



THE CITY OF
MT. PLEASANT, MICHIGAN

CITY HALL

320 W. Broadway • 48858-1698
(989) 779-5300
(989) 773-4691 fax

PUBLIC SAFETY

804 E. High • 48858-3595
(989) 779-5100
(989) 773-4020 fax

PUBLIC WORKS

1303 N. Franklin • 48858-4682
(989) 779-5400
(989) 772-6250 fax

PRE-BID ADDENDUM NO. 1

Project Bid: 2009 Water Treatment Plant Chemicals Bid

Bid Date: December 8, 2009

Time: 1:30 p.m.

Opening: City Hall
Clerk's Office
320 W. Broadway Street
Mt. Pleasant, Michigan 48858

Addendum Issued By: Malcolm Fox, Supervisor
Water Department

Date Issued: November 18, 2009

Intent: 1. To correct caustic soda unit measurement. Unit measurement should be listed as 400 tons instead of 400 gallons; and
2. To emphasize that the quantities listed in the bid proposal are estimated quantities for annual usage and not guaranteed quantities.

Bid Proposal: Revised and attached

Specifications: No change

City of Mt. Pleasant, Michigan
BID PROPOSAL
 WATER TREATMENT PLANT CHEMICALS

TO: Clerk's Office
 City Hall
 320 W. Broadway Street
 Mt. Pleasant, MI 48858

BID DATE: Tuesday, Dec. 8, 2009
 TIME: 1:30 p.m.

In accordance with the specifications and other bid requirements heretofore provided, the undersigned agrees to provide the below listed bid items at the price(s) set forth below. **THIS IS A ONE-YEAR BID EXCEPT FOR CAUSTIC SODA, WHICH IS A SIX-MONTH BID. THE QUANTITIES LISTED BELOW ARE ESTIMATED FOR ANNUAL USAGE AND ARE NOT GUARANTEED QUANTITIES.** This is a firm bid and not subject to withdrawal or change for a period of sixty (60) days.

<u>BID ITEMS</u>	<u>QTY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
CAUSTIC SODA (<i>Please quote pricing per gallon and per ton</i>)	400	TONS	\$_____/TON	\$_____
			\$_____/GAL	\$_____
FERRIC CHLORIDE	100	TONS	\$_____	\$_____
SODIUM FLUORIDE	4	TONS	\$_____	\$_____
SODIUM HYPOCHLORITE	40,000	GALS	\$_____/GAL	\$_____
LIQUID POLYPHOSPHATE	500	GALS	\$_____/GAL	\$_____
LIME	800	TONS	\$_____	\$_____
LIQUID CO2	150	TONS	\$_____	\$_____
ANIONIC POLYMER	2	TONS	\$_____	\$_____

TOTAL BID \$ _____
 =====
 (figures)

_____ (written) _____ and _____/100 Dollars.

CERTIFICATION: WE HEREBY CERTIFY THAT THE CHEMICAL(S) DELIVERED TO THE CITY OF MT. PLEASANT MEETS OR EXCEEDS YOUR SPECIFICATIONS IN EVERY RESPECT.

RESPECTFULLY SUBMITTED,

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ DATE _____

AUTHORIZED SIGNATURE _____

PRINT OR TYPE NAME & TITLE _____

Buyer Name: City of Mt. Pleasant, MI
 Item: Water Treatment Plant Chemicals

Vendor	Address	City	State	Zip+4
Agro-Iron, Inc.	201 W. Christina Blvd, #3	Lakeland	FL	33813-3508
Alexander Chemical Corp.	1901 Butterfield Rd., Suite 120	Downers Grove	IL	60515-7928
Applied Specialities, Inc	33555 Pin Oak Parkway	Avon Lake	OH	44012
Aquamark, Inc.	14910 Cross Creek Pkwy.	Newbury	OH	44065-9788
Beckart Environmental, Inc.	6900 46th Street	Kenosha	WI	53144
Carmeuse Lime	11 Stanwix St., 11th Floor	Pittsburg	PA	15222
Carmeuse Lime	11 Stanwix St., 11th Floor	Detroit	MI	15222
Chemco Products, Inc.	1349 Grand Oaks Dr.	Howell	MI	48843
Chemical Services, Inc (Ohio Chemical Svcs.?)	2600 Thunderhawk Ct.	Dayton	OH	45414
Continental Carbonic Products, Inc.	3985 East Harrison Avenue	Decatur	IL	
Elhorn Engineering Co.	889 Eden Rd.	Mason	MI	48854-9277
EPCO Carbon Dioxide Products		Marion	IN	
Greer Lime Co	PO Box 302	Riverton	WV	26814
Gulbrandsen Technologies	Center Street	Clinton	NJ	8809
Huron Lime Co	100 Meeker Street	Huron	OH	44839-1713
JCI Jones Chemicals, Inc.	18000 Payne Ave.	Riverview	MI	48192
KA Steel Chemicals, Inc.	15185 Main St	Lemont	IL	
KCI Chemicals, Inc.	4248 Oakwood Lane	Matteson	IL	60443-1923
Kemira Water Solutions, Inc.	3211 Clinton Parkway North, Suite	Lawrence	KS	66047
Mississippi Lime Company	3870 S. Lindbergh Blvd., Suite 201	St. Louis	MO	63127-1308
Nalco Co.	1601 W. Diehl Rd.	Naperville	IL	60563-1198
Praxaire	7000 High Grove Boulevard	Burr Ridge	IL	60527-7595
PVS Nolwood Chemicals, Inc.	10900 Harper Avenue	Detroit	MI	
SAL Chemical Co., Inc.	3036 Birch Dr.	Weirton	WV	26062
Univar USA, Inc.	13395 S. Huron River Dr.	Romulus	MI	48174-3631
Western Lime Corp. (Port Inland, MI)	206 N. 6th Ave., PO Box 57	West Bend	WI	53095
Sterling Water Technologies	P.O. Box 602	Columbia	TN	38402-0602
Pain Enterprises, Inc.	101 Daniels Way	Bloomington	IN	47404
PVS Chemicals, Inc.	10900 Harper Avenue	Detroit	MI	48213
Polydyne, Inc	One Chemical Plant Rd	Riceboro	GA	31323

CITY OF MT. PLEASANT
2010 WATER TREATMENT PLANT CHEMICAL BID

SUPPLIER	CaO (per ton)	NaOH Membrane (per ton)	CO2 (per ton)	FeCl3 (per ton)	NaF (per ton.)	NaOCl (per gal)	Polymer (per lb.)	Polyphosphate (per gal)
Alexander Chemical Corp.	NB	375.00	NB	NB	\$1,850.00	\$0.665	NB	NB
American Water Chemicals, Inc	NB	NB	NB	NB	NB	NB	NB	\$9.93
Applied Specialties, Inc.	NB	NB	NB	NB	NB	NB	\$1.084	NB
Western Lime	\$138.00	NB	NB	NB	NB	NB	NB	NB
Carmeuse Lime, Inc.	\$158.06	NB	NB	NB	NB	NB	NB	NB
Chemical Services	NB	437.00	\$100.00	NB	NB	NB	NB	NB
Chemco Products, Inc.	NB	NB	NB	NB	NB	NB	\$1.66	\$12.38
Continental Carbonic Products	NB	NB	\$78.00	NB	NB	NB	NB	NB
Elhorn Engineering Company	NB	NB	NB	NB	NB	NB	NB	\$6.50
EPCO Carbon Dioxide Products Inc.	NB	NB	\$93.18	NB	NB	NB	NB	NB
JCI Jones Chemicals, Inc.	NB	410.00	NB	NB	NB	\$0.665	NB	NB
KA Steel Chemicals, Inc.	NB	410.81	NB	NB	NB	\$0.74	NB	NB
Kemira Water Solutions.	NB	NB	NB	\$526.00	NB	NB	NB	NB
KC Industries LLC	NB	NB	NB	NB	NB	NB	NB	NB
Nalco Company	NB	NB	NB	NB	NB	NB	\$1.17	\$15.065
Pain Enterprices, Inc	NB	NB	\$73.50	NB	NB	NB	NB	NB
Polydyne Inc.	NB	NB	NB	NB	NB	NB	\$0.95	NB
Praxair, Inc.	NB	NB	NB	NB	NB	NB	NB	NB
PVS-Nolwood Chemicals, Inc.	NB	425.00	NB	NB	\$1,700.00	\$0.815	NB	NB
PVS Technologies, Inc.	NB	NB	NB	\$502.00	NB	NB	NB	NB
SAL Chemical	NB	NB	NB	NB	NB	NB	NB	\$10.49
Sterling Water Technologies LLC	NB	NB	NB	NB	NB	NB	NB	NB
Water Elements, LLC	NB	NB	NB	\$1,000.00	NB	NB	NB	NB

NB = No Bid

Caustic is a six-month bid

[Form01]

City of Mt. Pleasant, Michigan

CONTRACT DOCUMENTS

For
2010 Water Treatment Plant Chemicals Bid



JIM HOLTON
Mayor

KATHIE GRINZINGER
City Manager

Prepared By:
Division of Public Works

DUANE F. ELLIS, P.E.
DPW Director/City Engineer

November 2009

City of Mt. Pleasant, Michigan

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2010 Water Treatment Plant Chemicals Bid

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NOTICE TO BIDDERS
WATER TREATMENT PLANT CHEMICALS BID

The City of Mt. Pleasant, Michigan, is requesting sealed bids at the Office of the City Clerk, City Hall, 320 W. Broadway Street, Mt. Pleasant, Michigan 48858, until 1:30 p.m. (local time), on Tuesday, December 8, 2009, at which time and place the bids will be publicly opened and read. All bids shall be submitted in a sealed envelope, plainly marked "Water Treatment Plant Chemicals – December 8, 2009."

Proposals are solicited on a unit price basis, for the following chemicals:

CAUSTIC SODA	400	GALS
FERRIC CHLORIDE	100	TONS
SODIUM FLUORIDE	4	TONS
SODIUM HYPOCHLORITE	40,000	GALS
LIQUID POLYPHOSPHATE	500	GALS
LIME	800	TONS
LIQUID CO2	150	TONS
ANIONIC POLYMER	2	TONS

***THIS IS A ONE-YEAR BID. THE ABOVE-LISTED QUANTITIES ARE ESTIMATED FOR ANNUAL USAGE AND ARE NOT GUARANTEED QUANTITIES. **CAUSTIC SODA IS A SIX-MONTH BID. ***

Please quote both per gallon and per ton pricing for Caustic Soda.

No bid deposit, performance, labor, or material bond will be required.

The City of Mt. Pleasant reserves the right to accept or reject any or all bids, to waive any irregularities in the bids, and to select the bid considered most advantageous to the city.

Jeremy Howard
City Clerk

Malcolm Fox
Supervisor, Water Treatment Plant
(989) 779-5426

**CITY OF MT. PLEASANT
WATER TREATMENT PLANT CHEMICALS PROCUREMENT
GENERAL BID SPECIFICATIONS**

Definitions: The following definitions shall apply in this Specification. Purchaser: The City of Mt. Pleasant, henceforth known as the City. Vendor: the party supplying water treatment chemicals.

Material Safety Data Sheet: Each vendor shall provide the City of Mt. Pleasant with a complete copy of the U.S. Department of Occupational Safety and Health Administration, Material Safety Data Sheets, (Form OSHA-20), for each product being bid.

Product Specification: Each vendor shall provide the City a Product Specification, and also a Certificate of Compliance (ANSI/NSF Standard 60/61) for each chemical bid.

Quantity: These quantities shown are for estimated purposes only, not a guarantee of actual usage.

Basis of Award: The award will be to the supplier with the lowest unit cost for each chemical bid. The City of Mt. Pleasant reserves the right to reject low bids which do not meet specifications. The award for supplying Liquid Carbon Dioxide is non-exclusive, and may be awarded to more than a single supplier.

Note: Previous experience and performance may be factors in making the award.

Contract Period: The contract period is for one (1) year, to start January 1, 2010, through December 31, 2010, with the exception of Caustic Soda, which is a six month period.

Deliveries: Supply and transport F.O.B. destination, freight pre-paid to the City of Mt. Pleasant Water Treatment Plant and/or designated area on an "AS NEEDED" basis using a designated truck route within the City limits. Normal delivery hours are 0800 to 1500 hrs, unless otherwise scheduled by the City.

Assignments: The vendor agrees not to assign or transfer this contract or any part thereof without the written consent of the City of Mt. Pleasant. Any unauthorized assignment may subject the contractor to immediate termination.

Errors / Omissions / Discrepancies: Any errors, omissions, or discrepancies in the specifications discovered by a prospective contractor and/or service provider shall be brought to the attention of Malcolm Fox, Superintendent, Water Treatment Plant, as soon after discovery as possible. Further, the contractor and/or service provider shall not be allowed to take advantage of errors, omissions, or discrepancies in the specifications.

Default: Is defined as the failure of the bidder to fulfill the obligations of the contract, including but not limited to: failure to deliver on time or the unauthorized substitution of articles other than those quoted and specified on the contract; or failure to deliver specified quantities (repetitive shortages). If continued abuses of any or all of the above conditions persist, the City of Mt. Pleasant will notify the contractor in writing.

The contractor will be given ten days to correct this "Default" condition. Failure to do so within the specified period will result in the City's canceling the contract and procuring the articles or services from other sources and hold the contractor responsible for any excess cost occasioned thereby.

Termination: The City of Mt. Pleasant reserves the right to terminate any award to the bidder for cause, without any liability, upon 10 days notice from the Director of Public Works or his authorized representative, (See Default above).

Indemnification: The successful bidder agrees to defend, indemnify and hold harmless the City, its employees and agents from all claims and lawsuits arising out of its performance of this contract.

OTHER TERMS: The City of Mt. Pleasant reserves the right to accept any bid, to reject any bid or all bids, to waive irregularities and/or informalities in any bid, and to make the award in any manner deemed in the best interest of the City.

All envelopes must be marked "WATER TREATMENT PLANT CHEMICALS BID – DECEMBER 8, 2009" using a sealed envelope. We cannot be responsible for any bid not marked as stated above.

FIVE (5) DAYS PRIOR TO BID OPENING A TYPICAL ANALYSIS OF THE PRODUCT THE BIDDER PROPOSES TO FURNISH MUST BE SUPPLIED TO THE WATER TREATMENT PLANT, 4195 S. LINCOLN ROAD, MT. PLEASANT, MI 48858.

CONTACT INFORMATION: IF THERE ARE ANY QUESTIONS CONCERNING THE ATTACHED SPECIFICATIONS, PLEASE CONTACT MALCOLM FOX, PLANT SUPERINTENDENT, WATER TREATMENT PLANT, AT (989) 779-5426 or 779-5430, MONDAY THROUGH FRIDAY, BETWEEN THE HOURS OF 8:00 A.M. THROUGH 4:00 P.M.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
CAUSTIC SODA**

The following specification incorporates the criteria and specifications of AWWA B501-03 and any applicable National Sanitation Foundation (NSF) specifications.

Scope: This standard pertains to caustic soda for use in the treatment of municipal water supplies.

Definition: Caustic Soda is a 50% solution of Membrane Cell grade sodium hydroxide (NaOH). Bids will be on a dry ton basis. Also list the price per gallon of shipped caustic.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces caustic soda, as covered in this standard.*

Vendor: *Any party that enters into a contract, either written or verbal, to supply caustic soda for purchase in accordance with this standard.*

Purchaser: *The party entering into a contract or agreement to purchase caustic soda in accordance with the provisions of this standard, in this case, the City of Mt. Pleasant, henceforth known as "The City".*

Affidavit of Compliance: The City requires an affidavit from the manufacturer or vendor that the caustic soda furnished under the purchaser's orders meets or exceeds the specifications of the AWWA B501-03 and NSF/ANSI 60/61 standards, and the requirements specified in this standard.

Rejection: If the material is found to not meet the requirements of this standard, the responsibility of removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

Physical and Chemical Requirements: Caustic Soda shall be delivered as a 50% solution of membrane grade liquid sodium hydroxide.

Impurities: The caustic soda provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with caustic soda. Heavy metals (Pb, Hg, As) concentration must meet the requirements of food chemical codex.

Marking Shipment: Each shipment shall be labeled in accordance to current Department of Transportation standards.

Shipping and Delivery: Caustic soda shall be delivered in 4500-5000 gallon shipments. The trucks shall be self-sufficient with regard to unloading the caustic soda into the City's two 9700-gallon NaOH storage tanks. The trucks shall maintain the temperature of the caustic at a minimum 92° F during all weather conditions. The City shall supply a flanged connection on its two-inch fill line. The City shall accept weekday delivery between **0800** and **1500** hours or as arranged by the purchaser.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS
FOR LIQUID FERRIC CHLORIDE**

The following specification incorporates the criteria and specifications of AWWA B407-05 and ANSI/NSF 60/61 standards.

Scope: This standard covers liquid ferric chloride for use as a coagulant in treating municipal water supplies.

Definition: The liquid ferric chloride shall be supplied as a 40% solution. Bids shall be on a ton basis of 100% FeCl₃.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces liquid ferric chloride, as covered in this standard.*

Purchaser: *The party entering into a contract or agreement to purchase liquid ferric chloride in accordance with the provisions of this standard, in this case, the City of Mt. Pleasant, henceforth known as "The City".*

Vendor: *Any party that enters into a contract, either written or verbal, to supply liquid ferric chloride for purchase in accordance with this standard.*

Affidavit of Compliance: The City requires an affidavit from the manufacturer or vendor that the liquid ferric chloride furnished under the purchaser's orders meets or exceeds AWWA B407-05 and ANSI/NSF 60/61 specifications.

Basis of Rejection: If the material is found to not meet the requirements of this standard, the responsibility of removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

Impurities: The liquid ferric chloride provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with liquid ferric chloride.

Marking Shipment: Each shipment shall be labeled in accordance to current Department of Transportation standards.

Shipping and Delivery: Liquid ferric chloride shall be shipped in suitably lined, thoroughly cleaned tank trucks of 3000-7000 gallon capacity. The delivery trucks shall be self-sufficient with regard to unloading the liquid ferric chloride into the City's two 5000-gallon storage tanks. The City shall supply a flanged connection on its two-inch liquid ferric chloride fill line. The City shall accept weekday delivery between **0800** and **1500** hours or as arranged by the purchaser.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS
FOR SODIUM FLUORIDE**

The following standard incorporates the criteria and specifications of AWWA B701-06 and ANSI/NSF 60/61 standards.

Scope: This standard covers Sodium Fluoride as a fluoride source for use as a municipal water treatment prophylaxis.

Definition: Sodium fluoride will be delivered in fifty-pound bags. Sodium fluoride shall be coarse crystalline grade suitable for municipal water treatment. Bids will be on a one hundred pound basis.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces sodium fluoride, as covered in this standard.*

Vendor: *Any party that enters into a contract, either written or verbal, to supply sodium fluoride for purchase in accordance with this standard.*

Purchaser: *The party entering into a contract or agreement to purchase sodium fluoride in accordance with the provisions of this standard, in this case, the City of Mt. Pleasant, henceforth known as "The City".*

Affidavit of Compliance: The purchaser requires an affidavit from the manufacturer or vendor that the sodium fluoride furnished under the purchaser's orders meets or exceeds the specifications of the AWWA B701-06 and ANSI/NSF 60/61 standards, and the requirements specified in this standard.

Rejection: If the sodium fluoride is found to not meet the requirements of this standard, the responsibility of the removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the City.

Impurities: The sodium fluoride provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with sodium fluoride.

Marking Shipment: Each shipment shall be labeled in accordance to current Department of Transportation standards.

Shipping and Delivery: Sodium fluoride shall be delivered in skid mounted fifty-pound bag shipments. The trucks shall be self-sufficient with regard to unloading the sodium fluoride onto the City's receiving loading dock. The City shall accept weekday delivery between **0800** and **1500** hours or as arranged by the purchaser.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
SODIUM HYPOCHLORITE**

The following specification incorporates the criteria and specifications of AWWA B300-04 and any applicable National Sanitation Foundation (NSF) specifications.

Scope: This standard pertains to sodium hypochlorite for use in the treatment of municipal water supplies.

Definition: Sodium Hypochlorite (NaOCl) is a clear light-yellow liquid containing up to 16.0 g/l (16 trade percent) of available chlorine. Bids will include price per gallon of NaOCl at 16%.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces sodium hypochlorite, as covered in this standard.*

Purchaser: *The party entering into a contract or agreement to purchase sodium hypochlorite in accordance with the provisions of this standard, in this case, the City of Mt. Pleasant, henceforth known as "The City".*

Vendor: *Any party that enters into a contract, either written or verbal, to supply sodium hypochlorite for purchase in accordance with this standard.*

Affidavit of Compliance: The City requires an affidavit from the manufacturer or vendor that the sodium hypochlorite furnished under the purchaser's orders meets or exceeds AWWA B300-04 and ANSI/NSF 60/61 standards.

Rejection: *Notice of Nonconformance* - If the hypochlorite does not meet the requirements of this standard, the purchaser shall provide a notice of nonconformance to the vendor within 10 working days of receipt of the shipment at its point of destination. The results of the purchaser's test shall prevail unless the vendor notifies the purchaser within five working days of 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 vendor one of the sealed samples taken in accordance with the "Sampling Method" section included in this specification. In the event that the retest results do not agree with the test results of the purchaser, another sealed sample shall be forwarded to a referee laboratory agreed upon by both parties for analysis. The results of the referee laboratory's analysis shall be considered final. If the shipment is found to be in compliance with this standard, then the purchaser shall assume the cost of the referee laboratory. If the shipment is found not to meet the specifications of this standard, the vendor shall assume the cost of the referee laboratory.

If material delivered is found to not meet the requirements of this standard, the responsibility of removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

Physical Requirements: Sodium Hypochlorite (NaOCl) shall be delivered as a clear liquid containing not more than 0.15 percent insoluble matter by weight. It should be filtered before delivery.

Chemical Requirements: The Sodium Hypochlorite shall contain between 15 and 16 percent available chlorine by volume (trade percent). In the event the available chlorine by volume (trade percent) is lower than specified, the City shall deduct a penalty as follows:

- 1) Available chlorine between 14 & 15 trade percent, a penalty of 5% of the contract price shall be deducted.
- 2) Available chlorine between 13 & 14 trade percent, a penalty of 10% of the contract price shall be deducted.
- 3) Available chlorine between 12 & 13 trade percent, a penalty of 15% of the contract price shall be deducted.

In any event, if the available chlorine is below 12 trade percent, this will be reason for rejection of the shipment. The vendor will agree to return a rejected shipment.

The total free alkali in sodium hypochlorite (as NaOH) shall not exceed 1.5% by weight. The pH of the hypochlorite solution shall be between 12 and 13 at delivery.

Impurities: The sodium hypochlorite provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with sodium hypochlorite. The concentration of chlorite and chlorate shall not exceed levels recommended by AWWA standards.

In an effort to minimize impurities, the sodium hypochlorite delivered by the vendor shall be freshly made up for each delivery. That is, a shipment shall not be more than 24 hours old.

Sampling Method: The sample shall be taken at the point of destination, in accordance to AWWA B300-04.

Testing Methods: All testing shall be done in accordance to the most current and applicable AWWA standard for sodium hypochlorite. The following is a partial list of chemical and physical characteristics that may be tested for:

- 1) Available chlorine, in mg/L or trade percent;
- 2) Free alkali as NaOH;
- 3) Insoluble matter or impurities;
- 4) Chlorite;
- 5) Chlorate.

Marking: Each shipment will be labeled in accordance to current Department of Transportation standards. Each shipment is required to be labeled with the manufacturer, lot number, and the net weight.

Shipping and Delivery: Sodium Hypochlorite shall be delivered in 5000-gallon shipments. The trucks shall be self-sufficient with regard to unloading the hypochlorite into the City's two 6000-gallon storage tanks. The City will supply a flanged connection on its two-inch hypochlorite fill line. The City will accept weekday delivery between **0800** and **1500** hours, or as arranged by the purchaser.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
SODIUM POLYPHOSPHATE**

The following standard incorporates the criteria and specifications of the AWWA B502-05, B503-05, or B504-05 standards, and the ANSI/NSF 60/61 standards.

Scope: This standard pertains to sodium polyphosphate as a sequestering agent during municipal water treatment.

Definition: Food grade liquid, sodium polyphosphate will be delivered in thirty or fifty-five gallon drums. Bids will be on a ton basis of polyphosphate.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces sodium polyphosphate, as covered in this standard.*

Vendor: *Any party that enters into a contract, either written or verbal, to supply sodium polyphosphate for purchase in accordance with this standard.*

Purchaser: *The party entering into a contract or agreement to purchase sodium polyphosphate in accordance with the provisions of this standard, in this case, the City of Mt. Pleasant, henceforth known as "The City".*

Affidavit of Compliance: The purchaser requires an affidavit from the manufacturer or vendor that the sodium polyphosphate furnished under the purchaser's orders meets or exceeds the specifications of the AWWA B502-05, B503-05, or B504-05, and ANSI/NSF 60/61 standards, and the requirements specified in this standard.

Rejection: If the sodium polyphosphate is found to not meet the requirements of this standard, the responsibility of the removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

Physical and Chemical Requirements: Food grade liquid poly-phosphate suitable for use in a lime softening municipal water treatment plant.

Impurities: The sodium polyphosphate provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with sodium polyphosphate.

Marking Shipment: Each shipment shall be labeled in accordance to current Department of Transportation standards.

Shipping and Delivery: Liquid sodium polyphosphate shall be delivered in 30 or 55-gallon drums. The drums will have a molded lip to enable handling with a barrel cart. The vendor will use a delivery truck capable of placing the drums directly on the water plant loading dock without use of a forklift. The City shall accept weekday delivery between **0800** and **1500** hours or as arranged by the purchaser.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
QUICKLIME**

The following specification incorporates the criteria and specifications of AWWA B202-02 and any applicable National Sanitation Foundation (NSF) specifications.

Scope: This standard covers pebble quicklime for the use of treating municipal water supplies. It sets forth the tests, guarantees and other conditions pertaining thereto. The chemical is used as a softening agent, i.e., the removal of calcium and magnesium from raw water.

The quicklime shall meet the following requirements. Failure to meet any of them will be sufficient cause for rejection.

Definition: Quicklime is the product resulting from the calcinations of limestone, shell, or equivalent. This standard covers only limes, which are composed mainly of calcium oxide. Special limes such as dolomitic limes are not subject to the specifications contained herein. Quicklime consists primarily of calcium oxide (CaO), and to a lesser extent magnesium oxide (MgO). Hydrated lime is a finely divided powder, which results from the hydration of quicklime with enough water to satisfy its chemical affinity.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces quicklime, as covered in this standard.*

Purchaser: *The party entering into a contract or agreement to purchase quicklime (typically from the Vendor) in accordance with this standard. In this case, the City of Mt. Pleasant, henceforth known as the City.*

Vendor: *The party entering into a contract or agreement to ship and supply quicklime in accordance to this standard.*

Compliance: The City requires, (1) An affidavit of compliance from the manufacturer or vendor that the quicklime furnished under the purchaser's specification complies with all applicable requirements of this standard; (2) A certified analysis of the quicklime furnished by either the vendor or the manufacturer; and (3) An affidavit of compliance with AWWA B202-02 and NSF/ANSI 60/61.

Purchase of Quicklime: The purchase of quicklime shall be based on 90% available calcium oxide (CaO). In the event that any shipment has a calcium oxide content of less than 90%, the City shall deduct a penalty of 5% of the contract price for each 1% of calcium content below 90%. In no case shall the available calcium oxide (CaO) content be less than 80%.

The quicklime provided shall be of the "quick-slaking" type and shall disintegrate into a solution of finely divided particles upon addition to water. This reaction shall be evidenced by a production of heat, raising the temperature of the solution to 40° C in three minutes, and the entire slaking reaction should be complete in approximately ten minutes. Slaking of the quicklime shall not produce an objectionable amount of

undissolved or insoluble material, and shall not in any way interfere with the feeding machinery used to feed quicklime.

Basis for Rejection: Failure to meet the specifications of this standard shall be considered grounds for rejection of the material.

The basis of rejection shall be the following:

- ~ Available CaO content less than 80 percent. This percentage represents a minimum chemical requirement.
- ~ Failure of the quicklime to produce more than 10° rise in temperature in three minutes.
- ~ The production of more than five percent insoluble material upon slaking.
- ~ Determination of impurities in excess of those specified in the section following labeled "Impurities".

Notice of Nonconformance: *Notice of Nonconformance* with a shipment as caused by the failure of the material to meet the specifications contained herein, shall be provided to the vendor within 15 calendar days after receipt of the shipment in question. The purchaser's results shall prevail unless the vendor 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 one of the samples taken in accordance with the section following labeled "Testing Methods", to the vendor. In the event that the results determined by the vendor do not agree with those of the purchaser, a second sample, as above, shall be forwarded to a referee laboratory agreed upon by both parties. The results of the referee laboratory shall be accepted as final. The vendor shall pay the cost of the referee analysis if the material in question is found not to meet the specifications of this standard and by the purchaser if the material does meet the specifications.

If the material does not meet the requirements of the purchaser, the vendor shall assume full responsibility for the removal of the material from the premises of the purchaser or the point of destination unless some agreement is reached between the purchaser and the vendor that a price adjustment can be made.

Physical Requirements: The quicklime supplied shall be three quarter inch pebble lime and in no case shall it exceed the following limits: None shall be retained on a one inch sieve and not more than 5% shall pass a one quarter inch (0.25") sieve.

Chemical Requirements: Quicklime supplied under this specification shall be freshly burned and free of carbonate solids and siliceous residue. Insoluble material shall not exceed 5% by weight upon slaking.

Impurities: The quicklime supplied under this specification shall contain no inorganic or organic material in quantities capable of producing deleterious or injurious effects on the health of persons consuming water that has been properly treated with lime and/or lime products. The quicklime shall conform both to NSF/ANSI standard 60/61 and to AWWA B202-02.

Sampling Method: Samples shall be collected as per AWWA B202-02 or any applicable standard from the material being loaded into the delivery truck at the point of origin, and provided to the plant operator before unloading can begin. Samples shall be collected in airtight containers.

Testing Methods: Sample collection, testing methods, and any other relevant tests shall be performed in accordance with the AWWA Standard for Quicklime, ANSI/AWWA B202-02. Modifications of these procedures may be used only if they result from mutual agreement between the vendor and the purchaser.

Marking: Each shipment shall be labeled in accordance to current Department of Transportation standards. These labels may include such information as contents, lot number, net weight, manufacturer and any applicable safety warnings.

Shipping and Delivery: Quicklime shall be supplied in trucks with a capacity of 20-50 tons. The trucks shall be pressurized pneumatic self-unloading types, capable of delivering quicklime into the two 55 ton lime storage bins at the Mt. Pleasant Water Treatment Plant. The City will supply a flanged connection on its four-inch lime fill lines. The truck and its compressor shall be equipped with a muffler or other suitable noise suppression equipment. The City shall accept weekday delivery between **0800** hours and **1500** hours or as arranged by purchaser.

The net weight of the shipment shall not deviate from the recorded weight by more than 1.5 percent. The City may require that the vendor supply, on receipt of the shipment, a certificate of certified weighers attesting to the actual weight of the shipment in question.

If the reported weight of the shipment is found to be less than the actual weight, using any of the methods described above or as agreed to by the City and the vendor, the City may accept the shipment, reject the shipment, or agree to a price adjustment accounting for the weight deficiency.

Delivery of Non-Water Treatment Grade Lime: Quicklime must be water treatment quality grade unless by special arrangement with the City. Grade of lime and point of origin must be indicated on the shipping documents. **Non-treatment quality quicklime shall be penalized by a 50% price credit for the entire load.**

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
LIQUID CARBON DIOXIDE**

The following specification incorporates the criteria and specifications of AWWA B510-06 and ANSI/NSF 60/61 standards.

Scope: This standard covers carbon dioxide for the use of treating municipal water supplies. The chemical is used to modify and control the pH of water.

Definition: Carbon Dioxide (CO₂) gas shall be delivered in a liquid form. Bids will be on a ton basis as CO₂.

The following definitions shall apply in this standard:

Manufacturer: *The party or parties that produce carbon dioxide, as covered in this standard.*

Vendor: *Any party that enters into a contract, either written or verbal, to supply carbon dioxide for purchase in accordance with this standard.*

Purchaser: *The party entering into a contract or agreement to purchase carbon dioxide in accordance with the provisions of this standard. In this case, the City of Mt. Pleasant henceforth known as the City.*

Affidavit of Compliance: The purchaser requires an affidavit from the manufacturer or vendor that the carbon dioxide furnished under the purchaser's orders meets or exceeds the specifications of the AWWA B510-06 and ANSI/NSF 60/61 standards, and the requirements specified in this standard.

Rejection: If the carbon dioxide does not meet the requirements of this standard, the purchaser shall provide a notice of non-conformance to the vendor within 10 working days of receipt of the shipment at its point of destination. If the material is found to not meet the requirements of the standard, the responsibility of the removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

Impurities: The carbon dioxide provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with carbon dioxide.

Marking Shipment: Each shipment shall be labeled in accordance to current Department of Transportation standards.

Shipping and Delivery: Liquid carbon dioxide gas shall be shipped in trucks with a twenty-ton capacity. The delivery trucks shall be self-sufficient with regard to unloading the carbon dioxide into the City's 32-ton storage tank. The City shall accept weekday delivery between **0800** and **1500** hours or as arranged by the purchaser. The delivery driver must check in with Water Plant staff before unloading.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
ANIONIC POLYMER**

The following standard incorporates the criteria and specifications of any applicable AWWA and NSF standards, including AWWA B453-06.

Scope: This standard pertains to anionic polymer for use with lime softening water treatment.

Definition: Anionic polymer will be bid on a ton basis. The vendor shall provide technical assistance in determining optimum dose.

The following definitions shall apply in this standard:

Manufacturer: *The party that produces anionic polymer, as covered in this standard.*

Vendor: *Any party that enters into a contract, either written or verbal, to supply anionic polymer for purchase in accordance with this standard.*

Purchaser: *The party entering into a contract or agreement to purchase anionic polymer in accordance with the provisions of this standard. In this case, the City of Mt. Pleasant henceforth known as the City.*

Affidavit of Compliance: The City requires an affidavit from the manufacturer or vendor that the anionic polymer furnished under the purchaser's orders meets or exceeds applicable AWWA and ANSI/NSF 60/61 standards, and the requirements specified in this standard.

Rejection: If the anionic polymer is found to not meet the requirements of this standard, the responsibility of the removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

Physical and Chemical Requirements: The food grade emulsion anionic polymer must be suitable for use in lime softening upflow clarifiers. A concentration of 15% - 20% is required.

Impurities: The anionic polymer provided under this standard shall contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with anionic polymer.

Marking Shipment: Each shipment shall be labeled in accordance to current Department of Transportation standards.

Shipping and Delivery: Anionic polymer shall be delivered in 55 gallon barrels. The barrels shall have a molded lip to enable handling with a barrel cart. The vendor will use a delivery truck capable of placing the barrels directly on the water plant loading dock without use of a City forklift. The City shall accept weekday delivery between **0800** and **1500** hours or as arranged by the purchaser.

**CITY OF MT. PLEASANT
STANDARD SPECIFICATIONS FOR
QUICKLIME**

**DELIVERY ADDENDUM
FROST LAW SEASONAL DELIVERIES**

During the period each year when Isabella County “frost laws” are in effect, the lime vendor shall deliver Quicklime using methods that conform to the County rules and regulations. These methods may include reduced load sizes and/or designated truck routes.

Additional costs from the reduced load sizes may occur and should be submitted to the city for reimbursement.

City of Mt. Pleasant, Michigan
BID PROPOSAL
 WATER TREATMENT PLANT CHEMICALS

TO: Clerk's Office
 City Hall
 320 W. Broadway Street
 Mt. Pleasant, MI 48858

BID DATE: Tuesday, Dec. 8, 2009
 TIME: 1:30 p.m.

In accordance with the specifications and other bid requirements heretofore provided, the undersigned agrees to provide the below listed bid items at the price(s) set forth below. **THIS IS A ONE-YEAR BID EXCEPT FOR CAUSTIC SODA, WHICH IS A SIX-MONTH BID. THE QUANTITIES LISTED BELOW ARE ESTIMATED FOR ANNUAL USAGE.** This is a firm bid and not subject to withdrawal or change for a period of sixty (60) days.

<u>BID ITEMS</u>	<u>QTY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
CAUSTIC SODA (<i>Please quote pricing per gallon and per ton</i>)	400	GALS	\$_____/GAL	\$_____
			\$_____/TON	\$_____
FERRIC CHLORIDE	100	TONS	\$_____	\$_____
SODIUM FLUORIDE	4	TONS	\$_____	\$_____
SODIUM HYPOCHLORITE	40,000	GALS	\$_____/GAL	\$_____
LIQUID POLYPHOSPHATE	500	GALS	\$_____/GAL	\$_____
LIME	800	TONS	\$_____	\$_____
LIQUID CO2	150	TONS	\$_____	\$_____
ANIONIC POLYMER	2	TONS	\$_____	\$_____

TOTAL BID \$ _____
 =====
 (figures)

 (written) _____ and _____/100 Dollars.

CERTIFICATION: WE HEREBY CERTIFY THAT THE CHEMICAL(S) DELIVERED TO THE CITY OF MT. PLEASANT MEETS OR EXCEEDS YOUR SPECIFICATIONS IN EVERY RESPECT.

RESPECTFULLY SUBMITTED,

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ DATE _____

AUTHORIZED SIGNATURE _____

PRINT OR TYPE NAME & TITLE _____