

The following purchase order is agency specific. For piggy-backing opportunities you must contact the buyer.



KingCounty

Finance and Business Operations Division
Procurement and Contracts Services Section
Department of Executive Services

CNK-ES-0340
3rd Floor
401 5th Avenue
SEATTLE, WA 98104

206-263-9400 Ph
206-296-7676 Fax
TTY Relay: 771
www.kingcounty.gov

CONTRACTOR:
POLYDYNE INC
PO BOX 270

RICEBORO, GA 31323 United States
Fax: (800) 8802078

BILL TO:
KC DES FBOD ACCOUNTS PAYABLES
401 5TH AVE, CNK-ES-0320
SEATTLE, WA 98104

SHIP TO:
KC DES FBOD PCSS GOODS AND SERVICES
401 5TH AVE, CNK-ES-0340
SEATTLE, WA 98104

CONTRACT

CONTRACT NO. 400821	REVISION 3	PAGE 1 of 2
CREATION DATE 01-JAN-2012	BUYER JANET SEBRING	
DATE OF REVISION 14-MAY-2012	BUYER JANET SEBRING	

CONTRACTOR NO 2222	PAYMENT TERMS NET30DAYS	FREIGHT TERMS Paid	FOB DESTINATION, FREIGHT PAID	SHIP VIA Best Way	CONFIRM TO Telephone: (800) 848-7659
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DESCRIPTION

Change Order #6

This Change Order is issued to authorize a price increase effective November 11, 2011, in accordance with Polydyne, Inc.'s letter dated October 14, 2011 for supply and delivery of Clarifloc PRXB11 - liquid cationic coagulant for reclaimed water, as requested by authorized King County Department of Natural Resources - Wastewater Treatment Division personnel, during the period April 25, 2012 through April 24, 2013, in accordance with King County ITB #1010-08-MZS and responding bid of Polydyne, Inc., both incorporated by reference as if fully set forth herein.

2012 Pricing for Clarifloc PRXB11 Coagulant...
Schedule #1; 4,400 gallon tanker loads: \$0.782/lb.

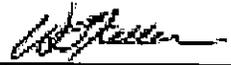
Schedule #2; 275 gallon totes: \$0.81/lb.

All terms and conditions remain the same.

Individual Standard Purchase orders with unique Purchase Order numbers referencing this Contract Purchase Agreement will be issued by King County to authorize the purchase and payment of goods and services.

All invoices must reference the individual Standard Purchase Order number to avoid delay in payments.

Supplier Contact:
Joe DesRochers - Technical Sales Representative
PH: (360) 931-5566
Email: jdesrochers@polydyneinc.com


Authorized Signature

ITB #1010-08-MZS, Coagulant for Reclaimed Water

Supply & Delivery of Clarifloc PRXB11

DATE OF PRICE INCREASE: November 11, 2011

Polydyne, Inc. Pricing:

Schedule 1 (tanker loads based at 4,400 gallons per load)

Pricing	Cost per pound	Estimated Annual Qty. Usage / pound	Price per Pound	\$ Increase	% Increase from Prior Year
2012 Pricing	\$0.7820	100,000.00	\$ 78,200.00	\$ 4,200.00	5.68%
2011 Pricing	\$0.7610	100,000.00	\$ 76,100.00	\$ 6,100.00	8.71%
2010 Pricing	\$0.7400	100,000.00	\$ 74,000.00	\$ 4,000.00	5.71%
2008 Pricing	\$0.7000	100,000.00	\$ 70,000.00		

Schedule 2 (275 gallons per tote)

Pricing	Cost per pound	Estimated Annual Qty. Usage / pound	Price per Pound	\$ Increase	% Increase from Prior Year
2012 Pricing	\$0.8100	2,900.00	\$ 2,349.00	\$ -	0.00%
2008 Pricing	\$0.8100	2,900.00	\$ 2,349.00		

Producer Price Index-Commodities
Original Data Value

Bureau of Labor Statistics

Series Id: WPU06130209
 Not Seasonally Adjusted
 Group: Chemicals and allied products
 Item: Aluminum compounds
 Base Date: 199506
 Years: 2002 to 2012

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2002	91.7	92.5	92.8	93.3	93.3	93.0	92.6	92.2	91.7	91.2	91.1	91.8	92.3
2003	92.3	92.5	92.9	93.0	92.6	92.6	92.5	93.5	93.5	93.7	94.1	94.4	93.1
2004	96.8	98.8	101.1	102.3	103.9	102.7	103.3	103.2	103.9	104.2	105.4	106.3	102.7
2005	108.8	108.8	108.9	108.8	114.1	114.1	113.5	108.8	121.6	170.0	143.4	125.9	120.5
2006	132.7	129.5	127.8	122.8	129.9	127.3	121.0	120.6	119.6	130.6	118.6	124.6	125.4
2007	131.6	125.0	129.8	127.2	127.0	127.5	128.5	122.9	126.8	131.0	128.6	126.2	127.7
2008	130.0	132.7	132.5	144.1	146.1	149.2	151.1	162.9	154.9	165.8	157.2	148.7	147.9
2009	148.1	146.0	147.1	147.1	132.9	132.6	131.3	134.1	126.0	126.1	126.0	125.2	135.2
2010	128.8	126.3	124.2	126.4	127.5	123.9	125.4	125.2	125.4	127.0	128.5	128.8	126.5
2011	131.8	134.2	138.7	139.7	140.8	140.2	139.5	141.1	139.1	139.5	140.8	136.0	138.1
2012	139.5	145.9	147.0										

2011 to 2012 $145.9 - 138.7 = 7.2$ % $145.9 = .049$ or 4.9%

2010 to 2012 ...

$(145.9 - 124.2) = 21.7$ % $145.9 = .148$ or 14.8%

Source: Bureau of Labor Statistics

Generated on: April 25, 2012 (04:11:20 PM)



Emailed to: mary.schumacher@kingcounty.gov

October 14, 2011

Ms. Mary Schumacher
Buyer
King County
401 Fifth Avenue
Seattle, WA 98104

Subject: ITB 1010-08-MZS

Dear Ms. Schumacher,

Pursuant to the terms of our agreement, Polydyne Inc. would like to request a price adjustment for Clarifloc PRXB11 supplied under the referenced ITB. Effective November 11, 2011, we propose to adjust our current unit selling price by 2.70%. To substantiate this adjustment, please find attached the most recent BLS Consumer Price Index for the Seattle-Tacoma-Bremerton area.

For the term November 11, 2011 through November 10, 2012, we propose to supply as follows:

Product	Price	Package
Clarifloc [®] PRXB11	\$0.782/Lb	Full Bulk

If you have any questions or require any additional information please do not hesitate to contact me. We greatly appreciate your business and look forward to continuing our valued relationship.

Sincerely,

Lawrence D. Grizzle
Business Manager



February 21, 2011

King County
South Plant
1200 Monster Road S.W.
Renton, WA 98057

Subject: Price Increase for Liquid Aluminum Sulfate and Alum/Polymer Blends

Dear Valued Customer:

We regret to inform you that Polydyne Inc. will be increasing prices for Aluminum Sulfate and Alum/Polymer Blends. We received the attached letter from our supplier giving us a price increase for this product line. Therefore, we must, unfortunately, pass thru this cost to you, our valuable customer.

Effective March 1, 2011 and until further notice, your price will be as follows:

Product	Price
Clarifloc PRXB11	\$0.761/LB

We greatly appreciate your business and understanding during these difficult times and look forward to continuing our valued relationship.

Sincerely,

Lawrence D. Grizzle
Business Manager



G E O
SPECIALTY CHEMICALS

January 31, 2011

Dear Valued Customer,

Thank you for the aluminum coagulant business that you have placed with GEO Specialty Chemicals. GEO remains committed to providing quality products and innovative chemistries at competitive prices. However, the major producers of organic polymers for water treatment are again increasing their prices, and this will directly impact GEO's costs on blended coagulants.

As a result, price increases will be implemented on all blends incorporating organic polymers (DADMC and ep/DMA coagulants). The increases will be effective March 1, 2011, or as current contracts and commitments allow.

Polymer blend pricing will be adjusted on a "formula by formula" basis corresponding to the amount of polymer in the blend and the increased cost of the specific polymer. These adjustments will be detailed for you before March 1 by your Account Manager.

Please contact your Account Manager with any questions or concerns you may have. We thank you again for working with GEO Specialty Chemicals.

Sincerely,

Pete Bertasi
Corporate Accounts Manager
GEO Specialty Chemicals

Joe Klinek
Corporate Accounts Manager
GEO Specialty Chemicals



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CONTRACTOR:
 POLYDYNE INC
 PO BOX 270

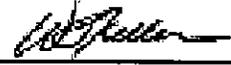
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 SEATTLE, WA 98104

CONTRACT		
CONTRACT NO. 400821	REVISION 1	PAGE 1 of 1
CREATION DATE 01-JAN-2012	BUYER CHRISTOPHER COLLIER	
DATE OF REVISION 25-APR-2012	BUYER CHRISTOPHER COLLIER	

CONTRACTOR/NO	PAYMENT TERMS	FREIGHT TERMS	FOB	SHIP VIA	CONFIRM TO
2222	NET30DAYS	Paid	DESTINATION	Seller Chooses	Telephone: (800) 848-7659

DESCRIPTION
<p>Change Order #5</p> <p>This Change Order is issued to renew Contract #400821 to furnish coagulant for reclaimed water as requested by King County Department of Natural Resources - Wastewater Treatment Division, during the period of April 25, 2012 through April 24, 2013, in accordance with King County ITB #1010-08-MZS and responding bid of Polydyne, Inc., both incorporated by reference as if fully set forth herein.</p> <p>All terms and conditions remain the same.</p> <p>Individual Standard Purchase orders with unique Purchase Order numbers referencing this Contract Purchase Agreement will be issued by King County to authorize the purchase and payment of goods and services.</p> <p>All invoices must reference the individual Standard Purchase Order number to avoid delay in payments.</p> <p>Supplier Contact: Joe DesRochers - Technical Sales Representative PH: (360) 931-5566 Email: jdesrochers@polydyneinc.com</p>
 _____ Authorized Signature

CONTRACT EXTENSION

Contract No.:	400821	Date:	April 25, 2012
Vendor:	Polydyne, Inc.	Buyer:	Christopher Collier
Change Order:	#05 CPC	Debarred:	Checked (04/25/12)
		List:	
Contract Creation Date:	April 25, 2008	Status of:	12/31/12
		Insurance:	
Extension Period:	April 24, 2013		
Extension Options Remaining:	0		
Drop Dead Date:	April 24, 2013		

MARKET ANALYSIS:

Polydyne, Inc. is one of six main providers of liquid cationic coagulant for the Seattle area. There were a total of five bidders, however RealChem Northwest was non-responsive and Nalco Company did not submit a bid. CalChem, JenChem Inc. were not awarded because Polydyne, Inc was the most responsive, responsible, and lowest bidder.

Polydyne Inc., supplies Clarifloc PRXB11; a high charge density, liquid cationic coagulant that is effective for influent water clarification, primary and secondary wastewater clarification, color removal, phosphate removal, treatment of oily wastewaters and refuse thickening in coal prep plants. This coagulant is comprised of 8.5-8.9% Aluminum content and 16.1-16.8% Al₂O₃ Content.

PRICE ANALYSIS:

Polydyne, Inc. requested a 5.6% increase for Clarifloc PRXB11 coagulant used in reclaimed water for delivery of 4,400 gallon tanker loads per Schedule #1 on November 11, 2011. Price for Schedule #1 in 2010 was \$0.7400/pound. New price is \$0.782/pound; this is in accordance with the 2010 to 2011 PPI of All Urban Consumers for Seattle-Tacoma-Bremerton, WA. Price has increased approximately 11.7% since 2008's original bid price.

Pricing changes to Contract as of April 24, 2008, Schedule #1:

Original Contract Agreement	\$0.7000/lb		04/24/2008
Change Order #3	\$0.7400/lb	5.71% increase	05/07/2010
Change Order #6	\$0.7820/lb	5.68% increase	11/11/2011

Pricing changes to Contract as of April 24, 2008, Schedule #2:

Original Contract Agreement	\$0.8100/lb		04/24/2008
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VOLUME, QUANTITY, USAGE ANALYSIS:

Total purchase amount is \$ 197,927.30 as of December 31, 2011. Coagulant is supplied to the South (Renton, WA) Wastewater Treatment Facility, but available to all WTD. Water reuse coagulant has very specific bulk properties to which Clarifloc PRXB11 adheres. The chemical must be free from impurities including water, dirt, harmful oils or additives. Annual usage at South Plant is approximated at 9,600 gallons or \$72,262.00 / year.

VENDOR PERFORMANCE:

Polydyne, Inc. has good performance. They have had no accidents and have supplied product in a timely fashion.

CONTRACT EXTENSION:

I recommend this Contract be extended for one (1) additional year. This is the final extension, and April 24, 2013 is the Contract drop dead date.



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VENDOR:

POLYDYNE INC
PO BOX 270
RICEBORO, GA 31323

SHIP TO

KC DEPARTMENT OF EXEC SERVICES
PROCUREMENT-GOODS & SERVICES
401 5TH AVE, CNK-ES0340
SEATTLE, WA 98104
United States

BILL TO

KC DEPT OF EXECUTIVE SERVICES
ACCOUNTS PAYABLE, 3RD FLOOR
401 5TH AVE, CNK-ES0320
SEATTLE, WA 98104
United States

Purchase Order

PURCHASE ORDER NO.	REVISION	PAGE
400821	3	1

THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCES RELATED TO THIS ORDER.

CREATION DATE	BUYER
24-APR-08	M, Schumacher
DATE OF REVISION	BUYER
24-FEB-11	R JACKSON

CUSTOMER ACCT #	VENDOR NO	PAYMENT TERMS	FREIGHT TERMS	F.O.B	SHIP VIA
	P02676	Net30days	Paid	Destination	SELLER CHOOSES

CONFIRM TO / TELEPHONE	REQUESTOR / DELIVER TO
(800) 848-7659	

LINE	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	T
	CHANGE ORDER #4 February 24, 2011 THIS CONTRACT IS ISSUED TO EXTEND THE CONTRACT TO FURNISH COAGULANT FOR RECLAIMED WATER AS REQUESTED BY AUTHORIZED KING COUNTY DEPARTMENT OF NATURAL RESOURCES, DURING THE PERIOD OF APRIL 25, 2011 THROUGH APRIL 24, 2012, IN ACCORDANCE WITH KING COUNTY ITB #1010-08-MZS AND RESPONDING BID OF POLYDYNE, INC., BOTH INCORPORATED BY REFERENCE AS IF FULLY SET FORTH HEREIN. ALL TERMS AND CONDITIONS REMAIN THE SAME. Purchase Agreement Effective From: 25-APR-08 To: 24-APR-12						
						Amount Agreed:	

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK HEREOF.	Required invoice information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description and Unit Price as stated on the purchase order. Missing information may result in payment delays.	ACCEPTANCE: This purchase order expressly limits acceptance to the terms and conditions stated herein.	TOTAL Authorized signature
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2/24/2011 9:13 PAGE 002/003 Fax Server King County

**PURCHASE ORDER
GENERAL TERMS AND CONDITIONS**

Compliance: By acceptance of this order, the vendor warrants full compliance with all applicable local, state or federal laws and regulations including specific statutory requirements of Federal Agencies. Upon request, the purchasing agent will provide applicable contract terms and conditions.

Acceptance/Changes: All goods or materials purchased hereunder are subject to approval by King County. No substitutions or changes of any nature under this purchase order will be accepted unless approved in writing by King County.

Inspections: By acceptance of this order, vendor grants the right to Buyer to make periodic visits to the vendor's plant or their subcontractor's for inspection of materials or to determine actual progress of manufacture.

Change Orders: Change orders modifying the terms and conditions herein will be without effect unless issued and authorized in writing by King County.

Cancellation: The County may cancel any purchase order or any part thereof by written notice at any time, without penalty, if the vendor fails to comply with the terms, specifications, delivery/completion date or to perform the work with diligence.

Invoices: Invoices must reference the purchase order number.

All vendors licensed to do business in Washington State must bill King County for applicable tax. Indicate discount terms to the County for prompt payment. Discount period to be extended if the invoice is returned for correction or clarification.

Shipping Instructions: All shipments must contain a packing slip. Unless otherwise specified, all goods are to be shipped prepaid, FOB Destination. Where shipping addresses indicate room numbers, the Vendor shall make delivery to that location at no additional charge, including, but not limited to delivery, packing and or crating.

Warranty: The Vendor warrants that all products delivered under this purchase order shall be free from defects in material and workmanship, and shall be fit for the intended purpose. This warranty is in addition to any standard warranty or guarantee given by vendor to the County. All products determined by King County to be defective shall be replaced within 15 days of notice by King County.

All costs of replacement, including shipping charges shall be borne by the Vendor. Vendor warrants that the merchandise is free and clear of all liens and encumbrances and that vendor has a good and marketable title to same. Vendor warrants that the equipment, materials or service on this order do not infringe any patent, registered trademark or copyright and agrees to hold King County harmless in the event of any infringement or claim thereof.

Certification Regarding Debarment, Suspension and Other Responsibility

Matters: By providing goods or services under this purchase order, the Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any Contract that may arise from this Contract. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Order of Precedence: When this purchase order is issued subsequent to the results of a request for bid or proposal, the terms and conditions contained in the solicitation or resulting contract shall control.



Finance and Business Operations Division
 Procurement and Contract Services Section
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 Seattle, WA 98104

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VENDOR:
POLYDYNE INC
 PO BOX 270
 RICEBORO, GA 31323

SHIP TO
 KC DEPARTMENT OF EXEC SERVICES
 PROCUREMENT-GOODS & SERVICES
 401 5TH AVE, CNK-ES0340
 SEATTLE, WA 98104
 United States

BILL TO
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 401 5TH AVE, CNK-ES0320
 SEATTLE, WA 98104
 United States

Purchase Order		
PURCHASE ORDER NO.	REVISION	PAGE
400821	2	1
THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCES RELATED TO THIS ORDER.		
CREATION DATE	BUYER	
24-APR-08	M, Schumacher	
DATE OF REVISION	BUYER	
23-MAR-10	O Bonadie	

CUSTOMER ACCT #	VENDOR NO. P02676	PAYMENT TERMS Net30days	FREIGHT TERMS Paid	F.O.B. Destination	SHIP VIA SELLER CHOOSES
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CONFIRM TO / TELEPHONE	(800) 848-7659	REQUESTOR / DELIVER TO
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JME	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	T
	<p>CHANGE ORDER #3 (05/07/10)</p> <p>This change order is issued to authorize a price increase for PRXB11 from \$0.70 to \$0.74 during the period May 17, 2010 through April 16, 2011.</p> <p>Individual standard purchase orders with unique purchase order numbers, referencing this contract #400821 will be issued. All invoices must reference the individual standard purchase order number, and not just the contract number.</p> <p>All terms and conditions remain the same</p> <p>CHANGE ORDER #2 (03/23/10)</p> <p>This change order is issued to extend the Contract Agreement between King County and the Contractor, Polydyne, Inc. , during the period April 17, 2010 through April 16, 2011 and is not an order for specific goods / services.</p> <p>Individual standard purchase orders with unique</p>						

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK HEREOF.	Required invoice information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description and Unit Price as stated on the purchase order. Missing information may result in payment delays.	<p>ACCEPTANCE:</p> <p>This purchase order expressly limits acceptance to the terms and conditions stated herein.</p>	<p>TOTAL</p> <p><i>DR Leach</i> Authorized signature</p>
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Purchase Order

PURCHASE ORDER NO.	REVISION	PAGE
400821	2	2
THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCES RELATED TO THIS ORDER.		
CREATION DATE	BUYER	
24-APR-08	M, Schumacher	
DATE OF REVISION	BUYER	
23-MAR-10	O Bonadie	

CUSTOMER ACCT #	VENDOR NO	PAYMENT TERMS	FREIGHT TERMS	F.O.B	SHIP VIA		
	P02676	Net30days	Paid	Destination	SELLER CHOOSES		
CONFIRM TO / TELEPHONE			REQUESTOR / DELIVER TO				
(800) 848-7659							
LINE	PART NUMBER - DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	T
	purchase order numbers, referencing this contract #400821 will be issued. All invoices must reference the individual standard purchase order number, and not just the contract number. All terms and conditions remain the same Purchase Agreement Effective From: 25-APR-08 To: 24-APR-11						
		Amount Agreed:					

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK HEREOF.

Required invoice information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description and Unit Price as stated on the purchase order. Missing information may result in payment delays.

ACCEPTANCE:

This purchase order expressly limits acceptance to the terms and conditions stated herein.

TOTAL

DR Lynch
Authorized signature

PURCHASE ORDER GENERAL TERMS AND CONDITIONS

Compliance: By acceptance of this order, the vendor warrants full compliance with all applicable local, state or federal laws and regulations including specific statutory requirements of Federal Agencies. Upon request, the purchasing agent will provide applicable contract terms and conditions.

Acceptance/Changes: All goods or materials purchased hereunder are subject to approval by King County. No substitutions or changes of any nature under this purchase order will be accepted unless approved in writing by King County.

Inspections: By acceptance of this order, vendor grants the right to Buyer to make periodic visits to the vendor's plant or their subcontractor's for inspection of materials or to determine actual progress of manufacture.

Change Orders: Change orders modifying the terms and conditions herein will be without effect unless issued and authorized in writing by King County.

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Invoices: Invoices must reference the purchase order number.

All vendors licensed to do business in Washington State must bill King County for applicable tax. Indicate discount terms to the County for prompt payment. Discount period to be extended if the invoice is returned for correction or clarification.

Shipping Instructions: All shipments must contain a packing slip. Unless other wise specified, all goods are to be shipped prepaid, FOB Destination. Where shipping addresses indicate room numbers, the Vendor shall make delivery to that location at no additional charge, including, but not limited to delivery, packing and or crating.

Warranty: The Vendor warrants that all products delivered under this purchase order shall be free from defects in material and workmanship, and shall be fit for the intended purpose. This warrantee is in addition to any standard warranty or guarantee give by vendor to the County. All products determined by King County to be defective shall be replaced within 15 days of notice by King County.

All costs of replacement, including shipping charges shall be borne by the Vendor. Vendor warrants that the merchandise is free and clear of all liens and encumbrances and that vendor has a good and marketable title to same. Vendor warrants that the equipment, materials or service on this order do not infringe any patent, registered trademark or copyright and agrees to hold King County harmless in the event of any infringement or claim thereof.

Certification Regarding Debarment, Suspension and Other Responsibility Matters: By providing goods or services under this purchase order, the Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any Contract that may arise from this Contract. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Order of Precedence: When this purchase order is issued subsequent to the results of a request for bid or proposal, the terms and conditions contained in the solicitation or resulting contract shall control.



May 17, 2010

Ovita Bonadie
Senior Buyer
King County
401 Fifth Avenue, 3rd Floor
Seattle, WA 98104

RE: Extension for PRXB11 reclaim water coagulant

Dear Mrs. Bonadie,

All of us at SNF/Polydyne thank you for your trust, loyalty and business over the past few years.

The current contract is currently up for extension. King County has expressed interest in extending the contract for another year at the current contract conditions. Polydyne, Inc would like to extend the contract with King County but rising costs have forced us to ask for a modest price increase for PRXB11 from \$0.70 to \$0.74. All other contract terms will remain the same.

The reasons for this request are rising raw material costs. I have attached a letter we received from our supplier explaining the rise in costs. Please consider our request.

I can be contacted at (360) 931-5566 to answer any additional questions you may have.

Best Regards,

Joe DesRochers
SNF Polydyne, Inc
Technical Sales Representative
360-931-5566
jdesrochers@polydyneinc.com



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KC DEPT OF EXECUTIVE SERVICES
ACCOUNTS PAYABLE, 3RD FLOOR
401 5TH AVE, CNK-ES0320
SEATTLE, WA 98104
United States

Purchase Order

PURCHASE ORDER NO.	REVISION	PAGE
400821	2	1
THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCES RELATED TO THIS ORDER.		
CREATION DATE	BUYER	
24-APR-08	M, Schumacher	
DATE OF REVISION	BUYER	
23-MAR-10	O Bonadie	

CUSTOMER ACCT #	VENDOR NO.	PAYMENT TERMS	FREIGHT TERMS	FOB	SHIP VIA
	P02676	Net30days	Paid	Destination	SELLER CHOOSES

CONFIRM TO / TELEPHONE	REQUESTOR / DELIVER TO
(800) 848-7659	

LINE	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	1
	CHANGE ORDER #2 (03/23/10) This change order is issued to extend the Contract Agreement between King County and the Contractor, Polydyne, Inc. , during the period April 17, 2010 through April 16, 2011 and is not an order for specific goods / services. Individual standard purchase orders with unique purchase order numbers, referencing this contract #400821 will be issued. All invoices must reference the individual standard purchase order number, and not just the contract number. All terms and conditions remain the same Purchase Agreement Effective From: 25-APR-08 To: 24-APR-11						
		Amount Agreed:					

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK HEREOF.

Required invoice information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description and Unit Price as stated on the purchase order. Missing information may result in payment delays.

ACCEPTANCE:
This purchase order expressly limits acceptance to the terms and conditions stated herein.

TOTAL

DR Leach
Authorized signature

**PURCHASE ORDER
GENERAL TERMS AND CONDITIONS**

Compliance: By acceptance of this order, the vendor warrants full compliance with all applicable local, state or federal laws and regulations including specific statutory requirements of Federal Agencies. Upon request, the purchasing agent will provide applicable contract terms and conditions.

Acceptance/Changes: All goods or materials purchased hereunder are subject to approval by King County. No substitutions or changes of any nature under this purchase order will be accepted unless approved in writing by King County.

Inspections: By acceptance of this order, vendor grants the right to Buyer to make periodic visits to the vendor's plant or their subcontractor's for inspection of materials or to determine actual progress of manufacture.

Change Orders: Change orders modifying the terms and conditions herein will be without effect unless issued and authorized in writing by King County.

Cancellation: The County may cancel any purchase order or any part thereof by written notice at any time, without penalty, if the vendor fails to comply with the terms, specifications, delivery/completion date or to perform the work with diligence.

Invoices: Invoices must reference the purchase order number.

All vendors licensed to do business in Washington State must bill King County for applicable tax. Indicate discount terms to the County for prompt payment. Discount period to be extended if the invoice is returned for correction or clarification.

Shipping Instructions: All shipments must contain a packing slip. Unless otherwise specified, all goods are to be shipped prepaid, FOB Destination. Where shipping addresses indicate room numbers, the Vendor shall make delivery to that location at no additional charge, including, but not limited to delivery, packing and or crating.

Warranty: The Vendor warrants that all products delivered under this purchase order shall be free from defects in material and workmanship, and shall be fit for the intended purpose. This warrantee is in addition to any standard warranty or guarantee given by vendor to the County. All products determined by King County to be defective shall be replaced within 15 days of notice by King County.

All costs of replacement, including shipping charges shall be borne by the Vendor. Vendor warrants that the merchandise is free and clear of all liens and encumbrances and that vendor has a good and marketable title to same. Vendor warrants that the equipment, materials or service on this order do not infringe any patent, registered trademark or copyright and agrees to hold King County harmless in the event of any infringement or claim thereof.

Certification Regarding Debarment, Suspension and Other Responsibility

Matters: By providing goods or services under this purchase order, the Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any Contract that may arise from this Contract. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Order of Precedence: When this purchase order is issued subsequent to the results of a request for bid or proposal, the terms and conditions contained in the solicitation or resulting contract shall control.



King County

Finance and Business Operations Division
Procurement and Contract Services Section
Department of Executive Services

CNK-ES-0340
3rd Floor
401 5th Avenue
Seattle, WA 98104

206-263-9400
206-296-7676 Fax
TTY Relay: 771
www.kingcounty.gov

VENDOR:

POLYDYNE INC
PO BOX 270
RICEBORO, GA 31323

SHIP TO

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PROCUREMENT-GOODS & SERVICES
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BILL TO

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Purchase Order

PURCHASE ORDER NO. 400821	REVISION 1	PAGE 1
THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCES RELATED TO THIS ORDER.		
CREATION DATE 24-APR-08	BUYER M, Schumacher	
DATE OF REVISION 25-JUN-09	BUYER P Russell	

TOMER ACCT #	VENDOR NO. P02676	PAYMENT TERMS Net30days	FREIGHT TERMS Paid	F.O.B. Destination	SHIP VIA SELLER CHOOSES
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FIRM TO / TELEPHONE (800) 848-7659	REQUESTOR / DELIVER TO
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E	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	T
	<p>CHANGE ORDER #1 (06/25/09)</p> <p>THIS CHANGE ORDER IS ISSUED TO EXTEND THE CONTRACT AGREEMENT FOR FURNISHING COAGULANT FOR RECLAIMED WATER AS REQUESTED BY AUTHORIZED KING COUNTY AGENCIES, DEPARTMENTS AND DIVISION DURING THE PERIOD APRIL 25, 2009 THROUGH APRIL 24, 2010, IN ACCORDANCE WITH KING COUNTY ITB 1010-08-MZS AND RESPONDING BID OF POLYDYNE, INC., BOTH INCORPORATED BY REFERENCE AS IF FULLY SET FORTH HEREIN AND IS NOT THE AUTHORITY FOR ORDERING SPECIFIC GOODS AND SERVICES.</p> <p>INDIVIDUAL STANDARD PURCHASE ORDERS, WITH UNIQUE PURCHASE ORDER NUMBERS, REFERENCING THIS CONTRACT, WILL BE ISSUED THAT PROVIDE THE AUTHORITY FOR ORDERING,</p> <p>ALL INVOICES MUST REFERENCE THE INDIVIDUAL STANDARD PURCHASE ORDER NUMBER, AND NOT THE PURCHASE AGREEMENT NUMBER, TO AVOID DELAY IN PAYMENT.</p> <p>ALL OTHER TERMS AND CONDITIONS SHALL REMAIN THE SAME.</p>						

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK THEREOF.

Required invoice information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description and Unit Price as stated on the purchase order. Missing information may result in payment delays.

ACCEPTANCE:
This purchase order expressly limits acceptance to the terms and conditions stated herein.

TOTAL
<i>DR Lynch</i> Authorized signature



King County

Finance and Business Operations Division
Procurement and Contract Services Section
Department of Executive Services

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Purchase Order

PURCHASE ORDER NO.	REVISION	PAGE
400821	1	2
THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCES RELATED TO THIS ORDER.		
CREATION DATE	BUYER	
24-APR-08	M, Schumacher	
DATE OF REVISION	BUYER	
25-JUN-09	P Russell	

TOMER ACCT #	VENDOR NO. P02676	PAYMENT TERMS Net30days	FREIGHT TERMS Paid	F.O.B. Destination	SHIP VIA SELLER CHOOSES
FIRM TO / TELEPHONE (800) 848-7659			REQUESTOR / DELIVER TO		

E	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	T
	<p>PRICE WARRANTY: THE CONTRACT WARRANTS THAT THE PRICES CHARGED TO KING COUNTY DO NOT EXCEED THOSE PRICES CHARGED BY THE CONTRACTOR TO ANY OTHER CUSTOMER PURCHASING THE SAME PRODUCT OR SERVICES IN LIKE OR SIMILAR QUANTITIES UNDER SIMILAR TERMS AND CONDITIONS.</p> <p>NON-APPROPRIATION: THIS CONTRACT MAY BE CANCELLED AT THE END OF THE CURRENT FISCAL PERIOD FOR NON-APPROPRIATION OF FUNDS BY THE KING COUNTY COUNCIL GOVERNMENT BODY. SUCH CANCELLATION SHALL BE UPON THIRTY (30) DAYS WRITTEN NOTICE TO THE CONTRACTOR, KING COUNTY'S FISCAL ENDS DECEMBER 31, OF EACH YEAR.</p> <p>Purchase Agreement Effective From: 25-APR-08 To: 24-APR-10</p>						
						Amount Agreed:	

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK THEREOF.

Required invoice information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description and Unit Price as stated on the purchase order. Missing information may result in payment delays.

ACCEPTANCE:
This purchase order expressly limits acceptance to the terms and conditions stated herein.

TOTAL
<i>DR Leach</i> Authorized signature

PURCHASE ORDER GENERAL TERMS AND CONDITIONS

Compliance: By acceptance of this order, the vendor warrants full compliance with all applicable local, state or federal laws and regulations including specific statutory requirements of Federal Agencies. Upon request, the purchasing agent will provide applicable contract terms and conditions.

Acceptance/Changes: All goods or materials purchased hereunder are subject to approval by King County. No substitutions or changes of any nature under this purchase order will be accepted unless approved in writing by King County.

Inspections: By acceptance of this order, vendor grants the right to Buyer to make periodic visits to the vendor's plant or their subcontractor's for inspection of materials or to determine actual progress of manufacture.

Change Orders: Change orders modifying the terms and conditions herein will be without effect unless issued and authorized in writing by King County.

Cancellation: The County may cancel any purchase order or any part thereof by written notice at any time, without penalty, if the vendor fails to comply with the terms, specifications, delivery/completion date or to perform the work with diligence.

Invoices: Invoices must reference the purchase order number.

All vendors licensed to do business in Washington State must bill King County for applicable tax. Indicate discount terms to the County for prompt payment. Discount period to be extended if the invoice is returned for correction or clarification.

Shipping Instructions: All shipments must contain a packing slip. Unless otherwise specified, all goods are to be shipped prepaid, FOB Destination. Where shipping addresses indicate room numbers, the Vendor shall make delivery to that location at no additional charge, including, but not limited to delivery, packing and or crating.

Warranty: The Vendor warrants that all products delivered under this purchase order shall be free from defects in material and workmanship, and shall be fit for the intended purpose. This warranty is in addition to any standard warranty or guarantee given by vendor to the County. All products determined by King County to be defective shall be replaced within 15 days

All costs of replacement, including shipping charges shall be borne by the Vendor. Vendor warrants that the merchandise is free and clear of all liens and encumbrances and that vendor has a good and marketable title to same. Vendor warrants that the equipment, materials or service on this order do not infringe any patent, registered trademark or copyright and agrees to hold King County harmless in the event of any infringement or claim thereof.

Certification Regarding Debarment, Suspension and Other Responsibility

Matters: By providing goods or services under this purchase order, the Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any Contract that may arise from this Contract. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Order of Precedence: When this purchase order is issued subsequent to the results of a request for bid or proposal, the terms and conditions contained in the solicitation or resulting contract shall control.



King County

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Procurement and Contract Services Section
Department of Executive Services

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Purchase Order

PURCHASE ORDER NO.	REVISION	PAGE
400821	0	1
THIS PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKING SLIPS, CRYPTONS AND CORRESPONDENCE RELATED TO THIS ORDER.		
CREATION DATE	BUYER	
24-APR-08	M Schumacher	
DATE OF REVISION	BUYER	

CUSTOMER ACCT #	VENDOR NO.	PAYMENT TERMS	FREIGHT TERMS	F.O.B.	SHIP VIA
	P02676	Net30days	Paid	Destination	SELLER CHOOSES

CONFIRM TO / TELEPHONE	REQUESTOR / DELIVER TO
(800) 848-7659	

LINE	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	
	<p>THIS PURCHASE AGREEMENT ESTABLISHES THE TERMS AND CONDITIONS BETWEEN AUTHORIZED KING COUNTY AGENCIES, DEPARTMENTS AND DIVISIONS AND POLYDYNE, INC. FOR COAGULANT FOR RECLAIMED WATER IN ACCORDANCE WITH THE VENDOR'S RESPONSE TO THE KING COUNTY BID NUMBER ITB 1010-08-MZS INCORPORATED BY REFERENCE AS IF FULLY SET FORTH HEREIN AND IS NOT THE AUTHORITY FOR ORDERING SPECIFIC GOODS AND SERVICES.</p> <p>INDIVIDUAL STANDARD PURCHASE ORDERS, WITH UNIQUE PURCHASE ORDER NUMBERS, REFERENCING THIS CONTRACT, WILL BE ISSUED THAT PROVIDE THE AUTHORITY FOR ORDERING</p> <p>ALL INVOICES MUST REFERENCE THE INDIVIDUAL STANDARD PURCHASE ORDER NUMBER, AND NOT THE PURCHASE AGREEMENT NUMBER, TO AVOID DELAY IN PAYMENT</p> <p>PRICE WARRANTY: THE CONTRACT WARRANTS THAT THE PRICES CHARGED TO KING COUNTY DO NOT EXCEED THOSE PRICES CHARGED BY THE CONTRACTOR TO ANY OTHER CUSTOMER PURCHASING THE</p>						1

SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK HEREOF.

Required Invoice Information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description, and Unit Price as stated on the purchase order, may result in payment delays.

ACCEPTANCE:

This purchase order expressly limits acceptance to the terms and conditions stated herein.

TOTAL

DR Leach
Authorized signature



King County

Finance and Business Operations Division
Procurement and Contract Services Section
Department of Executive Services

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CREATION DATE	BUYER	
24-APR-08	M Schumacher	
DATE OF REVISION	BUYER	

CUSTOMER ACCT #	VENDOR NO. P02676	PAYMENT TERMS Net30days	FREIGHT TERMS Paid	F.O.B. Destination	SHIP VIA SELLER CHOOSES		
CONFIRM TO / TELEPHONE (800) 848-7659			REQUESTOR / DELIVER TO				
LINE	PART NUMBER / DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSION	T
	SAME PRODUCT OR SERVICES IN LIKE OR SIMILAR QUANTITIES UNDER SIMILAR TERMS AND CONDITIONS NON-APPROPRIATION: THIS CONTRACT MAY BE CANCELLED AT THE END OF THE CURRENT FISCAL PERIOD FOR NON-APPROPRIATION OF FUNDS BY THE KING COUNTY COUNCIL GOVERNMENT BODY. SUCH CANCELLATION SHALL BE UPON THIRTY (30) DAYS WRITTEN NOTICE TO THE CONTRACTOR, KING COUNTY'S FISCAL ENDS DECEMBER 31, OF EACH YEAR. Purchase Agreement Effective From: 25-APR-08 To: 24-APR-09						
SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS. THIS ORDER IS SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FRONT AND BACK HEREOF.					Required Invoice Information: Ship to Address, Mailstop, Requestor's Name, Purchase Order Number, Contract Number (if applicable), Line Item Number, description, and Unit Price as stated on the purchase order, may result in payment delays.		
ACCEPTANCE: This purchase order expressly limits acceptance to the terms and conditions stated herein.					TOTAL		
					Authorized signature		

M Schumacher
Authorized signature

PURCHASE ORDER GENERAL TERMS AND CONDITIONS

Compliance: By acceptance of this order, the vendor warrants full compliance with all applicable local, state or federal laws and regulations including specific statutory requirements of Federal Agencies. Upon request, the purchasing agent will provide applicable contract terms and conditions.

Acceptance/Changes: All goods or materials purchased hereunder are subject to approval by King County. No substitutions or changes of any nature under this purchase order will be accepted unless approved in writing by King County.

Inspections: By acceptance of this order, vendor grants the right to Buyer to make periodic visits to the vendor's plant or their subcontractor's for inspection of materials or to determine actual progress of manufacture.

Change Orders: Change orders modifying the terms and conditions herein will be without effect unless issued and authorized in writing by King County.

Cancellation: The County may cancel any purchase order or any part thereof by written notice at any time, without penalty, if the vendor fails to comply with the terms, specifications, delivery/completion date or to perform the work with diligence.

Invoices: Invoices must reference the purchase order number.

All vendors licensed to do business in Washington State must bill King County for applicable tax. Indicate discount terms to the County for prompt payment. Discount period to be extended if the invoice is returned for correction or clarification.

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Warranty: The Vendor warrants that all products delivered under this purchase order shall be free from defects in material and workmanship, and shall be fit for the intended purpose. This warrantee is in addition to any standard warranty or guarantee give by vendor to the County. All products determined by King County to be defective shall be replaced within 15 days of notice by King County. All

costs of replacement, including shipping charges shall be borne by the Vendor. Vendor warrants that the merchandise is free and clear of all liens and encumbrances and that vendor has a good and marketable title to same. Vendor warrants that the equipment, materials or service on this order do not infringe any patent, registered trademark or copyright and agrees to hold King County harmless in the event of any infringement or claim thereof.

Order of Precedence: When this purchase order is issued subsequent to the results of a request for bid or proposal, the terms and conditions contained in the solicitation or resulting contract shall control.



King County

Department of Executive Services
Finance and Operations Division
Procurement and Contract Services Section
206-263-9400 TTY Relay: 711

Invitation to Bid

ADVERTISED DATE: JANUARY 31, 2008

Invitation to Bid (ITB) Title: Coagulant for Reclaimed Water

ITB Number: ITB 1010-08-MZS

Due Date: February 14, 2008 at 2:00 P.M.

Buyer: Mary Schumacher, mary.schumacher@kingcounty.gov, 206-263-9305

KING COUNTY
PROCUREMENT
SERVICES

FEB 2 1 2008

AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

Term Supply Requirement

Furnish Coagulant for Reclaimed Water as requested by King County Department of Natural Resources personnel in accordance with the attached instructions, requirements and specifications.

TOTAL BID PRICE: \$ 72,262.00
(Extended Total
from subsection 6.4)

No Pre-Bid Conference

Sealed Bids are hereby solicited and will **only** be received by:
King County Procurement Services Section
Chinook Office Building, 3rd Floor
401 Fifth Avenue
Seattle, WA 98104
Office Hours: 8:00 a.m. – 5:00 p.m.
Monday - Friday

BIDDERS SHALL COMPLETE AND SIGN THE FORM BELOW.

We acknowledge that Addenda numbered 1 to 1 have been examined as part of the Contract documents. The submittal is signed by an authorized representative of the Bidder accepting all terms and conditions contained in the bid and any addenda. We acknowledge that attaching our terms and conditions or modifying the ITB terms and conditions may result in our bid being rejected.

Company Name

Polydyne Inc.

Address

One Chemical Plant Rd.

City/State /Postal Code

Riceboro, GA 31323

Signature

Print name and title

Lawrence D. Grizzle, Business Manager

Email

polybiddpt@snfhc.com

Phone

(912) 880-2035

Fax

(912) 880-2078

SCS/DBE Certification Number

N/A

Upon request, this Invitation to Bid will be provided in alternative formats such as Braille, large print, audiocassette or computer disk for individuals with disabilities.

SECTION 1 Instruction To Bidders

1.1 Introduction

The purpose of this Invitation to Bid is to establish a contract to provide goods or services on an as-needed basis. Any quantities listed herein are for bidding purposes only and represent King County's estimated annual requirements. The County will be neither obligated nor restricted to the quantities or locations indicated.

1.2 Bid Submittal Procedure

The **original and one (1) copy** of this solicitation document shall be completed, signed and submitted. Failure to return the solicitation document may result in disqualification of the Bidder. The original shall be noted or stamped "original". Bids and modifications thereof shall be enclosed in a sealed envelope, with the "Bid Opening Label" completed and affixed.

Bidders are encouraged to use recycled paper in the preparation of additional documents submitted with this solicitation, and shall use both sides of paper sheets where practicable.

Sealed bids shall contain all required attachments and information and be submitted to King County (hereinafter "County") no later than the date, time and place stated on the front of this ITB or as amended. The bidder shall show the title and number, the due date specified, and the name and address of the bidder on the face of the envelope. Bidders are cautioned that failure to comply may result in non-acceptance of the bid. The Bidder accepts all risks of late delivery of mailed bids or of mis-delivery regardless of fault. Bids properly and timely submitted will be publicly opened.

Bids will only be accepted from Contractors able to complete the delivery of goods or services described in the specifications. Joint ventures shall submit one bid for the team, with accompanying proof of the joint venture agreement.

If a company chooses not to submit a bid, the County requests the company advise the Buyer by email if they desire to remain listed for the subject of this ITB and state reason they did not submit a bid.

1.3 King County Internet Web Site

King County is committed to reducing costs and facilitating faster communication to the community by using electronic means to convey information. As such, most Invitations to Bid and Requests for Proposal, as well as related exhibits, appendices, and issued addenda can be found on the King County Internet Web Site, located at http://metrokc.gov/procurement/rfp_rfq_itb/new_goods.aspx.

Please note any special messages regarding a particular solicitation. This information is posted at the Web Site as a convenience to the public, and is not intended to replace the King County process of formally requesting solicitation documents.

It is important that you register with King County Procurement and Contract Services after downloading documents from the RFPs, RFQs and ITBs - Consultants and Goods/Services websites. Failure to register may result in you not being notified of any addenda, which may result in rejection of your bid/proposal as non-responsive. To register, access **Contact Us >> Registration Form**. Thank you for your cooperation.

Only bids, modifications of bids received in accordance with the requirements of this ITB will be accepted. Facsimile or electronic bids will not be considered.

After all bids have been opened, the County will post a listing of the Bidders submitting bids, or the name of a person to contact for bid results at the King County Internet site. Please refer to the web site for a listing, as well as a notification of a final award.

1.4 Alterations to Document

Any addition, limitation or provision made or attached to the bid may render it non-responsive and/or irregular and be cause for its rejection.

Bidders may be required to submit additional documents as part of the bid package. Any alteration of such documents by erasure or interlineations shall be explained or noted and initialed by the Bidder.

1.5 Late Bids

Bids, modifications of bids, and withdrawal of bids received at the office designated in the solicitation after the exact hour and date specified for receipt will not be considered.

1.6 Cancellation of ITB or Postponement of Bid Opening

The County reserves the right to cancel the ITB at any time.

The County may change the date and time for submitting bids prior to the date and time established for submittal.

1.7 Addenda

Bidder shall acknowledge receipt of all "Addenda" issued during the bid process. Failure to acknowledge receipt of all addenda may result in a bid being determined non-responsive.

If at any time, the County changes, revises, deletes, clarifies, increases, or otherwise modifies the ITB, the County will issue a written Addendum to the ITB.

1.8 Questions and Interpretation of the ITB

No oral interpretations of the ITB will be made to any Bidder. All questions and any explanations must be requested in writing and directed to the Buyer no later than seven (7) days prior to the due date specified in the solicitation. Oral explanations or instructions are not binding. Any information modifying a solicitation will be furnished to all bidders by an addendum.

Days, as referenced in this document, are calendar days unless otherwise specified.

Communications concerning this bid, with other than the listed Buyer may cause the Bidder to be disqualified.

1.9 Examination of Bid Documents

The submission of a bid shall constitute an acknowledgement upon which the County may rely that the Bidder has thoroughly examined and is familiar with the ITB, including any work site identified in the ITB, and has reviewed and inspected all applicable statutes, regulations, ordinances and resolutions addressing or relating to the goods or services to be provided hereunder.

The failure of a Bidder to comply with above requirement shall in no way relieve the Bidder from any obligations with respect to its bid or to any Contract awarded pursuant to this ITB. No claim for additional compensation shall be allowed which is based upon a lack of knowledge or misunderstanding of this ITB.

1.10 Modifications of Bid or Withdrawal of Bid Prior to Bid Due Date

At any time before the time and date set for submittal of bids, a Bidder may submit a modification of a bid previously submitted to the County. All bid modifications shall be made in writing, executed and submitted in the same form and manner as the original bid.

Bids may be withdrawn by written notice received prior to the exact hour and date specified for receipt of bids. A bid also may be withdrawn in person by a Bidder or authorized representative provided their identity is made known and they sign a receipt for the bid, but only if the withdrawal is made prior to the

exact hour and date set for receipt of bids. All requests for modification or withdrawal of bids, whether in person or written, shall not reveal the amount of the original bid.

1.11 Bid Withdrawal After Public Opening

Except for claims of error granted by the County, no Bidder may withdraw a bid after the date and time established for submitting bids, or before the award and execution of a Contract pursuant to this ITB, unless the award is delayed for a period exceeding the period for bid effectiveness.

Requests to withdraw a bid due to error must be submitted in writing along with supporting evidence for such claim for review by the county. Evidence must be delivered to the county within two (2) business days after request to withdraw. The County reserves the right to require additional records or information to evaluate the request. Any review by the County of a bid and/or any review of such a claim of error, including supporting evidence, creates no duty or liability on the County to discover any other bid error or mistake, and the sole liability for any bid error or mistake rests with the Bidder.

1.12 Cost of Bid and Samples

The County is not liable for any costs incurred by Bidder in the preparation and evaluation of bids submitted. Samples of items required must be submitted to the location and by the time specified. Unless otherwise specified, samples shall be submitted with no expense to the County. If not destroyed by testing, samples may be returned at the bidder's request and expense.

1.13 Collusion

By signing this bid, the Bidder certifies that they have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding. If the County determines that collusion has occurred among Bidders, none of the bids from the participants of such collusion will be considered. The County's determination will be final.

1.14 Bid Effective Date

All bids submitted shall be a firm bid for a minimum period of 90 days after the bid opening date, unless otherwise stated in writing in the bid. The County may request a Bidder grant an extension of the bid effective period.

1.15 Bid Price and Tax

The bid price shall include everything necessary for the prosecution and completion of the Contract, except as may be provided otherwise in this ITB.

Bid Prices shall include all freight charges, FOB to the designated delivery point(s).

Taxes: Sales/use taxes and Federal excise taxes shall not be included in the bid price. The County shall pay any Washington State sales/use taxes applicable to the Contract price or tender an appropriate amount to the Contractor for payment to Washington State. The Bidder is cautioned that taxes may be a factor in evaluating the total cost of bid.

The County is exempt from Federal excise and Transportation taxes. All other government taxes, duties, fees, licenses, permits, royalties, assessments and charges shall be included in the bid price. Said exemption is made pursuant to Chapter 32 of the Internal Revenue Code and Registry No. A-1 02374. When requested, an exemption certificate will be furnished.

1.16 Protest Procedures

King County has a process in place for receiving protests based upon invitation to bid or contract awards. The protest procedures:

http://www.metrokc.gov/procurement/documents/U_014_Protest_Procedures.doc, are available from the King County Procurement web site: <http://www.metrokc.gov/procurement/faq/supplier.aspx>.

SECTION 2 Bid Evaluation and Contract Award

2.1 Evaluation of Bids

Bids will be evaluated by the County to determine which bid, if any, may be deemed to be the low responsive bid from a responsible bidder, and should be accepted in the best interest of the County.

The King County Contracting Opportunities Program is incorporated in this ITB. The determination of lowest responsive, responsible bidder will include the application of the five (5) percent incentive factor for Small Contractors and Suppliers (SCS).

King County may use prompt payment discount terms in evaluation of this ITB; however, discounts terms of less than twenty (20) days will not be considered. Minimum acceptable payment terms by the County without benefit of twenty (20) day discount will be net 30 days.

In the event of a discrepancy between the unit price and the extended amount for a bid item, the unit price will govern.

2.2 Responsive and Responsible

Responsive

The County will consider all the material submitted by the Bidder, and other evidence it may obtain otherwise, to determine whether the Bidder is in compliance with the terms and conditions set forth in this ITB.

Responsible

In determining the responsibility of the bidder, the County may consider:

- the ability, capacity and skill to perform the Contract or provide the service required (inspection of the bidder's facility may be required prior to award);
- the character, integrity, reputation, judgment and efficiency;
- financial resources to perform the Contract properly and within the times specified;
- the quality and timeliness of performance on previous contracts with the County and other agencies, including, but not limited to, the effort necessarily expended by the County and other agencies in securing satisfactory performance and resolving claims;
- compliance with federal, state and local laws and ordinances relating to public contracts;
- other information having a bearing on the decision to award the Contract.

Failure of a bidder to be deemed responsible or responsive may result in the rejection of a bid.

2.3 Financial Resources and Auditing

If requested by the County, prior to the award of a contract, the bidder shall submit proof of adequate financial resources available to carry out the execution and completion of work required by this contract.

King County reserves the right to audit the Contractor throughout the term of this contract to assure the Contractor's financial fitness to perform and comply with all terms and conditions contained within this contract. King County will be the sole judge in determining the Contractor's financial fitness in carrying out the terms of this contract.

2.4 King County Contracting Opportunities Program

The purpose of the King County Contracting Opportunities Program is to maximize the participation of Small Contractors and Suppliers (SCS) through the use of a five percent (5%) incentive factor in the

award of King County contracts for the purchase of goods or services. The Program is open to all SCS firms certified by King County's Business Development and Contract Compliance Office. To learn more about this program, or becoming a Certified Firm, as well as a list of Certified Firms, may be obtained by visiting the King County Contracting Opportunities Program Web-site at <http://bdcc.metrokc.gov/bred/Lists/SCS%20Certified%20Contractors/Public%20View1.htm> or contacting the Program office at 206-205- 3443.

2.5 Substitutions

When specific brands, materials, design, style or size are named, such specifications may be construed to be shown solely for the purpose of indicating the standard of quality, performance or intended use.

Where indicated, brands of equal quality, performance and use may be considered by the county, provided the bidder submits with their bid the brand, model, product number and other data necessary for comparison. The county retains the sole right to accept or reject substitutions.

2.6 Forms Required Before Contract Award

The Bidder shall submit, within five (5) Days of notification from the County, the applicable documents, insurance, bonds, sworn statements, and other requirements prior to award. Failure by the Bidder to submit required documents may result in rejection of the bid.

- Equal Benefit Worksheet and Declaration Form
- Personnel Inventory Report*
- Affidavit and Certificate of Compliance Regarding Equal Employment Opportunity*
- Statement of Compliance – Union or Employee Referral Agency Statement*
- Internal Revenue Service Form W-9 *
- **Certificate of Insurance and Endorsement *** – Have Insurance Agent e-mail or Fax to Buyer evidence of insurance from insurer(s) satisfactory to the county certifying to the coverage of insurance set forth in this ITB.

*If not on file with the County

2.7 Rejection of Bids

The County reserves the right to reject any bid for any reason or to waive informalities and irregularities in bids.

In consideration for the County's review and evaluation of its bid, the Bidder waives and releases any claims against the County arising from any rejection of any or all bids, including any claim for costs incurred by Bidders in the preparation and presentation of bids submitted in response to this ITB. In addition, Bidders waive the costs of providing additional information requested.

2.8 Single Bid Receipt

If the County receives a single responsive, responsible bid, the County may request an extension of the bid acceptance period and/or conduct a price or cost analysis on such bid. The Bidder shall promptly provide all cost or pricing data, documentation and explanation requested by the County to assist in such analysis. By conducting such analysis, the County shall not be obligated to accept the single bid; the County reserves the right to reject such bid or any portion thereof.

2.9 Public Disclosure of Bids

This Contract shall be considered a public document and will be available for inspection and copying by the public in accordance with the Public Records Act, Chapter 42.56 RCW (the "Act").

If the Contractor considers any portion of any record provided to King County under this Contract, whether in electronic or hard copy form, to be protected under law, the Contractor shall clearly identify each such portion with words such as "CONFIDENTIAL," "PROPRIETARY" or "BUSINESS SECRET." If a request is made for disclosure of such portion, the County will determine whether the material should be made available under the Act. If the County determines that the material is subject to disclosure, the County will notify the Contractor of the request and allow the Contractor ten (10) business days to take whatever action it deems necessary to protect its interests. If the Contractor fails or neglects to take such action within said period, the County will release the portions of record(s) deemed by the County to be subject to disclosure. King County shall not be liable to the Contractor for inadvertently releasing records pursuant to a disclosure request not clearly identified by the Contractor as "CONFIDENTIAL," "PROPRIETARY" or "BUSINESS SECRET."

2.10 Contract Award

Contract award, if any, will be made by the County to the low, responsive, responsible Bidder. The County will have no obligations until an award is made and an order placed with the Contractor. The County reserves the right to award one or more contracts as determined to be in the County's best interest. The County may accept any individual item, or group of items, or schedules of any bid, unless otherwise stated herein.

A written award mailed or otherwise furnished to a Contractor within the time for acceptance shall be a binding contract.

SECTION 3 Standard Contractual Terms and Conditions

3.1 Administration

This Contract is between the County and the Contractor who shall be responsible for providing the goods or services described herein. The County is not party to defining the division of work between the Contractor and its Subcontractors. The Contractor represents that it has or shall obtain all duly licensed or qualified personnel, materials and equipment required to perform work hereunder.

The Contractor's performance under this Contract may be monitored and reviewed by a Project Manager appointed by the County. Reports and data required to be provided by the Contractor shall be delivered to the Project Manager or Buyer. Questions by the Contractor regarding interpretation of the terms, provisions and requirements of this Contract shall be addressed to the Buyer or Project Manager for response.

3.2 Contract Amendments

No oral order or conduct by the County shall constitute a Contract Amendment. Contract Amendments shall only be effective upon written notification by the County. The County reserves the right to amend the contract to add or delete goods or services within the intended scope of this contract. This may include, but is not limited to:

- Approval of replacements for discontinued items,
- Add items of like function, or similar in nature or purpose to the originally listed products
- The provision of ancillary services in response to minor changes in County needs
- Extend the contract to include optional terms

Cost or Price Analysis may be required by the County for the evaluation of contract modifications, terminations, revision to contract requirements or other circumstances as determined by the County.

3.3 Invoices and Payment

The Contractor shall submit properly certified invoices to King County. The invoice(s) shall contain the following information: The purchase order/contract number, item numbers, description of supplies or services, quantities, unit prices, extended totals, and discounts, if applicable. For services, identify specific deliverables, and/or hourly rates, hours worked, total hours or related fees.

The Contractor shall bill to the address on the purchase order. The County will take advantage of any prompt payment discount terms bid. Discount periods shall be extended if the invoice is returned for credit or correction.

When a purchase order is issued against this Contract that has the potential for multiple or partial deliveries, a separate invoice shall be generated for each completed delivery accepted by the County.

Failure to comply with these requirements or to provide an invoice in conformance with the contract may delay payment.

Upon acceptance of payment, the Contractor waives any claims for the goods or services covered by the Invoice. No advance payment shall be made for the goods or services furnished by Contractor pursuant to this Contract.

King County will not be bound by prices contained in an invoice that are higher than those in the currently approved price list. If a price increase has not been accepted in writing by King County, the invoice may be rejected and returned to the Contractor for a correction.

3.4 Rejection of Goods Or Services

After award, the Buyer or authorized County representative shall have the option of rejecting or refusing delivery of any and all goods or services which are not in strict conformity with the requirements of the specification and the bid. All rejected goods or services shall be promptly replaced or re-performed and be subject to approval by the County. All replacement goods and services shall be provided at the Contractor's own expense.

3.5 Re-procurement Costs

When a Contractor fails to furnish goods or services in accordance with the terms of this Contract, and the County must purchase at a price greater than the contract price, the difference may be charged to the Contractor. The County may exercise this charge as a credit against invoices due the Contractor.

3.6 Termination For Convenience/Default/Non-appropriation

A. Termination for Convenience

The County for its convenience may terminate this Contract, in whole or in part, at any time by written notice sent certified mail, return receipt requested, to the Contractor. After receipt of a Notice of Termination ("Notice"), and except as directed by the County, the Contractor shall immediately stop work as directed in the Notice, and comply with all other requirements in the Notice. The Contractor will be paid its costs, including necessary and reasonable Contract close-out costs and profit on that portion of the work satisfactorily performed up to the date of termination as specified in the notice. The Contractor shall promptly submit its request for the termination payment, together with detailed supporting documentation. If the Contractor has any property in its possession belonging to the County, the Contractor shall account for the same and dispose of it in the manner the County directs. All termination payment requests may be subject to Cost or Price Analysis to determine reasonableness and compliance with the Contract and applicable laws and regulations.

B. Termination for Default

If the Contractor does not deliver work in accordance with the Contract, or the Contractor fails to perform in the manner called for in the Contract, or the Contractor fails to comply with any material provisions of the Contract, the County may terminate this Contract, in whole or in part, for default as follows:

A Notice to Cure will be served on the Contractor by certified mail (return receipt requested) or a delivery service capable of providing a receipt. The Contractor shall have ten (10) Days from the date the Notice to Cure was served to cure the default or provide the County with a detailed written plan, which indicates the time and methods needed to bring the work into compliance and cure the default.

If the Contractor has not cured the default or the plan to cure the default is not acceptable to the County, the County may terminate the Contract. Termination shall occur by serving a Notice of Termination by certified mail (return receipt requested) or delivery service capable of providing a receipt on the Contractor setting forth the manner in which the Contractor is in default and the effective date of termination.

The Contractor will only be paid for work delivered and Accepted, or work performed in accordance with the manner of performance set forth in the Contract less any damages to the County caused by or arising from such default. All termination payment requests are subject to Cost or Price Analysis to verify compliance with the Contract and applicable laws and regulations.

The termination of this Contract shall in no way relieve the Contractor from any of its obligations under this Contract nor limit the rights and remedies of the County hereunder in any manner.

C. Termination for Non-Appropriation

If expected or actual funding is withdrawn, reduced, or limited in any way prior to the termination date set forth in this Contract or in any amendment hereto, the County may, upon written notice to the Contractor, terminate this Contract in whole or in part.

In accordance with King County Code 4.04.040B.6, payment shall not exceed the appropriation for the year in which termination is effected. If this Contract is terminated for non-appropriation, the County shall be liable only for payment in accordance with the terms of this Contract for performance rendered prior to the effective date of termination; and, the Contractor shall be released from any obligation under this contract or a related Purchase Order to provide further work pursuant to the Contract as are affected by the termination.

Funding under this Contract beyond the current appropriation year is conditional upon the appropriation by the County Council of sufficient funds to support the activities described in this Contract. Should such an appropriation not be approved, the Contract shall terminate at the close of the current appropriation year. The appropriation year ends on December 31 of each year.

3.7 Force Majeure

The term force majeure shall include, without limitation by the following enumeration: acts of nature, acts of civil or military authorities, fire, accidents shutdowns for purpose of emergency repairs, industrial, civil or public disturbances, causing the inability to perform the requirements of this Contract. If any party is rendered unable, wholly or in part, by a force majeure event or any event cause not within such party's control, to perform or comply with any obligation or condition of this Contract, upon giving notice and reasonably full particulars to the other party, such obligation or condition shall be suspended only for the time and to the extent commercially practicable to restore normal operations. In the event the Contractor ceases to be excused pursuant to this provision, then the County shall be entitled to exercise any remedies otherwise provided for in this Contract, including Termination for Default.

Whenever a force majeure event causes the Contractor to allocate limited resources between or among the Contractor's customers, the County shall receive no less priority in respect to such allocation than any of the Contractor's other customers.

3.8 Taxes, Licenses, and Certificate Requirements

This Contract and any of the work provided hereunder is contingent and expressly conditioned upon the ability of the Contractor to provide the specified goods or services consistent with applicable federal, state or local laws and regulations. If, for any reason, the Contractor's required compliances are terminated, suspended, revoked or in any manner modified from their status at the time this Contract becomes effective, the Contractor shall notify the County immediately of such condition in writing.

The Contractor and subcontractor(s) shall maintain and be liable for all taxes (except sales/use taxes), fees, licenses, permits and costs as may be required by applicable federal, state or local laws and regulations as applicable to the work under this Contract.

3.9 Assignment

Neither party shall assign any interest, obligation or benefit under or in this Contract or transfer any interest in the same, whether by assignment or novation, without prior written consent of the other party. If assignment is approved, this Contract shall be binding upon and inure to the benefit of the successors of the assigning party. This provision shall not prevent the Contractor from pledging any

proceeds from this Contract as security to a lender so long as King County Policy Fin10-1 (AP), paragraph 6.1.3 is followed. If assignment is approved, it shall be accepted by either party upon the posting of all required bonds, securities and the like by the assignee, and the written agreement by assignee to assume and be responsible for the obligations and liabilities of the Contract, known and unknown, and applicable law.

3.10 Indemnification and Hold Harmless

- A. In providing services under this Contract, the Contractor is an independent contractor, and neither the Contractor nor its officers, agents or employees are employees of the County for any purpose. The Contractor shall be responsible for all federal and/or state tax, industrial insurance and Social Security liability that may result from the performance of and compensation for these services and shall make no claim of career service or civil service rights which may accrue to a County employee under state or local law.

The County assumes no responsibility for the payment of any compensation, wages, benefits, or taxes by or on behalf of the Contractor, its employees and/or others by reason of this Contract. The Contractor shall protect, indemnify, defend and save harmless the County and its officers, agents and employees from and against any and all claims, costs, and/or losses whatsoever occurring or resulting from (1) the Contractor's failure to pay any such compensation, wages, benefits or taxes; and/or (2) the supplying to the Contractor work, services, materials, and/or supplies by Contractor employees or other suppliers in connection with or in support of the performance of this Contract.

- B. The Contractor further agrees that it is responsible for and shall repay the County all indicated amounts following an audit exception which occurs due to the negligence, intentional act and/or failure for any reason to comply with the terms of this Contract by the Contractor, its officers, employees, agents, and/or representatives. This duty to repay shall not be diminished or extinguished by the prior termination of the Contract pursuant to the Duration of Contract, or the Termination section.
- C. The Contractor shall protect, defend, indemnify, and save harmless the County, [and the State of Washington or US Government (when any funds for this Contract are provided by them)], their officers, employees, and agents from any and all costs, fees (including attorney fees), claims, actions, lawsuits, judgments, awards of damages or liability of any kind, arising out of or in any way resulting from the negligent acts or omissions of the Contractor, its officers, employees, subcontractors or any tier and/or agents. The Contractor agrees that its obligations under this paragraph extend to any claim, demand, and/or cause of action brought by or on behalf of any of its employees, subcontractors of any tier or agents.

In addition to injuries to persons and damage to property, the term "claims," for purposes of this paragraph C, shall include, but not be limited to, assertions that the use or transfer of any software, book, document, report, film, tape, or sound reproduction or material of any kind, delivered hereunder, constitutes an infringement of any copyright, patent, trademark, trade name, and/or otherwise results in unfair trade practice.

- D. For purposes of paragraphs A and C above, the Contractor, by mutual negotiation, hereby waives, as respects the County only, any immunity that would otherwise be available against such claims under the Industrial Insurance provisions of Title 51 RCW.
- E. In the event the County incurs attorney fees and/or costs in the defense of claims within the scope of paragraphs A and C above, such attorney fees and costs shall be recoverable from the Contractor. In addition King County shall be entitled to recover from the Contractor its attorney fees, and costs incurred to enforce the provisions of this section.

- F. The indemnification, protection, defense and save harmless obligations contained herein shall survive the expiration, abandonment or termination of this Contract.
- G. Nothing contained within this provision shall affect and/or alter the application of any other provision contained within this Contract.

3.11 Applicable Law and Forum

Except as hereinafter specifically provided, this Contract shall be governed by and construed according to the laws of the State of Washington, including, but not limited to, the Uniform Commercial Code, Title 62A RCW. Any claim or suit concerning this Contract shall only be filed in either the King County Superior Court or U.S. District for the Western District of Washington, in Seattle.

3.12 Conflicts of Interest and Non-Competitive Practices

By entering into this Contract to perform work, the Contractor represents that it has no direct or indirect pecuniary or proprietary interest, and that it shall not require any interest that conflicts in any manner or degree with the work required to be performed under this Contract. The Contractor shall not employ any Person or agent having any conflict of interest. In the event that the Contractor or its agents, employees or representatives hereafter acquires such a conflict of interest, it shall immediately disclose such conflict to the County. The County shall require that the Contractor take immediate action to eliminate the conflict up to and including termination for default.

By entering into this Contract to perform work, the Contractor represents that no Persons except as designated by Contractor shall be employed or retained to solicit or secure this Contract with an agreement or understanding that a commission, percentage, brokerage, or contingent fee would be paid; and no gratuities, in the form of entertainment, gifts or otherwise, were bided or given by the Contractor or any of its agents; employees or representatives, to any official, member or employee of the County or other governmental agency with a view toward securing this Contract or securing favorable treatment with respect to the awarding or amending, or the making of any determination with respect to the performance of this Contract.

3.13 Disputes, Claims and Appeals

The Contractor shall address questions or claims regarding the Contract in writing to the Buyer and Project Manager, within ten (10) Days of the date on which the Contractor knows or should know of the question or claim. No claim by the Contractor shall be allowed if asserted after final payment under this Contract. No claim shall be allowed for any costs incurred more than ten (10) Days before the Contractor gives written notice, as required in this section. The Buyer and Project Manager shall ordinarily respond to the Contractor in writing with a decision, but absent such written response, the question or claim shall be deemed denied upon the tenth (10th) Day following receipt by the Buyer and Project Manager.

In the event the Contractor disagrees with the determination of the Buyer and Project Manager, the Contractor shall within five (5) Days of the date of such determination, appeal the determination in writing to the Procurement and Contract Services Section Manager. Such written notice of appeal shall include all information necessary to substantiate the appeal. The Procurement and Contract Services Section Manager shall review the appeal and make a determination in writing, which shall be final. Appeal to the Procurement and Contract Services Section Manager shall be a condition precedent to alternative dispute resolution or litigation.

Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract and in accordance with the direction of the Buyer or Project Manager. Failure to comply precisely with the time deadlines under this subsection as to any claim shall operate as a waiver and release of that claim and an acknowledgement of prejudice to the County.

3.14 Maintenance of Records/Audits

The Contractor shall maintain, and shall require any sub-contractor to maintain, accounts and records, including personnel, property, financial, and programmatic records and such other records as may be deemed necessary by the County to ensure proper accounting for all contract funds and compliance with this Contract. All such records shall sufficiently and properly reflect all direct and indirect costs of any nature expended and services provided in the performance of this Contract. The Contractor shall make such documents available to the County for inspection, copying, and auditing upon request.

All records referenced in subsection (A) shall be maintained for a period of six (6) years after completion of work or termination hereof unless permission to destroy them is granted by the Office of the Archivist in accordance with RCW Chapter 40.14, or unless a longer retention period is required by law.

The Contractor shall provide access to its facilities, including those of any sub-contractor, to the County, the State and/or federal agencies or officials at all reasonable times in order to monitor and evaluate the services provided under this Contract.

The Contractor agrees to cooperate with County or its designee in the evaluation of the services provided under this Contract and to make available all information reasonably required by any such evaluation process. The results and records of said evaluation shall be maintained and disclosed in accordance with RCW Chapter 42.56.

If the Contractor expended a total of \$500,000.00 or more in federal awards during its fiscal year, and is a non-profit organization, and is, under this Contract, carrying out or administering a program or portion of a program, it shall have an independent audit conducted in accordance with OMB Circular A-133, which shall comply with the requirements of GAAS (generally accepted auditing standards), GAO's Government Audit Standards and OMB Circular A-133, as amended and as applicable. Contractors expending federal awards from more than one source shall be responsible for determining if the combined financial awards are equal to or greater than \$500,000.00. The Contractor shall provide one copy of the audit report to each County division providing federal awards to the Contractor no later than nine (9) months subsequent to the end of the Contractor's fiscal year.

3.15 Other Public Agency Orders

The Washington State Interlocal Cooperative Act RCW 39.34 provides that other governmental agencies may purchase goods or services on this solicitation or contract in accordance with the terms and prices indicated therein if all parties agree. The County does not accept any responsibility or involvement in the purchase orders or contracts issued by other public agencies.

3.16 Environmental Purchasing Policy

Bidders able to supply products containing recycled and environmentally preferable materials that meet performance requirements are encouraged to offer them in bids and proposals.

The Bidder and Contractor shall use recycled paper for all printed and photocopied documents related to the submission of this solicitation and fulfillment of the contract and shall, whenever practicable, use both sides of the paper. (Reference: KCC 10.16 & King County Executive Policy CON 7-1-2).

3.17 Industrial and Hazardous Waste

The Contractor shall comply with all applicable local ordinances, state and federal statutes, and supporting rules and regulations governing the discharge of industrial waste to public sewer, private sewer, or side sewer tributary to the metropolitan sewer system.

Contractor shall handle and dispose of all hazardous wastes in compliance with all applicable local, state and federal laws and regulations, including the Resource Conservation and Recovery Act, the

Washington Hazardous Waste Management Act, and applicable rules and regulations of the Environmental Protection Agency and the Department of Ecology governing the generation, storage, treatment, transportation or disposal of hazardous wastes.

3.18 Patents and Royalties

The Contractor is responsible for paying all license fees, royalties or the costs of defending claims for the infringement of any intellectual property that may be used in performing this Contract.

3.19 Supported Employment Program

The County encourages the creation of supported employment programs for developmentally and/or severely disabled individuals. The County itself has such a program and is actively seeking to do business with those Contractors and Consultants that share this employment approach. If your firm has such a program, or intends to develop such a program during the life of this Contract, please submit Documentation supporting this claim with your bid. If you have questions, or need additional information, please contact the Community and Human Services Division, Developmental Disabilities Division, 206-296-5268.

3.20 Nondiscrimination and Equal Employment Program

During the performance of this contract, neither the Contractor nor any party subcontracting under the authority of this Contract shall discriminate nor tolerate harassment on the basis of race, color, sex, religion, nationality, creed, marital status, sexual orientation, age, or the presence of any sensory, mental, or physical disability in the employment or application for employment or in the administration or delivery of services or any other benefits under this Contract. King County Code, and all applicable state and federal anti-discrimination laws, rules, regulations and requirements are incorporated herein by reference, and such requirements shall apply to this contract. Ref: KCC 12.16, 12.17, and 12.18

3.21 Equal Benefits To Employees With Domestic Partners

Pursuant to Ordinance 14823, King County's "Equal Benefits" (EB) ordinance, and related administrative rules adopted by the County Executive, as a condition of award of a contract is valued at \$25,000 or more, the Contractor agrees that it shall not discriminate in the provision of employee benefits between employees with spouses, and employees with domestic partners during the performance of this Contract. Failure to comply with this provision shall be considered a material breach of this Contract, and may subject the Contractor to administrative sanctions and remedies for breach.

When the contract is valued at \$25,000 or more, the Contractor shall complete a Worksheet and Declaration form for County review and acceptance prior to Contract execution. The EB Compliance forms, Ordinance 14823 (which is codified at KCC Chapter 12.19) and related administrative rules are incorporated herein by reference. They are also available online at: <http://www.metrokc.gov/procurement/forms/eb.aspx>.

3.22 Non-Waiver of Breach

No action or failure to act by the County shall constitute a waiver of any right or duty afforded to the County under the Contract; nor shall any such action or failure to act by the County constitute an approval of, or acquiescence in, any breach hereunder, except as may be specifically stated by the County in writing.

3.23 Severability

Whenever possible, each provision of this Contract shall be interpreted to be effective and valid under applicable law. If any provision is found to be invalid, illegal, or unenforceable, then such provision or portion thereof shall be modified to the extent necessary to render it legal, valid, and enforceable and have the intent and economic effect as close as possible to the invalid, illegal, and unenforceable provision. If it is not possible to modify the provision to render it legal, valid and enforceable, then the provision shall be severed from the rest of this Contract. The invalidity, illegality or unenforceability of any provision shall not affect the validity, legality or enforceability of any other provision of this Contract, which shall remain valid and binding.

SECTION 4 Specific Contractual Terms & Conditions

4.1 Contract Value

The estimated annual value of this contract is approximately **\$125,000** a year. King County will not be limited, restricted or bound by this dollar value, nor shall the County be obligated to purchase any items contained in this ITB.

4.2 Contract Term

The initial term of this Contract will be one (1) year and may be extended for four (4) additional one-year periods at the option of the County, subject to the termination clauses contained herein. King County reserves the right to extend the term if determined to be in the best interest of the County.

Contracts or purchase orders will be issued by the County. Contract amendments or change orders issued by the County may reflect modification(s) of contract terms, funding or other matters.

King County reserves the right to purchase the goods or services described herein from other sources. The Contractor does not have the exclusive right to fill all of the County's requirements for the goods or services awarded nor will the County be obligated to purchase the estimated annual quantity, or any quantity contained in this Contract.

4.3 Price Revisions

Prices shall remain firm for the duration of the initial Contract period. Reasonable price changes based on market conditions and price/cost analysis may be made after the initial Contract period. The Contractor shall supply documentation satisfactory to King County such as documented changes to the Producers Price Index for the commodity, the Consumer Price Index for the Seattle-Tacoma-Bremerton area, or a manufacturer's published notification of price change(s).

King County will evaluate this information to determine if revising the pricing is considered fair and reasonable to the satisfaction of King County. Requests for any such change are to be made in writing to the Buyer in the Procurement Services Division office. A written change order issued by the County will institute the price adjustment, provide the new prices and establish the effective date for the new prices.

The Contractor shall endeavor to give the King County Procurement Services Section thirty (30) days but not less than fourteen (14) days written notice prior to the effective date of the price increase. The County may cancel the contract if the price increase request is not approved.

All price reductions at the manufacturer's or distributor's level shall be reflected in a reduction of the contract price(s) to King County retroactive to the effective date of the price reductions.

4.4 Shipping Charges

All prices shall include freight FOB to the designated delivery point. The County will reject requests for additional compensation for freight charges.

4.5 Packing Slips

Each delivery to the County shall have a packing slip enclosed that identifies the requester, purchase order number, part number, unit price and quantity of each part shipped. If the delivery is a partial shipment, indicate on the packing slip that it is not a complete shipment of that requisition and identify the items not shipped and provide a projected completion date of the order.

If the delivery combines items from more than one purchase order, separate packing slips shall be included in the shipment for each.

4.6 Use Report

The Contractor shall, if requested, submit to the Buyer a report of sales made to King County under this Contract. The report, in a format acceptable to King County, shall identify the detail required by the Buyer, which may include but is not limited to, delivery location, the item description, whether it's a Contract or non-Contract item, quantity, price and discount.

4.7 Warranty

The Contractor warrants that the work performed under this Contract shall be free from defects in material and workmanship, and shall conform to all requirements of this Contract, for a period of at least twelve (12) months from date of acceptance of such work by the County. Any work corrected shall be subject to this subsection to the same extent as the work initially provided.

Conducting of tests or inspections, acceptance, or the processing of payment(s) by the County shall not constitute a waiver of any rights under this Contract or in law. The termination of this Contract shall in no way relieve the Contractor from its warranty responsibility. King County may avail itself of the bidder or manufacturer's standard warranty if more beneficial to the County.

The Contractor shall ensure that the warranty requirements of this Contract are enforceable through and against the Contractor's suppliers, vendors, distributors and Subcontractors. The Contractor shall cooperate with the County in facilitating warranty related work by such suppliers, vendors, distributors and Subcontractors.

Contractor warrants that the Services shall in all material respects conform to the requirements of this Contract. Contractor warrants that qualified professional personnel with in-depth knowledge shall perform the Services in a timely and professional manner; and that the Services shall conform to the standards generally observed in the industry for similar Services. Contractor warrants that the Services shall be in compliance with all applicable laws, rules and regulations.

4.8 Warranty Remedies

Whenever possible, the contractor shall provide "on the spot" settlement of warranty claims or disputes, and authorize local representatives to act on the equipment manufacturer's behalf.

If at any time during the twelve (12) Month period immediately following acceptance of any work covered by this Contract, Contractor or the County discovers one or more material defects or errors in the work or any other aspect in which the work materially fails to meet the provisions of the warranty requirements herein Contractor shall, at its own expense and within thirty (30) Days of notification of the defect by the County, correct the defect, error or nonconformity.

The County shall give written notice of any defect to the Contractor. If the Contractor has not corrected defect within thirty (30) Days after receiving the written notice, the County, in its sole discretion, may correct the defect itself. In the case of an emergency where the County believes delay could cause serious injury, loss or damage, the County may waive the written notice and correct the defect. In either case the County shall charge-back the cost for such warranty repair to the Contractor.

The Contractor is responsible for all costs of repair or replacement in order to restore the work to the applicable Contract requirements, including shipping charges, for work found defective within the warranty period, regardless of who actually corrects the defect.

This subsection does not apply to any merchandise made to order for the County.

4.9 Hazardous Chemical Communication

In order to comply with WAC 296-62-054, Hazard Communication, the Contractor shall prepare, a Material Safety Data Sheet (MSDS) for all products containing any toxic products that may be harmful to the end user. The MSDS Sheet shall be submitted with the bid and shall accompany the toxic product(s) to the specified delivery sites and include the Chemical Abstract Service (CAS) numbers for every chemical that is listed in the MSDS. If the product is actually used diluted, the rate shall be so stated in the MSDS and the hazards and corresponding Personal protection, etc. also be listed. SARA Title 3 chemicals shall be listed with the percentage by weight of the total product. The MSDS shall include a statement as to the intended use of the product.

4.10 Insurance Requirements

Prior to the award of a contract, the Contractor shall obtain and maintain the minimum insurance set forth herein for the duration of this contract for itself and any subcontractor performing work. By requiring such minimum insurance, the County shall not be deemed or construed to have assessed the risks that may be applicable to the Contractor under this Contract. The Contractor shall assess its own risks and, if it deems appropriate and/or prudent, maintain greater limits and/or broader coverage. The Contractor shall maintain limits and scope of insurance no less than:

General Liability \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage, and for those policies with aggregate limits, a \$2,000,000 aggregate limit;

Products and Completed Operations: \$1,000,000;

Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage, CA 9948 Endorsement, and Auto Pollution for transport of pollutants;

Contractor's Pollution Liability: \$1,000,000 combined single limit per occurrence.

Workers' Compensation: Statutory requirements of the state of residency;

Employers Liability Stop Gap: \$1,000,000;

The County, its officers, officials, employees and agents are to be covered as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor in connection with this Contract. Use the above exact language on the Endorsement Form. **The County requires this Endorsement to complete the Contract.**

SECTION 5 Technical Specifications

5.1 Introduction

This contract is for the supply and delivery of coagulant, in bulk liquid form, for use in the water reclamation facility at the King County Department of Natural Resources South Treatment Plant.

The King County South Treatment plant uses an activated sludge process to treat wastewater to meet secondary treatment standards, where the majority of the treated effluent is discharged via an outfall to Puget Sound. A portion of the treated effluent is pumped to an on-site water reclamation facility for production, distribution and use of reclaimed water. The facility produces Class A reclaimed water through a process that includes coagulation, filtration and disinfection. The South Plant uses water from the reclaimed water facility on-site year-round for process water needs. From March to October reclaimed water is used for various irrigation and industrial uses.

Part of the standard for achieving a Class A reclaimed water is the addition of a coagulant, which aids in the removal of suspended solids to reduce turbidity of the water. The South Treatment Plant consistently operates the facility to maintain turbidities below 1.0 NTU at all times while producing Class A reclaimed water. Maintaining the turbidity below 1.0 NTU helps ensure the South Treatment Plant can meet permit conditions for Total Coliforms (TC) of ≤ 23 counts / 100 ml in any single sample and ≤ 2.2 counts / 100 ml for a 7-day moving median.

In the past, a variety of coagulants (Aluminum Sulfate, Polyaluminum Chlorohydrate and other PAC products) have been used at the South Plant water reclamation facility, with varying degrees of success. Currently the South Treatment plant uses a coagulant known as JENCHEM JC 1679, which is a proprietary polyaluminum chloride. It has worked effectively in meeting the permit standards for turbidity which allows the South Treatment Plant the ability to reuse water for conservation purposes, especially during the summer months.

5.2 General

In order to qualify for the bid process, the coagulant shall meet the product specifications outlined in subsection 5-3 (see below). The following items shall accompany the bid: 1) a Technical Specification sheet (see subsection 6.6.A), 2) a Material Safety Data Sheet (see subsection 4.9), 3) at least three (3) references where the product has been used, a contact name and phone number (see subsection 6.8) and 4) all test methods and procedures used to determine Specifications shall be furnished with bid. **Failure to provide the items requested will result in automatic disqualification of the bid.**

This ITB is a sealed bid process. After ensuring that the product meets the product specifications, the lowest responsive, responsible bid will be awarded the contract. Orders after contract award will be placed by issuance of purchase orders referencing the contract. Invoices shall reference the purchase order number not the contract number and shall be sent to the South Treatment Plant, 1200 Monster RD SW, Renton, WA 98057, attention: Steven Yee (206) 684-2476. The South Plant will order the coagulant on an as-needed basis.

5.3 Product Specification

The coagulant to be used for water reuse at the South Treatment Plant shall be NSF (National Sanitation Foundation) certified and approved for potable water usage in a range of 60 mg/l to 75 mg/l. The offered coagulant shall meet the specified ranges of all parameters identified in subsection 5.3.A.

A. Water Reuse Coagulant

These specifications constitute the Specification of the product being bid. All test methods and procedures used to determine Specifications shall be furnished with bid.

Bulk Properties	Property Values and Ranges
pH	4.25 +/- 0.25
Specific Gravity	1.24 +/- 0.01
Density	10.34 +/- 0.10
Aluminum @ Al, %	8.05 +/- 0.45
Chloride, %	8.10 +/- 0.50
Basicity, %	79.00 +/- 4.00

5.4 Product Quality

All bulk chemical products delivered shall be free from impurities including water, dirt, harmful oils or additives, fibrous materials and other products or contaminants. Any product delivered that is contaminated, shall be removed and replaced within forty-eight hours. In case of damage directly traceable to contamination, the contractor shall be responsible for all damages and costs incurred.

If deliveries do not meet specification, King County reserves the right to either reject the shipment and return it to the Contractor at the Contractor's expense, or be appropriately credited by the Contractor for the discrepancy.

5.5 Performance

King County shall require the offered product to achieve consistent performance throughout the life of the Contract to meet King County STP reclaimed water turbidity standards. If during the life of the Contract the product will not maintain required reclaimed water turbidities ≤ 1.0 NTU the vendor will be offered the opportunity to assist King County staff in making suggestions for improving product performance or by changing products. All remedial action taken by the Vendor shall be subject to prior approval by King County staff and subject to subsection 3.2 Contract Amendments.

If the Contractor is unable to offer a solution satisfactory to King County, then King County reserves the right to switch to an alternative coagulant from the current vendor or from another vendor if the problem is temporary, or terminate the Contract.

5.6 Delivery Requirements

A. Contractor's Responsibilities

The Contractor assumes all liability and responsibilities for the handling and transportation of chemicals until it has been unloaded and placed in storage tanks. All deliveries will be via motor freight as no railroad unloading facilities are available. All freight and delivery charges will be the responsibility of the Contractor. All deliveries are to be unloaded and transferred to King County's storage vessels by the carrier's on board equipment. No pressurized air will be available from King County for unloading purposes. Carrier shall have all required fittings available at time of delivery to transfer the coagulant from the tanker to King County's storage tanks.

In case of spillage, the contractor shall take immediate corrective action to abate, remove, and clean up the spilled chemical product. In the event of any delay in corrective action, the County may proceed with the clean up and the Contractor shall be liable for those expenses incurred by the County.

The Contractor shall be responsible for any and all damage to buildings and/or properties caused by delivery trucks and/or delivery personnel, and damages or services necessitated by the failure to deliver chemicals or the delivery of faulty product and equipment. Deliveries shall be made in a professional manner. Any repair or clean up services shall be made at the Contractor's expense to the satisfaction of the County. Upon the failure of the Contractor to comply with these requirements in a reasonable time, the County may deem it expedient to repair damages and perform the necessary services at the expense of the Contractor.

B. Deliveries

The estimated annual usage for coagulant at the South Plant is 9,600 gallons, and there will be a minimum of one (1) load purchased annually. The product will be delivered via bulk tankers in 4,400 gallon minimum loads. At least fourteen (14) days lead time will be given to the vendor when placing coagulant orders, though in the event of an emergency, King County reserves the right to schedule deliveries with less than a 72 hour lead time. Although the South Plant is in operation twenty four hours a day, deliveries shall only be made Monday – Friday from 0800 – 1600 hours, or Deliveries may be received outside these hours if prior arrangements are made with South Treatment Plant staff.

The driver shall contact the South Treatment Plant at least one (1) hour before arriving at the premises to unload. The driver shall meet all requirements for transporting and handling hazardous materials and shall provide and wear, any required personal protective equipment when unloading and handling the material. The driver also shall submit with each delivery: a Material Safety Data Sheet of the product, a Certificate of Analysis of the products bulk properties (see subsection 5.3.A) and a copy of the scale weight ticket indicating empty weight and full weight.

Contractor shall notify the County within twelve (12) hours if a scheduled delivery will not be made or delivered on time. Repeated non-delivery or failure to notify the County of an inability to deliver may be cause for Contract termination.

SECTION 6 Bid Response

6.1 Rules of Price Evaluation

Bids meeting all requirements of this ITB will be evaluated on price. Bids stating price in effect at the time of shipment will not be accepted.

6.2 Delivery

Delivery is required as soon as possible after issuance of a purchase order, but no later than fourteen (14) days after verbal placement of an order. Bid prices shall include delivery, FOB destination, to the following location:

South Treatment Plant
1200 Monster RD SW
Renton, WA 98507
Attn: South Plant Main Control
206-684-2404

Delivery Guaranteed within 7 - 14 days

6.3 Telephone Contact

Name of contact person: Joe Des Rochers, Technical Sales Representative

Telephone No.: (360) 931-5566

6.4 Emergency Telephone Contact

Name of contact person: Frank Cimino, Regional Sales Manager

Telephone No.: (909) 214-4338

6.5 Prompt Pay Discount

Prompt payment discounts offered by Contractors shall be used to calculate the low bid provided the discount offered allows a minimum of 20 days for payment. The number of days is calculated from the date of acceptance of goods or services or from the date a complete invoice is date stamped as received by King County, whichever event occurs last, and the check/warrant date. The County will take advantage of any prompt payment discount terms bid. Discount periods shall be extended if:

- A. The date printed on the invoice is more than three days earlier than the invoice receipt date;
- B. The delay is caused awaiting a credit memo, invoice correction, adjustment or reissue;
- C. An invoice is received prior to receiving goods ordered.

Prompt pay discount offered -0- % - 30 Days, Net 30

6.6 Technical Specification Sheet

A. Water Reuse Coagulant

These specifications constitute the Specification of the product being bid and shall be filled out by coagulant supplier. All test methods and procedures used to determine Specifications shall be furnished with bid.

Bulk Properties	Property Values and Ranges	Property Values and Ranges of Offered Product
pH	4.25 +/- 0.25	4.0 ± 0.5
Specific Gravity	1.24 +/- 0.01	1.236 - 1.256
Density	10.34 +/- 0.10	10.3 - 10.5 lbs./gal.
Aluminum @ Al, %	8.05 +/- 0.45	8.5 - 8.9%
Chloride, %	8.10 +/- 0.50	8.4 - 8.8%
Basicity, %	79.00 +/- 4.00	82 - 85

6.7 Pricing

A. The following items shall accompany the bid: 1) a Technical Specification sheet (see subsection 6.6.A), 2) a Material Safety Data Sheet (see subsection 4.9), 3) at least three (3) references where the product has been used, a contact name and phone number (see subsection 6.8) and 4) all test methods and procedures used to determine Specifications shall be furnished with bid. **Failure to provide the items requested will result in automatic disqualification of the bid.**

B. In the event of a discrepancy between the unit price and the extended price, the unit price will prevail. **Bidders shall bid all items in both Schedule 1 and Schedule 2 to be considered responsive.**

1. Schedule 1:

Pricing for full tanker loads based at 4,400 gallons per load:

Item#	Estimated Qty	Unit of Measure	Description	Unit Price	Extended Price
1	100,000	Pound	JENCHEM JC 1679 or approved equal	\$ 0.70 /lb	\$0.70 /lb
				Total	\$70,000.00

Identify item offered: Clarifloc PRXB11

2. Schedule 2:

Pricing for totes based at 275 gallons per tote:

Item#	Estimated Qty	Unit of Measure	Description	Unit Price	Extended Price
1	1	Totes	JENCHEM JC 1679 or approved equal	\$ 2,349.00 /tote	\$2,349.00 /tote
				equal Tote Cost is based on \$0.810/Lb. and 2900 Lb. Tote.	

Identify item offered: Clarifloc PRXB11

6.8 References

List the names and addresses of three (3) customers, for whom the bidder has performed or provided similar goods and/or services, preferably in Washington State, for a period not less than one (1) year. Include dates, contact persons and telephone numbers. Should any reference submitted by a bidder be found unsatisfactory, King County, at its sole option, may reject that bidder's bid. King County shall be the sole judge in determining a satisfactory/unsatisfactory reference response. **Reference shall be submitted with bid.**

Company Name: <u>Eastern Municipal Water District</u>	Company Name: <u>City of Tracy</u>
Company Address: <u>770 N. Sanderson Ave., San Jacinto, CA 92583</u>	Company Address: <u>3900 Holly Drive, Tracy, CA 95304</u>
Company Phone: <u>(951) 928-3777</u>	Company Phone: <u>(209) 831-4494</u>
Contact Person: <u>Jet Somsovanskul</u>	Contact Person: <u>Dan Wengrin</u>
Dates: <u>01/01/06 - 12/31/07</u>	Dates: <u>01/01/07 - 12/31/07</u>

Company Name: <u>City of Livermore</u>
Company Address: <u>101 W. Jack London Blvd., Livermore, CA 94550</u>
Company Phone: <u>(925) 960-8164</u>
Contact Person: <u>Kevin Kepler</u>
Dates: <u>01/01/07 - 12/31/07</u>

INVITATION TO BID

Addendum # 1



Department Of Executive Services
Finance and Business Operations Division
Procurement and Contract Services Section
206-263-9400 TTY Relay: 711

ADDENDUM DATE: February 13, 2008

ITB Title: Coagulant for Reclaimed Water

ITB Number: ITB 1010-08-MZS

Revised Due Date/Time: February 21, 2008 at 2:00 P.M.

Buyer: Mary Schumacher, mary.schumacher@kingcounty.gov, 206-263-9305

This addendum is issued to revise Invitation to Bid 1081-07-MZS, advertised January 31, 2008 as follows:

1. Change the bid opening date from February 14, 2008 to, Thursday, February 21, 2008, at 2:00 P.M.
2. Subsection 5.2 General " 4) all test methods and procedures used to determine Specifications shall be furnished with bid."

Change to read " 4) The approved ASTM test method that was utilized to determine product specifications, shall be furnished with bid."

3. Subsection 6.7.A General " 4) all test methods and procedures used to determine Specifications shall be furnished with bid."

Change to read " 4) The approved ASTM test method that was utilized to determine product specifications, shall be furnished with bid."

4. Delete Subsection 5.6.B second sentence and change to read:

"The product will be delivered via bulk tankers in 4,000 gallon minimum loads."

Clarifications:

1. Subsection 5.3 Product Specification – pH
The pH in the product specifications is a neat solution product.
2. Subsection 6.7.B.1 Pricing for full tanker loads is based at 4,400 gallons per load.
This sentence is used to indicate an approximate full tanker load for determining pricing.
3. Reference Requirement in Subsections 5.2 General item 3, 6.7.A item 3 and Subsection 6.8 References.
Bidder may use a reseller or a reseller's customer as a reference to meet the requirements of these subsections.

Please acknowledge this addendum in the space provided on the cover page of ITB 1010-08-MZS.

All other terms and conditions remain the same.

This Invitation to Bid Addendum will be provided in alternative formats such as Braille, large print, audiocassette or computer disk for individuals with disabilities upon request.

Bid Opening Label

Complete the form below (or a reasonable facsimile thereof) and affix to the exterior lower left hand corner of the submission package.

URGENT – SEALED BID ENCLOSED			
Do Not Delay – Deliver Immediately			
U R G E N T	 King County	King County Procurement & Contract Services Section Chinook Office Building, 3 rd FL CNK-ES-0340 401 Fifth Avenue Seattle, WA 98104	U R G E N T
	Bid No.	ITB 1010-08-MZS	
	Bid Title	Coagulant for Reclaimed Water	
	Due Date		
	Vendor		



Test Methods

Aluminum (Al), %	ANSI/AWWA B408-93 Sec. 5.3
Alumina (Al₂O₃), %	ANSI/AWWA B408-93 Sec. 5.3
Chloride (Cl), %	ANSI/AWWA B408-93 Sec. 5.7
Basicity (%)	ANSI/AWWA B408-93 Sec. 5.5
Specific Gravity	N326
PH (As Is)	N117
Density	Calculated from Specific Gravity



AWWA STANDARD FOR LIQUID POLYALUMINUM CHLORIDE

SECTION 1: GENERAL

Sec. 1.1 Scope

This standard covers polyaluminum chloride in aqueous (liquid) form for use in water supply service.

Sec. 1.2 Purpose

The main purpose of this standard is to provide purchasers, manufacturers, and suppliers with the minimum requirements for liquid polyaluminum chloride, including physical, chemical, packaging, shipping, and testing requirements.

Sec. 1.3 Application

This standard can be referenced in specifications for purchasing and receiving liquid polyaluminum chloride and can be used as a guide for testing the physical and chemical properties of liquid polyaluminum chloride samples. The stipulations of this standard apply when this document has been referenced and only to liquid polyaluminum chloride used in water supply service.

SECTION 2: REFERENCES

This standard references the following documents. In their latest editions, they form a part of this standard to the extent specified in this standard. In any case of conflict, the requirements of this standard shall prevail.

Analytical Methods for Atomic Absorption Spectrophotometry. 1976. Perkin Elmer.

Standard Methods for the Examination of Water and Wastewater. APHA,*
AWWA, WEF.†

SECTION 3: DEFINITIONS

1. *Manufacturer:* The party that manufactures, fabricates, or produces materials or products.
2. *Purchaser:* The person, company, or organization that purchases any material or work to be performed.
3. *Supplier:* The party who supplies material or services. A supplier may or may not be the manufacturer.

SECTION 4: REQUIREMENTS

Sec. 4.1 Physical Requirements

Liquid polyaluminum chloride products are clear to slightly hazy solutions, free of visible foreign matter or sediment. The specific gravity of the solution shall be in the range of 1.1 to 1.4. Specific gravity will vary with polyaluminum chloride content and by-product salt content.

Sec. 4.2 Chemical Requirements

Liquid polyaluminum chloride products shall contain from 2½ to 13 percent by weight expressed as aluminum (5 to 25 percent by weight polyaluminum chloride expressed as Al₂O₃). The percent basicity of the polyaluminum chloride shall be from 10 to 83 percent. The solution shall have turbidity less than 50 NTU.

Sec. 4.3 Impurities

The liquid polyaluminum chloride product supplied according to this standard shall contain no substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with liquid polyaluminum chloride product. This standard applies to liquid polyaluminum chloride product produced under careful manufacturing procedures and from suitably pure raw materials. If careless manufacturing procedures or other raw materials are used, impurities could be present that might be inconsistent with good water treatment practices. In such cases, additional tests by the manufacturer may be required to demonstrate that the product is suitable for water treatment purposes.

*American Public Health Association, 1015 15th St., NW, Washington, DC 20005.

†Water Environment Federation, 601 Wythe St., Alexandria, VA 22314-1994.

SECTION 5: VERIFICATION

Sec. 5.1 Sampling*

5.1.1 *Location.* All sampling shall be done at the point of destination.

5.1.2 *Liquid PACl.* Three 0.5-L (1-pint) samples shall be taken from each tank car, tank truck load, semi-bulk, or drum. These samples shall be stored in airtight, moistureproof glass containers, each clearly identified with a label signed by the sampler.

5.1.3 *Distribution.* One of the three sealed material samples is for immediate use by the purchaser for testing of the shipment according to Sec. 5. The two remaining material samples shall be retained for future use according to Sec. 5.8 if necessary.

5.1.4 *Retention.* Material samples shall be retained for at least 30 days after the date of receipt of the shipment before they are discarded.

5.1.5 *Test samples.* Test samples of liquid PACl shall be obtained from the sealed material sample delivered to the laboratory. The material sample container shall be unsealed only when necessary to remove quantities of the product for testing. The container should be immediately resealed after the test sample is removed. The material sample shall be thoroughly mixed before each test portion is withdrawn for analysis. The test sample shall be stored in an airtight glass container.

Sec. 5.2 Test Procedures—General

5.2.1 *Completion.* Laboratory examination of the sample by the purchaser shall be completed within five working days after receipt of the shipment.

5.2.2 *Test procedures.* Methods of testing PACl shall conform to the procedures described in the following sections. Alternative procedures can be used only with the written acceptance of the supplier. In any case of conflict, the methods of this standard shall prevail.

Sec. 5.3 PACl Content as Percent Al

5.3.1 *Reagents.*

1. Deionized (or distilled) water.
2. Aluminum standard. Weigh 1 g of aluminum wire to the nearest 0.0001 g and transfer to a 1000-mL volumetric flask. Add 50 mL of 1:1 hydrochloric acid (reagent 7), swirl the flask, and allow the reaction to proceed until all of the aluminum has dissolved. (WARNING: Hydrogen gas evolves during this reaction. Do not cap the flask. Keep the flask in a fume hood and away from spark, heat, and flame during this reaction.) Dilute with deionized water to the mark at 20°C and mix well. Store in a polyethylene bottle. Milligrams Al/mL = g of Al wire used.
3. Ammonium acetate buffer. To 500 g of ammonium acetate in a 1500 mL beaker add 500 mL of deionized water. Stir with a glass rod to dissolve most of the ammonium acetate, then continue stirring with a magnetic stirrer until completely dissolved. Add 20 mL of glacial acetic acid and mix. Store in a polyethylene bottle.
4. Xylenol orange indicator, dry powder. Transfer 60 g of sodium chloride to a clean sheet of paper and add 0.1 g of xylenol orange tetrasodium salt. By lifting alternate corners of the paper, thoroughly mix the two solids. Transfer the mixture,

*Polyaluminum chloride is irritating to skin and eyes.

a small quantity at a time, to a mortar and grind it to a fine powder. Transfer each ground portion to a 120-mL widemouth screw-cap bottle for storage. The dry powder is stable indefinitely. To prepare the xylenol orange indicator (1 g/L aqueous), dissolve 0.1 g of xylenol orange tetrasodium salt in 100 mL of water. Store in a dropping bottle. Discard after one month.

5. Zinc sulfate, standardized, approximately 0.05M. Dissolve 15 g of zinc sulfate heptahydrate in deionized water in a 1000-mL volumetric flask, dilute to the mark with deionized water, and mix. Store in a polyethylene bottle.

Standardize as follows: Pipette 25.0 mL of EDTA solution (reagent 8) into a 250-mL beaker or Erlenmeyer flask. Add 50 mL of deionized water and 25 mL of ammonium acetate buffer and mix. Add 0.1 to 0.2 g of the dry powder or 4 drops of the aqueous xylenol orange indicator, mix, and titrate with the zinc sulfate solution to a color change from tan-yellow to red-purple. Calculate for factor F_1 as follows:

$$F_1 = \frac{25.0 \text{ mL EDTA}}{\text{mL ZnSO}_4} \quad (\text{Eq 1})$$

6. Sulfuric acid, concentrated.

7. Hydrochloric acid solution, 1:1. To 25 mL of deionized water add 25 mL of concentrated hydrochloric acid and mix.

8. EDTA solution, standardized, 0.05M. Add 18.6 g of disodium ethylenediaminetetraacetate dihydrate to about 700 mL of deionized water in a 1-L beaker and stir on a magnetic stirrer until the EDTA is dissolved. Transfer to a 1000-mL volumetric flask, dilute to the mark with deionized water, and mix. Store in a polyethylene bottle.

Standardize as follows: Pipette 25.0 mL of aluminum standard into a 250-mL beaker or Erlenmeyer flask. Pipette 50.0 mL of the EDTA solution into the same beaker or flask and mix. Add 25 mL of ammonium acetate buffer and a boiling chip and boil for 2 min. Cool, add 0.1 to 0.2 g of the dry powder or 4 drops of the aqueous xylenol orange indicator, mix, and titrate with standardized zinc sulfate solution from a 25-mL burette to a color change from tan-yellow to red-purple.

$$\text{molarity of EDTA} = \frac{(25.0 \text{ mL Al Standard}) (\text{mg Al/mL}^\dagger)}{(B-A) (26.98)} \quad (\text{Eq 2})$$

Where:

$$\begin{aligned} A &= \text{mL ZnSO}_4 * F_1 \\ B &= 50.0 \text{ mL EDTA} * \end{aligned}$$

5.3.2 Procedure.

1. Calculate the size sample to be used, as follows:

$$\text{grams sample} = \frac{6.095}{\text{expected \% total Al}} \quad (\text{Eq 3})$$

Example: If expecting 5.3% Al, then $\frac{6.095}{5.3} = 1.15 \text{ g sample}$

*Correct these solution volumes to 20°C.

†From reagent 2.

Weigh a sample of this size to nearest 0.01 g. Quantitatively transfer it to a 500-mL Erlenmeyer flask and dilute with deionized water to about 200 mL.

2. Add 25 drops of concentrated sulfuric acid and mix.
3. Pipette 50.00 mL of the standardized 0.05M EDTA into the prepared sample solution. Mix.
4. Add 25 mL of ammonium acetate buffer.
5. Heat the contents to boiling and continue boiling for 2–3 min.
6. Cool the solution to room temperature.
7. Add a few drops of the aqueous xylenol orange indicator or 0.1 to 0.2 g of the dry powder xylenol orange indicator to the flask and mix.
8. Titrate the excess EDTA with standard 0.05M zinc sulfate to a color change from a tan-yellow to red-violet. NOTE: If *too large* a sample is taken, the color change may occur when the first drop of zinc sulfate is added. In this event, rerun the analysis using a smaller sample.

5.3.3 Calculation.

$$\% \text{ total Al} = \frac{[(\text{mL EDTA} - (\text{mL ZnSO}_4 \times F_1))] 2.0702 \times M \text{ of EDTA}}{\text{grams of sample titrated}} \quad (\text{Eq 4})$$

Sample calculation:

$$\frac{[50.0 - (5.7 \times 1.0546)] 2.072 \times 0.0505}{1.15 \text{ g}} = 5.22 \% \text{ total Al}$$

Sec. 5.4 PACl Content as Percent Al₂O₃ — Benchmark Method

Refer to *Analytic Methods for Atomic Absorption Spectrophotometry** when using this procedure.

5.4.1 Reagents.

1. Deionized water.
2. 25 percent potassium chloride solution: Dissolve 125 g of reagent-grade potassium chloride, KCl, in 500 mL deionized water in a 500-mL volumetric flask.
3. Concentrated, reagent-grade nitric acid, HNO₃.
4. Stock aluminum standard, 1000 mg/L as Al. Obtain premade from Fisher Scientific Corporation, Pittsburgh, Pa., or equivalent.
5. Working Al standard solutions: Into a series of separate 100-mL volumetric flasks, pipette 0.0, 1.0, 2.5, and 5.0 mL of the 1000-mg/L stock Al standard. Add 2.0 mL of 25 percent KCl solution and 1.0 mL concentrated nitric acid to each flask. Dilute to volume with deionized water and mix. These standards have concentrations of 0, 10, 25, and 50 mg/L as Al, respectively.

5.4.2 Apparatus.

1. Atomic absorption spectrophotometer (AAS), Perkin Elmer (Norwalk, Conn.) 306 or equivalent.
2. Aluminum hollow cathode lamp.
3. Volumetric flasks, assorted sizes.
4. Balance, accurate to 0.001 g.
5. Volumetric pipettes, assorted sizes.

*Perkin Elmer, 1976.

5.4.3 Instrument operating conditions.

1. Wavelength: 309.3 nanometres (nm).
2. Slit width: 0.7 nm.
3. Lamp energy: 15 milliamperes (mA).
4. Burner: N₂O single slot, parallel.
5. Flame type: N₂O-acetylene oxidizing (lean, blue).
6. Gas-pressure settings: follow manufacturer's recommendations depending on the type of gas control in use.

5.4.4 Procedure.

1. Obtain the test sample and make any necessary dilutions with deionized water to allow the final dilution to be in the linear working range of the instrument (<50 mg/L as Al). Typically, the first dilution is 1:50. All sample weights should be obtained to the nearest 0.001 g. Pipette 5.0 mL of the above solution into a 100-mL volumetric flask for the second dilution.

2. Pipette 2.0 mL of 25 percent KCl solution and 1.0 mL of concentrated HNO₃ into the flask and dilute to 100 mL with deionized water. Mix well. Prepare a blank by repeating this step in a volumetric flask that is clean and dry.

3. Optimize the instrumental parameters, that is, wavelength, burner position, lamp alignment, fuel-oxidant ratios, nebulization rate, following manufacturer's instructions.

4. Aspirate and measure the absorbance of the blank and a set of working standards solutions. The concentration range of the standards is 0 to 50 mg/L as Al.

5. Aspirate and measure the absorbance of the diluted test-sample solutions.

6. Prepare a calibration curve by plotting on linear graph paper absorbance versus concentration of Al in parts per million (ppm) for the standards. Obtain the concentration of Al in mg/L in the diluted test samples from sample absorbance values and the corresponding concentrations on the calibration curve. Alternatively, a curve can be fit to the data using a scientific calculator with linear regression capability. Sample concentration can be read directly from some instruments with automatic calibration.

5.4.5 Calculations.

1. Concentration in mg/L of Al in test sample:

$$\text{mg/L as Al} = (\text{mg/L in diluted test sample}) (D)$$

Where:

D = any appropriate dilution factors

2. Percent Al = (mg/L as Al)/10,000.

3. Percent Al₂O₃ = (percent Al) (1.89).

5.4.6 Performance data.

1. Range: 0-50 mg/L as Al in aspirated solutions.

2. Precision: Sample deviation is 1.18 percent relative as determined by three replicates of four samples by one operator.

Sec. 5.5 PACl Basicity

Neutralization of alkalinity in the sample with excess hydrochloric acid solution and back-titration with sodium hydroxide solution in the presence of potassium fluoride is the basis for this method. The potassium fluoride prevents the hydrolysis of aluminum salts by the complexation of the aluminum cations. Phenolphthalein is

used as an indicator. Using this alkalinity value (percent OH) and the percent aluminum, the percent basicity of the sample can be calculated. Alternately, the determination of the molar ratio of aluminum and chloride, *where no other anions are present*, can be used to calculate the percent basicity. Section 5.7 addresses the determination of the chloride in PACl.

5.5.1 Reagents.

1. 1.0N hydrochloric acid solution, HCl. Fisher certified or equivalent.
2. 1.0N sodium hydroxide solution, NaOH. Fisher certified or equivalent.
3. Potassium fluoride, 50 percent solution: Dissolve 250 g anhydrous KF in 375 mL of hot, deionized water or dissolve 405 g KF·2H₂O in 220 mL hot, deionized water. Cool and dilute to 500 mL with deionized water. Filter if necessary and store in plastic bottle.
4. Phenolphthalein indicator. Dissolve 1.0 g of phenolphthalein in 100 mL ethanol.

5.5.2 Apparatus.

1. Erlenmeyer flasks, 250 mL.
2. Volumetric pipettes or Repipets, 25 and 50 mL.
3. Graduated cylinder, 50 mL.
4. Hot plate.
5. Burette, 50 mL with 0.1-mL subdivisions.
6. Magnetic stir bars, small.
7. Top-loading balance accurate to 0.01 g.
8. Magnetic stirring plate.

5.5.3 Procedure.

1. Pipette 5.0 mL of the solution to be analyzed into a tared 250-mL Erlenmeyer flask. (See following note.) Reweigh and record weight difference to 0.01 g. Carefully add magnetic stir bar. Select a second flask for a blank and add a stir bar. Mark the flasks for identification.

NOTE: The volume of sample used in this method is difficult to determine, as it depends on both percent Al and the percent basicity. In general, the following guideline is applicable.

PACl Basicity Sample Size Guideline

Sample Volume (mL)	Expected Aluminum, %	Expected Basicity, %
5	5.3-8.0	0-50
3	8.0-10.6	50-70
2	>10.6	>70

2. Add 50 mL of deionized water to each Erlenmeyer flask.
3. Using a volumetric pipette, add 50.0 mL of 1.0N HCl to each Erlenmeyer flask.
4. Place both flasks on a preheated hot plate (high heat). After boiling for 5 min, immediately remove the flasks from the hot plate and cool to room temperature.
5. Using a volumetric pipette or Repipet, add 25.0 mL of 50% KF to each flask and swirl liquid in flask to mix.
6. Add four drops of phenolphthalein indicator and titrate each flask with 1.0N NaOH with stirring to a faint pink end point. The end point should persist for

1 min. If the end point for the sample is detected without addition of titrant, then repeat the above procedure using less sample.

5.5.4 Calculations.

$$1. \% \text{ OH} = \frac{(\text{titrant mL}_{\text{sample}} - \text{titrant mL}_{\text{blank}}) (1.7)}{\text{weight of sample in grams}} \quad (\text{Eq 5})$$

$$2. \% \text{ basicity} = \frac{\% \text{ OH (52.91)}}{\% \text{ Al (see Sec. 5.3 or Sec. 5.4)}} \quad (\text{Eq 6})$$

5.5.5 Performance data.

Range: 0 to 20 percent OH, or 0 to 83 percent basicity.

Sec. 5.6 Product Turbidity

5.6.1 Apparatus.

1. Turbidimeter, Hach Company (Loveland, Colo.) Model 18900 or equivalent.
2. Sample tubes for turbidimeter.
3. Turbidity standards, 10 and 100 NTU.

5.6.2 Procedure.

1. See part 2130B, "Nephelometric Method-Turbidity," *Standard Methods for the Examination of Water and Wastewater* (18th ed.).

Sec. 5.7 Chloride*†

5.7.1 Reagents.

All reagents used are reagent grade unless otherwise specified.

1. Water used in the preparation of reagents and in the procedure is deionized (or distilled).
2. Nitric acid, concentrated.‡
3. Sodium chloride solution, standard, 0.05N. Dry approximately 3.1 g of sodium chloride in a weighing dish in an oven at 105° to 110°C for 2 h. Cool the crystals to room temperature in a desiccator.

Weigh 2.9221 g of the dried sodium chloride to the nearest 0.0001 g in a tared weighing bottle. Using a water-wash bottle, quantitatively transfer the crystals through a powder funnel into a 1000-mL volumetric flask. Add about 150 mL of deionized water and swirl to dissolve the crystals. Dilute to the mark at 20°C with deionized water and mix thoroughly. Store the solution in a polyethylene bottle.

4. Iron indicator solution. To a 1500-mL beaker add 62 g of ferric ammonium sulfate, $\text{FeNH}_4(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$, and 500 mL of deionized water. Stir until the crystals are dissolved. Add 438 mL of concentrated nitric acid and mix. Store the solution in a polyethylene bottle.

*Anions, such as bromide, iodide, ferricyanide, ferrocyanide, and thiocyanate, which form silver salts that are less soluble than silver chloride in dilute nitric acid solution, are also titrated and give rise to positive interference. None of these anions is expected to be present in the sample in significant amounts.

†Bivalent mercury causes negative interference by forming a stable complex with thiocyanate ion.

‡Nitric acid is highly corrosive and can cause severe burns. Concentrated nitric acid emits hazardous nitrogen oxides. The acid is also a strong oxidant; spillage may cause a fire or liberate dangerous gases.

5. Potassium thiocyanate solution, 0.05*N*. Weigh 4.86 g of potassium thiocyanate to the nearest 0.01 g in a tared weighing bottle. Using a wash bottle, quantitatively transfer the crystals through a powder funnel into a 1000-mL volumetric flask. Add about 250 mL of deionized water and swirl to dissolve the crystals. Dilute to the mark with deionized water and mix thoroughly. Store the solution in a polyethylene bottle.

6. Benzyl alcohol.* Dispense from an amber-glass dropping bottle.

7. Silver nitrate solution, standard 0.05*N*. Weigh 8.495 g of silver nitrate to the nearest 0.001 g in a tared weighing bottle. Using a wash bottle, quantitatively transfer the crystals through a powder funnel into a 1000-mL volumetric flask. Add about 250 mL of deionized water and swirl to dissolve the crystals. Dilute to the mark with deionized water and mix thoroughly. Store the solution in a tightly stoppered amber-glass bottle. Standardize the solution as follows:

a. Pipette 25.00 mL of the standard 0.05*N* sodium chloride solution into each of three 500-mL glass-stoppered Erlenmeyer flasks. Determine the temperature of the sodium chloride solution and correct the volume pipetted to 20°C (Sec. 5.7.4.3, Table 1). Carry each flask through the remaining steps of the procedure.

b. Add 100 mL of deionized water and 5 mL of iron indicator solution. Swirl to mix. Using a 50-mL class A burette, add 27.0 mL of the silver nitrate solution being standardized, while swirling vigorously. Record the exact volume of the silver nitrate solution added to the nearest 0.01 mL, determine its temperature, and correct the volume to 20°C (Sec. 5.7.4.3, Table 1).

c. Add 10 drops of benzyl alcohol, stopper the flask, and shake it vigorously for 30 s. Place a 500-mL Erlenmeyer flask beneath a long-stem funnel fitted with Whatman 42 or equivalent filter paper. Transfer the contents from the stoppered flask to the funnel. Rinse this flask with about 5 mL of deionized water, stopper the flask, and thoroughly shake the rinse water around in the flask. Transfer the rinse water to the filter. Repeat the rinsing and the transfer of the rinse water. A complete transfer of the precipitate to the filter is not necessary. Wash the precipitate on the filter twice with cold water and collect the washings with the filtrate. Using a class A burette, slowly and while constantly swirling, titrate the combined filtrate, rinse water and washings, with 0.05*N* potassium thiocyanate solution until a faint red color persists.

$$\text{normality of AgNO}_3 = \frac{(\text{mL NaCl at } 20^\circ \text{C})(0.0500)}{[(\text{mL AgNO}_3 \text{ at } 20^\circ \text{C})(\text{mL KSCN} \times F_2)]} \quad (\text{Eq } 7)$$

Average the three results.

d. Restandardize monthly.

e. Determine the factor F_2 as follows: Add about 9 mL of the silver nitrate solution from the 50-mL burette to a 250-mL Erlenmeyer flask. Add 100 mL of water and 5 mL of iron indicator solution. Swirl to mix. Titrate slowly with the KSCN solution from the 10-mL burette, while swirling constantly, until a faint red-dish color persists.

*Benzyl alcohol vapor is irritating to eyes, nose, and throat; the liquid can burn skin and eyes and also may be readily absorbed through the skin. It is combustible. Keep the reagent away from heat or flame.

$$F_2 = \frac{\text{mL AgNO}_3}{\text{mL KSCN}} \quad (\text{Eq 8})$$

f. Repeat the determination and use the average factor rounded off to the nearest 0.001 mL AgNO₃/mL KSCN. Determine the factor each time a new KSCN or AgNO₃ solution is prepared.

5.7.2 Procedure.

1. Weigh 4 g of the sample to the nearest 0.001 g in a 250-mL beaker. Dilute to about 50 mL with deionized water. Acidify with 5 mL of concentrated nitric acid and boil for 5 min. Cool and transfer the sample to a 100-mL volumetric flask and dilute to column. Pipette 10.00 mL of this solution to a 500-mL glass-stoppered Erlenmeyer flask and dilute to about 150 mL with deionized water.

2. Add 5 mL iron indicator solution to the flask. Swirl to mix.

3. From a zeroed, 10-mL class A burette add 1.0 mL of 0.05N potassium thiocyanate solution and swirl to mix. Do not rezero this burette, the titration with thiocyanate solution will continue in step 8.

4. Fill and zero a 50-mL class A burette with standard 0.05N silver nitrate solution. Titrate slowly while swirling vigorously until the red color is completely discharged. Add an additional 2 mL of standard 0.05N silver nitrate solution. Record the exact volume of silver nitrate solution to the nearest 0.01 mL.

5. Add 10 drops of benzyl alcohol, stopper the flask, and shake it vigorously for 30 s (see note, Sec. 5.5.3).

6. Place a 500-mL Erlenmeyer flask beneath a long-stem funnel fitted with Whatman 42 or equivalent filter paper.

7. Transfer the contents from the stoppered flask to the funnel. Rinse this flask and thoroughly shake the rinse water around in the flask. Transfer the rinse water to the filter. Repeat the rinsing and the transfer of the rinse water. A complete transfer of the precipitate to the filter is not necessary. Wash the precipitate on the filter twice with cold water and collect the washings with the filtrate.

8. Using the 10-mL burette from which KSCN was added in step 3, slowly and with constant swirling, titrate (without rezeroing) the filtrate with 0.05N potassium thiocyanate solution until a faint red color persists (see notes, Sec. 5.7.4).

5.7.3 Calculation.

$$\text{chloride as percent Cl} = \frac{[(\text{mL AgNO}_3) - (\text{mL KSCN} \times F_2)] (N \text{ of AgNO}_3) (3.545)}{\text{grams of sample} \times 10/100} \quad (\text{Eq 9})$$

5.7.4 Notes and temperature corrections for volumetric solutions.

1. Shaking with benzyl alcohol facilitates filtration by coagulating the precipitate.

2. A back-titration of at least 0.5 mL KSCN solution is necessary to ensure that an adequate excess of silver nitrate solution was present to completely precipitate all the chloride present in the sample.

3. Temperature corrections for volumetric solutions.

When volumetric solutions are standardized at 20°C, titrations should be made at this temperature or corrections applied to reduce the volume of the solution used in titrations to 20°C. Table 1 shows corrections for temperatures from 15° to 30°C.

Table 1 Temperature corrections for volumetric solutions

Temperature °C	mL Correction per mL Used*			Factor†		
	N/20 or less solutions	N/10 solutions	N/1 solutions	N/20 or less solutions	N/10 solutions	N/1 solutions
15	+0.0008	+0.0008	+0.0011	1.0008	1.0008	1.0011
16	+0.0006	+0.0007	+0.0009	1.0006	1.0007	1.0009
17	+0.0005	+0.0005	+0.0007	1.0005	1.0005	1.0007
18	+0.0003	+0.0004	+0.0005	1.0003	1.0004	1.0005
19	+0.0002	+0.0002	+0.0003	1.0002	1.0002	1.0003
20	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000
21	-0.0002	-0.0002	-0.0003	0.9998	0.9998	0.9997
22	-0.0004	-0.0004	-0.0005	0.9996	0.9996	0.9995
23	-0.0006	-0.0006	-0.0008	0.9994	0.9994	0.9992
24	-0.0008	-0.0009	-0.0012	0.9992	0.9991	0.9988
25	-0.0010	-0.0011	-0.0015	0.9990	0.9989	0.9985
26	-0.0013	-0.0013	-0.0018	0.9987	0.9987	0.9982
27	-0.0015	-0.0016	-0.0022	0.9985	0.9984	0.9978
28	-0.0018	-0.0019	-0.0025	0.9982	0.9981	0.9975
29	-0.0020	-0.0021	-0.0029	0.9980	0.9979	0.9971
30	-0.0023	-0.0024	-0.0033	0.9977	0.9976	0.9967

*Apply correction to mL used to obtain corrected volume
or

†Multiply factor by mL used to obtain corrected volume.

Sec. 5.8 Rejection—Notice of Nonconformance

If the liquid polyaluminum chloride product delivered to the purchaser does not meet the requirements of this standard, the purchaser shall provide a notice of nonconformance to the supplier within 10 days after receipt of the shipment at the point of destination. The results of the purchaser's tests shall prevail, unless the supplier notifies the purchaser within five working days after receipt of the notice of nonconformance that a retest is desired. On receipt of the request for a retest, the purchaser shall forward to the supplier one of the sealed samples taken in accordance with Sec. 5.1 of this standard. In the event that the results obtained by the supplier on retesting do not agree with the test results obtained by the purchaser, the other sealed sample shall be forwarded, unopened, for analysis to a referee laboratory agreed on by both parties. The results of the referee analysis shall be accepted as final. The cost of the referee analysis shall be paid by the supplier if the material does not meet the requirements of this standard or by the purchaser if the material does meet the requirements of this standard.

Test Method Title: DETERMINATION OF SPECIFIC GRAVITY
Test Method Group: Physical Properties Author: Melissa Kupec
Test Method Number: N353
Test Method Effective Date: 05/13/98
Test Method Expiration Date: 05/13/2003
Status: Active
Contact: Tom Booth
Comments:

1. Sample should be between 60° and 90°F. If necessary cool sample in a water bath.
2. Pour approximately two ounces of the sample into a clean hydrometer cylinder. Slowly turn the cylinder letting the sample liquid coat the cylinder and collect any water. Pour off all liquid into waste pail.
3. Select the hydrometer with the expected value within its range and immerse slowly into the solution, making sure that it does not hit the bottom. Let the hydrometer come to rest.
4. The specific gravity is read by reading the value at the bottom of the meniscus.
5. Determine the temperature by inserting a thermometer into the sample in the cylinder.
6. Calculate the specific gravity at 60°F by the following formula:

$$[(\text{Actual Temp. } ^\circ\text{F} - 60)(0.0002)] + \text{Specific Gravity @ Temp. } ^\circ\text{F}$$

e.g. Specific Gravity @ 84°F = 1.2805
 $[(84 - 60)(0.0002)] + 1.2805 = 1.2853 @ 60^\circ\text{F}$

Revision History:

08/19/98 09:51:19 AM	Gail Howell/Charlotte
08/18/98 04:50:08 PM	Gail Howell/Charlotte
08/17/98 12:54:06 PM	Melissa Kupec/Charlotte

Laboratory Test Method pH measurement

Test Method Title: pH
Test Method Number: N117
Test Method Effective Date: 08/31/2006
Supersedes: 07/09/2003
Reason for Revision: Remove verbiage requiring calibration before each pH reading
Author: Bill Houston
Reviewed: Paul Miller 08/31/2006
Approval: Lane Robinson

1. SCOPE

The method measures the electric potential of the sample, which is a measure of the hydrogen ion activity. As such, it is the negative logarithm (base 10) of the hydrogen ion activity.

2. APPARATUS:

pH meter, analog or digital with ATC
pH and reference, or combination electrode
Glassware as required
Balance, accurate to 10 mg, minimum
Magnetic stir bar
Magnetic stir plate
Thermometer, with range to cover test temperature

3. REAGENTS

Distilled or deionized water; or pH or hardness modified water; or water/solvent mixes, as specified in the product formula specifications.

Buffer solutions that are sufficient to cover test ranges.

4. SAFETY

Exercise prudent lab practices when handling chemicals, such as the use of safety glasses, goggles, or gloves, especially when handling hot, acidic and/or alkaline materials.

5. STANDARDIZATION/ CALIBRATION:

For calibration procedure see lab work instruction WI-LAB-N117 or use calibration procedures supplied with the pH meter being used.

6. PROCEDURE

1. Review the product specification to determine the concentration and solution to be used for determining the pH.
2. If the sample is to be run neat, that is undiluted, proceed to step 3. If the sample is to be diluted, prepare it by accurate sample weights of all components. Thoroughly blend. The mixture must be homogeneous prior to proceeding to step 3.
3. It is advisable to adjust the temperature of the sample to approximately 25°C first to minimize shock to the electrode. Although pH is temperature related, units with auto temperature control (ATC) need not be adjusted further. For meters without this function it is mandatory to either adjust the sample temperature to match the dial temperature setting or to adjust the dial to match the sample temperature.
4. Remove the electrode from the storage buffer 4 and rinse. Place the pH electrode into the product and swirl it until the reading stabilizes.
5. Record the pH, clean the electrode with D.I. water and store it in the pH 4 buffer.

TYPICAL pH SOLVENTS

DI Water

75% Isopropyl Alcohol (IPA) + 25% DI Water

50% Isopropyl Alcohol (IPA) + 50% DI Water

10 parts (62.5%) Isopropyl Alcohol 6 parts (37.5%) DI Water aka 10:6 IPA / DI Water

LIMS VARIATIONS

LIMS Name	Concentration	Solvent
N117	100% / "as is" (neat)	None
N117-01	1% Product	DI Water
N117-02	2% Product	DI Water
N117-03	5% Product	DI Water
N117-04	10% Product	DI Water
N117-05	20% Product	DI Water
N117-06	5% Product	75% IPA / 25% DI Water
N117-07	10% Product	50% IPA / 50% DI Water
N117-08	4% Product	DI Water
N117-09	30% Product	DI Water
N117-10	15% Product	DI Water
N117-11	25% Product	DI Water
N117-12	10% Product	10 Parts IPA / 6 Parts DI Water

7. REPEATABILITY:

PRODUCT	SIGMA N-1	AVERAGE	95%CONF	SPECS	# TESTS
1887E	0.05	6.78	+/- 0.10	6 - 8	15
6287	0.02	9.76	+/- 0.04	9 - 10	15
1275C	0.01	7.96	+/- 0.02	7 - 8	15

The repeatability of 1887E was determined at Harrison on 7/1/91.

The repeatability of 6287 was determined at Harrison on 7/1/91.

The repeatability of 1275C was determined at Charlotte on 2/21/91.

8. REFERENCES:

pH Meter operation manual

Revision History:

03/01/99 03:03:10 PM

03/01/99 02:59:53 PM

08/18/98 05:08:03 PM

08/09/2000-08-09

07/09/2003

08/31/06

Phil Dispenza/Harrison

Phil Dispenza/Harrison

Gail Howell/Charlotte

Bill Houston/Cedartown

Paul Miller/Cedartown

Paul Miller/Cedartown



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

POLYDYNE INCORPORATED

P.O. BOX 279
RICEBORO, GA 31323
800-848-7659

Facility : # 88 USA

Polyaluminum Chloride[AL]

Trade Designation

Clarifloc® C-1100

Clarifloc® C-1200

Product Function

Coagulation & Flocculation

Coagulation & Flocculation

Max Use

250mg/L

250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

Polymer Blends

Trade Designation

Clarifloc® C-1000[CP]

Clarifloc® C-1050[CP]

Clarifloc® C-1051[CP]

Clarifloc® C-1052[CP]

Clarifloc® C-1200[CP]

Clarifloc® C-1250

Product Function

Algicide

Coagulation & Flocculation

Coagulation & Flocculation

Max Use

307mg/L

307mg/L

307mg/L

307mg/L

200mg/L

200mg/L

Clarifloc® C-1251[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1252[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1253[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1400[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1450[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1451[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1452[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1453[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1454[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1500[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1550[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1551[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® C-1600[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® C-1650[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® C-1651[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® C-1700	Coagulation & Flocculation	200mg/L
Clarifloc® C-1750	Coagulation & Flocculation	200mg/L
Clarifloc® C-1751	Coagulation & Flocculation	200mg/L
Clarifloc® C-1752	Coagulation & Flocculation	200mg/L
Clarifloc® C-1753	Coagulation & Flocculation	200mg/L
Clarifloc® C-1754	Coagulation & Flocculation	200mg/L
Clarifloc® C-5100[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXA01[CP]	Algicide Coagulation & Flocculation	307mg/L
Clarifloc® PRXA02[CP]	Algicide Coagulation & Flocculation	307mg/L
Clarifloc® PRXA03[CP]	Algicide Coagulation & Flocculation	307mg/L
Clarifloc® PRXA04[CP]	Algicide Coagulation & Flocculation	307mg/L
Clarifloc® PRXA05[CP]	Algicide Coagulation & Flocculation	307mg/L
Clarifloc® PRXA06[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXA07[CP]	Algicide Coagulation & Flocculation	200mg/L

Clarifloc® PRXA08[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXA09[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXA10[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXA11[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXA12[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXA13[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXA14[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXA15[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXA16[CP]	Algicide Coagulation & Flocculation	50mg/L
Clarifloc® PRXA17[CP]	Algicide Coagulation & Flocculation	50mg/L
Clarifloc® PRXA18[CP]	Algicide Coagulation & Flocculation	50mg/L
Clarifloc® PRXA19[CP]	Algicide Coagulation & Flocculation	50mg/L
Clarifloc® PRXA20[CP]	Algicide Coagulation & Flocculation	50mg/L
Clarifloc® PRXB01[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXB02[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXB03[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXB04[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXB05[CP]	Algicide Coagulation & Flocculation	200mg/L
Clarifloc® PRXB06[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXB07[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXB08[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXB09[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXB10[CP]	Algicide Coagulation & Flocculation	100mg/L
Clarifloc® PRXB11[CP]	Algicide Coagulation & Flocculation	60mg/L
Clarifloc® PRXB12[CP]	Algicide Coagulation & Flocculation	60mg/L
Clarifloc® PRXB13[CP]	Algicide Coagulation & Flocculation	60mg/L
Clarifloc® PRXB14[CP]	Algicide Coagulation & Flocculation	60mg/L

Clarifloc® PRXB15[CP]	Coagulation & Flocculation Algicide	60mg/L
Clarifloc® PRXB16[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB17[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB18[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB19[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB20[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB21[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB22[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB23[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB24[CP]	Coagulation & Flocculation Algicide	40mg/L
Clarifloc® PRXB25[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXB26[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXB27[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXB28[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXB29[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXB30[CP]	Coagulation & Flocculation Algicide	100mg/L
Clarifloc® PRXB31[CP]	Coagulation & Flocculation Algicide	100mg/L
Clarifloc® PRXB32[CP]	Coagulation & Flocculation Algicide	100mg/L
Clarifloc® PRXB33[CP]	Coagulation & Flocculation Algicide	100mg/L
Clarifloc® PRXB34[CP]	Coagulation & Flocculation Algicide	100mg/L
Clarifloc® PRXB35[CP]	Coagulation & Flocculation Algicide	100mg/L
Clarifloc® PRXC01[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXC02[CP]	Coagulation & Flocculation Algicide	200mg/L
Clarifloc® PRXC03[CP]	Coagulation & Flocculation Algicide	200mg/L
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Clarifloc® PRXC20[CP]	Algicide Coagulation & Flocculation	40mg/L
Clarifloc® PRXD01	Coagulation & Flocculation	200mg/L
Clarifloc® PRXD02	Coagulation & Flocculation	200mg/L
Clarifloc® PRXD03	Coagulation & Flocculation	100mg/L
Clarifloc® PRXD04	Coagulation & Flocculation	100mg/L
Clarifloc® PRXD05	Coagulation & Flocculation	100mg/L
Clarifloc® PRXD06	Coagulation & Flocculation	100mg/L
Clarifloc® PRXD07	Coagulation & Flocculation	100mg/L
Clarifloc® PRXD08	Coagulation & Flocculation	200mg/L
Clarifloc® PRXD09	Coagulation & Flocculation	200mg/L
Clarifloc® PRXD10	Coagulation & Flocculation	200mg/L

[CP] The finished drinking water shall be monitored to ensure that levels of copper do not exceed 1.3 mg/L.

Number of matching Manufacturers is 1
Number of matching Products is 115
Processing time was 0 seconds

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CLARIFLOC® PRXB11 COAGULANT

CHARACTERISTICS

CLARIFLOC PRXB11 is a high charge density, liquid cationic coagulant. CLARIFLOC PRXB11 is effective for influent water clarification, primary and secondary wastewater clarification, color removal, phosphate removal, treatment of oily wastewaters and refuse thickening in coal prep plants.

BENEFITS

- Minimal pH depression
- Economical treatment program
- Better settling and less pinfloc carryover
- Lower flocculant requirements
- Useful over a wider pH range than alum
- Performs better in low temperature or low alkalinity water
- More effective in wastewaters with high salt content
- Fast floc appearance

TYPICAL PROPERTIES

Physical Form	Clear Colorless Liquid
Ionic Nature	Highly Cationic
Relative Basicity	82 - 85 %
Density	10.3 - 10.5 lbs/gal
Product pH	4.0±0.5
Freezing Point	23.4° F. (-4.8° C.)
Solubility	Totally Water Soluble
Specific Gravity	1.236-1.256

PREPARATION AND FEEDING

CLARIFLOC PRXB11 is a low viscosity liquid product that can be fed neat or diluted in-line using a static mixer to any convenient concentration. However, diluting the product is not required.

MATERIALS OF CONSTRUCTION

Crosslinked polyethylene, fiberglass or rubber lined steel are the preferred materials of construction for bulk tanks. Stainless steel, mild steel, black iron, galvanized steel, copper or brass should not be used in any part of the feed system. For pump heads and feed lines, PVC, Teflon, Viton or Tygon are recommended.

MANUFACTURING SPECIFICATIONS

Aluminum Content	8.5 - 8.9%
Al ₂ O ₃ Content	16.1 - 16.8%

HANDLING AND STORAGE

CLARIFLOC PRXB11 has a suggested in-plant storage life of one year in unopened drums. For best results, store at 40-90 F. Should the product freeze, allow it to thaw thoroughly and mix well before attempting to feed. For spills of CLARIFLOC PRXB11, sprinkle lime or soda ash over the spill area to neutralize followed by sawdust or vermiculite and sweep the material into approved chemical disposal containers.

PRODUCT SAFETY INFORMATION

CLARIFLOC PRXB11 is an acidic product that can irritate the skin and eyes, so rubber apron, gloves and goggles should be worn during the handling of this product. Anyone responsible for the procurement, use or disposal of CLARIFLOC PRXB11 should familiarize themselves with the appropriate safety and handling information outlined in the POLYDYNE Material Safety Data Sheet. In the event of an emergency with CLARIFLOC PRXB11, contact Chemtrec anytime day or night at (800) 424-9300.

SHIPPING

CLARIFLOC PRXB11 Coagulant is shipped in 55 gallon drums or in 275 gallon one-way nonreturnable tote bins. Bulk quantities are also available.

ADDITIONAL INFORMATION

To place an order or obtain technical information from anywhere in the continental United States, call toll free:

(800) 848-7659

MATERIAL SAFETY DATA SHEET

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1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

CLARIFLOC PRXB11 POLYMER

Supplier :

POLYDYNE INC.

PO Box 279

Riceboro, Georgia 31323

Tel : 800-848-7659 Fax : 912-884-8770

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation : Water and Wastewater Treatment Coagulant/Flocculant

Identification of the substance : Aluminum chloride hydroxide, aqueous solution

Chemical Name	CAS-No	Weight %
Polydiallyldimethylammonium chloride (Polydadmac)	26062-79-3	25-35
Aluminum chloride hydroxide		65-75

3. HAZARDS IDENTIFICATION

May cause skin, eye, and respiratory irritation. Do not breath vapors or mist. Spills produce extremely slippery surfaces. Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Inhalation : Move to fresh air.

Skin contact : Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes If eye irritation persists, consult a specialist.

Ingestion : Get medical assistance. Give large amounts of water or milk. If a person vomits when lying on his back, turn over on his side. Keep airway clear. Never give anything by mouth to an unconscious person. Aluminum soluble salts may cause gastroenteritis if ingested.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : water spray, foam, carbon dioxide (CO₂), dry powder.

Protective equipment for firefighters : Firefighters should wear a self contained breathing apparatus (SCBA) and full protective clothing when responding to an emergency situation..

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions :** Use personal protective equipment (See section 8).
- Environmental precautions :** Do not contaminate water.
- Methods for cleaning up :** Dam up. For small spills use soda ash or lime to neutralize, caution: may generate CO₂ gas. . Soak up with absorbent material. Shovel or sweep up. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

- Handling :** Avoid contact with skin and eyes. Use personal protective equipment (See section 8). Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. Product may slowly corrode iron, brass, copper, aluminum and mild steel.
- Storage :** Keep in a dry, cool place (0 - 35°C). Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines : soluble aluminum salts (8-hrTLV) : 2mg/m³ as Al (ACGIH). PEL: 15 mg/m³ (total dust), 5 mg/m³ respirable fraction.

Personal protection equipment

- **Respiratory protection :** Not required; except in case of aerosol formation or if exceed exposure limits.
- **Hand protection :** Rubber gloves
- **Eye protection :** Safety glasses with side-shields. Do not wear contact lenses.
- **Skin protection :** Chemical resistant apron or protective suit.

Hygiene measures : Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form :** liquid
- Color :** Clear to slightly hazy, colorless to yellow liquid
- Odor :** slight
- pH :** 4-6
- Freezing point (°C) :** -7 C (19 F)
- Boiling point/range (°C) :** ~ 104 (~ 220 F)

Flash point (°C) :	Not applicable.
Autoignition temperature (°C) :	Not applicable.
Bulk density :	10.3-10.5 lbs/gal @ 25C; Specific gravity: 1.236-1.256
Water solubility :	completely soluble

10. STABILITY AND REACTIVITY

Stability :	Product is stable. No hazardous polymerization will occur..
Conditions to avoid :	strong bases
Hazardous decomposition products :	Thermal decomposition may release hazardous gases as aluminum, chlorine, and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

- **Oral :** LD50/oral/rat > 2000 mg/kg (Polydadmac)
- **Dermal :** 150 mg/3D-I (human): mild irritation effects
- **Inhalation :** Inhalation of vapors in high concentration may cause irritation of respiratory system

Irritation

- **Skin :** May cause skin irritation, especially after prolonged or repeated contact
- **Eyes :** Direct eye contact may cause irritation, redness and swelling. Prolonged exposure to aluminum salts may cause conjunctivitis.

Other information : Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Prolonged exposure may aggravate existing skin, eye and lung conditions. Persons with kidney disorders have an increased risk from exposure based on general information found on aluminum salts.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

The product is rapidly eliminated from the aquatic medium through irreversible adsorption onto suspended matter (sludge, clays, humic and other organic acids) and abiotic degradation (hydrolysis). The degradation products are practically non-toxic to aquatic organisms and present no danger to the environment.

- **Fish** LC50(48 hr, static)(Cerio Daphnia dubia): 6.0 mg/L (ACH)
LC50/Danio rerio/96 hr > 10 mg/L (OECD 203) (Polydadmac)

CLARIFLOC PRXB11 POLYMER

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- **Algae :** Algal inhibition tests are not appropriate. The flocculating characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
- **Daphnia :** EC50/Daphnia magna/48 hr > 10 mg/L (OECD 202)
- Bioaccumulation :** Does not bioaccumulate.
- Persistence / degradability :** Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

- Waste from residues / unused products :** In accordance with federal, state and local regulations.
- Contaminated packaging :** Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local regulations.

14. TRANSPORT INFORMATION

Not regulated by DOT /ATA/IMO.

15. REGULATORY INFORMATION

All components of this product are on the TSCA and DSL inventories.

- RCRA status :** Not a hazardous waste.
- Hazardous waste number :** Not applicable
- Reportable quantity (40 CFR 302) :** Not applicable
- Threshold planning quantity (40 CFR 355) :** Not applicable

HMIS & NFPA Ratings	HMIS	NFPA
Health :	1	1
Flammability :	0	0
Reactivity :	0	0
Personal Protection/Special :	B	

CLARIFLOC PRXB11 POLYMER

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16. OTHER INFORMATION

Person to contact : Regulatory Affairs Manager

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.



TABULATIONS FOR BID

To: King County **State:** WA
From: Polydyne Inc. **Fax No.:** (912) 880-2078
Submitted: 02/21/08
Subject: ITB 1010-08-MZS

Please provide us with tabulations on the subject bid by filling out this form or attaching your tabulations form to it. A self-addressed stamped envelope is included for your use. If possible, please fax us these tabulations to the above referenced number.

Awarded: YES/NO (circle one)
If YES, indicate awarded vendor with an *.
If No, indicate expected date of award.

Vendor	Product Code	Package	Unit Price
Polydyne Inc.	Clarifloc® PRXB11	Bulk	\$0.70/Lb. Delivered
Polydyne Inc.	Clarifloc® PRXB11	Tote	\$2,349.00/Tote Delivered

Thank you for your assistance.

Sincerely,

Randal Vickery
Bids & Contracts Coordinator

Dbase #108-059