road Station	Carbon - Powdered Activated	Lignite	16,000.00	dry lbs	1000 lb supersack	2	Bags	0.76 - HDB	NORIT	0.76 - HDB
KY	Richmond Road Station	Chlorine	100%	250,000.00	wet lbs	ton cylinder	6	Cylinder	No Bid	-	No Bid
KY	Richmond Road Station	Hydrofluosilicic Acid	23%	165,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Richmond Road Station	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Richmond Road Station	Polymer - Cationic	Catfloc LS	74,000.00	wet lbs	Bulk	2,750	Gallon	No Bid	-	No Bid
KY	Richmond Road Station	Potassium Permanganate	Neat	5,000.00	dry lbs	55 gallon drum	80	Drum	No Bid	-	No Bid
KY	Richmond Road Station	Sodium Hydroxide 0.50	50%	180,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	Richmond Road Station	Sodium Thiosulfate - Dry	Neat	15,500.00	dry lbs	50 lb bag	40	Bags	No Bid	-	No Bid
KY	Richmond Road Station	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	wet lbs	Bulk	4,000	Gallon	No Bid	-	No Bid
KY	TriVillage	Chlorine	100%	2,000.00	wet lbs	150 lb cylinder	6	Cylinder	No Bid	-	No Bid
KY	Owenton Water	Ferric Chloride	40%	500,000.00	Wet lbs	Bulk	3,000	Gallons	No Bid	-	No Bid
KY	Owenton Water	Polymer Nalco 7766	Neat	2,000.00	Wet lbs	Drum	2	Gallons	No Bid	-	No Bid
KY	Owenton Water	Chlorine	100%	10,000.00	Wet lbs	150 lb Cylinders	10	Cylinder	No Bid	-	No Bid
KY	Owenton Water	Fluoride	23%	8,000.00	Wet lbs	Drum	2	Gallons	No Bid	-	No Bid
KY	Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	Dry lbs	40 lbBags	40	Bags	0.72 - HDB	NORIT	0.72 - HDB
KY	Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	Wet lbs	Drum	10	Gallons	No Bid	-	No Bid
KY	Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	Wet lbs	Drum	10	Gallons	No Bid	-	No Bid
KY	Owenton Water	Potassium Permanganate	Neat	4,000.00	Dry lbs	55 lb Pail	5	Pail	No Bid	-	No Bid
KY	Owenton Water	Sulfuric Acid	98.00%	50,000.00	Wet lbs	Drum	10	Gallons	No Bid	-	No Bid
KY	Owenton WWTP	Chlorine	100%	3,000.00	Wet lbs	150 lb Cylinders	5	Cylinder	No Bid	-	No Bid
KY	Owenton WWTP	Sulfur Dioxide	100%	4,000.00	Wet lbs	150 lb Cylinders	8	Cylinder	No Bid	-	No Bid
KY	Owenton WWTP	Polymer Del Pac 20/20	Neat	22,000.00	Wet lbs	Drum	4	Gallons	No Bid	-	No Bid
KY	Owenton WWTP	Alum	48%	20,000.00	Wet lbs	Drum	4	Gallons	No Bid	-	No Bid
KY	Owenton WWTP	Bioxide	4%	3,800.00	Wet lbs	Bulk	1	Gallons	No Bid	-	No Bid

Location	Chemical	Concentration	Annual Volume	Shipment Quantity	Shipment Type	Delivered Price	Supplier	2008 Delivered Price
KRS	Ammonia - Anhydrous	Neat	90,000.00	20,000	lbs			
KRS	Chlorine	100%	600,000.00	10	Cylinder			
KRS	Hydrofluosilicic Acid	23%	300,000.00	4,000	Gallon			
KRS	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	4,000	Gallon			
KRS	Polymer - Cationic	Catfloc LS	230,000.00	4,000	Gallon			
KRS	Polymer - Nonionic	Pol -EZ 652	28,000.00	12	Drum			
KRS	Sodium Chloride	Neat (99% Pure)	23,000.00	98	Bags			
KRS	Sodium Hydroxide 0.50	50%	400,000.00	4,000	Gallon			
KRS	Sodium Thiosulfate - Liquid	30%	340,000.00	4,000	Gallon	$ 0.1345	Bonded Chemicals	$ 0.1295
KRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	4,000	Gallon			
RRS	Sodium Chloride	Neat (99% Pure)	15,000.00	98	Bags			
RRS	Ammonia - Anhydrous	Neat	34,000.00	10,000	lbs			
RRS	Carbon - Powdered Activated	Lignite	16,000.00	2	Bags			
RRS	Chlorine	100%	250,000.00	6	Cylinder			
RRS	Hydrofluosilicic Acid	23%	165,000.00	4,000	Gallon			
RRS	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	4,000	Gallon			
RRS	Polymer - Cationic	Catfloc LS	74,000.00	2,750	Gallon			
RRS	Potassium Permanganate	Neat	5,000.00	80	Drum			
RRS	Sodium Hydroxide 0.50	50%	180,000.00	4,000	Gallon			
RRS	Sodium Thiosulfate - Dry	Neat	15,500.00	40	Bags			
RRS	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	4,000	Gallon			
TriVillage	Chlorine	100%	2,000.00	6	Cylinder			
Owenton Water	Ferric Chloride	40%	500,000.00	3,000	Gallons			
Owenton Water	Polymer Nalco 7766	Neat	2,000.00	2	Gallons			
Owenton Water	Chlorine	100%	10,000.00	10	Cylinder			
Owenton Water	Fluoride	23%	8,000.00	2	Gallons			
Owenton Water	Carbon Hydrodarco B	Neat	12,000.00	40	Bags			
Owenton Water	Sodium Hydroxide 30%	30%	50,000.00	10	Gallons			
Owenton Water	Sodium Hydroxide 50%	50%	75,000.00	10	Gallons			
Owenton Water	Potassium Permanganate	Neat	4,000.00	5	Pail			
Owenton Water	Sulfuric Acid	98.00%	50,000.00	10	Gallons			
Owenton WWTP	Chlorine	100%	3,000.00	5	Cylinder			
Owenton WWTP	Sulfur Dioxide	100%	4,000.00	8	Cylinder			
Owenton WWTP	Polymer Del Pac 2020	Neat	22,000.00	4	Gallons			
Owenton WWTP	Alum	48%	20,000.00	4	Gallons			
Owenton WWTP	Bioxide	4%	3,800.00	1	Gallons			

Location	Chemical	Concentration	Annual Volume	Unit of Measure	Container Type	Shipment Quantity	Shipment Type	Delivered Price	Supplier	2007 Delivered Price
ucky River Station	Ammonia - Anhydrous	Neat	90,000.00	wet lbs	Bulk	20,000	lbs			NA
ucky River Station	Chlorine	100%	600,000.00	wet lbs	ton cylinder	10	Cylinder			NA
ucky River Station	Hydrofluosilicic Acid	23%	300,000.00	wet lbs	Bulk	4,000	Gallon			NA
ucky River Station	Polyaluminum - Chloride	Delpac2020 or equivalent	4,300,000.00	wet lbs	Bulk	4,000	Gallon			NA
ucky River Station	Polymer - Cationic	Catfloc LS	230,000.00	wet lbs	Bulk	4,000	Gallon			NA
ucky River Station	Polymer - Nonionic	Pol -EZ 652	28,000.00	wet lbs	55 gallon drum	12	Drum			NA
ucky River Station	Sodium Chloride	Neat (99% Pure)	23,000.00	dry lbs	50 lb bag	98	Bags			NA
ucky River Station	Sodium Hydroxide 0.50	50%	400,000.00	wet lbs	Bulk	4,000	Gallon			NA
ucky River Station	Sodium Thiosulfate - Liquid	30%	340,000.00	wet lbs	Bulk	4,000	Gallon			NA
ucky River Station	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4) Sulfate based	(1Zn : 10 PO4)	290,000.00	wet lbs	Bulk	4,000	Gallon			NA
mond Road Station	Sodium Chloride	Neat (99% Pure)	15,000.00	dry lbs	50 lb bag	98	Bags			NA
mond Road Station	Ammonia - Anhydrous	Neat	34,000.00	wet lbs	Bulk	10,000	lbs			NA
mond Road Station	Carbon - Powdered Activated	Lignite	16,000.00	dry lbs	1000 lb superpack	2	Bags			NA
mond Road Station	Chlorine	100%	250,000.00	wet lbs	ton cylinder	6	Cylinder			NA
mond Road Station	Hydrofluosilicic Acid	23%	165,000.00	wet lbs	Bulk	4,000	Gallon			NA
mond Road Station	Polyaluminum - Chloride	Delpac2020 or equivalent	1,900,000.00	wet lbs	Bulk	4,000	Gallon			NA
mond Road Station	Polymer - Cationic	Catfloc LS	74,000.00	wet lbs	Bulk	2,750	Gallon			NA
mond Road Station	Potassium Permanganate	Neat	5,000.00	dry lbs	55 gallon drum	80	Drum			NA
mond Road Station	Sodium Hydroxide 0.50	50%	180,000.00	wet lbs	Bulk	4,000	Gallon			NA
mond Road Station	Sodium Thiosulfate - Dry	Neat	15,500.00	dry lbs	50 lb bag	40	Bags			0.33
mond Road Station	Zinc Orthophosphate (Sulfate based) (1Zn : 10 PO4)	(1Zn : 10 PO4)	105,000.00	wet lbs	Bulk	4,000	Gallon			NA
TriVillage	Chlorine	100%	2,000.00	wet lbs	150 lb cylinder	6	Cylinder			NA
wenton Water	Ferric Chloride	40%	500,000.00	Wet lbs	Bulk	3,000	Gallons			NA
wenton Water	Polymer Nalco 7766	Neat	2,000.00	Wet lbs	Drum	2	Gallons			NA
wenton Water	Chlorine	100%	10,000.00	Wet lbs	150 lb Cylinders	10	Cylinder			NA
wenton Water	Fluoride	23%	8,000.00	Wet lbs	Drum	2	Gallons			0.23
wenton Water	Carbon Hydrodarco B	Neat	12,000.00	Dry lbs	40 lbBags	40	Bags			NA
wenton Water	Sodium Hydroxide 30%	30%	50,000.00	Wet lbs	Drum	10	Gallons			0.11
wenton Water	Sodium Hydroxide 50%	50%	75,000.00	Wet lbs	Drum	10	Gallons			0.105
wenton Water	Potassium Permanganate	Neat	4,000.00	Dry lbs	55 lb Pail	5	Pail			NA
wenton Water	Sulfuric Acid	98.00%	50,000.00	Wet lbs	Drum	10	Gallons			0.13
wenton WWTP	Chlorine	100%	3,000.00	Wet lbs	150 lb Cylinders	6	Cylinder			0.67
wenton WWTP	Sulfur Dioxide	100%	4,000.00	Wet lbs	150 lb Cylinders	8	Cylinder			NA
wenton WWTP	Polymer Del Pac 2020	Neat	22,000.00	Wet lbs	Drum	4	Gallons			NA
wenton WWTP	Alum	48%	20,000.00	Wet lbs	Drum	4	Gallons			0.11
wenton WWTP	Bioxide	4%	3,800.00	Wet lbs	Bulk	1	Gallons			NA

Bonded via Chemical Resources

Gerald J Coyne/SHARSVCS/AWWSC
06/08/2007 01:06 PM

To Sheila Miller/WVAWC/AWWSC@AWW
cc
bcc
Subject Fw: KY-American PACl quotation

General

Feel free to contact me directly should you have any questions.

Thanks

Jerry

Gerald Coyne
Senior Strategic Buyer Chemicals
American Water Works Service Company, Inc
3906 Church Road
Mount Laurel, NJ. 08054
856-727-6219
856-381-1397 Mobile
856-727-6258 Fax
gerald.coyne@amwater.com

For Mailing Purposes
1025 Laurel Oak Road
Voorhees, NJ. 08043

----- Forwarded by Gerald J Coyne/SHARSVCS/AWWSC on 06/08/2007 01:09 PM -----

"Amato, Christine" <CAmato@genchemcorp.com>
04/04/2007 10:58 AM

To gerald.coyne@amwater.com
cc
Subject KY-American PACl quotation

Hello Gerry,

General Chemical is pleased to respond to your request for quotation for Kentucky-American's Polyaluminum Chloride requirements for shipments to the Kentucky River Station estimated to be 4.3 million wet pounds and the Kentucky Richmond Road Station estimated to be 1.9 million wet pounds. We offer the following for your consideration:

HYPER+ION 4060 [POLYALUMINUM CHLORIDE]
In Tank Trucks
$0.135/Wet Pound

F.O.B. freight allowed to destination.

Terms: Net 30 days from date of shipment.

Price is based on full truckload quantities.

The above price is firm for the period of December 1, 2007 through November 30, 2008.

We have enclosed a Product Safety Data Sheet for your information.

Please feel to contact us if you have any questions or require additional information. We appreciate the opportunity to supply your Aluminum Sulfate requirements.

Best regards,

Christine A. Amato
Bid/Quotation Representative - Water Chemicals
General Chemical
(800) 631-8050
CAmato@genchemcorp.com

<<Hyper+Ion 4060 01-19-06.pdf>>

Hyper+Ion 4060 01-19-06.pdf

Material Safety Data Sheet

General Chemical

Hyper+Ion® 4060 Liquid Coagulant

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Hyper+Ion 4060

OTHER/GENERIC NAMES: Polyaluminum Hydroxychloride Solution

PRODUCT USE: Water purification chemical

MANUFACTURER: General Chemical, LLC
90 East Halsey Road
Parsippany, NJ 07054

FOR MORE INFORMATION CALL: 800-631-8050 (Customer Service) (Monday-Friday, 9:00am-4:30pm)

IN CASE OF EMERGENCY CALL: 800-424-9300 (CHEMTREC) (24 Hours/Day, 7 Days/Week)

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
Polyaluminum Hydroxychloride	1327-41-9	21-25
Water	7732-18-5	72-77

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: This product is considered hazardous under the OSHA Hazard Communication Standard.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A clear, odorless, colorless to light amber colored liquid which can cause significant irritation to the skin and eyes. Vapors may irritate nose and throat. Will not burn but may release hydrochloric acid vapors at fire temperatures.

POTENTIAL HEALTH HAZARDS

SKIN: Contact may cause severe reddening and swelling.

EYES: May irritate or burn the eyes.

INHALATION: Product mists can irritate mucous membranes and respiratory tract (nose, throat, etc.)

INGESTION: Can irritate the mouth, throat and stomach.

DELAYED EFFECTS: None known.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section.			

General Chemical

MATERIAL SAFETY DATA SHEET
Hyper+Ion® 4060 Liquid Coagulant

4. FIRST AID MEASURES

SKIN: Flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse

EYES: Immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

INGESTION: Do not induce vomiting. Immediately give large quantities of water. Get medical attention immediately.

ADVICE TO PHYSICIAN: Treat symptomatically.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Not flammable
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
UPPER FLAME LIMIT (volume % in air):	Not applicable
LOWER FLAME LIMIT (volume % in air):	Not applicable
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

EXTINGUISHING MEDIA:
Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARDS:
At elevated temperatures, irritating and corrosive hydrogen chloride vapors may be released

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:
Wear self-contained breathing apparatus. Cool exposed containers will water spray

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (See section 8 for recommended personal protective equipment.)
Dike areas to contain spill. Neutralize spilled material with alkali such as soda ash. When using soda ash and other carbonates, carbon dioxide gas may be released. Take precautions to minimize hazards from release of carbon dioxide

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

General Chemical

MATERIAL SAFETY DATA SHEET
Hyper+Ion® 4060 Liquid Coagulant

7. HANDLING AND STORAGE

NORMAL HANDLING: (See section 8 for recommended personal protective equipment.)
Avoid contact with eyes, skin and clothing. Avoid inhalation of mists and vapors

STORAGE RECOMMENDATIONS:
Store and ship in plastic or rubber-lined containers. Store in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Use local exhaust to keep airborne concentrations below the permissible exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:	Wear rubber gloves and apron, long sleeved shirts, trousers and boots. If prolonged or repeated contact is anticipated, all clothing should be impervious to liquid.
EYE PROTECTION:	Wear chemical safety goggles. Do not wear contact lenses.
RESPIRATORY PROTECTION:	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
ADDITIONAL RECOMMENDATIONS:	To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. Eyewash and safety showers are recommended.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Polyaluminum hydroxychloride	2 mg/m^3 TWA (as aluminum)	None	None

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:
Hydrochloric acid vapors: 7 mg/m^3 (ceiling)

General Chemical

MATERIAL SAFETY DATA SHEET
Hyper+Ion® 4060 Liquid Coagulant

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid
PHYSICAL STATE:	Liquid
MOLECULAR WEIGHT:	Mixture
CHEMICAL FORMULA:	Mixture
ODOR:	Odorless
SPECIFIC GRAVITY (water = 1.0):	~1.20 @ 25 °C
SOLUBILITY IN WATER (weight %):	100%
pH:	2.5-4.0
BOILING POINT:	>220°F (>105°C)
MELTING POINT:	Not applicable
VAPOR PRESSURE:	Not applicable
VAPOR DENSITY (air = 1.0):	Not applicable
EVAPORATION RATE:	Not applicable **COMPARED TO:** Not applicable
% VOLATILES:	80%
FLASH POINT:	None

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE/ (CONDITIONS TO AVOID):
This product is normally stable. Avoid contact with alkalies.

INCOMPATIBILITIES:
Avoid prolonged contact with iron, galvinized iron, steel, aluminum, copper and zinc which are subject to corrosion.

HAZARDOUS DECOMPOSITION PRODUCTS:
At high temperatures (e.g. fire conditions), hydrogen chloride vapor may be generated.

HAZARDOUS POLYMERIZATION:
Will not occur

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:
Data not available

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:
Data not available

OTHER DATA:
None

12. ECOLOGICAL INFORMATION

No data available

General Chemical

MATERIAL SAFETY DATA SHEET
Hyper+Ion® 4060 Liquid Coagulant

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Yes

If yes, the RCRA ID number is: D002 (Corrosive)

OTHER DISPOSAL CONSIDERATIONS:
None listed

The information offered in section 13 is for the product as shipped Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT HAZARD CLASS: 8, PGIII
US DOT ID NUMBER: UN3264
PROPER SHIPPING NAME: Corrosive liquid, acidic, inorganic, N.O.S. (polyaluminum hydroxychloride)

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Listed on the TSCA Inventory of Chemical Substances

OTHER TSCA ISSUES: None

SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA/CERCLA RQ (lb)	SARA EHS TPQ (lb)
No ingredients listed in this section.		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate

General Chemical

MATERIAL SAFETY DATA SHEET
Hyper+Ion® 4060 Liquid Coagulant

SARA 313 TOXIC CHEMICALS:
The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
No ingredients listed in this section.	

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
None listed		

ADDITIONAL REGULATORY INFORMATION:
None

WHMIS CLASSIFICATION (CANADA):
Controlled Product: E, D2B

FOREIGN CHEMICAL CONTROL INVENTORY STATUS:
All ingredients listed on Canada (DSL), Europe (EINECS), Korea (KECI).

16. OTHER INFORMATION

CURRENT ISSUE DATE: January 19, 2006
PREVIOUS ISSUE DATE: October 3, 2005

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:
Changes to section 9 and 16

OTHER INFORMATION: HMIS: 2-0-1
NFPA: 2-0-1

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness or a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. General Chemical, LLC is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. General Chemical, LLC shall not be responsible or liable for the use, application or implementation of the information, provided herein, and all such information is to be used at the risk, and in the sole judgement and discretion, of such persons, their employees, advisors and agents.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 18 of 80

Witness: Linda C. Bridwell

18. At page 29 of her direct testimony, Ms. Linda Bridwell states: "[T]he company has forecasted a price increase effective January 2008 based on initial conversations with chemical suppliers." Provide all correspondence between Kentucky-American and its chemical suppliers since January 1, 2006 in which the cost of chemicals is discussed.

Response:

Chemical prices are bid through American Water Procurement on a national basis and discussion regarding price changes is limited. Please see attached correspondence. Also see the chemical quotes attached to the response to PSC DR 2 question 17.

For electronic version, refer to KAW_R_PSCDR2#18_061807.pdf

Linda Bridwell/KAWC/AWWSC
06/07/2007 10:15 PM

To Debbie Mireault/KAWC/AWWSC@AWW
cc
bcc
Subject Fw: Question 18

Can you print all of this, including attachments, and let me review.

Linda Bridwell, PE
Project Delivery & Developer Services Manager - WV, KY TN
Southeast Region
2300 Richmond Road
Lexington, KY 40502
Tel: 859-268-6373
Fax: 859-268-6374

—— Forwarded by Linda Bridwell/KAWC/AWWSC on 06/07/2007 10:18 PM ——

David Shehee/KAWC/AWWSC
06/07/2007 03:58 PM

To Linda Bridwell/KAWC/AWWSC@AWW
cc
Subject Question 18

Linda,

Here is the rest of what I could find. We didn't use the 7190 Plus Polymer or the Polymer from ASI, but these were discussions so I wanted to make them available. There are POs for the ones that we are using or planning on using and they have been bid properly through procurement.

David B. Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, Kentucky 40515
(859) 335-3660 office
(859) 335-3388 fax
david.shehee@amwater.com

—— Forwarded by David Shehee/KAWC/AWWSC on 06/07/2007 03:58 PM ——

MMICULIS@brenntag.com
03/11/2007 07:49 PM

To dshehee@kawc com
cc DHuffstetler@brenntag.com, CDAWSON@brenntag.com
Subject Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

David

Attached is an updated quote since the last one was over a year old but fortunately only a slight change. This price should be stable barring and significant market changes which so far are not apparent.

We look forward to serving this requirement and be sure to advise your expected monthly usage. If a continuing requirement we can stock product for you for immediate release. See the ordering and shipping options in the enclosed letter.

Thank You,
Mark Miculis
Account Manager

Phone: (502) 863-2874
Fax: (502)-863-2903
Cell: (270) 860-8011
Vmx: (800-866-9697 Ex 1501)

(See attached file: QUOTE LETTER---KY AM Water 3-10-07 DS Update.doc)

dshehee@kawc.com

03/08/2007 02:49 PM

To: DHuffstetler@brenntag.com

cc: CDAWSON@brenntag.com, MMICULIS@brenntag.com, rbuchana@kawc.com

Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

Is this quote still good? We finally are ready to move on this.
(Embedded image moved to file: pic31060.jpg)

DHuffstetler@brenntag.com

To: MMICULIS@brenntag.com

cc: CDAWSON@brenntag.com, dshehee@kawc.com

03/01/2006 01:30 PM

Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

David, please be sure to provide the exact shipping address. Thanks!

Donna J. Huffstetler
Customer Service Representative
Brenntag Mid-South, Inc., Georgetown, Ky
Ph: 800-876-2874 Fax: 502-863-2903
E-mail Address: dhuffstetler@brenntag.com

Mark A
Miculis/Mid-South
/Brenntag

03/01/2006 12:24
PM

To: dshehee@kawc.com
cc: Donna J Huffstetler/Mid-South/Brenntag@Brenntag, Chris N Dawson/Mid-South/Brenntag@Brenntag
Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF (Document link: Donna J Huffstetler)

David

We will await your PO. I am certain it will give all the particulars on billing and shipping detail, but please assure we have good contact information at the plant and any other shipping detail on delivery times unloading equipment, etc. The drums are on pallets. Do you have dock height delivery.

Thank You,
Mark Miculis
National Account Executive
Phone: (270) 830-1306
Fax: (270) 826-1486

dshehee@kawc.com

03/01/2006 11:21
AM

To: MMICULIS@brenntag.com
cc:
Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

Thanks Mark. Please note that this will be shipped to our Northern Division (Owen County).

David Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, KY 40515
Phone (859) 335-3660
Fax (859) 335-3388
dshehee@kawc.com

MMICULIS@brenntag.com

To: dshehee@kawc.com

cc: DHuffstetler@brenntag.com, KHARDISON@brenntag.com, CDAWSON@brenntag.com

03/01/2006 12:13 PM

Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

David

Attached is the quote on the Sulfuric Acid 38.5% NSF product. Please note the shipping time on you initial order. You can call Donna or Chris at our Georgetown office to place your order.

We appreciate your interest and hope to serve you soon.

Thank You,
Mark Miculis
National Account Executive
Phone: (270) 830-1306
Fax: (270) 826-1486

(See attached file: QUOTE LETTER---KY AM Water 3-01-06 DS.doc)

dshehee@kawc.com

03/01/2006 07:48

To

AM MMICULIS@brenntag.com

cc

DHuffstetler@brenntag.com,
KHARDISON@brenntag.com

Subject
Re: Fw:, Kentucky American Water,
Richmond KY-Sulfuric Acid 38% NSF

I haven't heard anything back on this yet. Are you going to be able to ship 55 gallon containers of NSF approved 38% Sulfuric Acid to our Northern Division plant? I received a MSDS, but it was for <51% Sulfuric Acid. Is there a MSDS for your 38%?

Thank you for your assistance.

David Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, KY 40515
Phone (859) 335-3660
Fax (859) 335-3388
dshehee@kawc.com

MMICULIS@brenntag.com

To: dshehee@kawc.com

cc:
KHARDISON@brenntag.com, DHuffstetler@brenntag.com

02/27/2006 02:20 PM

Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

David

We make this up to your specification. It is not an off the shelf product, so if you have a specifc specification advise and we can take it from there and get you back the detail.

We appreciate your interest.

Thank You,
Mark Miculis

National Account Executive
Phone: (270) 830-1306
Fax: (270) 826-1486

dshehee@kawc.com

02/27/2006 01:19 PM

To: MMICULIS@brenntag.com

cc:

Subject: Re: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

Do you sell it both ways?

David Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, KY 40515
Phone (859) 335-3660
Fax (859) 335-3388
dshehee@kawc.com

MMICULIS@brenntag.com

To: dshehee@kawc.com

cc: KHARDISON@brenntag.com, BBOSAW@brenntag.com

02/27/2006 02:14 PM

Subject: Fw:, Kentucky American Water, Richmond KY-Sulfuric Acid 38% NSF

David

Is the material you are looking for 38% by weight or volume.

Thank You,
Mark Miculis
National Account Executive

Phone: (270) 830-1306
Fax: (270) 826-1486
----- Forwarded by Mark A Miculis/Mid-South/Brenntag on 02/27/2006 01:08 PM -----

Donna J Huffstetler/Mid-South/Brenntag
02/27/2006 09:06 AM

To: Mark A Miculis/Mid-South/Brenntag@Brenntag
cc:
Subject: Fw: Georgetown Branch, Kentucky American Water, Richmond KY

Mark,

Can you please take care of this?

Cd

Donna J. Huffstetler
Customer Service Representative
Brenntag Mid-South, Inc., Georgetown, Ky
Ph: 800-876-2874 Fax: 502-863-2903
E-mail Address: dhuffstetler@brenntag.com
----- Forwarded by Donna J Huffstetler/Mid-South/Brenntag on 02/27/2006 10:05 AM -----

dshehee@kawc.com
02/27/2006 09:56 AM

To: DHuffstetler@brenntag.com
cc:
Subject: Re: Georgetown Branch, Kentucky American Water, Richmond KY

Donna,

I need a price for 55 gallon drums of the 38% NSF approved Sulfuric Acid. We are going to try this product at our plant as soon as we can set up a

PO. We likely would start out with about 12 drums.

Thanks,

David Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, KY 40515
Phone (859) 335-3660
Fax (859) 335-3388
dshehee@kawc.com

DHuffstetler@brenntag.com

02/03/2006 06:16 PM

To: dshehee@kawc.com

cc:

Subject: Re: Georgetown Branch, Kentucky American Water, Richmond KY

David, I do have more info for you on this. Sorry that I haven't passed it on already, but I have been waiting on input from a few other people. I will try to get it all together for you by the first of the week.

Donna J. Huffstetler
Customer Service Representative
Brenntag Mid-South, Inc., Georgetown, Ky
Ph: 800-876-2874 Fax: 502-863-2903
E-mail Address: dhuffstetler@brenntag.com

Boyd Bosaw/Mid-South/Brenntag

02/03/2006 06:09 PM

To: dshehee@kawc.com

cc: DHuffstetler@brenntag.com

Subject: Re: Georgetown Branch, Kentucky American Water, Richmond KY (Document link: Donna J Huffstetler)

David,
Anything on the engineering and mechanical end involving pumps and tanks I will be the best one to help you.
Also I can help you with chemical compatibility & equipment specifications.

To get more information on availability of the 38% material and how it is packaged you will need to follow up with
Donna at our Georgetown Branch Office or one our sales people.

If you have any further questions on the engineering side of the equation please send me an e-mail or
give me a call and I will be happy to assist you.

Thanks,
Boyd

dshehee@kawc.com

02/03/2006 04:48 PM

To: BBOSAW@brenntag.com
cc: rbuchana@kawc.com
Subject: Re: Georgetown Branch, Kentucky American Water, Richmond KY

Thanks so much. Can you provide the same type of information on you 38% product. Does it come in containers that can be offloaded with a hand fork-lift? What are our options there?

David Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, KY 40515
Phone (859) 335-3660
Fax (859) 335-3388
dshehee@kawc.com

BBOSAW@brenntag.com

To: dshehee@kawc.com
cc: DHuffstetler@brenntag.com

02/02/2006 04:17 Subject: Georgetown Branch, Kentucky American Water, Richmond KY
PM

David,
Was unable to contact you today by phone so I will provide you with some info as to what type of bulk storage
you can use to store 93% NSF certified material.

HOLDING TANK for 93% SULFURIC ACID:

First the only plastic tank manufacture I know which is NSF certified is Poly Processing. You can visit their
website at www.polyprocessing.com and pick out a tank with drawings. It will show the dia. and height of
each tank.

Tanks will range from 30 gallon to 15,000 gallon. However, a tank designed for heavy sulfuric acid will need
to have the following design and can not exceed 5,000 gallon.

1) Material of Construction: HDXLPE (High Density Crossed-Linked Polyethylene) do not use a linear crossed
linked tank.

2) You will also need to include an OR-1000 lining when using the tanks for heavy sulfuric like (93%).

3) Next you will want to specify a tank which has an IMFO bottom full drain outlet. Incase you ever want to
work on this tank you will want to make sure it can be fully drained.

4) If product is transferred by air you will need to specify a 4" tank vent. Which should be vented outside

5) You will also need a dike designed to contain 110% of the largest tank in the dike.

6) If you are bulk unloading acid you will need either a water source or safety shower located with-in 25 feet of
the truck unloading station.

7) You will need a 4-bolt flange connection for BULK deliveries of the acid to your location with a 2" pipe diameter.

8) If you are only transloading acid from totes or drums you will need to consider the proper method to transfer
acid to the bulk container that best fits you situation safely. Please call and we can discuss.

If you have any further questions please call me direct.y at my office (270-830-1203).

Thanks,

Boyd Bosaw

Brenntag Mid-South
Corporate Projects Manager
Henderson KY.

(See attached file: QUOTE LETTER---KY AM Water 3-01-06 DS.doc)(See attached file: QUOTE LETTER---KY AM Water 3-01-06 DS.doc)
(See attached file: QUOTE LETTER---KY AM Water 3-01-06 DS.doc)(See attached file: pic31060.jpg)(See attached file: QUOTE LETTER---KY AM Water 3-01-06 DS.doc) QUOTE LETTER--KY AM Water 3-10-07 DS Update.doc pic31060.jpg

QUOTE LETTER--KY AM Water 3-01-06 DS.doc
---- Forwarded by David Shehee/KAWC/AWWSC on 06/07/2007 03:58 PM ----

MFryman@brenntag.com
04/10/2007 03:29 PM

To David.Shehee@amwater.com
cc MMICULIS@brenntag.com
Subject Fw: Alum

David,

I said current cost but I meant to say the current price. Please excuse my incorrect verbiage.

Mary J. Fryman
Customer Service Representative
Brenntag Mid-South, Inc.
110 Carley Drive
Georgetown, KY 40324
Ph: 800-876-2874 Fax: 502-863-2903
E-mail: mfryman@brenntag.com

---- Forwarded by Mary J Fryman/Mid-South/Brenntag on 04/10/2007 03:27 PM ----

Mary J Fryman/Mid-South/Brenntag

04/10/2007 03:22 PM

To David.Shehee@amwater.com

cc MMICULIS@brenntag.com
Subject Re: AlumLink

David,

Mark had to leave for a meeting but he wanted me to answer your questions. So per Mark directions.

General Chemical Company is the supplier.
Yes, we have NSF approved 50% Alum in totes.
The current cost for a 603 lb. drum of Alum Liquid 50% Sol to Owenton, KY will be .2163/lb. delivered, with a $50/drum deposit and $37.50 fuel surcharge for each day's delivery.

If you need anything feel free to contact us.

Have a wonderful day!

Mary J. Fryman
Customer Service Representative
Brenntag Mid-South, Inc.
110 Carley Drive
Georgetown, KY 40324
Ph: 800-876-2874 Fax: 502-863-2903
E-mail: mfryman@brenntag.com

David.Shehee@amwater.com

04/09/2007 09:21 AM

To MFryman@brenntag.com
cc MMICULIS@brenntag.com
Subject Alum

Would you please proved the following information.

Who your supplier for Alum?
Do you have 50% NSF approved Alum in totes?
What is the cost to deliver to our Northern Division Plant (in Owenton, KY)?

Thanks,

(Embedded image moved to file: pic15834.jpg) pic15834.jpg
---- Forwarded by David Shehee/KAWC/AWWSC on 06/07/2007 03:57 PM ----

Patricia A Allen
<pallen@nalco.com>
04/11/2007 04:33 PM

To David.Shehee@amwater.com
cc
Subject Re: 7190 PLUS

Absolutely can provide that information for the PolEZ 675 in 55 gallon drums.

Price is .94 per pound and will remain in effect until December 31, 2007. We also have a .025/lb temporary fuel energy surcharge that is being added
to every invoice. I have included the MSDS and the NSF certification for you also.

Also, what is the address that we would be shipping to? I'd like to check to see if your account is set up in our system. We have many American
Water locations.

Patti

NALCO
Patricia Allen
Municipal Inside Sales Representative
Office: 630-305-1531
Mobile: 815-557-4246
email: pallen@nalco.com

David.Shehee@amwater.com

04/11/2007 03:11 PM

To: pallen@nalco.com
cc:
Subject: Re: 7190 PLUS

Patricia,

Thank you for the information. Can you provide the same for Pol EZ 675?

Thanks,
(Embedded image moved to file: pic00542.jpg)

Patricia A Allen
<pallen@nalco.com
>
Subject: 7190 PLUS
04/11/2007 04:05
PM

To: david.shehee@amwater.com
cc:

David:

How are you today? I received your voicemail from Rick St Jules here at Nalco regarding the 7190Plus.

The price for these drums is $1.01 per pound including freight. We have also implemented a .025/lb fuel/energy surcharge
this is being aded temporarily to all invoices. I have included the MSDS and NSF certificate as you requested. Please contact
me directly when you are ready to place your first order. My contact information is listed below.

Should you have any questions or concerns on any of the information I have supplied you, please let me know.

Patti

(Embedded image moved to file: pic17537.gif)
Patricia Allen
Municipal Inside Sales Representative
Office: 630-305-1531
Mobile: 815-557-4246
email: pallen@nalco.com
(See attached file: MSDS 7190 PLUS.PDF)(See attached file: 3854_001.pdf)

pic00542.jpg has been removed from this note on April 11 2007 by Patricia A Allen
pic17537.gif has been removed from this note on April 11 2007 by Patricia A Allen
MSDS 7190 PLUS.PDF has been removed from this note on April 11 2007 by Patricia A Allen
3854_001.pdf has been removed from this note on April 11 2007 by Patricia A Allen


MSDSPOLEZ675.PDF


3855_001.pdf

BRENNTAG

March 11, 2007

Mr. David Shehee
Water Quality Supervisor
Kentucky American Water Company
6300 Cedar Creek Lane
Lexington, KY 40515

Dear David:

Pricing is up slightly due to freight and raw material cost changes since this time last year. Confirming your request, I am providing an update on the requirement discussed as follows

Sulfuric Acid 38.5% NSF (#647328)
566# Net Weight Returnable Drum $ .19/lb

Drum Deposit $50.00/each

FOB—Delivered-Owen County, KY
Terms-Net 30 days

We have available at our Tampa branch, which we can ship to our Georgetown location for stock or shipment. Please allow seven to ten days for processing and normal transit, however if you need immediately we can ship directly from Tampa to your location, via common carrier plus freight on the above quote. Pricing is based on 12 drum shipments. If this a spot requirement please keep in mind the lead time required, however if this is going to be on going we will stock the material in Georgetown for your release. A fuel surcharge of $37.50 will apply (adjusted quarterly) on Brenntag deliveries. If you elect to have the product shipped immediately via common carrier, the policies of the carrier would apply including freight and applicable fuel surcharges.

Thanks again for your confidence in Brenntag as we look forward to working with you on this new product. If you should have any questions or need any other information call me at your convenience.

Sincerely,

Mark A. Miculis
Account Manager

Cc Donna Huffstetler
Chris Dawson

Brenntag Mid-South, Inc.
1405 Highway 136 West (42420)
PO Box 20
Henderson, KY 42419-0020

BRENNTAG

March 1, 2006

Mr. David Shehee
Water Quality Supervisor
Kentucky American Water Company
6300 Cedar Creek Lane
Lexington, KY 40515

Dear David:

Confirming our conversation, I am providing an update on the requirement discussed as follows:

Sulfuric Acid 38.5% NSF (#647328)
566# Net Weight Returnable Drum $ .18/lb

Drum Deposit $50.00/each

FOB—Delivered-Lexington KY
Terms-Net 30 days

We have available at our Tampa branch, which we can ship to our Georgetown location for stock or shipment. Please allow seven days for normal transit, however if you need immediately we can ship directly from Tampa to your location, via common carrier plus freight on the above quote. Pricing is based on 12 drum shipments. If this a spot requirement please keep in mind the lead time required, however if this is going to be on going we will stock the material in Georgetown for your release. Fuel surcharge and other fees would apply.

Thanks again for your confidence in Brenntag as we look forward to working with you on this new product. If you should have any questions or need any other information call me at your convenience.

Sincerely,

Mark A. Miculis
Account Manager

Cc Donna Huffstetler
Chris Dawson

Brenntag Mid-South, Inc.
1405 Highway 136 West (42420)
PO Box 20
Henderson, KY 42419-0020

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

POL-E-Z® 675

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **POL-E-Z® 675**

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 1 / 2 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Straight Run Middle Distillate	64741-44-2	15.0 - 40.0
Ammonium Chloride	12125-02-9	1.0 - 5.0

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause skin and eye irritation.
Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. Water in contact with the product will cause slippery floor conditions. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia (NH4) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
Can cause mild to moderate irritation.

SKIN CONTACT :
Can cause mild to moderate irritation.

INGESTION :
Not a likely route of exposure. There may be irritation to the gastro-intestinal tract with nausea and vomiting.

INHALATION :
Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :
Acute :
A review of available data does not identify any symptoms from exposure not previously mentioned.
Chronic :
Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

AGGRAVATION OF EXISTING CONDITIONS :
Skin contact may aggravate an existing dermatitis condition.

4. FIRST AID MEASURES

EYE CONTACT :
Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :
Remove contaminated clothing. Wash off affected area immediately with soap and plenty of water. If symptoms develop, seek medical advice.

INGESTION :
Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT :	> 212 °F / > 100 °C (PMCC)
LOWER EXPLOSION LIMIT :	No data available.
UPPER EXPLOSION LIMIT :	No data available.

EXTINGUISHING MEDIA :
Foam, Dry powder, Carbon dioxide, Other extinguishing agent suitable for Class B fires
Use extinguishing media appropriate for surrounding fire.

UNSUITABLE EXTINGUISHING MEDIA :
Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia (NH4) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Notify appropriate government, occupational health and safety and environmental authorities. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :
Do not take internally. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Avoid eye and skin contact.

STORAGE CONDITIONS :
Store separately from oxidizers. Store the containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)	
Oil Mist	TWA: 5 mg/m3 STEL: 10 mg/m3

Ammonium Chloride	TWA: 10 mg/m3 STEL: 20 mg/m3

OSHA/PEL :
Substance(s)

Oil Mist	TWA: 5 mg/m3 STEL: 10 mg/m3
Ammonium Chloride	TWA: 10 mg/m3 STEL: 20 mg/m3

ENGINEERING MEASURES :
General ventilation is recommended.

RESPIRATORY PROTECTION :
Due to its low volatility and toxicity, the hazard potential associated with this material is relatively low. Respiratory protection is not normally needed.

HAND PROTECTION :
Nitrile gloves, PVC gloves

SKIN PROTECTION :
Wear standard protective clothing.

EYE PROTECTION :
Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :
Keep an eye wash fountain available. Keep a safety shower available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Off-white
ODOR	Hydrocarbon

SPECIFIC GRAVITY	1.01 - 1.07 @ 77 °F / 25 °C
SOLUBILITY IN WATER	Emulsifiable
FREEZING POINT	23 °F / -5 °C
VOC CONTENT	22.0 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

POL-E-Z® 675

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Freezing temperatures.

MATERIALS TO AVOID :
Addition of water results in gelling. Contact with strong oxidizers (e g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon, Oxides of nitrogen, ammonia

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

No toxicity studies have been conducted on this product. The following results are for a similar product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	470 mg/l	Similar Product

Rating : Essentially non-toxic

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

POL-E-Z® 675

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X Immediate (Acute) Health Hazard

Delayed (Chronic) Health Hazard
Fire Hazard
Sudden Release of Pressure Hazard
Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

NSF INTERNATIONAL :
This product has received NSF/International certification under ANSI/NSF Standard 60 in the coagulation and flocculation category. The official name is "Polymer Blends." Maximum product application dosage is : 3.5 mg/l.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
This product contains the following substances listed in the regulation:

Substance(s)	Citations
• Ammonium Chloride	Sec. 311

CLEAN AIR ACT, Sec 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
The following substances are disclosed for compliance with State Right to Know Laws:

Ammonium Chloride	12125-02-9
Straight Run Middle Distillate	64741-44-2

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

POL-E-Z® 675

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

WHMIS CLASSIFICATION :
D2B - Materials Causing Other Toxic Effects - Toxic Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

NALCO

MATERIAL SAFETY DATA SHEET

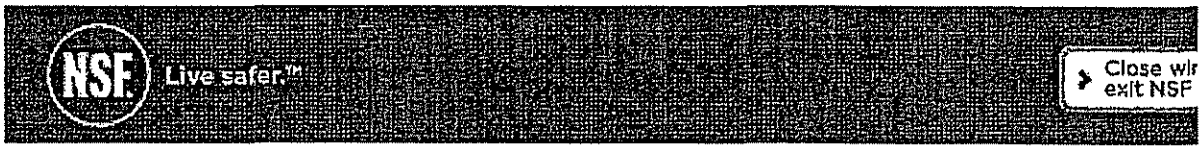
PRODUCT

POL-E-Z® 675

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Prepared By : Product Safety Department
Date issued : 02/11/2005
Version Number : 1.8



NSF Product and Service Listings

These Listings were Last Updated on **Wednesday, April 11, 2007** at 4:15 AM Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Warning: NSF is concerned about fraudulent downloading and manipulation of website text. If you have received this listing in hard copy, always confirm this certification/listing information by going directly to http://www.nsf.com/Certified/PwsChemicals/Listings.asp?CompanyName=NALCO&TradeName=Pol%2DE%2DZ+675&PlantCountry=UNITED+STATES& for the latest most accurate information.

NSF/ANSI STANDARD 60
Drinking Water Treatment Chemicals - Health Effects

NALCO COMPANY

1601 WEST DIEHL ROAD
NAPERVILLE, IL 60563-1198
630-305-1000

Facility : #140 USA

Polyacrylamide [PC]

Trade Designation	*Product Function*	*Max Use*
Pol-E-Z 675	Coagulation & Flocculation	3.5 mg/L

[1] These products are designed to be flushed out prior to using the system for drinking water. The well is to be properly flushed and drained before being placed in service.
[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Number of matching Manufacturers is 1
Number of matching Products is 1
Processing time was 0 seconds

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Linda Bridwell/KAWC/AWWSC
06/07/2007 10:16 PM

To Debbie Mireault/KAWC/AWWSC@AWW
cc
bcc
Subject Fw: Question 18

Can you print all of this including attachments and let me review?

Linda Bridwell, PE
Project Delivery & Developer Services Manager - WV, KY TN
Southeast Region
2300 Richmond Road
Lexington, KY 40502
Tel: 859-268-6373
Fax: 859-268-6374

---- Forwarded by Linda Bridwell/KAWC/AWWSC on 06/07/2007 10:19 PM ----

David Shehee/KAWC/AWWSC
06/07/2007 03:48 PM

To Linda Bridwell/KAWC/AWWSC@AWW
cc
Subject Question 18

Linda,

Here are some conversations re: Question 18. I will send more.

David B. Shehee
Water Quality Supervisor
Kentucky American Water
6300 Cedarcreek Lane
Lexington, Kentucky 40515
(859) 335-3660 office
(859) 335-3388 fax
david.shehee@amwater.com
---- Forwarded by David Shehee/KAWC/AWWSC on 06/07/2007 03:51 PM ----

"Ralph Coast" <coast@AppliedSpecialties.com>
04/19/2007 11:53 AM

To <dshehee@kawc.com>
cc "Mark Rininger" <rininger@AppliedSpecialties.com>
Subject AS2814/AS1430

David,

Please find attached my proposal for subject treatment. If you have any questions do not hesitate to call me.

Regards,

Ralph Coast
Applied Specialties Inc.
724-752-6652 office/fax
724-944-0625 cell

Proposal-Owenton,KY.doc Jar Test Results - Owenton,KY.xls AS-1430PW.pdf AS-1430PW PDS New.pdf AS-2814.pdf AS-2814N.pdf

—— Forwarded by David Shehee/KAWC/AWWSC on 06/07/2007 03:51 PM ——

"Ralph Coast" <coast@AppliedSpecialties.com>
04/28/2007 09:12 AM

To <david.shehee@amwater.com>
cc
Subject AS2814 Bulk Pricing

David,

Per your request, pricing for a 3000 gallon bulk delivery of AS2814 is $0.36 per pound, delivered. If fuel cost should decrease a few cents then we can adjust pricing.
I hope this helps and should you have any questions please give me a call.

Regards
Ralph Coast
Applied Specialties Inc.
724-752-6652 office/fax
724-944-0625 cell
coast@appliedspecialties.com

—— Forwarded by David Shehee/KAWC/AWWSC on 06/07/2007 03:51 PM ——

"Ralph Coast" <coast@AppliedSpecialties.com>
05/02/2007 02:55 PM

To <David.Shehee@amwater.com>
cc
Subject RE: AS1430PW

David,

Per your request, pricing for subject polymer is $1.26 per pound, delivered. A 55-gallon drum weighs 450 pounds.
For the plant trial we can give you a 5-gallon pail or two at no charge.

Also, the contract you mentioned the other day should be completed and sent to Gerry Coyne by the end of today. If not today, tommorow.

Thanks
Ralph

From: David.Shehee@amwater.com [mailto:David.Shehee@amwater.com]
Sent: Mon 4/30/2007 9:50 AM
To: Ralph Coast
Subject: AS1430PW

Ralph,

Can you provide me a cost for 55 gallon drums of this?

Thanks,
(Embedded image moved to file: pic27098.jpg)

Applied Specialties, Inc.

Kentucky American Water Co.
2300 Richmond Road
Lexington, KY 40502

April 19, 2007

Attn: Mr. David Shehee
Water Quality Specialist

Dear David,

This letter is in regard to our visit to the Owenton, KY treatment plant on April 17, 2007. The purpose of our visit was to evaluate Applied Specialties' ferric chloride / polymer blends in an effort to improve treatment.

With the plant currently running ferric chloride at approximately 1500 wet pounds per million gallons, this places a significant sludge loading on the ClariCone unit. Observation of the ClariCone indicated that the sludge blanket is too high in the unit causing carryover of the floc which is affecting the filters.

Jar tests were conducted by first screening several variations of the ferric blends and selecting the one that provided the optimum performance. The product of choice is AS2814. Please see the attached jar test data sheet for specific results such as settled water turbidity and pH. As you see in the results, the AS2814 performed at a significantly lower dosage than the current treatment. To further evaluate the performance of AS2814 I recommend a full-scale plant trial be conducted. I feel confident that in a short time period you will se results that will overall treatability.

Pricing for the AS2814 in a 55-gallon drum is $0.55 per pound, delivered. This pricing is for **Trial Purposes Only.** You ask if Applied Specialties would provide eight drums at no charge for a trial. It is our company policy that we can not provide any chemical greater than a five gallon pail at no charge. I hope you understand that if each sales person gave away this type of volume it at no charge it would drive the company straight into the ground. Keep in mind that not all trials are a success.

We will provide a five-gallon pail of AS1430PW anionic emulsion at no charge. The AS1430PW was used as settling aid in the jar tests.

I have attached the Product Bulletins and MSDS for the AS2814 and AS1430PW for review and file.

33555 Pin Oak Parkway Avon Lake, OH 44012 Ph: (440) 933-9442 Fax: (440) 933-9439 www.appliedspecialties.com

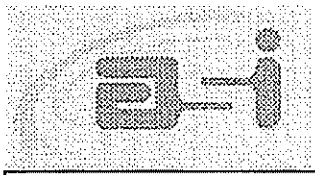
Applied Specialties, Inc.

I or Eric will contact you the week of 4/23/07 to discuss the next plan of action. However, if you have any questions please do not hesitate to contact me or Eric. Thank you for the opportunity to demonstrate our products and we look forward to working with in the future.

Sincerely,

Ralph Coast
Applied Specialties Inc.
724-752-6652 office/fax
724-944-625 cell
coast@appliedspecialties.com

Eric Rininger
Applied Specialties Inc.
330-670-9628 office/fax
330-697-5566 cell
rininger.eric@appliedspecialties.com



Jar Test Results

										Water Treatment	X
										Process Treatment	
										Waste Treatment	
Company				Company's Product				Date		Pages	
KY American Water Co.				Ferric Chloride				4/17/2007			
Plant Location								Jar Test Done By			
Owenton,KY								R. Coast / E. Rininger			
Present Treatment	Product 1		ppm	Product 2		ppm	Product 3		ppm		
	Ferric Chloride			Nalco 7766=							
Flow	Sample Source		pH	Temperature	Raw NTU		Color		Other		
1.5	Raw Water				25						
Treatment System											
Jart Test Procedure	Rapid Mix. Min. RPM.				Slow Mix. Min. RPM.			Setting Min.		Sample Size	
	1 min. @ 120 rpm				10 mins. @ 40 rpm			15 mins. @ 0 rpm			
Test No.	Product 1	ppm	Product 2	ppm	Product 3	ppm	Floc Size 1-10	Settled NTU	Clarity 1-10	pH	Comments
1	AS2814	20	AS1430	.3			5	4.77	8	7.26	
2	AS2814	25	AS1430	.3			7	3.59	9	7.19	
3	AS2814	30	AS1430	.3			8	3.33	9	7.07	
4	AS2814	35	AS1430	.3			8	2.53	10	7.06	
5	AS2814	40	AS1430	.3			9	2.33	10	7.05	
6	AS2814	50	AS1430	.3			10	1.97	10	7.03	
7											
8											
9	Plant Settled							3.05			
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Comments:

Applied Specialties, Inc.
33555 Pin Oak Parkway
Avon Lake, Ohio 44012

AS-1430PW

050771430PW-2
March 18, 2005
Telephone (440) 933-9442
Emergency: (216) 973-6118

MATERIAL SAFETY DATA

SECTION 1 MATERIAL IDENTIFICATION

NSF certified with a maximum use for potable water of 1.0 mg/L.

PRODUCT NAME **AS-1430PW**
SYNONYMS Anionic Water-Soluble Polymer in Emulsion

SECTION 2 INGREDIENTS AND HAZARDS

COMPONENT	CAS. NUMBER	TWA/CEILING	REFERENCE

Emergency Overview: Milky, viscous Liquid, Hydrocarbon Odor. Caution! Spills Are Extremely Slippery.

SECTION 3 ENVIRONMENTAL INFORMATION

TSCA STATUS All components are listed
CERCLA REPORTABLE QUANTITY Not Listed

SARA TITLE III:
SECTION 302 (EXTREMELY HAZARDOUS SUBSTANCE) Not Listed
SECTION 311/312 (HAZARDOUS SUBSTANCES)
Classification Under Section 311/312 of SARA (40 CFR 370): Acute (No) Chronic (No) Fire (No) Reactive (No) Pressure (No)
SECTION 313 (TOXIC CHEMICALS): Not Listed.
RCRA STATUS Not Listed.
NTP, IARC, OSHA & ACGIH STATUS None of the ingredients are listed.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

HEALTH - 1 FIRE - 1 REACTIVITY - 0

0 MINIMAL
1 SLIGHT HAZARD
2 MODERATE HAZARD
3 SERIOUS HAZARD
4 SEVERE HAZARD

Chemical identity of some ingredients may be withheld as confidential as permitted by 29 CFR 1910.1200 and various State right to know laws.

Applied Specialties, Inc.
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AS-1430PW

050771430PW-2
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SECTION 4 HEALTH HAZARD AND PROTECTION DATA

TARGET ORGANS

Eyes Skin

ROUTES OF ENTRY INTO BODY

Skin Or Eye Contact

SIGNS AND SYMPTOMS OF EXPOSURE

LD_{50} / oral/rat >5000 mg/kg
Product Is Not Expected To Be Toxic In Contact With The Skin Or By Inhalation
May Cause Eye Irritation With Susceptible Persons May Cause Skin Irritation With Susceptible Persons
Prolonged Skin Contact May Defat The Skin And Produce Dermatitis

PROTECTIVE EQUIPMENT REQUIRED:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Synthetic rubber gloves should be worn when handling this material. Wear chemical goggles, a face shield and chemical resistant clothing such as a rubber apron where splashing may occur. Provide a safety shower and eye wash station at any location where skin/eye contact can occur. Wash skin thoroughly after handling. Clothing wet with product should be placed in a closed container until provisions are made for it to be discarded or laundered. If the clothing is to be laundered the person performing the laundering should be informed of the hazardous properties of the material. Any clothing that becomes wet with the material should be removed immediately and not reworn until the clothing has been properly cleaned. RESPIRATOR SELECTION - Use only in well-ventilated areas. Where exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. ESCAPE & FIRE FIGHTING - Self-contained breathing apparatus with a face-piece operated in pressure demand or other positive-pressure mode.

FIRST AID

SKIN CONTACT: Skin that becomes contaminated should be washed or showered with soap and water to remove any chemical from skin. Contaminated clothing should be removed and wash the skin with soap and water. Clothing should be washed before it is reused. If irritation is present, get medical attention.

EYE CONTACT: If material gets into the eyes, flush the eyes immediately with large amounts of water for at least 30 minutes, lifting the lower and upper lids occasionally. Get **MEDICAL** attention immediately. Contact lenses should not be worn when working with this substance or any other chemical.

INHALATION: If a person breathes in large amounts of product mist, move the person to fresh air. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get **MEDICAL** attention as soon as possible.

INGESTION: DO NOT induce vomiting. Get **MEDICAL** attention at once. Aspiration of petroleum distillates may cause chemical pneumonitis. Never give anything by mouth to an unconscious person.

Applied Specialties, Inc.
33555 Pin Oak Parkway
Avon Lake, Ohio 44012

AS-1430PW

050771430PW-2
March 18, 2005
Telephone (440) 933-9442
Emergency: (216) 973-6118

SECTION 5 PHYSICAL DESCRIPTION

APPEARANCE AND ODOR	Milky, viscous liquid; slight or mild hydrocarbon odor.
BOILING POINT	~ 100 ° C (~212 ° F)
MELTING POINT	Not applicable
FLASH POINT	Does not flash
VAPOR PRESSURE	Not determined
SPECIFIC GRAVITY	1.030 +/- 0.02 g/ml
PRODUCT pH (at 5g/L)	6.00 – 8.00 standard pH units
SOLUBILITY IN WATER	Approximately 0.50 % (limited by viscosity)

SECTION 6 INCOMPATIBILITIES AND STORAGE

Hazardous polymerization will not occur
Keep away from sources of ignition
Incompatible with oxidizing materials.
Hazardous decomposition products include carbon dioxide, carbon monoxide, oxides of nitrogen.
Addition of water to product in storage can cause emulsion failure.
Keep containers closed when not in use
Store containers with labels visible

SECTION 7 REGULATIONS/OSHA

OSHA Standard 29 CFR 1910.1200	HAZARD COMMUNICATION
OSHA Standard 29 CFR 1910.1000	AIR CONTAMINANTS Table Z-1
OSHA Standard 29 CFR 1910.94	VENTILATION
OSHA Standard 29 CFR 1910.134	RESPIRATORY PROTECTION
OSHA Standard 29 CFR 1910.20	ACCESS TO EMPLOYEE EXPOSURE
OSHA Standard 29 CFR 1910.132	PERSONAL PROTECTIVE EQUIPMENT
OSHA Standard 29 CFR 1910.141	SANITATION
OSHA Standard 29 CFR 1910.151	MEDICAL SERVICES AND FIRST AID
OSHA Standard 29 CFR 1910.133	EYE AND FACE PROTECTION

SECTION 8 EMERGENCY HANDLING OF HAZARDOUS MATERIALS

IF MATERIAL IS ON FIRE OR INVOLVED IN FIRE:
Use water spray, CO_2 , or dry chemical extinguishers or agents suitable for surrounding fire.

IF MATERIAL IS NOT ON FIRE OR NOT INVOLVED IN FIRE:
Keep material out of water sources and sewers.

PERSONAL DANGER SITUATION PROTECTION:
Keep upwind. Avoid breathing dust/vapors/fumes from material. Avoid bodily contact with material. Wear boots, protective gloves and gas-tight goggles. Wear full protective clothing (regular FIRE FIGHTERS' gear is inadequate).

Applied Specialties, Inc.
33555 Pin Oak Parkway
Avon Lake, Ohio 44012

AS-1430PW

050771430PW-2
March 18, 2005
Telephone (440) 933-9442
Emergency: (216) 973-6118

SECTION 9 SPILL, LEAK AND DISPOSAL PROCEDURES

Persons not wearing protective equipment and clothing should be restricted from spill areas until clean-up has been completed. If AS-1430PW is spilled, take the following steps:

1 - Ventilate the spill area. Eliminate sources of ignition.
2 - Collect spilled material using an approved explosion-proof liquid vacuum.
3 - Apply an absorbing compound to any residual material and shovel into a disposal drum.
4 - Discard any vacuumed material and the absorbent material in accordance to all FEDERAL, STATE, AND LOCAL REGULATIONS.

NOTE: DO NOT wash or pour AS-1430PW into any surface waters or streams or directly into sewers.

SECTION 10 SHIPPING AND TRANSPORTATION DATA

PROPER SHIPPING NAME	Resin Compound, Petroleum Hydrocarbon Polymer
HAZARD CLASS	Not Regulated
IDENTIFICATION NUMBER	NMFC 46032
LABEL REQUIRED	None

Helvia A. Garcia-Muñoz

Applied Specialties, Inc.
33555 Pin Oak Parkway
Avon Lake, Ohio 44012

AS-1430PW

050771430PW-2
March 18, 2005
Telephone (440) 933-9442
Emergency: (216) 973-6118

PENNSYLVANIA and MASSACHUSETTS RIGHT-TO-KNOW INFORMATION:

The following comprises the CHEMICAL IDENTIFICATION LIST

	CAS #	
2-Propenamide	79-06-1	Listed. Environmental Hazard.

NEW JERSEY RIGHT-TO-KNOW TOTAL INGREDIENTS LABEL:

	CAS #
2-Propenamide	79-06-1

CALIFORNIA PROPOSITION 65:

This product does contain toxic chemicals currently on the California list of known carcinogens and reproductive toxins

Pursuant to the California Safe Drinking Water and Toxic Enforcement Act of 1986 (proposition 65), this information is provided. This law requires that " clear and reasonable warning " be provided to any individual, knowingly or intentionally exposed to any substances identified by the state as being cancer or reproductive hazards unless, it can be shown that the exposure poses "no significant risk". Based on available data, the following chemicals listed by Proposition 65 may be present in this product:

2-Propenamide	79-06-1	TRACE

Applied Specialties, Inc.
Product Technical Data Sheet

AS-1430PW

TYPE: ANIONIC POLYMER
NSF CERTIFIED

DESCRIPTION

AS-1430PW is a high molecular weight, low charge density anionic polyacryl-amide. **AS-1430PW** is supplied as a low viscosity, milky-white water-in-oil emulsion. **AS-1430PW** is an acrylic/acrylamide copolymer which generally performs in the pH range 4.5-12.0.

TYPICAL PROPERTIES

Appearance	Milky-white emulsion
Density @ 80°F	8.7 +/- .1 Lbs./Gal.
Viscosity @ 80°F	1200 CPS
Activity	30%
Charge Density	30%
Freeze Point	25°F

HEALTH AND SAFETY INFORMATION

As with any chemical, the operator should be completely familiar with the safe handling of **AS-1430PW** before it is used. The **Material Safety Data Sheet** should be read and understood before **AS-1430PW** is used.

ADVANTAGES

The unique polymer properties of **AS-1430PW** make it an excellent choice for a variety of municipal and industrial applications including:

- Plate & Frame Filter Presses
- Vacuum filter operation
- Belt press operation
- Sludge Dewatering
- Demulsification
- Gravity settling
- Air flotation
- Centrifuging

NSF INTERNATIONAL STATUS

AS-1430PW coagulant is certified to ANSI/NSF Standard 60 by NSF for use in potable water to a maximum concentration of 1 mg/L.

APPLICATION

AS-1430PW is an anionic flocculant which is very effective in many liquid-solid separation processes. The product has been found to be particularly effective for municipal and industrial thickening and clarification operations. **AS-1430PW** has also shown utility as a flocculant for dewatering processes.

CONTROL AND FEEDING

AS-1430PW may be fed neat using a proper sized ASI Emulsion Feed System. **AS-1430PW** may also be diluted with clean water and fed.

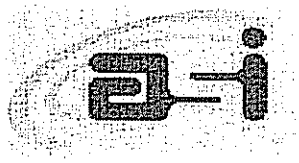
Application dosage may vary, but your Applied Specialties, Inc. Technical Engineer will assist you with an on-site test to determine what is optimum for your system. Your ASI Engineer will also assist you in identifying the best application point and assist in sizing and selecting any necessary feed or control equipment.

A stock solution of up to 1% concentration (as **AS-1430PW**) may be prepared by adding **AS-1430PW** to the appropriate quantity of agitated water. Subsequent dilution to 0.1 or 0.2% should maximize performance in most cases.

A stock solution should not be stored more than 24 hours, as deterioration in performance can occur. NOTE: Water should never be added to a water-in-oil emulsion--as a difficult to dissolve gel will form.

2/98

Applied Specialties, Inc.
33555 Pin Oak Parkway, Avon Lake, OH 44012
Phone: (440) 933-9442 / Fax (440) 933-9439



Applied Specialties, Inc.
Product Technical Data Sheet

AS-1430PW

TYPE: ANIONIC POLYMER
NSF CERTIFIED

HANDLING AND STORAGE

AS-1430PW has a low hazard value and is relatively non-toxic. When handling any chemical, proper care and good housekeeping should be exercised.

Spills of **AS-1430PW** are very slippery and should be cleaned up immediately. Because **AS-1430PW** is difficult to "hose down" spills should be "scooped up" as much as possible. The remaining thin film may be absorbed with a solid material such as sweeping compound or alternatively, the area may be hosed down after most of the polymer has been picked up.

Consult the Material Safety Data Sheet for specific spill reporting, clean up and disposal procedures.

AS-1430PW may be stored in glass, stainless steel, or plastic vessels. Plastic or epoxy lined containers are also suitable. Aluminum and iron equipment should not be used in storage or feed systems.

AS-1430PW should be stored at 40 to 90^{O}F. Short-term exposure to higher or lower temperatures will normally not harm the product. If frozen, **AS-1430PW** should be warmed to 40 to 90^{O}F and agitated prior to use.

The shelf life of **AS-1430PW** is at least six months. The product should be rotated to avoid excessive storage time. **AS-1430PW** will settle slightly on standing; an upper layer of clear oil will develop. Mild agitation will restore homogeneity.

If **AS-1430PW** freezes during shipment or storage, it may be thawed and used after agitation to insure homogeneity.

PACKAGING

AS-1430PW is available in 30 and 55 gallon non- returnable drums as well as 275 and 330 gallon non-returnable tote tanks and 300 gallon returnable tote tanks. **AS-1430PW** is also available in bulk tank trucks.

DOT INFORMATION

Proper Shipping Name: **RESIN COMPOUND, PETROLEUM HYDROCARBON POLYMER**

Hazard Class:	na
UN Number:	na
Packaging Group:	na
Labeling Required:	**None**
DOT RQ :	na
NMFC :	**46032**

IMPORTANT NOTICE

The information and statements herein are believed to be reliable, but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE. Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license.

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Applied Specialties, Inc.
33555 Pin Oak Parkway
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AS-2814

050952814-O
April 5, 2005
Telephone (440) 933-9442
Emergency: (216) 973-6118

MATERIAL SAFETY DATA

SECTION 1 MATERIAL IDENTIFICATION

NSF certified with a maximum use for potable water of 263 mg/L.

PRODUCT NAME OR SYNONYMS	AS-2814 COAGULANT AID

SECTION 2 INGREDIENTS AND HAZARDS

COMPONENT	CAS. NUMBER	%	TWA/CEILING	REFERENCE
Ferric Chloride	7705-08-0	<45%	1 mg/m^3 (as iron salts)	ACGIH
1,2-Ethanediamine, polymer with (chloromethyl) oxirane and N-methylmethanamine	42751-79-1		NOT ESTABLISHED	

Emergency Overview: Dark red-brown liquid; sharp odor. DANGER! Corrosive. Causes burns to eyes, skin and all tissues. Harmful if inhaled.

SECTION 3 ENVIRONMENTAL INFORMATION

OSHA STATUS This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard
TSCA STATUS All components are listed
CERCLA REPORTABLE QUANTITY Ferric Chloride - 1,000 Pounds

SARA TITLE III:
SECTION 302 (EXTREMELY HAZARDOUS SUBSTANCE) None
Section 311/312 (Hazardous Substances)
Classification Under Section 311/312 Of Sara (40 CFR 370): Acute (Yes) Chronic (Yes) Fire (No) Reactive (Yes) Pressure (No)

SECTION 313 (TOXIC CHEMICALS) None

RCRA STATUS RCRA hazardous based on pH (D002). Empty containers are also hazardous and should be handled accordingly
NTP, OSHA, ACGIH & IARC STATUS None of the ingredients are listed.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

HEALTH - 3 FIRE - 0 REACTIVITY - 1

0 MINIMAL
1 SLIGHT HAZARD
2 MODERATE HAZARD
3 SERIOUS HAZARD
4 SEVERE HAZARD

Chemical identity of some ingredients may be withheld as confidential as permitted by 29 CFR 1910.1200 and various State right to know laws.

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SECTION 4 HEALTH HAZARD AND PROTECTION DATA

TARGET ORGANS
Eyes Skin Gastrointestinal System Respiratory System Mucous Membranes

ROUTES OF ENTRY INTO BODY
Inhalation Ingestion Skin Or Eye Contact

SIGNS AND SYMPTOMS OF EXPOSURE
Severe Irritation And Burns Of Eyes And May Result In Permanent Visual Loss Unless Removed Quickly By Thorough Irrigation With Water. Irritation And Burns Of Skin. Burns Of Mucous Membranes, Gastrointestinal Tract. Irritation Of Respiratory Tract
Ingestion May Cause Severe Liver And/Or Kidney Damage, And May Be Fatal.

PROTECTIVE EQUIPMENT REQUIRED:
Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Synthetic rubber gloves should be worn when handling this material. Wear chemical goggles, a face shield and chemical resistant clothing such as a rubber apron where splashing may occur. Provide a safety shower and eye wash station at any location where skin/eye contact can occur. Wash skin thoroughly after handling. Clothing wet with product should be placed in a closed container until provisions are made for it to be discarded or laundered. If the clothing is to be laundered the person performing the laundering should be informed of the hazardous properties of the material. Any clothing that becomes wet with the material should be removed immediately and not reworn until the clothing has been properly cleaned. RESPIRATOR SELECTION - Use only with adequate ventilation. Airborne concentrations should be kept to the lowest levels possible by mechanical means. If vapor or mist is generated and the permissible exposure limit of the product or any component of the product is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown. ESCAPE & FIRE FIGHTING - Self-contained breathing apparatus with a face-piece operated in pressure demand or other positive-pressure mode.

FIRST AID
NOTE: Speed in removing product from eyes and skin is of utmost importance.

SKIN CONTACT: Skin that becomes contaminated should be washed or showered with large amounts of water to remove any chemical from skin. Contaminated clothing should be removed and wash the skin with soap and water. Clothing should be washed before it is reused. **Get medical attention immediately**. Safety showers and eye wash stations should be available in work areas.

EYE CONTACT: If material gets into the eyes, flush the eyes immediately with large amounts of water for at least 30 minutes, lifting the lower and upper lids occasionally. Get **MEDICAL** attention immediately. Contact lenses should not be worn when working with this substance or any other chemical. Eye wash and showers should be available in work areas

INHALATION: If a person breathes in large amounts of product mist, move the person to fresh air. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

INGESTION: If conscious, give large quantities of water or milk of magnesia. **Do not induce Vomiting**. **Get medical attention immediately**. Never give anything by mouth to an unconscious person.

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SECTION 5 PHYSICAL DESCRIPTION

APPEARANCE AND ODOR	Dark red-brown liquid; sharp odor.
BOILING POINT	Not determined
MELTING POINT	Not applicable
FLASH POINT	Not applicable
VAPOR PRESSURE	Not determined
SPECIFIC GRAVITY	1.41 +/- 0.02 g/ml
PRODUCT pH	<1.00 standard pH units
SOLUBILITY IN WATER	Complete

SECTION 6 INCOMPATIBILITIES AND STORAGE

Stable
Hazardous Polymerization will Not Occur
Incompatibility: Most Metals - Aluminum/Aluminum Alloys, Carbon Steel, Copper/Copper Alloys, And Nylon. Avoid Contact With Alkaline Materials. Do Not Store In Metal Containers. Provide Venting For Rubber-Lined Steel To Avoid Pressure Build-Up If Failure Occurs.
May React With Metals And Generate Hydrogen. Avoid Pressure Build-Up Or Ignition Sources.
May Release Hydrogen Chloride Gas At Elevated Temperatures.
Store Containers With Labels Visible

SECTION 7 REGULATIONS/OSHA

OSHA Standard 29 CFR 1910.1200	HAZARD COMMUNICATION
OSHA Standard 29 CFR 1910.1000	AIR CONTAMINANTS Table Z-1
OSHA Standard 29 CFR 1910.94	VENTILATION
OSHA Standard 29 CFR 1910.134	RESPIRATORY PROTECTION
OSHA Standard 29 CFR 1910.20	ACCESS TO EMPLOYEE EXPOSURE
OSHA Standard 29 CFR 1910.132	PERSONAL PROTECTIVE EQUIPMENT
OSHA Standard 29 CFR 1910.141	SANITATION
OSHA Standard 29 CFR 1910.151	MEDICAL SERVICES AND FIRST AID
OSHA Standard 29 CFR 1910.133	EYE AND FACE PROTECTION

SECTION 8 EMERGENCY HANDLING OF HAZARDOUS MATERIALS

IF MATERIAL IS ON FIRE OR INVOLVED IN FIRE:
Use water in flooding quantities as a fog. Use water spray, fog, foam, dry chemical, carbon dioxide CO_2 or dry chemical extinguishers or any agents suitable for surrounding fire. Keep drums cool. Closed containers may heat above the boiling point and rupture violently. During fire, irritating and toxic gases of hydrogen chloride may be generated by thermal decomposition.

IF MATERIAL IS NOT ON FIRE OR NOT INVOLVED IN FIRE:
Keep material out of water sources and sewers. Contain and collect.

PERSONAL DANGER SITUATION PROTECTION:
Keep upwind. Avoid breathing dust/vapors/fumes from material. Avoid bodily contact with material. Wear boots, protective gloves and gas-tight goggles. Wear full protective clothing (regular FIRE FIGHTERS' gear is inadequate).

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SECTION 9 SPILL, LEAK AND DISPOSAL PROCEDURES

Persons not wearing protective equipment and clothing should be restricted from spill areas until clean-up has been completed. If AS-2814 is spilled, take the following steps:

1. Ventilate the spill area and confine spill if possible.
2. Neutralize with lime, limestone, or soda ash. Soda ash and limestone generate CO_2 requiring ventilation.
3. Shovel into an approved disposal drum.
4. Discard any unusable material, the absorbant material and container in accordance to all FEDERAL, STATE AND LOCAL REGULATIONS. AS-2814 is RCRA Regulated as a corrosive #D002.
5. Spills on dirt, sand, etc. may be handled by removing the affected solids and placing in approved containers. HANDLE, STORE, TRANSPORT AND DISPOSE OF ALL MATERIALS IN ACCORDANCE WITH ALL EPA & HEALTH REGULATIONS. Ferric chloride has an RQ under CERCLA of 1,000 pounds. Report spills to the appropriate authorities.

NOTE: DO NOT wash or pour AS-2814 into any surface waters or streams or directly into sewers.

SECTION 10 SHIPPING AND TRANSPORTATION DATA

PROPER SHIPPING NAME	Corrosive Liquid, Acidic, Inorganic, N.O.S., (Ferric Chloride)
HAZARD CLASS	8
IDENTIFICATION NUMBER	UN 3264
PACKAGING GROUP	II
LABEL REQUIRED	Corrosive

RQ FERRIC CHLORIDE 1000 POUNDS. SPILLS OVER 198.9 GALLONS ARE REPORTABLE TO NRC @ 1-800-424-8802 AND STATE & LOCAL AUTHORITIES IMMEDIATELY DUE TO REPORTABLE QUANTITY OF FERRIC CHLORIDE (RQ 1000 POUNDS).

H. García-Muñoz

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PENNSYLVANIA RIGHT-TO-KNOW INFORMATION

The following materials are listed as ENVIRONMENTAL HAZARDS under PENNSYLVANIA RIGHT-TO-KNOW:

Ferric chloride	CAS# 7705-08-0

Applied Specialties, Inc.
Product Technical Data Sheet

AS-2814

TYPE: LIQUID, COAGULANT
NSF CERTIFIED

DESCRIPTION

AS-2814 is a high charge low molecular weight cationic polymer/inorganic coagulant blend. It is supplied as a liquid with a low viscosity.

TYPICAL PROPERTIES

Appearance	Clear, dark red liquid with sharp odor
pH	<1 Standard pH units
Boiling Point	Not determined
Melting Point	Not determined
Specific Gravity	1.41 +/- 0.020 grams/ml
Solubility in Water	Complete

HEALTH & SAFETY INFORMATION

As with any chemical, the operator should be completely familiar with the safe handling of **AS-2814** before it is used. **The Material Safety Data Sheet** should be read and understood before **AS-2814** is used.

NSF INTERNATIONAL STATUS

AS-2814 coagulant is certified to ANSI/NSF Standard 60 by NSF for use in potable water to a maximum concentration of 263 mg/L.

ADVANTAGES

- Easy to apply, pourable liquid which simplifies dilution, feed and handling operations.
- Economical to use - effective at low dosage levels. Added savings can be realized in bulk deliveries.
- Effective over a wide pH range and eliminates the need for post-treatment pH adjustment.
- Eliminates or reduces lime demand when used as a primary coagulant.
- Forms a low volume, compact, high solids sludge for easy disposal.
- Effective in clarification of low turbidity, high color waters.

APPLICATION

AS-2814 is designed for use in both industrial and municipal applications to improve the efficiency of solids/water separation process. **AS-2814** is an effective primary coagulant to reduce carry over and increase sludge density.

Other uses of **AS-2814** include conditioning of waste water sludges prior to vacuum filtration or centrifugation, clarification of latex waste water, and demulsification of dispersed and emulsified oils and greases.

04-05

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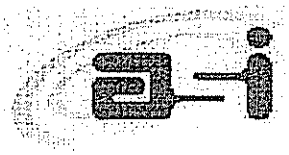

Applied Specialties, Inc.
Product Technical Data Sheet

AS-2814

TYPE: LIQUID, COAGULANT
NSF CERTIFIED

CONTROL & FEEDING

Feed rate of **AS-2814** can range from 2 to 500 ppm. **AS-2814** can be used as a neat product or diluted with clean water as much as 3:1. Use an appropriately sized chemical feed pump suitable for low pH solutions.

Application dosage may vary, but your Applied Specialties, Inc. Technical Engineer will assist you with an on-site test to determine what is optimum for your system. You ASI Engineer will also assist you in identifying the best application point and assist in sizing and selecting any necessary feed or control equipment.

HANDLING AND STORAGE

When handling any chemical, proper care and good housekeeping should be exercised. Consult the Material Safety Data Sheet for specific spill reporting, clean up and disposal procedures.

The shelf life of **AS-2814** is 6 – 9 months. The product should be rotated to avoid excessive storage time.

AS-2814 should be stored at 40 to 90°F. Short term exposure to higher or lower temperatures will normally not harm the product. If frozen, **AS-2814** should be warmed and agitated prior to use.

PACKAGING

AS-2814 is available in 30 gallon and 55 gallon drums as well as 275 and 300 gallon totes. **AS-2814** is also available in bulk tank trailers. For information on other delivery types, contact your ASI Representative.

DOT INFORMATION

Proper Shipping Name: **CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (FERRIC CHLORIDE)**
Hazard Class: **8**
UN Number: **UN 3264**
Packaging Group: **II**
Labeling Required: **CORROSIVE**
DOT RQ : **Ferric Chloride 1,000 lbs**

IMPORTANT NOTICE

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KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 19 of 80

Witness: Linda Bridwell/Sheila Miller

19. Refer to Kentucky-American's Response to Commission Staff's First Set of Information Requests, Item 1(a), W/P3, pages 56 through 65. Provide the calculations and state all assumptions used to derived the chemical usages

Response:

Chemical usage calculations are included for Kentucky River Station, Richmond Road Station, and Northern Division. Chemical usages are based upon 30-year historical rainfalls (included), 5-year historical turbidity data (included), historical usage (included), source usage (i.e., which source for RRS and Northern Division and pumpage), benchtop testing, and online analyzers. Historical rainfall, turbidity data, usage, and source usage are critical for chemicals such as coagulants (primary and secondary), taste and odor chemicals (i.e., potassium permanganate and carbon), reservoir management chemicals (i.e., copper sulfate) and those used to adjust pH (i.e., caustic soda). Historical usage is beneficial for chemicals used for disinfection (i.e., chlorine and ammonia) and corrosion control (zinc orthophosphate) as their usage remains fairly consistent. Anticipated treatment changes (e.g., turning ammonia off and raising corrosion inhibitor during flushing) also are taken into account when projecting the budget.

For electronic version, refer to KAW_R_PSCDR2#19_061807.pdf

Kentucky American Water
PSC DR 2 Question 19

RICHMOND ROAD STATION

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb
	3.34	4.27	46.3	3.27	2.23	64.5	4.41	3.49	64	3.67	3.47	48.3	4.78	2.64	60.5	4.58	2.28	77.6	4.8	3.05	46.6	3.77	6.1	37.4	3.11	0.89	23.3	2.7	0.93	18.1	3.44	1.77	22.1			49.6
Estimated Feed Rate	400			500			500			400			500			600			400			350			250			250			250			400		

KENTUCKY RIVER STATION

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb	30 yr Avg Rain	2005 Rain	5-yr Turb
	3.34	4.27	51.7	3.27	2.23	79.6	4.41	3.49	61.1	3.67	3.47	39.4	4.78	2.64	66.7	4.58	2.28	95.8	4.8	3.05	51.2	3.77	6.1	47.6	3.11	0.89	38.4	2.7	0.93	22.7	3.44	1.77	29			65.5
Estimated Feed Rate	325			400			350			200			350			450			250			250			200			150			150			350		

RICHMOND ROAD STATION				5-year averages								
LINE 11 - (FORM 168) - CHEMICALS												
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG
FERRIC CHLORIDE	93.7	51.4	0.0	0.0	0	0.0	0.0	4.2	4.1	25.8	1.8	0.0
POLYALUMINUM CHLORIDE	425.4	369.8	576.3	356.0	532	425.9	347.6	395.2	363.2	344.6	420.2	435.2
CHLORINE	56.7	50.2	55.5	61.0	64	67.7	70.9	74.9	67.0	61.8	60.6	50.1
FLUORIDE	35.1	31.4	31.9	32.5	34	36.9	37.4	38.1	47.6	35.7	38.4	33.9
POWDERED CARBON	1.1	0.9	0.3	0.7	8	2.6	4.0	2.0	5.2	1.6	1.9	1.4
COPPER SULFATE	3.5	0.0	3.7	0.0	17	0.0	15.7	2.2	5.9	0.0	3.2	7.9
POLYMERS-1	15.5	12.8	14.7	18.2	21	15.8	16.9	15.9	23.8	16.6	19.3	17.7
CORROSION INHIBITOR	29.1	25.3	22.4	26.5	28	29.6	26.9	27.0	31.9	28.4	32.3	28.2
SODIUM CHLORIDE	5.8	5.5	6.5	5.1	5	7.3	5.9	3.9	7.0	5.1	3.6	5.5
AMMONIA	7.8	6.5	12.3	4.9	8	11.1	6.0	20.2	14.3	7.9	9.1	5.6
CAUSTIC SODA	65.3	42.4	34.5	27.6	25	69.2	53.6	54.7	68.7	40.9	33.3	20.4
POT. PERMANGANATE	2.4	1.7	0.8	2.3	3	0.6	0.4	1.7	4.8	1.2	2.3	2.3
POLYMERS - 2	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
TOTAL	744.3	602.6	766.1	538.6	751	670.0	588.6	643.5	649.7	576.3	629.0	611.5

KENTUCKY RIVER STATION				5-year averages								
LINE 11 - (FORM 168) - CHEMICALS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG
ALUM	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CORROSION INHIBITOR	26.0	24.9	27.3	25.7	25	21.5	29.1	26.2	25.4	27.5	25.4	34.8
CHLORINE	48.8	47.0	48.9	49.2	49	53.8	57.7	62.7	61.5	53.5	50.4	44.2
FLUORIDE	33.3	32.9	34.8	32.6	32	38.9	41.1	37.2	39.0	37.1	33.1	38.5
POWDERED CARBON	0.0	0.0	0.0	0.0	0	2.5	3.1	0.0	0.0	0.0	0.0	0.0
POLYMERS-1	20.1	20.2	20.2	19.3	19	18.1	20.9	21.3	22.4	22.4	20.6	18.2
SODIUM CHLORIDE	2.3	3.0	2.2	1.7	2	1.9	2.0	2.1	2.8	2.7	2.5	3.6
AMMONIA	7.5	10.4	9.0	8.2	7	7.1	7.7	9.7	8.0	9.5	8.7	8.0
CAUSTIC SODA	24.0	15.8	27.8	32.4	31	43.4	42.7	48.5	52.1	41.7	21.1	18.0
POT. PERMANGANATE	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POLYMERS - 2	2.2	2.1	2.1	1.3	2	1.7	1.6	1.6	1.9	2.1	2.7	1.9
FERRIC CHLORIDE	33.6	5.9	5.7	20.6	7	13.5	26.0	65.3	87.2	80.9	48.7	53.8
POLYALUMINUM CHLORIDE	401.8	318.5	391.1	323.6	395	366.9	307.9	278.1	346.1	322.8	374.2	350.0
TOTAL	624.0	507.0	595.3	541.4	597	605.0	575.4	578.3	677.8	627.4	620.6	608.5

TOTAL COMPANY				5-year averages								
LINE 11 - (FORM 168) - CHEMICALS												
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG	LBS/MG
SODIUM THIOSULFATE	18.1	19.5	20.8	20.5	23	27.5	26.9	19.4	24.4	20.9	24.3	26.7
POLYALUMINUM CHLORIDE	408.7	334.1	442.4	332.1	429	381.5	318.3	309.2	350.5	329.1	387.6	376.2
ALUM	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIME, HYDRATED	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHLORINE	51.1	48.0	50.8	52.3	53	57.2	61.1	66.0	63.0	55.9	53.4	46.0
FLUORIDE	33.8	32.4	34.0	32.6	33	38.4	40.2	37.5	41.2	36.7	34.6	37.1
POWDERED CARBON	0.3	0.3	0.1	0.2	2	2.5	3.3	0.5	1.4	0.5	0.6	0.4
COPPER SULFATE	1.0	0.0	1.0	0.0	4	0.0	4.1	0.6	1.6	0.0	0.9	2.4
POLYMERS-1	18.8	18.0	18.6	19.0	19	17.5	19.9	19.9	22.8	20.7	20.2	18.1
LIME, PEBBLE	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SODIUM CHLORIDE	3.3	3.8	3.4	2.6	3	3.3	3.0	2.6	3.9	3.4	2.8	4.2
AMMONIA	7.6	9.2	9.9	7.3	7	8.1	7.3	12.5	9.7	9.0	8.8	7.3
CAUSTIC SODA	36.0	23.9	29.7	31.1	29	49.7	45.6	50.1	56.4	41.5	24.6	18.7
POT. PERMANGANATE	0.7	0.5	0.2	0.6	1	0.1	0.1	0.4	1.2	0.4	0.7	0.7
POLYMERS - 2	1.5	1.5	1.5	1.0	1	1.2	1.2	1.2	1.5	1.5	1.9	1.3
FERRIC CHLORIDE	51.0	19.8	4.1	15.2	5	10.2	19.2	49.1	65.5	64.8	35.0	37.3
SLUDGE POLYMER	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2	0.4	0.3	0.3	0.2
CORROSION INHIBITOR	26.9	25.0	25.9	25.9	26	23.5	28.6	26.5	27.1	27.8	27.4	32.8
TOTAL	658.9	536.1	642.7	540.7	635	621.1	578.9	595.6	670.4	612.5	623.0	609.4

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 20 of 80

Witness: Linda C. Bridwell

20. Refer to Kentucky-American's Response to Commission Staff's First Set of Information Requests, Item 1(a), W/P3, page 66.

a. For each Kentucky-American water treatment facility, list the dates in the previous 10 years that the facility was cleaned, the cost of each cleaning, and the amortization period that Kentucky-American used for each cleaning.

b. Provide all documents upon which Kentucky-American used to derive the actual waste disposal cost for KRS of $202,500.

c. Provide all documents that contain a description of the services that comprise the actual waste disposal cost of KRS of $202,500.

d. For the entries "2007 Cleaning RRS," "KRS Waste Disposal Current," and "RRS Waste Disposal Current," explain what each entry represents and describe how each entry was determined.

Response:

a. KAW has cleaned the sludge lagoons at the Kentucky River Station in November, 1999 for $120,000, amortized over 24 months, in November 2001 for $144,000, amortized over 24 months and December 2006 for $202,500, amortized over 24 months in the forecasted period. The Richmond Road Station Lake Ellerslie and sedimentation basins were cleaned in August 2002 for $87,572.11 and June 2005 for $69,564.96. These were not amortized.

b. See the attached invoice and contract.

c. See the attachment for b. above.

d. "2007 Cleaning RRS" is the proposed residuals cleaning of Lake Ellerslie at Richmond Road Station near the supernatant discharge point scheduled for July 2007. "KRS Waste Disposal Current" and "RRS Waste Disposal Current" are the forecasted monthly expenditures for waste disposal at each facility including chemicals, power and disposal costs.

For electronic version, refer to KAW_R_PSCDR2#20_061807.pdf

C. B. Construction Company

P.O. Box 965
233 East French Ave.
Burnside, Kentucky 42519
(606) 561-9963

Kentucky American Water Co.
2300 Richmond Road
Lexington, KY 40502

12-21-06 RCVD 0014

ATTN: Mr. Joe White

DATE: December 11, 2006

INVOICE #121106

JOB: Sludge Lagoons

CONTRACT PRICE	$200,000.00
ADDITIONAL WORK Weedeating & trimming	2,500.00
PREVIOUS BILLING	-0-
THIS BILLING WORK 100% COMPLETE	202,500.00
BALANCE ON CONTRACT	-0-

TOTAL AMOUNT OF THIS INVOICE $202,500.00

Joe White

~~170250~~. 120205 186444 50113439.W T131
OK To PAY
Signature

Maintenance Work Order No _____

SERVICE AGREEMENT

THIS AGREEMENT made this _____day of Oct, 2006 between C. B. CONSTRUCTION COMPANY of 233 East French Avenue, Burnside, Kentucky 42519 (hereinafter called CONTRACTOR) and KENTUCKY-AMERICAN WATER COMPANY, a Kentucky corporation with its principal place of business at 2300 Richmond Road, Lexington, Kentucky 40502 (hereinafter called WATER COMPANY).

WITNESSETH AS FOLLOWS:

1. CONTRACTOR agrees, in consideration of the mutual promises herein contained, that he will perform all of the work which is to include providing all of the labor, tools, materials, and equipment necessary to perform the following (hereinafter called WORK):

   CONTRACTOR will furnish labor and equipment to remove sludge from the four (4) lagoons at WATER COMPANY's Kentucky River Station. Before beginning removal, CONTRACTOR will rework the storage area to handle the sludge from the lagoons. To make room for the wet sludge, CONTRACTOR will haul 1,200 truck loads of the dried sludge from the storage area and spread, seed and straw the storage area. CONTRACTOR must keep excessive sludge off of the roadways at all times in order to keep the road to the Floral Cliff Nature Sanctuary open. When removal of the dried sludge is completed, CONTRACTOR will clear all sludge from roadways and regravel all gravel roads. Final payment will not be paid until all equipment is removed from WATER COMPANY property.

2. The CONTRACTOR agrees that he will commence the WORK within seven calendar days after being notified by WATER COMPANY to do so.

3. The WATER COMPANY agrees to pay and the CONTRACTOR agrees to accept for said WORK the following prices: ***$200,000.00 (Two hundred thousand dollars and 00/100).***

4. It is understood that the CONTRACTOR is thoroughly familiar with the location where the WORK is to be done and conditions which will, in any way, affect its cost; that he is familiar with the amount and location of all materials to be utilized in accomplishing the WORK; and that he will make no claim whatever for extra compensation with respect to such matters, all such claims for extra compensation being hereby expressly waived.

5. It is agreed that the CONTRACTOR is an independent contractor and not an agent for WATER COMPANY.

Maintenance Work Order No. ___ ___ ___ ___ ___ ___

6. The CONTRACTOR will not, without prior written consent of the WATER COMPANY, assign, sublet or transfer in whole or in part, any of CONTRACTOR'S interest or rights or any moneys due or to become due under this AGREEMENT; and a merger, sale of substantially all of the assets or sale of control through stock ownership shall be considered an assignment or transfer for the purposes of this paragraph.

7. Should any of the WORK be sublet by the CONTRACTOR, as provided in Section 6 above, nothing contained in the subcontract shall create any contractual relation between the WATER COMPANY and any such subcontractor.

8. The CONTRACTOR hereby accepts exclusive liability for and shall hold the WATER COMPANY harmless from all payroll taxes or contributions for unemployment insurance, or old age pensions, or annuities, measured by wages, salaries or other remuneration paid to employees of said CONTRACTOR

9. Prior to final payment and as a condition precedent thereto, the CONTRACTOR and all other suppliers of materials, services, transportation, equipment or labor shall execute and deliver to the WATER COMPANY their releases on forms supplied by the WATER COMPANY, of all claims or liens or material supplied or labor performed under or by virtue of this AGREEMENT.

10. INDEMNIFICATION:

a) CONTRACTOR shall indemnify and hold harmless WATER COMPANY and its affiliated companies, agents and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the WORK, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the WORK itself) including the loss of use resulting therefrom and (ii) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder

(b) In any and all claims against WATER COMPANY or any of its agents or employees by any employee of CONTRACTOR, subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any

Maintenance Work Order No. _____

of them may be liable, the indemnification obligation under subparagraph (a) shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable to or for CONTRACTOR or any subcontractor under Workers' Compensation acts, disability benefit acts or other employee benefit acts.

(c) Any provision of this paragraph in respect of indemnification which is prohibited or unenforceable by law in the State in which the WORK, or other performance described in this AGREEMENT, is sited shall not invalidate the remaining provisions of this paragraph or this AGREEMENT.

11. INSURANCE:

(a) The CONTRACTOR shall submit with this signed AGREEMENT two (2) copies of a "Certificate of Insurance." The certificates are to be completed by the CONTRACTOR'S insurance carrier(s) and signed by an authorized agent(s) of the insurance company(s). The CONTRACTOR shall not commence any work under this AGREEMENT until such "Certificate of Insurance" is in the hands of and approved by the WATER COMPANY.

(b) Workers' Compensation and Employer's Liability Insurance: The CONTRACTOR shall carry Workers' Compensation Insurance during the life of this AGREEMENT to insure his statutory liability to his employees in the State in which the WORK under this AGREEMENT is to be performed plus not less than $100,000 Employer's Liability Insurance coverage.

(c) Comprehensive General Liability and Property Damage: The CONTRACTOR shall carry the Comprehensive Form of General liability and Property Damage Insurance during the life of this AGREEMENT covering the risks itemized in the form for "Certificate of Insurance" provided for in this AGREEMENT. The limits shall be not less than $500,000/$1,000,000 for bodily injury and $100,000/$500,000 for property damage.

(d) Comprehensive Automobile Liability and Property Damage: The CONTRACTOR shall carry the Comprehensive Form of Automobile Liability and Property Damage Insurance during the life of this AGREEMENT covering the risks itemized in the form for "Certificate of Insurance" provided for in this AGREEMENT. The limits shall be not less than $500,000/$1,000,000 for bodily injury and $100,000 for property damage.

Fax

Kentucky American Water

To: Sheila Miller
Company: AWSC
Fax: 304-353-6332
Pages: 16

From: Mary Ellen Pugh for Dillard Griffin
Company: Ky American Water
Phone: 859-335-3425
Fax:
Date: 6-11-07

SUBJECT: In Ref to PSC #16

American Water
2300 Richmond Road
Lexington, KY 40502
T +1 859 269 [illegible]
F +1 859 268 [illegible]
I www.amwater.com

RWE GROUP

Maintenance Work Order No _____

(e) Umbrella and/or Excess Liability: The CONTRACTOR shall carry umbrella and/or excess liability insurance during the life of this AGREEMENT covering the risk involved in subparagraph (c) and (d) above with a combined single limit which shall be not less than $1,000,000.

12. American Water Works Company, Inc. and its affiliates including WATER COMPANY, are complying with the requirements of Executive Order 11246 of September 24, 1965 and the regulations, orders and rules promulgated thereunder as amended. These requirements (See 41 CFR Section 60-2.21 (b) (2)) make it mandatory that we incorporate the provisions of Equal Employment Opportunity into the terms and conditions of each nonexempt purchase order or contract which exceeds $10,000 and annually obtain a Certification of Nonsegrated Facilities from all suppliers prior to the award of any nonexempt purchase order or contract. CONTRACTOR'S acceptance of this AGREEMENT constitutes a material representation that it will supply any necessary certificates relating to the above and its compliance with the provisions of Equal Employment Opportunity.

13. CONTRACTOR agrees to comply with the requirements of the Occupational Safety and Health Standards 29 CFR Part 1910. CONTRACTOR further agrees to comply with any and all safety rules and regulations required by the WATER COMPANY.

14. HAZARDOUS MATERIALS AT JOB SITE:

In accordance with the intent of the Federal Occupational Safety and Health Administration Standard Section 29CFR-1910.1200, Hazard Communication with effective date of May 25, 1986, and Standard Section 29CFR-1910.119, Process Safety Management of Highly Hazardous Chemicals (effective May 26, 1992), the WATER COMPANY hereby notifies the CONTRACTOR, work is to be performed on company property where the CONTRACTOR'S employees may be exposed to hazardous materials existing on the premises. Chemicals known to be used or stored by the WATER COMPANY include the following:

Liquid Chlorine	Calcium Hydroxide Hydrated Lime)
Liquid Alum	Calcium Oxide (Pebble Lime)
Hydrofluosilicic Acid	Potassium Permanganate
Powdered Activated Carbon	Liquid Caustic Soda
Ammonia	Various laboratory reagent
Copper Sulfate	Polymers
Ferric Chloride	Polyaluminum Chloride
Zinc Orthophosphate	

Material Safety Data Sheets are available at the WATER COMPANY for all chemicals. CONTRACTOR acknowledges that this information is furnished in compliance with the Hazard Communication Standard and further accepts that it is the CONTRACTOR's responsibility to notify its employees of the location and hazards of working around hazardous chemicals. The WATER COMPANY agrees to notify the CONTRACTOR of any release and/or spill which may affect the health and safety of its employees. It is the CONTRACTOR's responsibility to notify the WATER COMPANY of any chemicals which the CONTRACTOR may bring onto WATER COMPANY property. It is further the responsibility of the CONTRACTOR to notify the WATER COMPANY of any release and/or spill which may affect the safety or health of WATER COMPANY employees.

15. CONTRACTOR will provide certification to the WATER COMPANY which will indicate that its confined space program complies with the requirements as outlined in OSHA 29 CFR 1910.146. When confined space work is to be performed on WATER COMPANY property, the CONTRACTOR agrees to follow the guidelines listed in 29 CFR 1910.146 and further to coordinate any confined space work which may involve WATER COMPANY employees with the WATER COMPANY representative responsible for the work. The CONTRACTOR must provide its own equipment necessary to work safely in a confined space. At no time will the CONTRACTOR be allowed to utilize WATER COMPANY equipment for the purpose of safely entering and/or working in a confined space environment.

16. HARASSMENT COMPLAINTS:

It is the policy of the WATER COMPANY to provide and maintain a work environment free of discord related to matters which do not pertain to company business, especially disparaging ethnic or religious remarks and unwelcome sexual advances, requests for sexual favors or other verbal or physical conduct of a sexual nature. An investigation of all complaints of the above-described conduct will be made immediately. The CONTRACTOR must understand that this type of behavior will not be tolerated. Any CONTRACTOR who permits this type of behavior to exist while working on behalf of the WATER COMPANY may subject itself to legal action against the CONTRACTOR and its responsible employees. The actions may subsequently lead to termination of this and future agreements between the WATER COMPANY and the CONTRACTOR.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be duly executed, the day and year first above written.

Maintenance Work Order No _____

WITNESS:

KENTUCKY-AMERICAN WATER COMPANY

By _____
Nick O. Rowe
President

WITNESS:

C. B. CONSTRUCTION COMPANY

C.B. Const. Co
By _____
(Signature)

William Christopher
(Print or type name)

Owner
(Title/Position)

Approved By:

_____
Director of Loss Control

Maintenance Work Order No. _____

RELEASE OF LIENS

PRIME CONTRACTOR

WHEREAS, we, the undersigned, have installed or furnished labor, materials and/or equipment for _____ pursuant to a written agreement dated _____, 2006 between KENTUCKY-AMERICAN WATER COMPANY (hereinafter referred to as the WATER COMPANY) and C. B. CONSTRUCTION COMPANY (hereinafter referred to as the CONTRACTOR), which said facilities are owned by the WATER COMPANY and described and located as follows:

WHEREAS, we, the undersigned, have agreed to release any and all claims and liens which we have, or might have, against the WATER COMPANY, or said facilities by reason of the labor, materials and equipment furnished by us in connection with said installation;

NOW THESE PRESENTS WITNESS that we, the undersigned, in consideration of the premises, and of the sum of One Dollar ($1.00) in hand paid by the said WATER COMPANY, at and before the sealing and delivery hereof, the receipt whereof we do hereby acknowledge, have remised, released and forever quitclaimed, and by these presents do remise, release and forever quitclaim, unto the said WATER COMPANY, its successors and assigns, any and all manner of liens, claims and demands whatsoever which we now have, or might or could have, on or against the said facilities, or the owner thereof, for work done, or for equipment or materials furnished in connection with the installation thereof. It is the intent of this release that the WATER COMPANY, its successors and assigns shall and may hold, have, use and enjoy the said facilities free and discharged from all liens and demands whatsoever which we now have, or might have or could have against the same if these presents had not been made.

Maintenance Work Order No _____

IN WITNESS WHEREOF, we have hereunto set our hand and seal the day written opposite our signature.

Company Name _____ (SEAL)

By _____

Title _____

Dated_____, 2006

Sworn to and subscribed before me, a Notary Public, this _____ day of _____, 2006.

_____ (SEAL)
Notary Public

I, _____, duly authorized representative of _____, designated as CONTRACTOR, do hereby state that the parties whose names are signed to the attached releases, pages 1 through ____, are all of the parties who have furnished labor, materials or equipment in connection with the construction of the facilities mentioned above, excepting only such materials as may have been furnished by the WATER COMPANY.

Dated_____, 2006

_____
Representative's Signature

Sworn to and subscribed before me, a Notary Public, this _____ day of _____, 2006.

_____ (SEAL)
Notary Public

Maintenance Work Order No _____

RELEASE OF LIENS

SUBCONTRACTORS AND MATERIAL SUPPLIERS

WHEREAS, we, the undersigned, have installed or furnished labor, materials and/or equipment for the installation of _____ installed pursuant to a written agreement dated _____,2006 between the Kentucky-American Water Company, (hereinafter referred to as the WATER COMPANY and _____ (hereinafter referred to as the CONTRACTOR) which said facilities are owned by the WATER COMPANY and described and located as follows:

WHEREAS, we, the undersigned, have agreed to release any and all claims and liens which we have, or might have, against the WATER COMPANY or said facilities by reason of the labor, materials and equipment furnished by us in connection with said installation;

NOW THESE PRESENTS WITNESS that we, the undersigned, in consideration of the premises, and of the sum of One Dollar ($1.00) in hand paid by the said WATER COMPANY, at and before the sealing and delivery hereof, the receipt whereof we do hereby acknowledge, have remised, released and forever quitclaimed, and by these presents do remise, release and forever quitclaim, unto the said WATER COMPANY, its successors and assigns, any and all manner of liens, claims and demands whatsoever which we now have, or might or could have, on or against the said facilities, or the owner thereof, for work done, or for equipment or materials furnished in connection with the installation thereof. It is the intent of this release that the WATER COMPANY, its successors and assigns shall and may hold, have, use and enjoy the said facilities free and discharged from all liens and demands whatsoever which we now have, or might have or could have against the same if these presents had not been made. And we do further certify and acknowledge, that we have received of and from the said CONTRACTOR, payment in full on account of labor done or materials or equipment furnished for or in connection with said facilities.

Maintenance Work Order No _____

IN WITNESS WHEREOF, we have hereunto set our hand and seal the day written opposite our signature

Company Name _____ (SEAL)

By _____

Title _____

Dated _____, 2006

Sworn to and subscribed before me, a Notary Public, this _____ day of _____, 2006.

_____ (SEAL)
Notary Public

Maintenance Work Order No. _____

KENTUCKY-AMERICAN WATER COMPANY
2300 Richmond Road
Lexington, Kentucky 40502

CONTRACTOR CHEMICAL TRAINING

I, _____ of C. B. CONSTRUCTION COMPANY acknowledge that I have received information from KENTUCKY-AMERICAN WATER COMPANY (KAWC) concerning the hazards associated with chemicals on their property. A listing of these chemicals is also provided for me on Page 5 of my contract with KAWC. I understand that this information is being furnished me in compliance with the Hazard Communication Standard and it is my responsibility to inform my employees of these hazards.

Signed this the _____ day of _____, 2006.

KENTUCKY-AMERICAN WATER COMPANY **C. B. CONSTRUCTION COMPANY**

Joe White
(Representative)

C B Construction Co
William Clayton
(Representative)

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

COMMISSION STAFF'S SECOND SET OF INFORMATION REQUESTS

Item 21 of 80

Witness: Patrick Baryenbruch/Michael Miller

21. Refer to the Direct Testimony of Patrick Baryenbruch.

a. At page 3 of Exhibit PLB-1 of his testimony, Mr. Baryenbruch refers to monthly bills that the Service Company issues to the operating companies. Provide all of the monthly invoices that the Service Company issued to Kentucky-American for the calendar year ended 2006.

b. At page 3 of his testimony, Mr. Baryenbruch states: "KAWC transitioned to the Alton Call Center in October 2003 and to the Pensacola Call Center in June 2005." At page 21, however, he states that the Call Center is in Alton, Illinois.

(1) Identify the Call Center that Kentucky-American currently uses.

(2) If the response to Item 21(b)(1) is the Pensacola Call Center, explain why Kentucky-American switched call centers.

(3) If the response to Item 21(b)(1) is the Pensacola Call Center, provide a cost comparison of the call centers for the forecasted test period. Provide all workpapers, show all calculations, and state all assumptions used to prepare the comparison.

c. Refer to Exhibit PLB-1, page 7.

(1) List and describe each of the $733,724 of Service Company charges that was considered "non-recurring" and state the reason why Kentucky-American considers that charge as non-recurring.

(2) Explain the relevance of the statement "KAWC is not seeking recovery" of these charges considering the charges were incurred during the calendar year ended 2006 and Kentucky-American's forecasted test period used as a basis for rates in this case is the 12 months ended November 30, 2008.

(3) Mr. Baryenbruch states the "recoverable" amount of 2006 Service Company charges as $5,878,690. The forecasted income statement set forth in Kentucky-American's Application, Exhibit 37, Schedule C, page 7 of 55 lists Management Fees of $6,246,717. Reconcile these two amounts

and explain each difference in the charges comprising these amounts. This response should separately itemize the charges of each service company.

d. Refer to Exhibit PLB-1, Schedule 3. Provide for each service company directly assigning or allocating hours to Kentucky-American the job titles and/or classifications of employees that had hours assigned or allocated to Kentucky-American.

e. For each job title and/or classification set forth in Kentucky-American's Response to Item 21(d), provide:

(1) The minimum education, training, and experience necessary to hold the position.

(2) The 2006 pay rates and average payroll overhead costs for all employees holding the position. Show the calculation of the average payroll overhead costs.

(3) The number of hours allocated and directly assigned, stated separately, to Kentucky-American.

(4) The outside provider position included in Exhibit PLB-1 Schedules 5, 6, 7, and 8 that is the comparable position.

f. Refer to Exhibit PLB-1, page 3. List the services that AWWC's Corporate Office provides to American Water subsidiaries.

g. Refer to Exhibit PLB-1, Schedule 2. Provide all workpapers, show all calculations, and state all assumptions used to develop this Schedule. Provide clear and complete source document references.

h. Refer to Exhibit PLB-1, Schedule 3. Provide all workpapers, show all calculations, and state all assumptions used to develop this Schedule. Provide clear and complete source document references.

i. Refer to Exhibit PLB-1, Schedule 4. Provide all workpapers, show all calculations, and state all assumptions used to develop this Schedule. Provide clear and complete source document references.

j. Refer to Exhibit PLB-1, Schedule 5.

(1) Provide all pages of the Michigan Lawyers Weekly that Kentucky-American used to develop the Billing Rate Range.

(2) Explain why averaging the hourly rate of an associate and a partner is a reasonable method to calculate the billing rate of a Kentucky attorney.

k. Refer to Exhibit PLB-1, Schedule 6.

(1) Provide all relevant pages from "Operating Ratios For Management Consulting Firms, 2006 Edition."

(2) Explain how each of the percentages for "Typical Percent of Time Spent on a Consulting Project" was determined.

l. Refer to Exhibit PLB-1, Schedule 7.

(1) Provide all relevant pages from the American Institute of Certified Public Accountants' 2006 National PCPS/TSCPA Management of an Accounting Practice Survey.

(2) Explain how each of the percentages for "Typical Percent of Time Spent on an Accounting Assignment" was determined

m. Refer to Exhibit PLB-1, Schedule 8.

(1) Provide all documents and state all assumptions that were used to develop the average billing rates for Firm #1 and Firm #2.

(2) Explain how each of the percentages for "Typical Percent of Time on an Engineering Assignment" was determined

n. Refer to Exhibit PLB-1, page 18. Describe how Mr. Baryenbruch determined the "New Positions' Salary" level as $85,000 and 52 percent of this level as the cost of benefits associated with the new position. Provide all documents, show all calculations, and state all assumptions upon which Mr. Baryenbruch relied to reach his determination.

o. Refer to Exhibit PLB-1, page 19. Provide Belleville Lab survey results for 2005 and 2006.

p. Refer to Exhibit PLB-1, Schedule 9, page 1 of 2.

(1) For each listed item in "Labor," state whether the Call Center performs that task for Kentucky-American.

(2) For each listed item in "Materials and Expense," state whether the Call Center performs that task on behalf of Kentucky-American.

q. Refer to Exhibit PLB-1, page 24.

(1) State the source of "[e]lectric utility industry's avg calls/customer" of 2.5. Provide all documents used to derive this ratio.

(2) Provide all documents, show all calculations, and state all assumptions upon which Mr. Baryenbruch relied to reach his determination that American Water averages 1.28 calls per customer.

(3) Provide all documents, show all calculations, and state all assumptions upon which Mr. Baryenbruch relied to reach his determination of "Bank charge per item" of $0.1085.

(4) Kentucky-American incurs and reports on its income statement Customer Accounting Expense. The forecasted Customer Accounting Expense in this case is $1,461,534. Provide the analysis of this account for 2006 that was performed to determine that none of these expenses should be included in the calculation of the "2006 Cost Per Kentucky-American Customer" when comparing the amount to those FERC accounts included in the study.

r. Refer to Exhibit PLB-1, page 25. The least cost is $12.43 while the highest cost is $35.82, a difference of $23.39 or 188 percent.

(1) Describe the procedures used to verify that the costs included in the FERC Accounts 903 and 905 by each company listed in the comparison were appropriately classified and reported.

(2) Explain how, if Mr. Baryenbruch did not analyze the information to verify the nature of the amounts charged to these FERC Accounts, the comparison can be relied upon.

(3) Explain the large variance in the results of the comparison.

(4) Explain why, given the large variance in the results, the Commission should rely upon the study.

Response:

a. See the attached monthly invoices. For electronic file, refer to KAW_R_PSCDR2#21a_061807.pdf.

b. (1) Calls from KAWC customers can go to either call center, however, Alton is the primary call center for KAWC customer service. The call centers in Alton and Pensacola work in conjunction with one another and are under common management. The Pensacola call center was established primarily to handle the addition of the Elizabethtown Water Company

customer base. The Call Centers are fully integrated with one another and are designed to handle overflow calls from the other Call Center in times of heavy calls and to provide redundancy for the Call Center operations in case one of the Call Centers was unable to provide service for any number of reasons related to weather, natural disasters or other emergency situations.

(2) See the response to part b. (1) above.

(3) See the response to part b. (1) above. The cost of both Call Centers is combined and allocated to the AWW subsidiaries who receive service through the Call Centers.

c. (1) The $733,724 consists of the following one-time, nonrecurring costs relating that were eliminated from the 2006 Service Company charges because those costs are precluded from rate recovery by Commission Orders or due to the non-recurring nature of those expenses no rate recovery is being sought.

Condemnation Costs	- $ 13,333
STEP Project	- $ 25,151
Business Change	- $ 89,322
Divesture Related Costs	- $114,326
Sarbanes-Oxley Implementation	- $491,592
Total	- $733,724

(2) See the response to part c. (1) above.

(3) See the attached schedule. For electronic version, refer to KAW_R_PSCDR2#21c3_061807.pdf. The $5,878,690 represents the 2006 actual Service Company charges as adjusted for elements in part c. (1) above and the $6,246,717 represents the amount of Service Company charges included in the Company forecasted test-year for the twelve months ended November 2008.

d. See documents attached. Please refer to the following electronic files:
KAW_R_PSCDR2#21d_Part1_061807.pdf
KAW_R_PSCDR2#21d_Part2_061807.pdf
KAW_R_PSCDR2#21d_Part3_061807.pdf
KAW_R_PSCDR2#21d_Part4_061807.pdf
These documents consists of nearly 900 pages of information. The documents are sorted by Service Company Office, Department and employee and provide by month for 2006 the hours, dollars, and labor overheads charged to KAWC during 2006. The job title for each employee by department.

e. (1) The Company is assembling the applicable information for the hundreds of Service Company positions, but has not completed that task as of the

filing of this response. The requested information would be invaluable material to the Company's competitors and the Company will provide this information to the parties once completed and appropriate confidentiality agreements are executed.

(2) Please see the response to part d. above.

(3) The Company has not been able to complete the data sorting required to provide the information in the requested format in the time allocated to the responses to this request. The accounting system does not currently capture the requested data in a manner that is easily formated as requested. The Company will provide the requested information as soon as the data set is completed.

(4) Mr. Baryenbrunch obtains the information used in his study by department in order to compare those functions to outside providers. The Company is in the process and categorizing that information by employee and has not completed the information in the time allotted. The information will be provided in the requested format as soon as the data set is completed.

f. See attached documents. For electronic version, refer to KAW_R_PSCDR2_21f_061807.pdf.

g. See attached documents. For electronic version, refer to KAW_R_PSCDR2_21g_061807.pdf.

h. See attached documents. For electronic version, refer to KAW_R_PSCDR2_21h_061807.pdf.

i. See attached documents. For electronic version, refer to KAW_R_PSCDR2_21i_061807.pdf.

j. (1) See hard copy attached of: "Michigan's Largest Law Firms", Michigan Lawyers Weekly, September 22, 2006. For electronic version, refer to KAW_R_PSCDR2_21j1_061807.pdf.

(2) The Michigan Lawyers Weekly survey contains a high-low range for associate and partner billing rates. The average billing rate for each firm was calculated by averaging the high and low rates. As can be seen from the calculation workpaper and from the Michigan Lawyers Weekly survey data, the billing rate range is significant. For instance, the firm of Trott & Trott, PC bills associates between $125 and $250 per hour and bills partners between $150 and $350 per hour. This range of billing rates provides sufficient data to calculate the firm's average and the overall average of all law firms participating in the survey.

k. (1) See hardcopy attached of : "2006 Operating Ratios for Management Consulting Firms Association of Management Consulting Firms". Also see other attached documents. For electronic version, refer to KAW_R_PSCDR2#21k1_061807.pdf.

(2) The distribution was developed based on my 28 years of experience as a management consultant. The percentage distribution is conservative in that the majority of work (80%) is assumed to be performed by the three lower level consulting positions.

l. (1) See attached. For electronic version, refer to KAW_R_PSCDR2#21l1_061807.pdf.

(2) The distribution is based on my experience as a certified public accountant and staff auditor with Arthur Andersen and my recent assignments for Duke Energy, where I have managed accountants from KPMG and have worked with Duke's audit form, Deloitte & Touche, in the implementation of Sarbanes-Oxley related testing of internal controls. The percentage distribution is conservative in that the majority of work (60%) is assumed to be performed by the two lower level accountant positions.

m. (1) See attached. For electronic version, refer to KAW_R_PSCDR2#21m1_061807.pdf.

(2) The engineering assignment percentage distribution was developed by Service Company engineering managers (Wayne Morgan and Steve Tambini). The market cost comparison study has used this distribution for many years. The percentage distribution is conservative in that the majority of work (65%) is assumed to be preformed by the two lower level engineering positions.

n. The source of this information was Michael Miller, KAWC's Vice President and Treasurer. In order to be successful, the person hired for this position would need considerable experience dealing with each of the four outside provider categories – attorneys, consultants, certified public accountants and professional engineers. The candidate must be able to direct the work of these professionals, monitor the quality of their work, administer their various contracts and ensure invoicing accuracy.

The Service Company billed KAWC 48,595 hours for O & M related services during 2006. Based on 1,500 annual "billable" hours per person, that amounts to

about 32 full-time equivalent staffing. That is a significant complement of outside service providers for this position to manage.

o. See attached. For electronic version, refer to KAW_R_PSCDR2#21o_061807.pdf.

p. (1) PLB-1, Schedule 9, Labor

Item

1. Yes
2. Yes
3. Yes, except KAWC maintains line extension records
4. Yes.
5. Yes. CCC maintains premise and billing account records, and delinquent notices.
6. Yes.
7. No these machines have been replaced by computers.
8. Yes.
9. CCC prepares the billing files. IT prints and mails the customer bills
10. Yes, except for local collection agencies.
11. No, these functions are performed by cash management.
12. Yes.
13. Yes.
14. Yes, except the IT function prints and mails the bills and notices.
15. CCC issues all bills including final bills. The meter reading is performed by KAWC employees.
16. These functions are handled by the KAWC operations function.
17. Yes.
18. Yes.
19. CCC maintains the meter reading schedule in the customer service software.
20. Yes.

(2) PLB-1, Schedule 9, Materials and expenses

Item

21. CCC maintains the customer service and billing records
22. No.
23. No.
24. Yes.
25. No.
26. Yes, but this is handled electronically.
27. Yes.
28. No.
29. No.
30. Yes.

q. (1) See attached. For electronic version, refer to KAW_R_PSCDR2#21q1_061807.pdf.

(2) See attached. For electronic version, refer to KAW_R_PSCDR2#21q2_061807.pdf.

(3) See attached. For electronic version, refer to KAW_R_PSCDR2#21q3_061807.pdf.

(4) Please see attached schedule for the analysis of the 2006 customer accounting expenses for KAWC. For electronic version, refer to KAW_R_PSCDR2#21q4_061807.pdf. The analysis indicates that (i) Mr. Baryenbrunch included the lock box and collection fees in his analysis, (ii) the telephone expense relates to the overall business of KAWC and not related to customer contact, (iii) the miscellaneous expenses relate to meter reading and other field service operations, (iv) uncollectible expense is not included in the FERC descriptions and should not be inncluded. The analysis indicates that postage and forms should have been included and total $651,542 should have been included in Mr. Baryenbrunch's study. KAWC failed to provide this data to Mr. Baryenbrunch and he will update his study to include those costs. The average cost per customer for KAWC will be $32.56 once those additional costs are included.

r. (1) The numbers used to calculate neighboring electric utility customer services cost per customer came directly from each utility's FERC Form 1, which was obtained from the FERC website (FERC.gov). The 23 electric utilities included in the cost comparison were not surveyed because it would have been impractical and would have unnecessarily added to the cost of this study. Reliance was placed on the comparison group utilities following the FERC's definitions for Accounts 903 and 905 (see PLB-1 Schedule 9, pages 21 and 22).

(2) Again, reliance was placed on the comparison group following FERC guidelines for Accounts 903 and 905. I can personally attest this is an important consideration for electric utilities. I am currently managing a team of Duke Energy accountants who are improving general ledger account definitions. One of the most important considerations in carrying out this work is that transactions recorded in each account adhere to the FERC guidelines. Based on my direct professional experience, it is valid and appropriate to compare KAWC's customer account services per customer cost to that of the electric utility comparison group.

(3) Without contacting each of the 23 comparison group utilities and conducting an extensive benchmarking interviews and analysis, it is not possible to explain the variances. Utilities operate under a different set of

regulatory rules, have different cost structures, experience different economies of scale and are at different points in terms of replacing their customer information systems. Any of these factors could account for the differences from one utility to the next.

(4) Electric utilities place great importance on recording transactions in accordance with the guidelines established by the FERC. Also, this study's comparison group includes a sufficiently large number of electric utilities (23) so that very high and very low values do not impact the quality of the comparison group's overall average cost per customer.

For electronic version of this document, refer to KAW_R_PSCDR2#21_61807.pdf.