

June 22, 2010

***VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY***

Oregon Public Utility Commission
550 Capitol Street NE, Suite 215
Salem, OR 97301-2551

Attn: Filing Center

RE: UI ___ - Application Requesting Approval of Affiliated Interest Agreement with Nalco Company

Enclosed for filing by PacifiCorp dba, Pacific Power is an Application Requesting Approval of the Affiliated Interest Agreement with Nalco Company. An original and three (3) copies will be provided via overnight delivery.

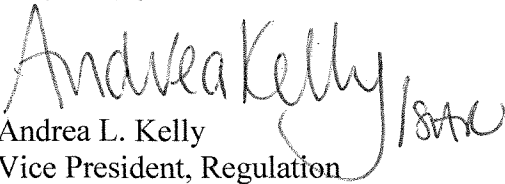
PacifiCorp respectfully requests that all formal correspondence and data requests regarding this matter be addressed to:

By E-mail (preferred): datarequest@pacificorp.com.

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232

Please direct informal questions with respect to this filing to Joelle Steward at 503-813-5542.

Very truly yours,


Andrea L. Kelly
Vice President, Regulation

Enclosure

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UI _____

In the Matter of the Application of
PACIFICORP, d.b.a. Pacific Power,
Requesting Approval of an Affiliate Interest
Agreement with Nalco Company

**APPLICATION OF PACIFIC POWER
AND WAIVER OF PAPER SERVICE**

1 Pursuant to ORS 757.495(1) and OAR 860-027-0040, PacifiCorp, d.b.a Pacific Power
2 (“Company”) requests approval from the Public Utility Commission of Oregon
3 (“Commission”) of the Materials Supply Master Contract (“Contract”) between PacifiCorp
4 and Nalco Company (“Nalco”), a copy of which is attached as Attachment A. The Company
5 respectfully requests that the Commission approve the Contract as an affiliated interest
6 agreement and allow PacifiCorp to purchase services pursuant to the Contract.

7 Additionally, pursuant to OAR 860-013-0070(4) the Company waives paper service
8 for this proceeding.

9 **I. Background**

10 PacifiCorp is a wholly-owned indirect subsidiary of MidAmerican Energy Holdings
11 Company (“MEHC”). MEHC is a subsidiary of Berkshire Hathaway, Inc. Nalco is a financial
12 subsidiary of Nalco Holding Company, a publicly-traded company. Berkshire Hathaway,
13 Inc., holds an approximate six percent ownership interest in Nalco Holding Company.
14 “Affiliated interest”, as defined in ORS 757.015(3), includes every corporation five percent
15 or more of whose voting securities are owned by any corporation or person owning five
16 percent of the voting securities of a public utility or in any successive chain of ownership of a
17 public utility. Berkshire Hathaway Inc.’s ownership interest in PacifiCorp and Nalco
18 qualifies as an affiliated interest.

1 Nalco provides the Company with certain water treatment facilities, chemicals and
 2 expertise and has been doing so for more than thirty years. The previous agreement with
 3 Nalco terminated December 31, 2009, which the Commission approved in Order No. 09-294,
 4 Docket UI 287. The Company conducted a competitive bid process to obtain goods and
 5 services similar to those provided by Nalco and selected Nalco as the vendor going forward
 6 from the expiration of the previous contract.

7 With this Application, the Company requests Commission authorization to engage in
 8 business transactions with Nalco under the terms and conditions of the new contract.

9 **II. Compliance with OAR 860-027-0040 Filing Requirements**

10 **A. Address**

11 The Company's name and address of its principal business office are:

12 PacifiCorp
 13 825 NE Multnomah Street
 14 Portland, OR 97232

15 **B. Communications and Notices**

16 All notices and communications with respect to this Application should be addressed
 17 to:

<p>18 PacifiCorp Oregon Dockets 19 825 NE Multnomah Street, Suite 2000 20 Portland, OR 97232 21 <u>OregonDockets@pacificorp.com</u></p>	<p>Michelle R. Mishoe Legal Counsel Pacific Power 825 NE Multnomah Street, Suite 1800 Portland, OR 97232 Tel. (503) 813-5977 <u>michelle.mishoe@pacificorp.com</u></p>
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25 In addition, PacifiCorp respectfully requests that all data requests regarding this
 26 matter be addressed to:

<p>27 By e-mail (preferred)</p> <p>28 By regular mail</p>	<p><u>datarequest@pacificorp.com</u></p> <p>Data Request Response Center PacifiCorp 825 NE Multnomah, Suite 2000 Portland, OR 97232</p>
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1 Informal inquires may be directed to Joelle Steward, Regulatory Manager, at (503)
2 813-5542.

3 **C. Relationship Between PacifiCorp and Affiliated Interest**

4 The Company is a wholly-owned indirect subsidiary of MEHC. MEHC is a
5 subsidiary of Berkshire Hathaway, Inc. Nalco is a financial subsidiary of Nalco Holding
6 Company, a publicly-traded company. Berkshire Hathaway, Inc., holds an approximate six
7 percent ownership interest. Therefore, Nalco is an “affiliated interest” of the Company as set
8 forth in ORS 757.015(3). The Company’s relationship with Nalco began well before Nalco
9 became an affiliated interest.

10 **D. Voting Securities**

11 The Company and Nalco do not own voting securities in each other.

12 **E. Common Officers and Directors**

13 The Company and Nalco do not share any officers or directors.

14 **F. Pecuniary Interest**

15 No officer or director of either the Company or Nalco is a party to or has a pecuniary
16 interest in the contemplated business transactions between the Company and Nalco.

17 **G. Description of Goods and Services Provided; Cost(s) Incurred; Market**
18 **Value; Pricing Methods**

19 Nalco provides the Company with water treatment programs and related services for
20 many of the Company’s generation facilities and has been doing so for more than thirty
21 years. Nalco provides generation plant engineering assistance and supplies certain water
22 treatment and dust suppression chemicals. Additionally, Nalco may provide no-cost
23 consulting services and technical assistance for water treatment programs for new generation
24 plant development.

1 The most recent Contract leverages the long-standing relationship between the two
2 companies to achieve cost savings. Pricing for Nalco’s products and services are contained in
3 Exhibits B.1 and B.2 to the Contract. The products and services provided under the Contract
4 are priced in accordance with pricing indices and Nalco guarantees its prices to be
5 competitive. Prices will be firm through December 31, 2010. After that time, the price will
6 only change if the raw material cost of a product impacts the cost of a Nalco product by
7 greater than ten percent, either causing an increase or a decrease. The Contract requires
8 Nalco to provide the Company with “most favored nation” pricing, meaning Nalco will
9 charge the Company the same or better than similarly-sized and situated companies. The
10 Contract includes “normal” on-site service, which includes routine service, equipment
11 inspections, trouble-shooting and emergency call-outs, at no extra charge. Additionally,
12 Nalco will provide additional consulting and other services, up to 10 man-days per year, at
13 no additional charge. For any services above the 10 man-days, the Company receives a 50
14 percent discount on the normal labor rates.

15 Under the Contract, pricing for chemicals may be adjusted annually, based on review
16 of the pricing for the top eight products, if the raw material cost of a product increases or
17 decreases beyond ten percent. Annual price increases are capped at the lesser of five percent
18 increase/decrease of PacifiCorp’s aggregate spend, or \$150,000 total per year for all
19 products. The Company has the right to audit Nalco’s books for the determination of price
20 increases.

21 **H. Estimate of Amount PacifiCorp will Pay Annually for Services**

22 The Company estimates it will spend approximately \$2.7 million annually for
23 products and services under the Contract.

1 **I. Reasons Relied Upon for Procuring the Proposed Services, and Benefits**
2 **to the Public**

3 The Company uses water as a major component of operating its generation facilities.
4 The Company procures water treatment services for effective, efficient and safe operation of
5 its generation facilities. These services benefit the public by ensuring the Company's
6 generation facilities operate and provide customers with cost-effective energy.

7 **J. Description of the Procurement Process**

8 The previous agreement with Nalco expired under its own terms December 31, 2009.
9 The Company conducted a competitive bidding process to select a new vendor for the water
10 treatment facilities, supplies and services supplied under the previous contract with Nalco.
11 The evaluation was performed on an analysis of the estimated annual cost of water treatment
12 processes proposed by each bidder. Nalco was selected as the overall lowest cost and total
13 highest evaluated bidder for products and services.

14 **K. Relationship of Cost of Provision of Services and Market Value**

15 As explained in Section G above, pricing for chemicals is dependent upon price
16 indices that reflect Nalco's cost of providing chemicals and services.

17 **L. Contracts Between Affiliated Interest and PacifiCorp**

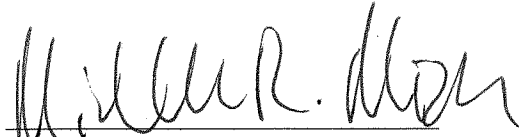
18 A copy of the Materials Supply Master Contract between PacifiCorp and Nalco is
19 included as Attachment A.

20 **M. Copy of Board Resolutions**

21 The Contract with Nalco did not require a resolution from the Company's board of
22 directors.

1 WHEREFORE, for the reasons set forth above, PacifiCorp respectfully requests that
2 the Commission issue an order authorizing PacifiCorp to conduct business with Nalco
3 Company, pursuant to the provisions of ORS 757.495 and OAR 860-027-0040.
4 DATED: June 22, 2010.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michelle R. Mishoe". The signature is written in a cursive style and is positioned above a horizontal line.

Michelle R. Mishoe, #07242

Legal Counsel
Pacific Power

ATTACHMENT A

Materials Supply Master Contract

MATERIALS SUPPLY MASTER CONTRACT
BETWEEN
PACIFICORP
AND
NALCO COMPANY
FOR
SUPPLY OF WATER TREATMENT/SPECIALTY CHEMICALS

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Both Parties have caused an individual, with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial SP

Company: Initial _____

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- EXHIBIT B.2 – OTHER COMMERCIAL TERMS

Both Parties have caused an individual, with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial  Company: Initial _____

- EXHIBIT B.3 – ANALYTICAL TEST AND PRICE LIST
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- ATTACHMENT 3 – NON-ENGLISH SPEAKING CONTRACTOR POLICY

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Supplier: Initial 

Company: Initial _____

MATERIALS CONTRACT
BETWEEN
PACIFICORP
AND
NALCO COMPANY
FOR
SUPPLY OF WATER TREATMENT/SPECIALTY CHEMICALS

PARTIES

The Parties to this Contract are PACIFICORP (hereinafter "Company") whose address is 825 NE Multnomah St., Portland, OR 97232 and NALCO COMPANY (hereinafter "Supplier") whose address is 3601 W. Diehl Road, Naperville, IL 60563.

ARTICLE 1. DEFINITIONS

Defined Terms:

Affiliate shall mean an entity that is controlled by, or under common control with one of the Parties including any subsidiary, parent or sibling corporation.

Business Day shall mean a day that banks and most institutions are open for business, excluding Saturdays and Sundays.

Calendar Day shall mean a consecutive 24-hour day running from midnight to midnight. Any generic reference to "days" shall be construed to mean a Calendar Day.

Change Order shall mean a directive issued by Company to Supplier to alter the specifications of a Purchase Order the Supplier is providing to the Company.

CIPS Covered Assets shall mean any assets identified by Company as "critical assets" or "critical cyber assets," as those terms are defined in the North American Electric Reliability Corporation Glossary of Terms.

Company's Criteria shall mean applicable requirements used as the baseline for determining whether an individual is a restricted person, as set forth on Exhibit D, Company's Criteria.

Company's Facilities shall mean any facilities owned, operated or otherwise controlled by Company which require Company authorization to obtain access.

Critical Infrastructure Information (CII) shall mean information concerning CIPS Covered Assets that: 1) relates to the production, generation or transmission of energy; 2) could be useful to a person planning an attack on critical infrastructure; and 3) provides strategic information beyond the geographic location of the critical asset, and which is identified as CII by Company.

Emergency shall be defined as conditions under which, without affecting an immediate repair: life, health or safety would be endangered by operation of the facility; the facility would be unavailable for commercial dispatch; or the facility could not be operated, or demonstrated to be operating, in compliance with environmental regulations.

Lead Time shall mean the time from Supplier's confirmed receipt of Company's Purchase Order to Company's receipt of Material.

Material or Materials shall mean all products, equipment, materials, goods, parts, documentation, spare parts, data packages, and associated incidental services and associated hardware to be delivered to Company, by Supplier, under this Contract.

Both Parties have caused an individual, with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial SP

Company: Initial _____

Material Adverse Change "MAC" shall mean, with respect to the Supplier, if the Supplier, in the reasonable opinion of Company, has experienced a material adverse change in the ability to fulfill its obligation under this Contract, including, but not limited to, any such change that results in its inability to satisfy ARTICLE 10, CREDIT REQUIREMENT or ARTICLE 11, SECURITY, including any event or circumstance that would give Company the right to terminate for cause pursuant to ARTICLE 34, TERMINATION FOR CAUSE.

Minimum Order Quantity as used herein, shall mean the minimum quantity of any line item that can be ordered and delivered by Supplier on any single Purchase Order.

Personnel shall mean the employees of Supplier or any of its agents, Subcontractors, or independent contractors who are employed to perform Work under this Contract.

Purchase Order shall describe the Material to be delivered to Company, where it is to be delivered, and any specific terms and conditions applicable to the Material.

Sensitive Personnel shall include all Personnel with authorized unescorted physical access to Company's Facilities or authorized cyber access to Company's CIPS Covered Assets.

Subcontractor shall mean any individual, firm, partnership, corporation or contractor, at any tier, having an agreement with Supplier to perform a portion of Supplier's obligations under this Contract.

Work as used herein, shall mean all obligations, duties, requirements and responsibilities required for the successful completion of the Contract by Supplier, including furnishing of all products and/or services (supervision, labor, materials, equipment and other supplies, etc., in addition to obtaining all licenses and permits) in accordance with the terms and conditions set forth herein and inclusive of those detailed herein.

Work Site shall mean the location or locations where the Work is to be performed.

ARTICLE 2. DESCRIPTION OF WORK

Time is of the essence in the performance of the Work under this Contract. Supplier shall perform the Work in strict accordance with the technical specifications more fully described in Exhibit A.1, Scope of Supply.

ARTICLE 3. PERIOD OF PERFORMANCE

This Contract shall be in effect from January 1, 2010 through December 31, 2012, with the option for Company to extend the term for up to two (2) additional one-year extension terms by providing Supplier written notice prior to the expiration of the initial three-year term (or initial extension term).

ARTICLE 4. PURCHASE ORDERS

Supplier shall, in accordance with, and subject to, the terms and conditions of this Contract sell to and deliver to Company the Materials as provided in this Contract at the prices, Lead Times, Minimum Order Quantities and technical specifications stated herein and pursuant to a schedule as Company may require during the term of this Contract. A Purchase Order shall be issued by Company for each purchase made pursuant to this Contract, and no purchase shall be authorized unless such Purchase Order has been issued.

At anytime, Company retains the right to cancel, change and/or adjust Purchase Orders as it determines necessary to manage its supply chain, inventory stocking levels or project drop ship dates and/or accommodate engineering or technical changes.

ARTICLE 5. CONSIDERATION AND PAYMENT

As full consideration for the satisfactory performance of Supplier's obligations under this Contract, Company will pay Supplier within thirty (30) Calendar Days upon receipt of invoice the applicable price for Material in strict accordance with Exhibit B-1, Pricing Schedule, provided the Material has been received and passed inspection.

Prices shall be quoted in United States Dollars and no allowance for price changes shall be made for any international currency exchange rate fluctuations and/or changes to import duties, tariffs and import fees.

All invoices shall reference the applicable Purchase Order number and the Contract number. Company will pay all undisputed invoice amounts within thirty (30) Calendar Days of receipt of a proper invoice, provided the Material has been received and passed inspection.

Both Parties have caused an individual, with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial SP

Company: Initial _____

All invoices shall be addressed as follows:

PacifiCorp
Attn: Accounts Payable Department
P.O. Box 3040
Portland, OR 97208-3040

INVOICES WHICH DO NOT CONTAIN THE ABOVE INFORMATION, OR ARE NOT
ADDRESSED AS ABOVE, WILL CAUSE PAYMENT DELAY.

Company may offset any such payment to reflect amounts owing from Supplier to Company or its subsidiaries pursuant to this Contract or any other agreement between the Parties or otherwise. In addition, Company may withhold all payments otherwise due Supplier until such time as Supplier has provided the letter of credit, if any, that is required by this Contract.

Upon request by Company, Supplier shall also provide lien and claim releases executed by Supplier, its Subcontractors and their suppliers through the date of each invoice submitted.

ARTICLE 6. INDEXING

Notwithstanding the provisions set forth in ARTICLE 5, CONSIDERATION AND PAYMENT, identified Material Line Items specified in Exhibit B.1, Pricing Schedule shall be subject to annual price changes based on reviews of the "raw material cost adjustments" as defined in Exhibit B.1, Pricing Schedule. The mechanics of the indexing are included in Exhibit B.1, Pricing Schedule. Price changes for other Materials included in Exhibit B.1, Pricing Schedule shall be an average of the "identified" Material line items specified.

ARTICLE 7. MOST FAVORED NATION/COMPETITIVE OFFERS

If at any time during the term of this Contract, Supplier sells or offers to sell comparable quantities of similar grades of Material as those provided hereunder at a price lower than Supplier's price to Company then in effect or upon other terms and conditions more favorable than the terms and conditions hereof, Supplier shall promptly notify Company thereof and offer such lower price or such other more favorable terms and conditions to Company during the period in which such lower price or such other more favorable terms and conditions are in effect. Company, or a third party appointed by Company, may from time to time, audit Supplier's books and records to verify Supplier's compliance with the foregoing.

ARTICLE 8. TAXES

The consideration as stated in ARTICLE 5, CONSIDERATION AND PAYMENT is exclusive of all taxes to be borne by Company arising out of Supplier's performance hereunder, including without limitation sales and use taxes, unless specifically stated otherwise. Local sales and use taxes in all states shall be paid by Supplier and invoiced as a separate line item. Notwithstanding the foregoing the Supplier is solely responsible for all import and export duties and value-added taxes related to the Material and all applicable parts.

ARTICLE 9. ACCOUNTING AND AUDITING

Supplier shall keep accurate and complete accounting records in support of all cost billings to Company in accordance with generally recognized accounting principles and practices. In addition, Supplier shall keep full and accurate records of performance, delivery and quality of Materials in accordance with ARTICLE 52, REPORTING, and shall make those records available to Company to examine in the same manner as provided in this Article for financial records. Company or its audit representative shall have the right at any reasonable time or times to examine, audit, and reproduce the records, vouchers, and their source documents which serve as the basis for compensation other than compensation which is fixed in amount by this Contract. Such documents shall be available for examination, audit, and reproduction for three (3) years after completion or termination of this Contract. All results of these audits shall be kept confidential between the two Parties and their agents. Supplier shall assist Company with preparing necessary audit material and will allow Company to review any work papers prepared by independent auditors as allowed by professional standards. Any over-collections shall be returned within thirty (30) days from date of notice of overcharge. Audit findings will be considered to be final for the period audited.

Both Parties have caused an individual, with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial AS

Company: Initial _____

ARTICLE 10. CREDIT REQUIREMENT

Supplier shall meet the requirements of any one or more of clause (i), clause (ii) or clause (iii) below: (i) Supplier maintains a senior unsecured debt rating from Standard & Poor's of BBB- or better; (ii) if Supplier has no debt rating, Supplier meets ALL of the following credit standards: a) tangible net worth ten (10) times the projected maximum exposure under this Contract, b) no change in the condition of its earnings, net worth, or working capital over the last twenty-four (24) months which would reasonably be anticipated to impair the Supplier's ability to meet its obligations under this Contract, and c) Supplier is not in default under any of its other agreements and is current on all of its financial obligations, or (iii) Supplier posts security under ARTICLE 11, SECURITY.

If requested by Company, Supplier shall within thirty (30) days provide Company with copies of its most recent annual and quarterly financial statements prepared in accordance with generally accepted accounting principles.

ARTICLE 11. SECURITY

Supplier shall provide Company with security against defaults by Supplier under this Contract as may be required by ARTICLE 10, CREDIT REQUIREMENT in such form and amount as may be reasonably required by Company ("Default Security"), and pursuant to such additional agreements or instruments as may be reasonably required by Company, including, but not limited to letters of credit, third party guaranty, escrow accounts, labor and material payment bond, surety bonds, and step-in rights. Company may at any time, or pursuant to a request by Supplier, recalculate the amount of Default Security required pursuant to this paragraph, in which case Company shall increase or decrease the existing amount of Default Security, as appropriate, to conform the new requirements. At no time shall the amount of Default Security to which Company is entitled pursuant to this paragraph be less than Company's Net Replacement Costs, (as defined below).

If this Contract is terminated as a result of Supplier's default, Supplier shall pay Company the positive difference, if any, obtained by subtracting the Contract value from the replacement price for any Work that Supplier was otherwise obligated to provide during the remaining term of this Contract plus compensation for additional managerial and administrative services and such other costs and damages as Company may suffer as a result of Supplier's breach ("Net Replacement Cost"). Amounts owed by Supplier pursuant to this paragraph shall be due within five (5) Business Days after any invoice from Company for the same.

The terms of any letter of credit required by Company shall conform to the attached Exhibit F, Letter of Credit Terms/Form of Acceptable Letter of Credit, Drawing Certificate and Transfer Certificate as well as the requirements of this Contract and be issued by a bank acceptable to Company. This letter of credit shall provide for payment to Company of the letter of credit stated amount if Supplier defaults under the terms of this Contract.

The Company shall have the right to call the entire amount of the letter of credit if Supplier has not renewed the letter of credit with thirty (30) calendar days of its expiration.

Supplier's expenses of complying with this letter of credit requirement shall be paid by the Supplier.

ARTICLE 12. WITHHOLDING PAYMENT

Company may, without limiting any other rights or remedies Company may have, withhold from payment sufficient amounts which, in the opinion of Company, reflect the reasonable cost to repair or replace unsatisfactory Work or the value of any claim against Company which Supplier has failed to settle pursuant to its indemnity contained herein. Company may also retain from any payment sufficient funds to discharge any delinquent accounts of Supplier for which liens on Company's property have been or can be filed, and Company may at any time pay therefrom for Supplier's account such amounts as are, in the opinion of Company, due thereon, including any sums due under any federal or state law.

ARTICLE 13. DESIGNATED REPRESENTATIVE AND NOTICES

Upon commencement of the Contract, each Party shall designate a representative authorized to act in its behalf and shall advise the other Party in writing of the name, address, and telephone number of such designated representative, and shall inform the other party of any subsequent change in such designation. Either Party may change the identity or address of its designated representative by giving the other Party written notice of such change.

Any notice by either Party to the other shall be delivered to the office of the designated representative of the other Party, or, if deposited in the mail, properly stamped with the required postage and addressed to the office of such representative. The Parties' addresses for purposes of notice shall be as set forth below:

Both Parties have caused an individual, with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial AS

Company: Initial _____

If to Supplier:

Nalco Company
12244 South Business Park Drive, Suite 212
Draper, UT 84020

Attn: Brent Richards (brichards@nalco.com)
Telephone: 801-361-7771

If to Company:

PacifiCorp Energy
1407 West North Temple, Room 330
Salt Lake City, UT 84116

Gary Hoffman
Attn: (gary.hoffman@pacificorp.com)
Telephone: 801-220-2319

Copy to (Company)

PacifiCorp
8 Miles West Hwy 31; PO Box 680
Huntington, UT 84528

Ginger Wiscombe
Attn: (ginger.wiscombe@pacificorp.com)
Telephone: 435-687-4210

ARTICLE 14. DELIVERY

Delivery of the Material is a substantial and material consideration under this Contract and shall be DDP (INCOTERMS 2000) on or before the dates defined in this Contract.

The Supplier has agreed to deliver Material on time (as per the accepted Purchase Order), free of defect within a firm LeadTime.


Material delivered after the guaranteed delivery dates shall be subject to liquidated damages as specified in ARTICLE 25, LIQUIDATED DAMAGES.

ARTICLE 15. SHIPPING AND HANDLING

1. Packing

- a. Supplier is responsible for assuring that the Material covered under this Contract is suitably packaged to ensure against damage under normal handling and transportation methods. All Material or components shall be identified with the Company's equipment number or tag number.
- b. Any articles or Material that might otherwise be lost shall be boxed or wired in bundles and plainly marked for identification. All un-palletized deliveries including, but not limited to, boxes, Material, and components shall be delivered with a gross weight less than forty (40) pounds. Any shipment containing, but not limited to, boxes, Material, and components with a single gross weight limit which exceeds forty (40) pounds shall be palletized, with all boxes, Material, or components securely attached to the pallet. All parts exceeding one thousand (1000) pounds gross weight shall be prepared for shipment by palletizing with slings or harness for handling by crane. Boxed parts, where it is unsafe to attach slings to the box, shall be packed on pallets with slings or harness attached to the pallet or part, the slings or harness shall be so attached to readily allow ease in attachment to the hoisting equipment.
- c. The Material and all related parts shall be shipped DDP (INCOTERMS 2000) to the Work Site specified in this Contract, with the Supplier retaining risk, liability and responsibility, financial or otherwise, to the final destination.

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Supplier: Initial 

Company: Initial _____

- d. Within 48 hours prior to the shipment of any items, the Supplier shall notify Company of shipping information, including shipping date, date of Material arrival on the Work Site, and the designated carrier.
2. Shipment Routing:
- a. Prior to the shipment of any Material, Supplier shall become knowledgeable of transportation conditions, such as clearances and restrictions, height and width, bridge load limits and other limitations affecting transportation. Such limitations or the lack of transportation facilities shall not become the basis for claims or damages or for an extension of time for completion of Work under this Contract.

ARTICLE 16. RETURN OF MATERIALS

Supplier shall accept Materials for return to Supplier inventory without charge to Company when the following conditions are met:

- a. The Materials are not unique to Company, are returned in original packaging and in an unused condition, and the return to Supplier by Company was within six months of the date of receipt.
- b. Costs for return logistics to Supplier are to the account of the Company.
- c. Such Materials have been stored by Company in accordance with Supplier provided environmental storage conditions or in the event Supplier fails to provide environmental storage guidelines, in accordance with generally accepted storage guidelines for such Materials.
- d. The price of the Materials for return is greater than US\$250.
- e. Materials have been sold to Company by Supplier.

ARTICLE 17. RECYCLING OF CONTAINERS AND REELS

Supplier and Company agree that containers and reels make up a significant and avoidable cost within the supply chain. Supplier and Company agree that an exchange or rotatable program for containers and reels will allow both Parties to remove unnecessary cost in the supply chain. Accordingly, Supplier and Company shall develop guidelines on returning containers and reels to the Supplier for recycling and or using container or reel less best practices. The Parties agree that Supplier shall credit Company the cost of the returned reels and containers from the next invoice submitted. Supplier shall retrieve empty reels and containers from Company Work Sites within fifteen (15) Business Days of request by Company or upon delivery of new Materials, whichever is sooner.

ARTICLE 18. INDEMNIFICATION

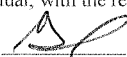
Supplier specifically and expressly agrees to indemnify, defend, and hold harmless Company and its officers, directors, employees and agents (hereinafter collectively "Indemnitees") against and from any and all claims, demands, suits, losses, costs and damages of every kind and description, including attorneys' fees and/or litigation expenses, brought or made against or incurred by any of the Indemnitees to the extent resulting from or arising out of any negligence or wrongful acts of Supplier, its employees, agents, representatives or Subcontractors of any tier, their employees, agents or representatives in the performance or nonperformance of Supplier's obligations under this Contract or in any way related to this Contract. The indemnity obligations under this Article shall include without limitation:

- a. Loss of or damage to any property of Company, Supplier or any third party;
- b. Bodily or personal injury to, or death of any person(s), including without limitation employees of Company, or of Supplier or its Subcontractors of any tier; and
- c. Claims arising out of workers' compensation, unemployment compensation, or similar such laws or obligations applicable to employees of Supplier or its Subcontractors of any tier.

The invalidity, in whole or part, of any of the foregoing paragraphs will not affect the remainder of such paragraph or any other paragraph in this article.

Supplier's indemnity obligation under this Article shall not apply to any liability to the extent caused by the negligence of any of the Indemnitees.

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ARTICLE 19. INSURANCE AND WORKERS' COMPENSATION

Without limiting any liabilities or any other obligations of Supplier, Supplier shall, prior to commencing Work, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

Workers' Compensation. Supplier shall comply with all applicable Workers' Compensation Laws and shall furnish proof thereof satisfactory to Company prior to commencing Work.

All Workers' Compensation policies shall contain provisions that the insurance companies will have no right of recovery or subrogation against the Company, its parent, divisions, Affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

Employers' Liability. Insurance with a minimum single limit of \$1,000,000 each accident, \$1,000,000 disease each employee, and \$1,000,000 disease policy limit.

Commercial General Liability. The most recently approved ISO policy, or its equivalent, written on an occurrence basis, with limits not less than \$1,000,000 per occurrence/ \$2,000,000 general aggregate (on a per location and/or per job basis) bodily injury and property damage, including the following coverages:

- a. Premises and operations coverage
- b. Independent contractor's coverage
- c. Contractual liability
- d. Products and completed operations coverage
- e. Coverage for explosion, collapse, and underground property damage
- f. Broad form property damage liability
- g. Personal injury liability, with the contractual exclusion removed
- h. Sudden and accidental pollution liability, if appropriate

Business Automobile Liability. The most recently approved ISO policy, or its equivalent, with a minimum single limit of \$1,000,000 for bodily injury and property damage including sudden and accidental pollution liability, with respect to Supplier's vehicles whether owned, hired or non-owned, assigned to or used in the performance of the Work.

Umbrella Liability. Insurance with a minimum limit of \$5,000,000 each occurrence/aggregate where applicable to be excess of the coverages and limits required in Employers' Liability insurance, Commercial General Liability insurance and Business Automobile Liability insurance above. Supplier shall notify Company, if at any time their full umbrella limit is not available during the term of this Contract, and will purchase additional limits, if requested by Company.

Except for Workers' Compensation insurance, the policies required herein shall include provisions or endorsements naming Company, its officers, directors, agents, and employees as additional insureds.

To the extent of Supplier's negligent acts or omissions, all policies required by this Contract shall include provisions that such insurance is primary insurance with respect to the interests of Company and that any other insurance maintained by Company is excess and not contributory insurance with the insurance required hereunder, provisions that the policy contain a cross liability or severability of interest clause or endorsement, and provisions that such policies not be canceled or their limits of liability reduced without 1) ten (10) calendar days prior written notice to Company if canceled for nonpayment of premium, or 2) thirty (30) calendar days prior written notice to Company if canceled for any other reason. No required insurance policies shall contain any provisions prohibiting waivers of subrogation. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against the Company, its parent, divisions, Affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

A certificate in a form satisfactory to Company certifying to the issuance of such insurance shall be furnished to Company prior to commencement of Work by Supplier. Commercial General Liability coverage written on a "claims-made" basis, if any, shall be specifically identified on the certificate.

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Commercial General Liability insurance coverage provided on a "claims-made" basis shall be maintained by Supplier for a minimum period of five (5) years after the completion of this Contract and for such other length of time necessary to cover liabilities arising out of the Work.

ARTICLE 20. RISK OF LOSS

Supplier shall have risk of loss or risk of damage to the Material until the Material is delivered to Company or Company's transportation agent or representative. Title to the Material shall pass to the Company when delivered to Company or Company's transportation agent

ARTICLE 21. CHANGES TO CONTRACT AND/OR PURCHASE ORDER

Company may at any time in writing require changes and/or additions within the general scope of this Contract or any Purchase Order issued here under, direct the omission of or variation in Work, or alter the schedule. If such direction results in a material change in the amount or character of the Work, an equitable adjustment in the Contract price and other such provisions of this Contract as may be affected shall be made and this Contract shall be modified in writing accordingly. Any claim by Contractor for an adjustment under this Article shall be processed in accordance with the provisions of ARTICLE 30, CLAIM NOTICE AND RESOLUTION PROCEDURE.

Company shall have the right to request that the Supplier consider changes to the Material supplied under this Contract including modifications, alterations or additions. If Company wishes to request such a change in Materials supplied, Company shall notify the Supplier. Within fifteen (15) days after receipt of such notice (unless otherwise extended by mutual agreement), the Supplier shall advise Company of the feasibility of the requested change to Materials supplied, and shall submit to the Company a draft Change Order.

If the Supplier wishes to propose a change to the Materials supplied, the Supplier shall submit to Company a draft Change Order within fifteen (15) days after notifying Company in writing of its intent to propose a change.

All draft Change Orders shall include: (i) a technical description of the proposed change to Materials supplied in such detail as Company may reasonably require, (ii) a proposed firm price adjustment (increase or decrease) in the Contract price, if any, caused by the proposed change, (iii) all potential effect(s), if any, on the schedule of shipment dates in ARTICLE 14, DELIVERY, or any other schedule or dates for performance by the Supplier hereunder, caused by the proposed change, and (iv) all potential effect(s), if any, on the Supplier's ability to comply with any of its obligations hereunder, including the Supplier's warranties and performance guarantees, caused by the proposed change.

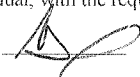
Company shall within fifteen (15) Business Days from the date of receipt of such information either approve or disapprove the draft Change Order, in writing, or request additional time to consider the draft Change Order. If Company approves the Change Order, Company and the Supplier shall then sign the Change Order which shall operate as an amendment to this Contract. No change shall be made to Material without the written approval from Company.

All changes under this Contract shall be subject to mutual agreement and no Change Order will be effective until signed by the Company at the authorized approval level. THE ISSUANCE OF INFORMATION, ADVICE, APPROVALS, OR INSTRUCTIONS BY ANYONE OTHER THAN THE AUTHORIZED REPRESENTATIVE SHALL NOT CONSTITUTE AN AUTHORIZED CHANGE ORDER PURSUANT TO THIS ARTICLE.

ARTICLE 22. WARRANTY

Supplier warrants that the Work performed hereunder shall be free from defects, shall conform to ARTICLE 2, DESCRIPTION OF WORK, and shall be suitable for the use specified. Supplier further warrants that Material supplied pursuant to this Contract shall be new, shall be of the quality specified or of the best grade if no quality is specified, and shall conform to ARTICLE 2, DESCRIPTION OF WORK, and other descriptions set forth in this Contract, including all inspection and testing criteria as defined by the Company. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF USE, EXCEPT FOR THE USE AS SPECIFIED IN THIS CONTRACT, AND CONSTITUTES THE ONLY WARRANTY OF SUPPLIER WITH RESPECT TO THE MATERIAL SUPPLIED PURSUANT TO THIS CONTRACT. The warranty provided

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by this Article shall extend to all damage to the Material resulting from or related to the failure of a warranted component(s). The warranty for Materials shall remain in full force and effect for a period of five (5) years following receipt and acceptable inspection of the applicable Material at the final destination. If any Material or service fails to meet the foregoing warranties, the Company shall have the right to perform Emergency replacements or repairs as they deem necessary to minimize on-going production losses.

ARTICLE 23. MANUFACTURING INSPECTION, TESTING AND ACCEPTANCE

Upon Company's request and with the Supplier's prior written consent, which shall not be unreasonably withheld, the Company's representative shall be provided access to the Supplier's facilities to obtain information on production progress and to make inspections. Such access shall be of sufficient scope for the purposes set forth herein and to areas concerned with the Material. Access shall not include restricted areas where work of a proprietary nature, unrelated to the Material, is being conducted.

Subject to the conditions set forth in the foregoing paragraph, the Supplier will make reasonable efforts to obtain for Company's access to its suppliers' facilities for the purposes described in the paragraph above.

Neither Company's inspection of the production processes, production progress and/or Material nor its failure to inspect shall relieve the Supplier of its obligation to fulfill the requirements of this Contract, or be construed as acceptance by Company.

Following delivery of the Material, the Material will be used by Company and tested, at Company's sole option, by either Company or Supplier to ensure that the Material conforms to all requirements of this Contract. Testing performed by Company may be witnessed by Supplier.

Any deficiencies discovered during the testing phase which are not caused by the fault or negligence of Company shall be corrected promptly by Supplier at Supplier's sole expense. The testing phase will be repeated following correction of the deficiencies.

ARTICLE 24. PRE-SHIPMENT INSPECTION

When the technical specification of the Material includes an inspection code or the words "Pre-Shipment Inspection Required" is indicated on the Purchase Order, one or more of the Material items on the Purchase Order contain pre-shipment inspection requirements and Material shall not be shipped until Company or its designee has inspected the Materials or associated certificates as required, and advised Supplier in writing that the Materials comply with the Company technical specifications in the Contract.

ARTICLE 25. LIQUIDATED DAMAGES

If the Supplier fails to deliver the Material or Work in accordance and within the time specified in this Contract, the Company may incur some degree of damages. The Parties expressly acknowledge and agree that it would be difficult or impossible to determine with absolute precision the amount of damages that would or might be incurred by Company as a result of Supplier's failure to deliver the Material or Work in accordance and within the time specified in this Contract. The Parties accordingly agree, having taken into account all factors that they deem appropriate, including all of their respective rights and obligations under this Contract, that liquidated damages (as defined below) are in lieu of actual damages, and are the Parties' reasonable estimates of fair compensation for the losses that may reasonably be anticipated to be incurred by Company from such failures in respect of such matters, and do not constitute a penalty. The payment of liquidated damages (as defined below) (and, to the extent applicable, termination of the Contract by Company in accordance with the terms hereof) shall be Supplier's sole and exclusive obligation and Company's sole and exclusive remedy for the failure of Supplier to deliver the Material or Work in accordance and within the time specified in this Contract.

Liquidated damages shall mean an amount equal to Twenty-five Thousand Dollars (\$25,000.00) per day for each calendar day on which the delivery of the Material occurs beyond the scheduled date of delivery of such Material.

EXCEPT AS SPECIFICALLY PROVIDED IN THIS ARTICLE, AND NOTWITHSTANDING ANY OTHER PROVISION IN THIS AGREEMENT, ANY EXHIBIT HERETO OR ANY RELATED DOCUMENT AND EVEN IF SO ADVISED, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR CONSEQUENTIAL, INDIRECT, SPECIAL OR EXEMPLARY DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFIT AND LOST PRODUCTION.

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ARTICLE 26. ENFORCEABILITY OF LIQUIDATED DAMAGES

In the event that the provisions for the payment of liquidated damages in the Contract are held to be unenforceable, Supplier agrees to pay to the Company all actual damages suffered by the Company due to the circumstances giving rise to the liability to pay liquidated damages (had they been enforceable) including loss of profit or income, loss of use, loss of production, loss of contracts and indirect and consequential damages but subject to the maximum amounts which would have been payable if the Liquidated Damages provisions had been enforceable.

ARTICLE 27. EXAMINATION OF WORK

Supplier's Work will be subject to examination at any reasonable time or times by Company, which shall have the right to reject unsatisfactory Work. Neither examination of Work nor the lack of same nor acceptance of the Work by Company nor payment therefore shall relieve Supplier from any of its obligations under this Contract.

ARTICLE 28. ALLOCATION

In the event of a partial failure of Supplier's sources of supply, Supplier will first meet all of Company's requirements hereunder prior to any allocation among other customers.

ARTICLE 29. SUSPENSION OF WORK

Company may, by written notice, direct Supplier to suspend performance of any or all of the Work for a specified period of time. If such suspension is not caused by the fault or negligence of Supplier, Supplier will be compensated for extra costs in accordance with the provisions set forth in ARTICLE 30, CLAIM NOTICE AND RESOLUTION PROCEDURE. Upon receipt of such notice to suspend, Supplier shall 1) discontinue Work, 2) place no further orders or subcontracts, 3) suspend all orders and subcontracts, 4) protect and maintain the Work, and 5) otherwise mitigate Company's costs and liabilities for those areas of Work suspended.

ARTICLE 30. CLAIM NOTICE AND RESOLUTION PROCEDURE

In the event Supplier has a claim or request for a time extension, additional compensation, any other adjustment of the Contract terms, or any dispute arising out of the Work (hereinafter "Claim"), Supplier shall notify Company in writing within five (5) working days following the occurrence of the event giving rise to the Claim. Supplier's failure to give notice as required will constitute a waiver of all of Supplier's rights with respect to the Claim.

As soon as practicable after Claim notification, Supplier shall submit the Claim to Company with all supporting information and documentation. Supplier shall also respond promptly to all Company inquiries about the Claim and its basis.

Any Claim that is not disposed of by mutual agreement between the Parties shall be decided by Company which shall provide a written decision to Supplier. Such decision shall be final unless Supplier, within thirty (30) calendar days after such receipt of Company's decision, provides to Company a written protest, stating clearly and in detail the basis thereof. Supplier's failure to protest Company's decision within that time period shall constitute a waiver by Supplier of its right to dispute the decision. Even if a Claim arises, Supplier shall continue its performance of this Contract.

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ARTICLE 31. DISPUTE RESOLUTION

All protests of Company dispositions hereunder shall be settled, if possible, by negotiation of the Company and Supplier. If the matter is not resolved by such negotiations, either Party may, by giving written notice to the other Party, cause the matter to be referred to a meeting of appropriate management representatives of the Parties. Such meeting shall be held within ten (10) Business Days following the giving of the written notice. For Supplier the escalation path shall be from the Contract Administrators to the Sales Manager and then to the Regional Vice President, or their equivalents should these titles be changed. For Company the escalation path shall be from the Contract Administrators to the Procurement Manager then to the Director of Procurement or their equivalents should those titles be changed.

If the matter is not resolved within thirty (30) Business Days after the date of the notice referring the matter to the appropriate higher management or such later date as may be mutually agreed upon, the Parties may then pursue any other remedies they may have.

ARTICLE 32. DELAYS

Force Majeure. Neither party shall be liable for delays due to strike (except for strikes by Supplier's own workforce or Subcontractors), fire, riots, acts of God, acts of the public enemy, or other similar unforeseeable cause beyond the control and without the fault or negligence of the party incurring such delay; provided, however, that both Parties agree to seek to mitigate the potential impact of any such delay. Any Force Majeure delay shall not be the basis for a request for additional compensation. In the event of any such delay, the required completion date may be extended for a reasonable period not exceeding the time actually lost by reason of the delay.

Company-Caused Delay. Should Company cause a delay in Supplier's performance and if Company determines the facts justify an extension of time and/or additional compensation and no remaining float time exists in the schedule, this Contract may be modified. Company may, at its discretion, in lieu of granting an extension of time, require Supplier to regain the schedule whereby Company shall compensate Supplier for all additional costs reasonably incurred thereby. No adjustment under this Article shall be made for any delay to the extent that it is caused or contributed to by Supplier or performance would have been delayed by any other cause, including the fault or negligence of Supplier.

Supplier-Caused Delays. In the event the Material is not shipped in accordance with the applicable Purchase Order and the delay is in no way related to either a Company caused delay, the Supplier shall pay all costs associated with expedited freight in addition to liquidated damages in the amount stated herein in ARTICLE 25, LIQUIDATED DAMAGES.

Request for Time Extension. Any request for time extension or additional compensation shall be made in accordance with ARTICLE 30, CLAIM NOTICE AND RESOLUTION PROCEDURE.

If, at any time, Company determines the progress of the Work is unsatisfactory, Supplier may be directed to work overtime, increase its workforce, work additional shifts, add supervision or take other corrective actions to ensure the timely and orderly prosecution of the Work, at no additional cost to Company.

ARTICLE 33. TERMINATION FOR CONVENIENCE

Company may terminate this Contract at any time without cause prior to its completion by sending to Supplier written notice of such termination. Upon such termination Company shall pay to Supplier, in full satisfaction and discharge of all liabilities and obligations owed to Supplier, an equitable amount for all Work satisfactorily performed by Supplier as of the date of termination. Company will not be liable for anticipated profits based upon Work not yet performed.

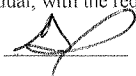
At any time prior to delivery of the Material ordered under a particular Purchase Order, Company may, without cause, terminate the Purchase Order in whole or in part by sending to Supplier written electronic notice of such termination. Upon such termination, Company may pay to Supplier an equitable termination fee, where deemed appropriate by Company.

ARTICLE 34. TERMINATION FOR CAUSE

1. For purposes of this Contract, a default by Supplier shall be deemed to occur upon the occurrence of any of the following:
 - a. A material breach by Supplier of any of its material obligations under this Contract, if such breach continues uncured for a period of ten (10) Calendar Days after receipt of written notice from Company, unless such breach cannot by its

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nature be remedied within such period in which event Supplier shall provide evidence reasonably satisfactory to Company within ten (10) Calendar Days after receipt of such notice that such default will be corrected or that Supplier is making reasonable progress to that end. For purposes of the Contract, a material breach by Supplier shall be deemed to include, without limitation, Supplier's refusal or neglect to supply sufficient and properly skilled workmen, materials of the proper quality or quantity or Material necessary to perform the Work described in this Contract properly, or Supplier's failure in any respect to prosecute the Work described in this Contract or any part thereof with promptness, diligence and in accordance with all of the material provisions hereof;

- b. A determination that any representation, statement or warranty made by Supplier in this Contract, the Supplier's proposal or any other statement, report or document which Supplier is required to furnish to Company was false or misleading in any material respect;
 - c. The filing by or against Supplier of a proceeding under any bankruptcy or similar law, unless such proceeding is dismissed within thirty (30) days from the date of filing; the making by Supplier of any assignment for the benefit of creditors; the filing by or against Supplier for a proceeding for dissolution or liquidation, unless such proceeding is dismissed within thirty (30) days from the date of filing; the appointment of or the application for the appointment of a receiver, trustee or custodian for any material part of Supplier's assets unless such appointment is revoked or dismissed within thirty (30) days from the date thereof; the attempt by Supplier to make any adjustment, settlement or extension of its debts with its creditors generally; the insolvency of Supplier; the filing or recording of a notice of lien or the issuance or the obtaining of a levy of execution upon or against a material portion of Supplier's assets, unless such lien or levy of execution is dissolved within thirty (30) days from the date thereof.
 - d. A Material Adverse Change has occurred with respect to Supplier and Supplier fails to provide such performance assurances as are reasonably requested by Company, including without limitation the posting of additional "Security" pursuant to ARTICLE 11, SECURITY.
2. Upon the occurrence of any such material default, following the applicable process described in this ARTICLE 34, TERMINATION FOR CAUSE, Company shall be entitled upon written notice to Supplier and without notice to Supplier's sureties and without limiting any of Company's other rights or remedies, to terminate this Contract or to terminate Supplier's right to proceed with that portion of the Work affected by any such material default.
 3. Upon termination of this Contract or any portion of this Contract upon a material default by Supplier, Company shall be entitled to pursue any and all rights and remedies that it may have against Supplier or any other sureties or guarantors under this Contract or any other instrument or at law or in equity.
 4. Upon receipt of any such written notice of termination of the entire Contract or of any right to proceed with any portion of the Work following the applicable process described in this ARTICLE 34, TERMINATION FOR CAUSE, Supplier shall, at its expense, for that portion of the Work affected by any such termination:
 - a. Assist Company in making an inventory of all Material in storage at Supplier's facility, en route to Supplier's facility, in storage or manufacture elsewhere, en route to Company and on order from the suppliers; and
 - b. To the extent that they are assignable, assign to Company any and all subcontracts and equipment rental agreements as designated in writing by Company
 5. In the event of such termination, Company may, for the purpose of completing the Work or enforcing these provisions, take possession of Material, tools, appliances, documentation, software source media, flow charts and listing at the Company's Work Site belonging to or under the control of Supplier, and may use them or may finish the Work by whatever method it may deem expedient including the hiring of another supplier or suppliers under such form of agreement as Company may deem advisable while still maintaining their obligation to mitigate damages, or Company may itself provide any labor or materials and perform any part of the Work. Notwithstanding anything to the contrary contained herein, Company may not take possession of or use trade secrets proprietary to any of Supplier's suppliers or Subcontractors unless Supplier has the right pursuant to its agreement with such suppliers or Subcontractors to grant such rights to Company. Supplier shall cooperate with and assist Company in attempting to acquire from Supplier's suppliers and Subcontractors the right to take possession of and use any and all such trade secret materials in the event of such termination. All trade secrets proprietary to Supplier shall remain subject to the provisions herein, and Company shall not have any broader rights to use or disclose such trade secrets as a result of such termination. Any software embodying any of Supplier's trade secrets shall also be subject to the provisions herein. In the event of such a termination, Supplier shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of Supplier compensation

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hereunder shall exceed the sum of the expense of finishing the Work plus compensation for additional managerial and administrative services and such other costs and damages as Company may suffer as a result of Supplier's breach, such excess shall be paid to Supplier. Failure of Company to exercise any of its rights hereunder shall not excuse Supplier from compliance with the provisions of the Contract nor prejudice rights of Company to recover damages for such material default.

ARTICLE 35. SITE REGULATIONS

Supplier, when performing Work at the Work Site, shall abide by and adhere to the Company Work Site regulations, if any, including without limitation environmental protection, loss control, dust control, safety, and security.

ARTICLE 36. SITE INVESTIGATION

Supplier acknowledges that it has satisfied itself as to the nature and location of the Work, the general and local conditions, and all other matters which can in any way affect the Work or the cost thereof under this Contract. Excluding reasonable reliance upon documentation, specifications and drawings provided by Company, the failure of Supplier to acquaint itself with any applicable conditions and other matters shall not relieve Supplier from the responsibility for properly estimating the difficulties and costs of successfully performing the Work and completing this Contract, and shall not be grounds for adjusting either the price or the schedule.

ARTICLE 37. LAWS AND REGULATIONS

Supplier shall at all times comply with all applicable laws, statutes, regulations, rules, ordinances, codes, and standards, including without limitation those governing wages, hours, desegregation, employment discrimination, employment of minors, health and safety. Supplier shall comply with equal opportunity laws and regulations to the extent that they are applicable. Supplier confirms that its employees and its Subcontractors employed in the performance of the Work may legally work in the United States.

Supplier shall indemnify, defend and hold harmless Company, its Board of Directors, officers, employees and agents from all losses, costs and damages by reason of any violation thereof and from any liability, including without limitation fines, penalties and other costs arising out of Supplier's failure to so comply.

ARTICLE 38. INDEPENDENT CONTRACTOR

Supplier is an independent contractor, and all persons employed by Supplier in connection herewith shall be employees of Supplier and not employees of Company in any respect. Supplier is not an agent of Company and shall maintain complete control over its employees.

ARTICLE 39. SUPPLIER'S PERSONNEL/DRUGS, ALCOHOL, AND FIREARMS

Supplier shall employ in the performance of the Work only persons properly qualified for the same. Supplier shall at all times enforce strict discipline and good order among its employees and the employees of any Subcontractors of any tier. Supplier shall not permit or suffer the introduction or use of any firearms, illegal drugs, or intoxicating liquor upon the Work under this Contract, or upon any of the grounds occupied or controlled by Supplier.

Supplier shall immediately remove from the Work any person found to be incompetent, insubordinate, careless, disorderly, in violation of the above restriction on firearms, drugs or liquor, or under the influence of illegal drugs or intoxicating liquor, and such person shall not again be employed in the performance of the Work herein without the written consent of Company.

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ARTICLE 40. ACCESS TO COMPANY'S FACILITIES

40.1 Unescorted Physical Access to Company's Facilities

In the event that the Work under this Contract requires unescorted physical access to Company's Facilities, Supplier and Personnel shall be required to comply with the Company's access requirements:

- a. Ensure that Personnel have passed the background checks outlined in subsection 40.3 (a) of this Article consistent with the Exhibit D, Company's Criteria prior to requesting unescorted physical access to Company's Facilities;
- b. Ensure that Personnel complete Company provided or approved CIPS compliance training prior to requesting unescorted physical access to Company's Facilities;
- c. Ensure that Personnel have passed Supplier's drug and alcohol exam and are in compliance with Supplier's substance abuse/drug and alcohol policy as outlined in ARTICLE__ SUBSTANCE ABUSE/ DRUG AND ALCOHOL POLICY.
- d. Keep accurate and detailed documentation to confirm completion dates for background checks, CIPS compliance training, and drug tests and certify to Company such documentation by completing a Supplier / Vendor Information Form, attached as Exhibit E hereto, for each Personnel.

40.2 Authorized Cyber or Unescorted Physical Access to Company's CIPS Covered Assets

Company shall specify in each Purchase Order whether or not the Work under this Contract for any specific project requires any authorized cyber or authorized unescorted physical access to Company's CIPS Covered Assets. If the Work under this Contract requires such access, for all Sensitive Personnel, Supplier shall:

- a. Ensure that Sensitive Personnel (and any Personnel with access to CII) are informed of and comply with Company's CII requirements contained in the confidentiality agreement previously provided to Supplier;
- b. Ensure that Sensitive Personnel have passed the background checks outlined in subsection 40.3 (a) of this Article consistent with the Exhibit D, Company's Criteria prior to requesting cyber or unescorted physical access to CIPS Covered Assets;
- c. Ensure that Sensitive Personnel complete Company provided or approved CIPS compliance training prior to requesting cyber or unescorted physical access to CIPS Covered Assets;
- d. Report Sensitive Personnel terminations for cause immediately to Company but not longer than twelve (12) hours from time of termination and report all other Sensitive Personnel terminations or changes in employment status for those who no longer require access within twelve (12) hours from time of occurrence;
- e. Ensure that Sensitive Personnel have passed Supplier's drug and alcohol exam and are in compliance with Supplier's substance abuse/drug and alcohol policy as outlined in ARTICLE__ SUBSTANCE ABUSE/ DRUG AND ALCOHOL POLICY.
- f. Keep accurate and detailed documentation to confirm completion dates for background checks, CIPS compliance training and drug tests and certify to Company such documentation by completing a Supplier/Vendor Information Form, attached as Exhibit F hereto, for each Sensitive Personnel.

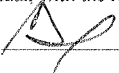
Supplier shall not allow any Sensitive Personnel who have not met the foregoing requirements of this subsection 40.2 to perform Work, unless Supplier has received prior written consent from Company.

40.3 Personnel Screening

For Personnel required to obtain authorization for unescorted physical access to Company's Facilities or cyber or unescorted physical access to Company's CIPS Covered Assets, the following requirements must be met by Supplier:

- a. Supplier shall conduct, at Supplier's cost and expense, the requisite background checks for the current and past

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Supplier: Initial 

Company: Initial _____

countries of residence of all Personnel consistent with Exhibit D, Company's Criteria. All background checks will be conducted in accordance with federal, state, provincial, and local laws, and subject to existing collective bargaining unit agreements or other agreements, if any.

- b. The background checks shall be updated no less frequently than every seven (7) years or upon request by Company, and shall, at a minimum, consist of a social security number verification and seven-year criminal background check, including all convictions for a crime punishable by imprisonment for a term exceeding one year.
- c. Supplier shall ensure that each of the Personnel undergoing a background check sign an appropriate authorization form prior to background checks being conducted, acknowledging that the background check is being conducted, and authorizing the information obtained to be provided to Company.
- d. Company may also request that Supplier provide an ongoing and updated list of persons that have been denied access to the Work or Company's Facilities. Employment history, education verification, and professional certifications for Personnel may also be required by Company.
- e. For purposes of this Contract, a background check is valid for seven (7) years prior to the assignment date; however, in the event any Personnel for which a background check is required has had a break in service with Supplier for greater than two (2) years, a new background check will be required. Regardless of when performed, all background checks shall be documented pursuant to the requirements set forth in subsection 40.3.

40.4 Supplier Designee

Supplier shall designate one person to be responsible for compliance with the requirements of this Article, and all reporting and inquiries shall be made via e-mail to CIPS-Contracting@PacifiCorp.com. Any event giving rise to a reporting obligation under this Article shall be reported to Company within twelve (12) hours of its occurrence.

ARTICLE 41. SUBSTANCE ABUSE/DRUG AND ALCOHOL POLICY

- a. Supplier shall have and ensure compliance with a substance abuse/drug and alcohol policy that complies with all applicable federal, state and/or local statutes or regulations. Supplier shall subject each of the Personnel to a drug test at Supplier's sole cost and expense. Such drug test shall, at a minimum, be a five (5) Panel Drug Test, which should be recognizable at testing labs as a "SamHSA5 panel at 50NG – THC cut-off".
- b. For any Personnel who have had a recent drug test, such recent drug test shall be documented pursuant to the previous paragraph. Supplier warrants that Supplier and the Personnel are in compliance with Supplier's substance abuse/drug and alcohol policy.
- c. During the course of Work performed under this Contract, Supplier shall keep accurate and detailed documentation of its drug policy and Personnel drug tests, which it shall submit to Company upon request.
- d. Supplier shall designate one person to be responsible for compliance with the requirements of this Article and all reporting and inquiries shall be made to a duly authorized representative of Company in a timely manner.

ARTICLE 42. DEPARTMENT OF TRANSPORTATION

Supplier shall ensure Department of Transportation compliance, including but not limited to valid driver's license, equipment inspections, hours of service and all appropriate documentation for any Personnel who may drive while on assignment to Company

ARTICLE 43. OWNERSHIP OF DESIGNS, DRAWINGS, AND WORK PRODUCT

Drawings and dimensional data prepared by Supplier and submitted to Company in accordance with this Contract shall become property of Company for Company's use in maintenance, operation and upgrade of the Materials.

Supplier will not transfer any rights to intellectual property proprietary to Supplier's business operations, including but not limited to, calculations, manufacturing sketches, computer programs, or trade secret or otherwise to Company.

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Supplier: Initial 

Company: Initial _____

ARTICLE 44. PATENT AND COPYRIGHT INDEMNITY

Supplier shall indemnify, defend, and hold harmless Company, its directors, officers, employees, and agents against and from all claims, losses, costs, suits, judgments, damages, and expenses, including attorneys' fees, of any kind or nature whatsoever on account of infringement of any patent, copyrighted or uncopyrighted work, including claims thereof pertaining to or arising from Supplier's performance under this Contract. If notified promptly in writing and given authority, information and assistance, and contingent upon Company not taking any position adverse to Supplier in connection with such claim, Supplier shall defend, or may settle at its expense, any suit or proceeding against Company so far as based on a claimed infringement which would result in a breach of this warranty and Supplier shall pay all damages and costs awarded therein against Company due to such breach. In case any product, service or combination thereof is in such suit held to constitute such an infringement and the use of said product or service is enjoined, Supplier shall, at its expense and through mutual agreement between the Company and the Supplier, either procure for Company the right to continue using said product or service, or replace same with a non-infringing product or service, or modify same so it becomes non-infringing, or remove the product or halt the service and refund the purchase and any transportation costs separately paid by Company. The foregoing states the entire liability of Supplier for patent infringement relating to products, services or any combination thereof. The indemnification obligations of this Article shall not extend to any claims, losses, costs, suits, judgments, damages and expenses caused by Company's failure to comply with the express written product and/or process instructions of Supplier.

ARTICLE 45. ASSIGNMENT

Supplier shall not assign this Contract or any part hereof, or any rights or responsibilities hereunder without the prior written consent of Company, and any attempted assignment in violation hereof shall be void.

ARTICLE 46. SUBCONTRACTS

Supplier shall neither subcontract nor permit any portion of the Work to be subcontracted without the prior written consent of Company; and Supplier shall be fully responsible for the acts or omissions of any Subcontractors of any tier and of all persons employed by them, and neither the consent by Company, nor anything contained herein, shall be deemed to create any contractual relation between the Subcontractor of any tier and Company.

ARTICLE 47. NONEXCLUSIVE RIGHTS

Nothing in this Contract is to be construed as granting to Supplier an exclusive right to provide any or all of the Work anticipated herein. The use of Supplier's Services is completely discretionary with Company. This Contract shall not be construed in any way to impose a duty upon Company to use Supplier.

ARTICLE 48. NONDISCLOSURE

Definition of Confidential Information. As used in this Contract, the term "Confidential Information" means 1) proprietary information of Company, 2) information marked or designated by Company as confidential, 3) critical infrastructure information of Company, 4) information, whether or not in written form and whether or not designated as confidential, which is known to Contractor as being treated by Company as confidential, 5) information provided to Company by third parties which Company is obligated to keep confidential, and 6) information developed by Supplier in connection with the performance of this Contract.

Nondisclosure. Supplier agrees that it will not disclose Confidential Information, directly or indirectly, under any circumstances or by any means, to any third person without the express written consent of Company.

Nonuse. Supplier further agrees that it will not use Confidential Information except as may be necessary to perform the Work called for by this Contract.

Protection. Confidential Information will be made available by Supplier to its employees only on a "need to know" basis and only after notifying such employees of the confidential nature of the information and after having obligated them to the nonuse and nondisclosure obligations of this Contract. Supplier agrees to take all reasonable precautions to protect the confidentiality of Confidential Information and, upon request by Company, to return to Company any documents which contain or reflect such Confidential Information.

Unless waived by Company, Supplier shall require its employees and Subcontractors of any tier to adhere to these confidential information and nondisclosure terms.

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Supplier: Initial 

Company: Initial _____

The obligations of confidentiality shall not attach to any disclosures which (a) are or become part of the public domain through no act of the recipient, (b) are known to the recipient at the time of disclosure, or (c) are disclosed to the recipient by a third party who has the right to make such disclosures.

ARTICLE 49. NONWAIVER

The failure of Company to insist upon or enforce strict performance by Supplier of any of the terms of this Contract or to exercise any rights herein shall not be construed as a waiver or relinquishment to any extent of its rights to assert or rely upon such terms or rights on any future occasion.

ARTICLE 50. SEVERABILITY

Any provisions of this Contract prohibited or rendered unenforceable by local, state, or federal law shall be ineffective only to the extent of such prohibition or unenforceability without invalidating the remaining provisions of this Contract.

ARTICLE 51. LIENS

Supplier hereby waives its rights to any mechanics lien or other lien under any applicable statutes or otherwise for all Material furnished in connection with this Contract. Prior to Supplier's receipt of each payment under this Contract, Supplier shall deliver to Company all affidavits, lien releases, materialmen's certificates and other documents necessary fully to protect Company under the applicable lien laws. If at any time there shall be evidence of the existence of any such lien or claim for work done or for services or Material furnished by Supplier or any other party in connection with the Contract, the Company may use payment then due or to become due under this Contract to discharge such lien or satisfy such claim and may credit such amount against the payment due or to become due to the Supplier.

ARTICLE 52. REPORTING

Company requires Supplier to provide the following reporting information on a quarterly basis:

- Warranty failure information, grouped by failure type, is to be provided, electronically, to the Asset Policy Department on a quarterly basis no later than 30 Calendar Days following the end of a calendar quarter.
- On-Time Shipment performance information is to be provided, electronically, to the Procurement Department on a quarterly basis no later than 30 Calendar Days following the end of a calendar quarter.
- Key cost driver information including raw material costs and price trends to be used in determining cost adjustments.

ARTICLE 53. COMMUNICATIONS

Within one (1) Business Day of receipt, Supplier will acknowledge all Purchase Orders placed by Company. Supplier will have up to one (1) Business Day following receipt of Purchase Order to contest the requested delivery date for any Purchase Orders placed above the agreed to supply capacity in accordance with this Contract. If no verbal or electronic response is made by Supplier within one (1) Business Day, the Purchase Order delivery date and terms will be considered confirmed by Supplier.

Supplier will provide advance communication to Company on all Purchase Orders that will not be delivered in full per the confirmed Purchase Order delivery date. Such advanced notice shall not relieve Supplier of its obligations under ARTICLE 25, LIQUIDATED DAMAGES and ARTICLE 26 ENFORCEABILITY OF LIQUIDATED DAMAGES.

ARTICLE 54. MINIMUM CONTRACTOR SUPPLY CAPACITY (Not used).

ARTICLE 55. FORECAST

Supplier's personnel shall use materials planning and forecasting principles and methods for the Material covered under this

Contract. Supplier personnel shall have the expertise and working knowledge of materials forecasting and materials requirements planning (MRP). Supplier shall develop and retain on file Materials Requirements Planning procedures for those Materials stock numbers that Supplier manufactures in Country. Supplier shall provide procedures to Company for review upon request. Supplier shall validate Company Purchase Orders and forecasts for accuracy of quantity, supply date, or redundancy. Supplier assumes all responsibility for Materials imported against forecast requirements.

ARTICLE 56. GUARANTEED COST IMPROVEMENTS

Supplier agrees to participate with Company on a cross-functional team comprised of key individuals from both organizations. The team initiated and led by Supplier, will focus on achieving the COST IMPROVEMENTS.

ARTICLE 57. ENTERPRISE RESOURCE SYSTEMS

Company operates a SAP based Enterprise Resource Planning ("ERP") system that governs its materials and financial transactions. Supplier shall in the future make every commercially reasonable effort to pursue and develop the required connectors and interfaces from Supplier's ERP system to Company SAP system in order for cost effective implementation of supply chain management processes preferred under this Contract.

In addition, Company is open to maximizing the cost effective utilization of standards based electronic commerce technologies, compatible with legacy computer systems, including but not limited to requirements for desk top ordering, cataloging, documentation, payments, and performance monitoring.

ARTICLE 58. ELECTRONIC COMMERCE

In the event Supplier has implemented electronic commerce capabilities, Supplier shall ensure such electronic commerce (e-commerce website) interface shall be available to Company.

Supplier and its Subcontractors Lead Times for Materials shall be stated in e-commerce website. At a minimum, Supplier shall update the Lead Times on a quarterly basis or as changes in Lead Times are known to Supplier. Supplier Lead Times shall be no greater than those agreed herein.

Supplier and its Subcontractors shall provide Company with 24-hour a day access to Supplier web based catalog and electronic documentation library. Supplier's electronic commerce business model shall include:

- a. Processes for electronic invoicing and payment systems,
- b. Development of an electronic inspection library for certificates, test reports, shipment release documents, etc.
- c. Tracking and tracing of Company shipments from its Suppliers,
- d. Electronic links to its Suppliers engineering files, drawings, documentation, installation/ operations manuals, and product alerts.

Supplier electronic commerce platform should support a seamless interface with SAP business-to-business module, or any other e-commerce enterprise platform specified by Company. Supplier shall not change any price on Supplier website without those changes being processed in accordance with ARTICLE 21, CHANGES.

Supplier shall keep an electronic historical file of all transactions executed under this Contract and shall maintain such records for the duration of this Contract plus an additional three (3) years.

Supplier shall have a computerized inventory and/or production management system and/or Purchase Order tracking/expediting system, capable of interfacing with Company Material systems.

ARTICLE 59. INTEGRATED SUPPLY CHAIN MEETINGS

Integrated supply chain meetings shall be held as deemed necessary by the Company, but normally shall not be more than once a month. Past and future supply performance will be utilized to review the production and supply schedule and

discuss any delays, unusual conditions or critical items, which have affected or could affect production capacity and/or delivery performance.

ARTICLE 60. GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Utah. Any litigation between the Parties arising out of or relating to this Contract will be conducted exclusively in federal or state courts in the State of Utah, at the discretion of Company, and Supplier consents to jurisdiction by such courts.

ARTICLE 61. ENTIRE AGREEMENT/DOCUMENTS INCORPORATED BY REFERENCE

This Contract and any referenced attachments constitute the complete agreement between the Parties. All understandings, representations, warranties, agreements and any referenced attachments, if any, existing between the Parties regarding the subject matter hereof are merged into and superseded by this Contract, which fully and completely expresses the agreement of the Parties with respect to the subject matter hereof. Any scope of work, specifications, drawings, schedules or other documents listed in this Contract are incorporated by reference into this Contract.

Company assumes no responsibility for any understanding or representation made by any of its employees, officers or agents during or prior to the negotiations and execution of this Contract, unless such understanding or representation is expressly stated in the Contract

The Parties intend that the terms and conditions of this Contract, its referenced attachments, and any purchase Order that may be issued relating to this Contract should be complementary with each other; provided, however, that in the event of a conflict between the terms and conditions of any Purchase Order and those of the Contract, the terms and conditions of this Contract shall take precedence and control over any Purchase Order.

ARTICLE 62. EXECUTION AND EFFECTIVE DATE

This Contract has been executed by duly authorized representatives of the Parties and shall be effective as of date of execution by the Company.

SUPPLIER:

Nalco Company

By: Stephen Landman *SLK*
(Signature)

Name: Stephen Landman
(Type or Print)

Title: Vice President
(Date Executed)

COMPANY:

PacifiCorp

By: DANA RALSTON
(Signature)

Name: DANA RALSTON
(Type or Print)

Title: VP-IT/ERMA GEN.
3/20/10
(Date Executed)

Both Parties have caused an individual with the requisite authority to bind that Party, to initial this and each other page of this Contract prior to execution.

Supplier: Initial SLK

Company: Initial _____

**EXHIBIT A.1
SCOPE OF SUPPLY AND SUPPORT
FOR SPECIALIZED WATER TREATMENT CHEMICALS**

OBJECTIVE:

Achieve the most cost-effective and efficient water treatment programs and related services for **PacifiCorp Energy (plants located in Utah and Wyoming).**

Company and Supplier will utilize all resources to reduce redundancy and find innovative solutions for plant water treatment programs through Supplier technical service and use of specialty water treatment chemicals. Supplier will be the preferred water treatment chemical supplier and will provide competent on-site services as well as cost-competitive chemical programs delivered and applied according to Company's safety and technical requirements.

Supplier must:

- Improve product quality, material availability and reduce total cost of material.
- Establish effective performance measures for continuous improvement (quality, cost, and service).
- Provide a seamless organization that can respond to Company needs as required.
- Integrate resources for planning, forecasting, procuring and warehousing of chemical products.
- Provide innovative solutions for performing its procurement and materials management processes.
- Work with key personnel to reduce plant equipment forced outage rates (EFOR).
- Provide technical support and training for continuous improvement of cycle chemistry.
- Provide no-cost consulting and technical assistance to identify the best water treatment programs to lower overall operating cost of any new facilities.

PERFORMANCE: The following performance factors shall be guaranteed by Supplier:

- Circulating cooling water copper corrosion rate shall be less than 0.2 mpy
- Circulating cooling water steel corrosion rate shall be less than 5 mpy
- Condensers and other heat exchangers shall be kept free from scale or biofoulants.
- Bulk cooling water bacteria count shall be less than 10^3 colony forming units per ml. There shall be no significant algae growth on the outside of structures such as cooling towers.

If the Supplier fails to meet the performance requirements as stated above, all costs associated with achieving the required level of performance will be at Supplier's expense including labor and materials supplied by Company.

SCOPE OF SUPPLY REQUIREMENTS:1. SUPPLY AND TRANSPORT PRODUCTS

- A. Supplier shall provide product to all locations as required for PacifiCorp Energy at locations defined in Item 3 below.
- B. Transportation and freight FOB Destination with supplier retaining ownership and risk for product until delivery at plant site. Freight charges to be pre-paid and added to invoice as specified in Exhibit B.2. Supplier to provide or coordinate all transportation and freight.

2. PRODUCT LEAD TIME AND DELIVERY REQUIREMENTS (ROUTINE AND EMERGENCY)

- A. **Timely delivery of product is critical to ensure no loss of production will be incurred.**
Failure to deliver these critical products in a timely manner will adversely impact Company's ability to operate facilities.
- B. Emergency Contact Information:

NOTE: Supplier to provide emergency contact information and be available to respond to emergency delivery requirements 24 hours per day; 7 days per week.

3. PLANT ADDRESSES:

Facilities to be included in this agreement that currently use water treatment chemicals and services are as follows:

PacifiCorp Energy:

Blundell Geothermal Plant Roosevelt Hot Springs Road PO Box 769 Milford, UT 84751	23.5 MW
Chehalis Plant 1813 Bishop Road Chehalis, WA 98532	Unit 1
Currant Creek Plant 2096 West 300 North PO Box 523 Mona, UT 84645	520 MW (Combined Cycle) (No Cooling Tower)
Lake Side Plant 1825 North Pioneer Lane Vineyard, UT 84058	520 MW (Combined Cycle)
Carbon Plant Hwy 6, 3 Miles North of Helper, UT 84526	Unit 1 – 70 MW Unit 2 – 112 MW

Hunter Plant	Unit 1 – 430 MW
Hwy 10, 3 Miles South of	Unit 2 – 430 MW
Castle Dale, UT 84513	Unit 3 - 430 MW

Huntington Plant	Unit 1 – 430 MW
Hwy 31, 8 Miles West of	Unit 2 – 430 MW
Huntington, UT 84528	

Dave Johnston Plant	Unit 1 – 109 MW
1391 Tank Farm Road	Unit 2 – 109 MW
Coal Company Route	Unit 3 – 230 MW
Glenrock, WY 84637	Unit 4 – 361 MW

Jim Bridger Plant	Unit 1 – 547 MW
9 miles north of Point of Rocks	Unit 2 – 547 MW
Point of Rocks, WY 82942	Unit 3 – 547 MW
	Unit 4 – 547 MW

Naughton Plant	Unit 1 – 177 MW
Hwy 189, South of	Unit 2 - 235 MW
Kemmerer, WY 83101	Unit 3 – 324 MW

New applications: Supplier will be the supplier of any specialty chemicals required for the operation of the new scrubbers under construction at Naughton.

Wyodak Plant	Unit 1 – 365 MW
48 Wyodak Road	(No Cooling Tower)
Garner Lake Route	
Gillette, WY 82718	

Others locations as identified, subject to mutual agreement.

- Supplier will be given the opportunity to run a 60 day trial at Gadsby Plant to prove cost and performance. Said trial will be preceded by at least 30 days where Supplier will be allowed to monitor the performance of the existing treatment program. If the trial results in meeting or reducing current costs and meets or exceeds current performance, Supplier will be awarded the business.

Gadsby Plant	Unit 1 – 66 MW
1359 West North Temple (Rear)	Unit 2 – 79 MW
Salt Lake City, UT 84116	Unit 3 – 106 MW

**EXHIBIT A.2
SCOPE OF SUPPLY AND SUPPORT
FOR SPECIALIZED WATER TREATMENT CHEMICALS**

The following questions and answers incorporated into Supplier’s proposal are hereby incorporated into the contract and amend the scope of supply as set forth in Exhibit A.1.

Nalco SUBMITTALS

1. PRODUCT LEAD TIME AND DELIVERY REQUIREMENTS (ROUTINE AND EMERGENCY)

A. Timely delivery of product is critical to ensure no loss of production will be incurred.

1) Provide logistics plan **including delivery time required following receipt of purchase order** for recommended products to each location to guarantee:

- Continued supply of product to meet contractual requirements
- Deliveries are completed as scheduled and required.

Nalco’s standard is to deliver all chemical products to our customers within 14 calendar days following receipt of a purchase order. When circumstances require it, special handing of orders can be elevated to a rush status usually resulting in deliveries within 7 days or shorter. This may result in additional freight charges if a dedicated truck is required to deliver the product by a specific deadline. If the requirement for a dedicated truck is due to an order delay caused by Nalco, then Nalco will absorb any excess freight charges. If the delay is caused by the customer, then any excess freight charges will be passed along to the customer.

For delivery of Nalco products, the following plants are the normal points of supply:

- **PacifiCorp: Evansville WY, Vancouver WA, Chicago IL, Garyville, LA**

B. Following execution of contract and agreement of established average usage and operating needs for each location, state number of days required for implementation of product delivery: na DAYS

Note: For Currant Creek implementation will take 30 days. In all other facilities, where Nalco is the current supplier, implementation will be immediate.

For Gadsby Plant, Exhibit A.1 – Item 4 and Exhibit A.2 will govern.

- C. Describe method and communications plan to ensure deliveries are made to the correct tanks, etc.

Nalco deliveries are made in accordance with our Zero-Defect Delivery program, details of which are available on request. An overview of the program is found in Nalco Reprint R-548 Nalco Controls Chemical Distribution with Zero-Defect Delivery Program.

2. TECHNICAL SUPPORT AND TRAINING (Re: Exhibit A.4)

3. CHEMICAL ANALYSIS/PRODUCT COMPATIBILITY

- A) Describe your chemical analysis program. Do you perform this service or subcontract to another company?

Analysis of all our chemical products is completed by our QC (quality control) laboratories within each of our manufacturing plants.

- B) Detail your program for migrating all chemical needs to one supplier and any compatibility concerns. If there are concerns, what are the areas of major concern?

As the incumbent supplier for most of the plants, migration of chemicals to Nalco products would only be necessary at PacifiCorp's Gadsby station. A detailed migration plan that focuses on safety and training for Gadsby is located in Exhibit A.3.

- C) Describe monitoring equipment recommended for treatment applications.

- Who would own this equipment?
- How would it be maintained and serviced?
- What are the terms and conditions associated with the use of this equipment?

Cooling Water

3D TRASAR to monitor all cooling towers. This equipment package provides instrumentation for continuous monitoring of the following 10 parameters:

1. Product Dosage (Nalco TRASAR chemical)
2. Active Polymer (Nalco tagged polymer)
3. Background fluorescence
4. Temperature
5. pH
6. Conductivity
7. Turbidity
8. ORP
9. Corrosion rate – Primary (i.e. mild steel)
10. Corrosion rate – Secondary (i.e. admiralty or SS)

While the 3DTRASAR system is designed to automatically feed and control the primary cooling water treatment chemicals, this equipment can be used to monitor the above parameters in a cooling tower system.

Boiler Feedwater

NCSM (Nalco corrosion stress monitor) to monitor the corrosion stress in boiler feedwater systems using AT-ORP (“at temperature” oxidation-reduction potential) technology. The NCSM is capable of measuring the exact level of corrosion stress in the feedwater associated with changes in dissolved oxygen, changes in reductant/passivator residual, changes in load and other operational factors that can impact corrosion rates. NCSM can also be used to monitor the corrosion stress in systems practicing AVT-o or OT.

The NCSM can be paired up with a Particle Monitor as a secondary method of measuring corrosion in the pre-boiler system. Studies have shown that during a system stress (i.e. oxygen leak, or impurity ingress), the NCSM will immediately detect an ORP increase several minutes before the Particle Monitor senses the release of corrosion product following the event.

Ownership:

- **The NCSM systems for Boiler Feedwater may be rented to the plants using this technology and ownership is retained by Nalco.**

Service & Maintenance:

- **Nalco will provide all service and maintenance for both the 3D TRASAR and NCSM systems as long as Nalco is the primary supplier of specialty chemicals for the application.**

Terms & Conditions associated with the use of these systems:

- **3D TRASAR: There are no restrictions on the use of this equipment; however Nalco will not provide service, maintenance or parts if we are no longer the supplier of the specialty water treatment chemicals used in the cooling tower.**
- **NCSM: Nalco retains ownership of this equipment and its rental to the user is predicated on Nalco being the supplier of the reducing agent for those units using an oxygen scavenger. For those units not using an oxygen scavenger, the Plant may use this technology as long as Nalco is the primary supplier of specialty water treatment chemicals in other applications within that plant. If a plant wishes to keep an NCSM and Nalco is no longer the chemical supplier, Nalco would propose a licensing fee to enable continued use of this technology.**

4. SAFETY

- A. SAFETY. All OSHA Regulations to be strictly enforced.
- B. MSDS (Material Safety Data Sheet) required with every delivery.
- C. Supplier to provide written safety policies and procedures for emergency response to hazardous spills.
- D. All safety equipment required for delivery to be provided by the Supplier or transportation agent.

Nalco's drivers are all highly trained and experienced delivery specialists for our chemical products. Their performance requirement is ZDD (zero defect delivery) 100% of the time. Thus the main focus and culture is on the safe delivery of every chemical to every customer, every time.

- E. Describe additional safety training provided for chemical deliveries
Site specific chemical safety training will be provided on an annual basis for each plant upon request. This will include a review of specific hazards associated with each chemical delivered to the plant along with recommendations on minimizing operator exposure and spills.

NOTE: Supplier to provide information and be available to provide emergency response 24 hours per day; 7 days per week.

Nalco provides emergency response 24 hours per day; 7 days per week through ChemTrac at 1-800-IM-ALERT (1-800-462-5378).

5. ENVIRONMENTAL

A) Supplier to meet all environmental requirements including:

- Comply with individual plant environmental policy(s); receive clarification for any environmental questions prior to proceeding with deliveries.
- Opacity emitted from Supplier's or carrier equipment must meet DOT requirements.

B) Distribution Channel: Include details on your distribution network such as which distributors would service which plants, contacts, phone numbers, delivery methods, etc.

Nalco products ship from Nalco manufacturing sites or third-party warehouses depending on the product, desired package and available inventory. Decisions regarding a product's point-of-origin will be made to ensure the shortest order-to-delivery time.

a. Customer/Account Service: Describe the customer service program for service of this agreement including:

Primary customer support is provided by the local representation at the plant. For placing and tracking orders, additional customer service is provided by the District Administrator in the local District as follows:

- **PacifiCorp: Michelle Skinrood – Salt Lake City, UT**

Customers may also contact Nalco's Customer Support Group in Naperville IL at 800-288-0879 for ordering and logistics questions. (Re: Attachment 4 – Customer Service).

General corporate support is available through Nalco's Key Account Manager, Brent Richards, Salt Lake City, Utah at 801-361-7771.

- a. Computer Tracking System
- b. Customer Support
- c. Special Services

C) Quality Control:

Is your company ISO certified? Yes X No

Summarize quality control procedure including:

- Describe testing and quality control programs to ensure that each category/type of product meets published specifications.

Manufacturing

QUALITY ASSURANCE OF RAW MATERIALS (STARS Program):

“STARS” is an acronym for “SUPPLIER TRACKING AND RECOGNITION SYSTEM” and is a global process Nalco Company uses to integrate suppliers of raw materials into the Nalco Company Quali-Trak process of continuous improvement. The Nalco Company Purchasing Department implemented this system in March 1991.

The purpose of STARS is to document mutually agree upon requirements, track supplier conformance to these requirements and recognize those suppliers who show continuous improvement and who consistently meet or exceed our requirements.

Certificate of Analysis

Raw materials used by Nalco Company are inspected in our laboratories to ensure they conform to documented specifications. Once approved, they are accepted into our plant. Inspection may range from complete testing to an evaluation of the supplier’s certificate of analysis. Certificates of analysis are accepted from some suppliers who have a proven track record with Nalco Company. In these cases, Nalco Company requires only periodic checks in our laboratory to verify conformance. Samples of all raw materials approved for use are retained for future reference.

General Scope

Products manufactured in Nalco Company authorized toll facilities are subject to rigorous in – process, final and packaging quality assurance testing before shipped to the customer. Each of these phases of quality assurance are well documented for each product and records are available upon request.

Batch numbers are assigned to each batch of raw materials when they enter our plants and this number is recorded on the blend sheet. A batch number for the final blend is also recorded on the blend sheet for tracking purposes. This allows Nalco Company to trace any non-conformances of a manufactured batch to the raw materials that went into that batch. All equipment systems have traceable serial

numbers and this information is recorded on the blend sheet to record the original equipment used to make a blend.

All activities are undertaken and recorded according to established procedures under ISO 9002.

Process Control

Nalco Company uses documented manufacturing procedures to provide consistent working instructions for all manufacturing processes, The procedures define the approved equipment, formula, steps required to complete the process and the required quality assurance samples for each manufacturing step.

Manufacturing records are kept on batch sheets as described above. In –process and final batch testing for our Quality Assurance Department is in accordance with complete quality assurance documented analytical test procedures. Laboratories are located at each manufacturing site to facilitate this work. Results of these tests are compared to the documented specifications and are reported to the appropriate personnel.

Final Inspection

Nalco Company will not release a product until all final batch and shipping specifications are met. Upon completion of manufacturing, a sample is taken to our Quality Assurance Lab to verify that the material meets our specifications. Approvals must be received which cover all aspects of manufacturing and shipping before the materials are released.

Products identified as non-conforming must be handled according to documented policies. Special care (such as storing these materials in a quarantined area) is taken to ensure that they are not inadvertently shipped to a customer. These products are re-worked according to documented procedures and must meet final conformance specifications before being released. Products that cannot be re-worked or which do not meet specifications after re-working are disposed of according to Responsible Care guidelines.

Quality Control and Quality Assurance at Nalco Company

Quality Control, in the traditional sense, includes the following:

1. Development of raw material specifications, in-process and finished product specifications.

2. Testing and inspection in accordance with specifications for in-process, final batch and packaging events

Our Corporate Quality Assurance group does specification development by collecting a statistically significant set of data (three different batches with multiple data collection on each batch). Sometimes new test methods are also required to be developed and proven to be statistically sound. The data from each batch is analyzed statistically and specification ranges are developed that meet our requirements for statistical process potential and statistical test method potential.

Quality Assurance is accomplished through the following:

- 1. Our ISO calibration methods for all critical lab and process equipment**
- 2. The use of control samples and standards for individual test methods**
- 3. The efforts of our Production Chemist Staff.**

ISO instrument calibrations are automatically scheduled and completed as per the frequency required by the calibration ISO procedures. Preventative maintenance is done on instruments on a six to twelve month basis. The calibration software program in both the lab and in our Maintenance Department also schedules it.

Standards for method calibration are done prior to/during the test method as prescribed by the test procedure. Control samples are utilized to further ensure that reproducible results are produced over a period of time for test methods.

Nalco's staff of Ph.D. Production Chemists monitor the quality of the analysts work on a daily basis in addition to reviewing all our major processes for statistically capable products. They also work closely with our smaller blending sites. In addition to those duties they are responsible for handling process problems in the production units and for reporting and tracking those problems to find and eliminate the causes. Our Production Chemists also design and monitor Gauge Repeatability and Reproducibility studies both within individual laboratories and between suppliers and our labs.

D) Inventory Optimization and Standardization:

- Company would like to reduce the on-hand inventories of products and work with a manufacturer and distributor to provide products on an "as needed" basis. Describe your inventory reduction program to help us reduce on-hand inventories and what you would require from Company to help determine future chemical needs.**
- In addition to reducing on-hand inventories, we are interested in reducing the number of different chemicals we use. How would you assist in this project**

and what would be a time frame for completion? Show how this type of program would reduce overall costs.

As the incumbent supplier, Nalco has always strived to minimize chemical inventories by working with each plant to pick the right package size (drum, tote, bulk) for the usage rate of the specific application. Too small a package means too many orders and handling of chemicals, where as packages that are too large result in larger than necessary inventories and product expiration issues.

We have also worked to minimize the number of chemicals used at each site by proposing multi-functional products, mostly for the cooling tower applications, where scale control and corrosion control chemistries are combined. This approach however, can be less cost effect than breaking down the individual components to separate chemical products. Therefore we make sure these decisions are made jointly with our customer after reviewing all options.

The individual plant proposals address specific opportunities for product consolidation, inventory optimization and standardization.

E) Material Packaging Requirements:

Supplier shall detail its capabilities to perform the following packaging requirements:

A packing list or delivery ticket for all materials received by Company must be provided in waterproof envelopes and identified with the following information:

- Purchase order and item number (Release Number)
- Company material or stock number.
- Product Description
- Quantity shipped
- Unit of Measure (matched to order)
- Material Safety Data Sheets (MSDS)
- Manufacturer name and catalog number

Nalco is fully capable of meeting all the requirements listed above for the packaging and delivery of our chemical products.

Exhibit A.3 PacifiCorp Gadsby Migration Plant

The majority of chemicals used at Gadsby plant are supplied in drum, returnable bin or pail and only the circulating cooling water corrosion/scale inhibitor is provided in bulk form. That simplifies the conversion process and places emphasis on a safe and successful conversion on that system.

The following conversion procedures are provided for review and acceptance, if Nalco is awarded the business at Gadsby Plant (Re: Exhibit A.1 Item 4). Conversion begins by implementing a training program to establish safe handling procedures, analytical procedures and operating limits for each system and chemical. Physical product conversion will be performed as directed for each chemical addition point.

Main Circulating Water Scale/Corrosion Product

1. Separate and isolate one of the (2) 2,500 gallon tanks.
2. Transfer the contents from the isolated tank into the online tank
3. Rinse the internal walls of the tank and pump the rinse water into the cooling water systems, repeat as necessary to ensure the tank is clean
4. Flush pump and chemical feed lines
5. Refill the tank with 3DT-189 and leave in standby until the second tank level reaches the minimum suction level.
6. Valve in the tank with the 3DT-189 and repeat the cleaning process on the second tank
7. Once the cleaning process is complete the tanks can be rejoined

Boiler Feedwater Oxygen Scavenger/Metal Passivator

1. Upon exhaustion of the bin, empty the returnable carbonylhydrazide bin into the day tank and disconnect the nitrogen regulator and close discharge valve.
2. Disconnect quick connection and remove bin from operating location to storage for return.
3. Install Eliminox tank and reestablish connections. (Connector will be inspected and checked for compatibility prior to feed tank reaching empty.
4. Once the day tank is consumed, establish feed through normal measuring pot.

Raw Water Clarification Polymer

1. Upon emptying 55 gallon polymer drum on drum caddy
2. Remove drum from caddy and switch drums to Nalco 7768
3. Empty polymer mix tank, clean tank and flush lines
4. Clean measuring pot and refill to directed levels of Nalco 7768
5. Refill polymer mix tank and reestablish polymer feed to raw water clarifier.

Exhibit A.4
TECHNICAL SUPPORT AND TRAINING

- A. Summarize general and engineering support available to PacifiCorp included as part of this agreement. How is this support provided?

Nalco currently provides technical and engineering support through several channels.

Primary support for PacifiCorp is through our local Field Engineers that provide the on-site service and project work at each generating plant to ensure our chemical programs are properly applied and optimized to meet plant requirements for cost-effectiveness. In addition to routine service, each primary representative (field engineer) typically works on several TCO reduction projects with plant engineers and chemistry personnel. In some cases the primary rep is supported by a Nalco AE (application engineer) or a Tech Rep (technical representative). In all cases, the primary representative has an assigned back-up field engineer within the region or district.

Secondary support from our Power SBU (strategic business unit) team, which consists of 10 highly experienced individuals with an average of 25+ years of water treatment experience serving the power industry. The Power SBU also provides Power Industry specific training to both customer plants and to the field engineers devoted to serving power plants. Our internal Power Industry training is based on a college level curriculum with 100, 200 and 300 level course progressions.

Finally, additional technical support to our field engineers is provided through our Naperville IL based TRC (technical resource center) and our scientists from our Research and Development team.

TRAINING:

Site Specific Training for our customers is normally provided on an annual basis. This is completed by the Field Engineers assigned to the account and usually consists of training regarding the chemical treatment programs Nalco supplies with an emphasis on safety and safe handling of the chemicals.

Computer Based training courses for customers are also available through our Nalco Customer University (NCU). There are a total of 26 different courses covering topics from cooling water/boiler water basics and ion exchange basics, to statistical process control and safety.

- B. Provide recommendations and details for technical support and in-service programs that would be available to all platforms as part of an agreement.

On-site service will be provided to the individual plants per the schedule outlined in Exhibit B.2. Service tasks will vary depending upon plant needs, but in general will consist of the following:

- **Inventory monitoring and control**
- **Placing orders to ensure continuous supply of chemicals**

Water Treatment Chemicals

- **Analysis and review of key chemistry parameters**
- **Program monitoring and recommendations to ensure minimum performance levels are met and maintained. Includes condenser performance and corrosion measurement.**
- **Program optimization to ensure chemical usage is minimized while maintaining performance requirements.**
- **Equipment Inspections during outages: boilers, condensers, heat exchangers, etc.**
- **Trouble shooting using the M-O-C approach, where problems are diagnosed by reviewing/analyzing the mechanical and operational aspects of a process in addition to the chemical treatment.**
- **TCO (total cost of operation) Reduction Projects.**
- **Personal Service Reports summarizing findings and recommendations**

C. Describe the chain of technical support and who would provide the support should additional expertise be required. How will these non-routine services be charged?

Technical support will be provided by the following chain:

1. **Primary Field Engineer (see paragraph E)**
2. **Secondary or back-up Field Engineer (see paragraph E)**
3. **Power Strategic Business Unit**
 - a. **Industry Technical Consultants (ITC):**
 - i. **Dan Sampson, Peter Ten Eyck, George Peabody**
 - b. **Key Account Manager: Jim Boak**
 - c. **Industry Development Manager: Dan Cicero**
4. **Technical Resource Center (see last page for complete list)**
 - a. **Tony Banweg (boilers)**
 - b. **George Totura (boilers)**
 - c. **Philip Yu (micro-bio)**
 - d. **John Pilisits (cooling)**
 - e. **Ben Brock (cooling)**
5. **Research & Development**
 - a. **Dr. Jasbir Gill (cooling)**
 - b. **Steve Hatch (cooling)**
 - c. **Dr. Peter Hicks (boilers)**

Technical Support from the above are included in the proposal at no extra charge with the following limitations:

- **PacifiCorp will be provided with a consulting credit for on-site support of 10 man-days per year.**
- **Consulting man-days required beyond this allotment would be billed at 50% of our normal rate of \$1,600/day, or \$800/day. This rate applies only to on-site support from the personnel in #'s 3, 4 or 5 above.**

Water Treatment Chemicals

- D. What laboratory support is available? How many sample analyses are included in the contract?

Complete laboratory support is available for all the power plants served under this proposal. As part of this proposal Nalco will continue to offer the same amount of analytical testing that has traditionally been supplied for each plant in the past at no charge.

- E. What product quality guarantees are offered? How would you keep Company informed of the quality of products being delivered?

All Nalco products are guaranteed to meet their individual manufacturing specifications. Nalco will provide a COA (certificate of analysis) for each shipment of a Nalco product. Each COA will show the measured value and the specification for each parameter tested.

List the number of and names of people who would service these accounts at each location. The table below shows Nalco's service personnel assigned to each plant:

Service Providers	Primary	Secondary	Tech Rep
	Field Engr	Field Engr	or AE
PacifiCorp			
Hunter	Ralph Trent	Blair Furner	
Huntington	Ralph Trent	Blair Furner	
Carbon	Ralph Trent	Blair Furner	
LakeSide	Ralph Trent	Dan Braodhouse	
Gadsby	Ralph Trent	Blair Furner	
Current Creek	Ralph Trent	Blair Furner	
Blundell	Mike Kimball	Ralph Trent	
Dave Johnston	Steve James	Tommy Faigl	
JimBridger	Steve James	Tommy Faigl	
Wyodak	Steve James	Tommy Faigl	
Naughton	Steve James	Tommy Faigl	

Describe chemical analytical capability.

Nalco has a full service “Customer Analytical Laboratory” located at our Naperville IL, Research & Technical Center. A full description of analyses and pricing is included in Exhibit B.3.

Nalco’s Technical Resource Center (TRC) 630-305-CHEM

PAC-1 Water and Waste Treatment	John Sparapany
Water and Waste Treatment	Robert Henderson
Water and Waste Treatment	Richard Burlotte
Water and Waste Treatment	Mitch Morgan
PAC-2 Internal Treatment	Tony Banweg
Condensate Treatment	Debbie Bloom
Internal and Condensate	George Totura
Internal and Condensate	Robert Henderson
Internal and Condensate	Mitch Morgan
Internal and Condensate	Jeff Fox
Internal and Condensate	Richard Brulotte
PAC-3 (Cooling Water)	Ben Brock
	John Pilsits
	Philip Yu
	Richard Brulotte
	Dan Flynn
PAC-8 (Facility Care)	John Sparapany
PAC-M (Membrane Technology)	John Sparapany
	George Totura

Exhibit B.1 - Pricing
PRODUCT IDENTIFICATION

<u>ITEM</u>	<u>Short text</u>	<u>Material</u>	<u>Material</u>	<u>Mfr</u>	<u>Ex. manuf.</u>	<u>Manufacturer part no.</u>
2	CHEMICAL,BIocide,CHLORINE/BROMINE, 50LB PAIL	0001000844	1000193120	NALCO CHEM	960.11	DJ,JB, NAU
3	CHEMICAL,INHIBITOR,CORROSION,LIQUID,44 LB PAIL	0006002706	1000267108	NALCO CHEM	1250.11	HTR, HTG, JB, NAU
4	TOP EIGHT CHEMICAL,INHIBITOR,CORROSION,LIQUID,3331 LB PORTAFEED SR	0006000832	1000234349	NALCO CHEM	1250.31	HTR, HTG, JB, NAU
5	CHEMICAL,INHIBITOR,CORROSION,LIQUID,1737 LB PORTAFEED JR	0006000854	1000234080	NALCO CHEM	1250.33	HTR, HTG, JB, NAU
6	CHEMICAL,INHIBITOR,CORROSION,LIQUID,2297 LB TOTE	0006002717	1000267138	NALCO CHEM	1250.61	HTR, HTG, JB, NAU
7	CHEMICAL,SOLUTION,CORROSION,COPPER,BULK	0006000824	1000233402	NALCO CHEM	1336.91	
8	CHEMICAL,INHIBITOR,SCALE,3774 LB PORTAFEED SR	0006002196	1000258450	NALCO CHEM	1383.31	HTR.
9	CHEMICAL,INHIBITOR, SCALE, 2599 LB TOTE	0006800014	1000223059	NALCO CHEM	1383.61	HTR.
10	CHEMICAL,INHIBITOR,SCALE,BULK	0006005676	1000256519	NALCO CHEM	1383.91	HTR.
11	CHEMICAL,COAGULANT,CATIONIC, 525 LB DRUM	0006000820	1000233356	NALCO CHEM	4954.15	DJ, NAU
12	CHEMICAL,COAGULANT,CATIONIC,BULK	0006000858	1000234344	NALCO CHEM	4954.91	DJ, NAU
13	CHEMICAL,BIocide,NON-OXIDIZING, 470 LB DRUM	0006000822	1000233360	NALCO CHEM	7330.15	CA
14	CHEMICAL,DEFOAMER, 450 LB DRUM	0006003203	1000262283	NALCO CHEM	7471.15	NAU
15	CHEMICAL,DEFOAMER, 2174 LB TOTE	0002024710	1000202333	NALCO CHEM	7471.61	NAU
16	CHEMICAL,POLYMER,ANIONIC,EMULSION,1739 LB PORTAFEED JR	0006001684	1000233404	NALCO CHEM	7763.33	NAU
17	CHEMICAL,POLYMER,ANIONIC,FLOCCULANT, 478 LB DRUM	0006800003	1000223025	NALCO CHEM	7768.15	CA, GAD
18	CHEMICAL,POLYMER,ANIONIC,FLOCCULANT, 2304 LB TOTE	0006800004	1000223028	NALCO CHEM	7768.61	CA, GAD
19	TOP EIGHT CHEMICAL,POLYMER,CATIONIC,COAGULANT,BULK	0001009569	1000056753	NALCO CHEM	8157.91	CA
20	CHEMICAL,DISPERSANT,INHIBITOR,SCALE,2698 LB TOTE	0006002718	1000267139	NALCO CHEM	8357.61	NAU
21	CHEMICAL,POLYMER,CATIONIC,2251 LB TOTE	0007880745	1000223904	NALCO CHEM	71257.61	HTR
22	TOP EIGHT CHEMICAL,POLYMER,CATIONIC,BULK	0007880746	1000249831	NALCO CHEM	71257.91	HTR
23	CHEMICAL,INHIBITOR,CORROSION,LIQUID,1737 LB PORTAFEED JR w/ TRANSFER SERVICE	0006000854	1000234080	NALCO CHEM	1250.33 w/ transfer service	HTR, HTG, JB, NAU
24	CHEMICAL,INHIBITOR, CORROSION, 507 LB DRUM	0008040420	1000154981	NALCO CHEM	39M.15	CC, LS, HTR, HTG
25	CHEMICAL,INHIBITOR,CORROSION, 2535 LB TOTE	0006000856	1000234342	NALCO CHEM	39M.61	CC, LS, HTR, HTG
26	TOP EIGHT CHEMICAL,INHIBITOR,SCALE & CORROSION,BULK	0006001760	1000249834	NALCO CHEM	3DT187.91	HTR, HTG, JB, LS, NAU
27	CHEMICAL,INHIBITOR,SCALE & CORROSION,BULK	0006001759	1000249833	NALCO CHEM	3DT188.91	DJ
28	TOP EIGHT CHEMICAL,INHIBITOR,SCALE & CORROSION,BULK	0006001758	1000249832	NALCO CHEM	3DT189.91	CA, DJ, GAD
29	CHEMICAL,INHIBITOR,DISPERSANT,4134 LB PORTAFEED SR	0006012003	1000269131	NALCO CHEM	3DT190.31	DJ
30	CHEMICAL,INHIBITOR,DISPERSANT,2147 LB PORTAFEED JR	0006012004	1000269132	NALCO CHEM	3DT190.33	DJ
31	CHEMICAL,INHIBITOR,DISPERSANT,2809 LB TOTE	0006012002	1000269120	NALCO CHEM	3DT190.61	DJ
32	CHEMICAL,INHIBITOR,DISPERSANT,BULK	0006012001	1000269119	NALCO CHEM	3DT190.91	DJ

Exhibit B.1 - Pricing
PRODUCT IDENTIFICATION

33		CHEMICAL,INHIBITOR,CORROSION, 2599 LB TOTE	0001010292	1000028629	NALCO CHEM	3DT198.61	HTR, HTG, JB, NAU
34	TOP EIGHT	CHEMICAL, CORROSION INHIBITOR, TOLYLTRIAZOLE, BULK	0001010372	1000048659	NALCO CHEM	3DT198.91	HTR, HTG, JB, NAU
35	TOP EIGHT	CHEMICAL,INHIBITOR,SCALE,2560 LB TOTE	0001008901	1000043336	NALCO CHEM	5200M.61	CA, HTR, HTG, JB
36		CHEMICAL,INHIBITOR,SCALE,BULK	0006002707	1000268062	NALCO CHEM	5200M.91	CA, HTR, HTG, JB
37		CHEMICAL,DEFOAMER,33 LB PAIL	0001010316	1000034212	NALCO CHEM	71D5 PLUS.11	CA, HTR, HTG, JB, GAD
38		CHEMICAL,DEFOAMER,386 LB DRUM	0001010315	1000034178	NALCO CHEM	71D5 PLUS.15	CA, HTR, HTG, JB, GAD
39		CHEMICAL,DEFOAMER,386 LB PORTAFEED MINI W/TRANSFER SERVICE	0002023956	1000136339	NALCO CHEM	71D5 PLUS.36 w/transfer service	CA, HTR, HTG, JB, GAD
40		CHEMICAL,DEFOAMER, 1892 LB TOTE	0006000857	1000234343	NALCO CHEM	71D5 PLUS.61	CA, HTR, HTG, JB, GAD
41		CHEMICAL,DEFOAMER, 1640 LB PORTAFEED JR W/ TRANSFER SERVICE	0006000827	1000233405	NALCO CHEM	7471.33 w/transfer service	NAU
42		CHEMICAL,POLYMER,ANIONIC,FLOCCULANT, 1720 LB PORTAFEED JR W/ TRANSFER SERVICE	0006800001	1000087079	NALCO CHEM	7766 PLUS.33 w/transfer service	NAU
43		CHEMICAL,POLYMER,ANIONIC,FLOCCULANT, 2253 LB TOTE	0006800002	1000175286	NALCO CHEM	7766 PLUS.61	NAU
44			0006800005	1000223039	NALCO CHEM	8108 PLUS.33 w/transfer service	NAU
45		CHEMICAL,POLYMER,ANIONIC,FLOCCULANT, 2295 LB TOTE	0006800006	1000223042	NALCO CHEM	8108 PLUS.61	NAU
46		CHEMICAL,POLYMER,ANIONIC,DRY,55 LB BAG	0006000818	1000233354	NALCO CHEM	8173 PULV 26A	HTR
47		CHEMICAL,DISPERSANT,INHIBITOR,SCALE,1711 LB PORTAFEED JR W/TRANSFER SERVICE	0009013105	1000220580	NALCO CHEM	8357.33 w/transfer service	NAU
48	TOP EIGHT	CHEMICAL,INHIBITOR,SCALE,BULK	0006090309	1000262992	NALCO CHEM	94DQ233.91	BLUNDEL
49		CHEMICAL,BIOCIDE,CHLORINE,BROMINE,2370 LB PORTAFEED JR	0001000845	1000193129	NALCO CHEM	960.33B	DJ, JB, NAU
50		CHEMICAL,DISPERSANT,SCALE,ANIONIC,40 LB PAIL	0006000850	1000234076	NALCO CHEM	BLR-3715.11	JB
51		CHEMICAL,DISPERSANT,SCALE,ANIONIC,454 LB DRUM	0001349449	1000195373	NALCO CHEM	BLR-3715.15	JB
52		CHEMICAL,CORROSION INHIBITOR,40 LB DRUM,	0006012005	1000269134	NALCO CHEM	C-4710.24	DJ, JB
53		CHEMICAL,INHIBITOR,TOLYLTRIAZOLE,2344 LB TOTE	0001170258	1000202790	NALCO CHEM	CUPROSTAT.61	JB, NAU
54		CHEMICAL,INHIBITOR,TOLYLTRIAZOLE, BULK	0009018002	1000217327	NALCO CHEM	CUPROSTAT.91	JB, NAU
55		CHEMICAL,INHIBITOR,CORROSION,COPPER,465 LB DRUM	0006000855	1000234341	NALCO CHEM	ELIMINOX.15	CA, DJ, GAD, WYK,
56		CHEMICAL,INHIBITOR,CORROSION,COPPER,465 LB PORTAFEED MINI W/ TRANSFER SERVICE	0001000841	1000193105	NALCO CHEM	ELIMINOX.36 w/ transfer service	CA, DJ, GAD, WYK,
57		CHEMICAL,INHIBITOR,CORROSION,COPPER,2258 LB TOTE	0006002719	1000267140	NALCO CHEM	ELIMINOX.61	CA, DJ, GAD, WYK,
58		CHEMICAL,SOLUTION,CORROSION,496 LB DRUM	0006000821	1000233358	NALCO CHEM	LCS 20.15	DJ, NAU
59		CHEMICAL,INHIBITOR,CORROSION,LIQUID,2498 LB TOTE	0008723976	1000218440	NALCO CHEM	LCS 20.61	DJ, NAU
60		CHEMICAL,CLEANER,RO,LIQUID,ALKALINE,40 LB PAIL	0006000859	1000234345	NALCO CHEM	PC 33.11	WYK
61		CHEMICAL,CLEANER,RO,LIQUID,ALKALINE,465 LB DRUM	0006000861	1000234347	NALCO CHEM	PC 33.15	WYK
62		CHEMICAL,CLEANER,RO,LIQUID,SURFACTANT,44 LB PAIL	0006000860	1000234346	NALCO CHEM	PC 67.11	WYK

Exhibit B.1 - Pricing
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63	CHEMICAL,CLEANER,RO,LIQUID,SURFACTANT,496 LB DRUM	0006000862	1000234348	NALCO CHEM	PC 67.15	WYK
64	CHEMICAL,BIocide,REVERSE OSMOSIS,51 LB PAIL	0001003546	1000040408	NALCO CHEM	PC-11.11	DJ, NAU, WYK
65	CHEMICAL,BIocide,REVERSE OSMOSIS, 500 LB DRUM	0006800007	1000223045	NALCO CHEM	PC-11.15	DJ, NAU, WYK
66	CHEMICAL,BIocide,REVERSE OSMOSIS, 500 LB PORTAFEEED MINI W/TRANSFER SERVICE	0001453104	1000270369	NALCO CHEM	PC-11.36 w/transfer service	DJ, NAU, WYK
67	CHEMICAL,BIocide,REVERSE OSMOSIS, 2701 LB TOTE	0006800009	1000223050	NALCO CHEM	PC-11.61	DJ, NAU, WYK
68	CHEMICAL,INHIBITOR,SCALE,MEMBRANE,549 LB DRUM	0001330590	1000276121	NALCO CHEM	PC-1850T.15	DJ,JB, WYK
69	CHEMICAL,INHIBITOR,SCALE,MEMBRANE, 624 LB DRUM	0006800010	1000223052	NALCO CHEM	PC-191T.15	CC, LS, NAU
70	CHEMICAL,INHIBITOR,SCALE,MEMBRANE,624 LB DRUM W/ TRANSFER SERVICE	0006800011	1000223056	NALCO CHEM	PC-191T.36 w/ transfer service	CC, LS, NAU
71	CHEMICAL,INHIBITOR,SCALE,MEMBRANE,3007 LB TOTE	0006002720	1000267141	NALCO CHEM	PC-191T.61	CC, LS, NAU
72	CHEMICAL,INHIBITOR,SCALE,MEMBRANE, 550 LB DRUM	0001160705	1000202550	NALCO CHEM	PC-195T.15	DJ, JB, WYK
73	CHEMICAL,CLEANER,MEMBRANE,551 LB DRUM	0006002721	1000267142	NALCO CHEM	PC-77.15	CC
74	CHEMICAL,CLEANER,MEMBRANE, 2460 LB TOTE	0006000823	1000233401	NALCO CHEM	PC-77.61	CC
75	CHEMICAL,CLEANER,MEMBRANE, 42 LB PAIL	0006003201	1000262281	NALCO CHEM	PC-98.11	CC, NAU
76	CHEMICAL,CLEANER,MEMBRANE, 2266 LB TOTE	0006000827	1000233405	NALCO CHEM	PC-98.61	CC, NAU
77	CHEMICAL,POLYMER,ANIONIC,EMULSION,465 LB DRUM	0001007559	1000025409	NALCO CHEM	POLEZ-2706.15	JB
78	CHEMICAL,POLYMER,ANIONIC,EMULSION,465 LB DRUM	0009013103	1000220569	NALCO CHEM	POLEZ-7736.15	JB
79	CHEMICAL,INHIBITOR,SCALE,ONCE THROUGH,BULK	0006000828	1000233406	NALCO CHEM	THR 404.91	DJ
80	CHEMICAL,INHIBITOR,CORROSION, 556 LB DRUM	0001005459	1000197168	NALCO CHEM	TRAC100.15	CA

CA = Carbon
CC = Carrant Creek
DJ = Dave Johnston
GAD = Gadsby
HTG = Huntington
HTR = Hunter
LS = Lakeside
JB = Jim Bridger
NAU = Naughton
WYK = Wyodak

Exhibit B.1 - Pricing
PRODUCT IDENTIFICATION

ICE (+3.0% ALL)

1. Pricing

- a) Nalco will maintain pricing firm for all chemical products through December 31, 2010 using the baseline price established in Exhibit B.1. Price changes will be adjusted only if the raw material cost of a particular product impacts the cost of a Nalco product by greater than 10%, either increase or decrease of the baseline price in Exhibit B.1.

Example 1: Nalco's product 3DT187.911 active component costs rise from the 2010 baseline price established in Exhibit B.1 from 1.0 to 1.15, a 15% increase by November 2010 (using average raw material costs during the time period of Aug-Oct 2010). This translates to a cost increase of \$0.03/lb. Then the price of 3DT187.91 would increase by \$0.03/lb from \$0.34/lb to \$0.37/lb for 2011. The baseline cost will remain the same for tracking purposes over the contract term, but the price paid will fluctuate in accordance with the above calculation. .

i.e.: If the cost driver (B.1) price index increases by \$1/pound, then PSO price goes up by \$.15/pound. The cost increase for 3DT187.91 (PSO portion only) would then be \$0.15/pound x 22% (22% located in B.1 RMCA data); pricing for THSP and OP04 (located in B.1 RMCA data) and cost drivers for this chemical did not change in this example.

Example 2: Nalco's product 8157.91 active component cost rise from 1.0 to 1.09, a 9% increase by November 2010 (using the average cost of Aug-Oct 2010). This translates to a cost increase of \$0.07/lb. Since the cost increase was less than 10% no price adjustment would apply. Since no price adjustment was taken in this example, the baseline cost will stay the same (Aug-Oct 2009 average) in order to determine price adjustment for 2012.

- b) Thereafter, Nalco and PacifiCorp will review pricing every twelve months for the top eight products (in total spend and volume) and adjust only if the raw material cost of an individual product increases/decreases beyond 10%.
- c) Price changes will be capped at the lesser of: i) 5% (increase/decrease) of the prior year's PacifiCorp aggregate spend or: ii) will not exceed \$150,000 total per year for all products.
- d) Price adjustments for all chemicals included in this agreement other than the top eight referenced above will be an average of the change of the top chemicals with the cap as specified and defined in 1c.
- e) Price changes will be limited to an annual adjustment (once per year).
- f) Nalco will provide 30 days written notification of any price adjustments.
- g) Nalco will include appropriate data justifying any raw material cost adjustment. If the raw material cost adjustment (RMCA) results in a higher price, then within the 30 days between notification and effective date, Nalco will meet with PacifiCorp management to review the RMCA and offer any applicable lower cost options. If Nalco fails to offer such a meeting, the RMCA will not apply until Nalco makes a reasonable effort to conduct such a meeting.
- h) As necessary to verify any price adjustments made pursuant to the contract, PacifiCorp will retain the right to audit Nalco's books and records at reasonable times and upon reasonable notice as necessary to verify any

pricing adjustments pursuant to the Contract. If it is determined by PacifiCorp that Nalco did not meet the adjustment obligation, Nalco will reimburse PacifiCorp for the cost of the audit.

- i) Exceptions to 1c: Pricing for analytical work (samples sent to Nalco laboratory for analysis), test kits, and solutions are not held firm and are subject to annual price increases.

2. Technology Commitment

- a) Nalco will provide 3D TRASAR 5500 control systems at no charge for each cooling tower in the PacifiCorp fleet that does not already own one.

3. Value-Add Credit (VAC)

- a) Nalco will provide additional incentive for the PacifiCorp plants in the form of a VAC account. This account will have \$140,000 credit for PacifiCorp that can be spent over the first 18 months of the contract on anything from consulting services for special projects to Nalco equipment purchases; i.e. :
 - a. Equipment installation work.
 - b. New developments include at-temperature ORP monitoring via NCSM (Nalco Corrosion Stress Monitor).
 - c. 3D- Trasar equipment installation
- b) At the end of the 18-month period, any unused credit in the account will be converted to chemical price discounts over the remaining 18 months of the contract.
- c) The PacifiCorp Generation Chemist (Gary Hoffman) will administer this item and coordinate requests from plant chemists.
- d) No future value added credits will apply for the remainder of the contract term.

4. Volume Discounts:

- a) A 3% discount for award of all PacifiCorp business or a 2.8% discount for all PacifiCorp business excluding Gadsby Plant.
- b) An additional 4% discount to PacifiCorp for supply to MidAmerican Energy Company and Cal Energy Generation Company (**or**)
- c) An additional 3% discount to PacifiCorp for supply to MidAmerican Energy Company only.

5. Transportation Costs:

Freight charges are pre-paid and added to each invoice based on Nalco's freight tables which are updated once per year each January based on average freight costs across North America. If freight costs are impacted significantly by higher diesel prices during the calendar year, Nalco may impose a fuel surcharge. Said fuel surcharge will be based on the United States Weekly On-Highway Diesel price set by the US Department of Energy (<http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp>).

Freight rates are based on \$2.75/gallon US #2 diesel fuel costs. A surcharge correction in the amount of 1% of Nalco's freight tables for every \$.06/gallon that fuel varies above or below \$2.75 per gallon will be added to or deducted from the freight rate.

6. Logistics:

- a) Package Goods: For Nalco chemical products delivered in packages (pails, bags, drums, totes, port-a-feed units, etc.) there is no minimum order quantity.
- b) Bulk: For Nalco chemical products shipped by bulk trailer, the minimum order quantity is 1000 gallons.
- c) Pricing does not include the cost for off-loading chemical from a drum, tote, or port-a-feed unit into a customer "base tank/tote". The added cost for this delivery service is \$0.10/lb.

7. Number of visits per month required by the technical representative:

Hunter Plant:	2 Site Visits per month
Huntington Plant:	2 Site Visits per month
Carbon Plant:	2 Site Visits per month
Currant Creek Plant	1 Site Visits per month
Lake Side Plant	2 Site Visits per month
Gadsby Plant	2 Site Visits per month
Naughton Plant	2 Site Visits per month
Jim Bridger Plant	2 Site Visits per month
Dave Johnston Plant	2 Site Visits per month
Wyodak Plant	1 Site Visits per quarter
Blundell Plant	1 Site Visits per quarter

Service frequency can be increased or decreased based on the requirements of each plant.

If it is mutually-agreed that the total number of site visits can be decreased, PacifiCorp and Nalco will mutually agree on a method to offset the decreased total service cost either through additional visits to alternate locations or as a reduction to chemical pricing.

Note that Nalco will provide additional service on an “as needed” basis for emergency or special project situations. If the need for additional service is expected to be long-term, a daily rate of \$1,200 per day will be invoiced.



2009 TEST & PRICE LIST

Global Analytical Resources - Naperville, IL

HOW TO CONTACT US:

Naperville Analytical Help Desk : 630-305-2315

Voicemail is monitored throughout the day. All calls will be returned.

Choose one of the following voice-mailbox options:

- | | |
|--------------------------------------|----------------------------------|
| 1. Water (x1872) | 2. Deposit or Metallurgy (x2312) |
| 3. Microbiology & Legionella (x2543) | 4. Billing and Reports (x2013) |
| 5. Technical Resource Center (x2436) | 6. Coupon (x1581) |

SEND SAMPLES VIA FEDEX TO:

Nalco Company
Attn: Sample Receiving
1601 W. Diehl Rd
Naperville, IL 60563

E-MAIL: AnalyticalLabNaperville@nalco.com

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INTRODUCTION

Each test is assigned a cost and a price that is valid through December 31, 2009.

District Cost is the amount the district will be charged for the analytical.

Customer Price is the amount we will charge the customer when the submitter instructs us to do so.

To charge a BA, Service Order or PO# please include on the label:

- 1) The BA, Service Order number or the customer issued PO number.
- 2) Customer Sold To and Ship To numbers (even if the numbers are the same).

Requesting Rush Analyses:

- 1) All rush requests **MUST** be called into the Analytical Help Desk Voicemail 630-305-2013.
(Note: There are no Rushes for Microbiological Analysis)
- 2) Please make sure you leave the following information on the voice-mailbox.
 - * Customer name and location (or Sold To Number).
 - * Tests you need performed and when you need the results by.
 - * When will the sample be arriving at the lab.
 - * Your name and how to best contact you.
- 3) We will return your call.
- 4) If a rush can be completed, a surcharge for rush samples will be assessed.
- 5) Please contact the lab before quoting for a rush on other analysis a surcharge may be applied.
- 6) Rush requests less than 5 days for Water testing will require District Manager approval.

ALL COSTS AND PRICES INCLUDE FED-EX SHIPPING CHARGES IF A NALCO EQUIPMENT MAILER IS USED.



Knowledge Management Database:

Server/Path: NNVAAPP01/NV/US/Nalco

Our information is located on the Analytical Tab, under North America

(Online copy of the Test List, Useful Forms, Ready Label Set-Up, Interpretation Guides etc.)

2009 Naperville Analytical Test and Price List - Deposit

Deposit Testing

TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Use Sample Shipper Whirl-Pak™ 500-P0214.88 for dry samples and 500-P0224.88 for wet samples)
DEPOSIT ANALYSIS NOTE: Deposit analysis requires 2 grams of dry sample for full testing. Less sample may result in either qualitative results or more expensive tests.	DEP	\$165	\$330	The DEP test code is used with solid deposits. The analysis reports the concentration of elements in weight percent as an oxide for elements from fluorine to uranium present at concentrations greater than 0.5%. In addition, x-ray diffraction is used to determine the crystalline compounds present. When possible, the diffraction results will be semiquantitative. Three gravimetric tests are included: loss at 925°C, % CO ₂ , and % dichloromethane extractables. Additional analyses will be completed as necessary to fully characterize the deposit (for example: FTIR, CHNS, etc) at no additional charge.

Individual Deposit Tests

TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Use Sample Shipper Whirl-Pak™ 500-P0214.88 for dry samples and 500-P0224.88 for wet samples)
Carbon, Hydrogen, Nitrogen, and Sulfur	CHNS	\$40	\$80	Carbon, Hydrogen, Nitrogen, and Sulfur content of solid and liquid samples.
Infrared analysis of organics	IRD_DEP	\$100	\$200	Infrared analysis of the deposit. Determines the functional groups that are present in the sample (predominantly organics).
Loss at 105°C	L105	\$20	\$40	Loss at 105°C performed on sample as received. Removes water from the sample.
Heating value, as received	BTU	\$53	\$106	Requires minimum 5 ml. ASTM D-240 and D-2015.
Heating value, dry basis	BTUDRY	\$57	\$114	Requires minimum 5 grams. ASTM D-240 and D-2015.

Microscopy

Test	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Use Sample Shipper Whirl-Pak™ 500-P0214.88) Call or email dcloud@nalco.com for rush requests in advance for approval
Light Microscope	LM	\$150	\$300	Light microscope analysis, primarily used for examination of fibrous matter in deposits.
Scanning Electron Microscope	SEM	\$350	\$700	Scanning Electron Microscopy - Imaging and/or semi-quantitative chemical analysis of solids and/or surfaces using scanning electron microscopy and energy dispersive spectroscopy.
Microscopy Problem Solving	SEM_CAUSE	\$1,000	\$2,000	Cause Analysis Microscopy - More project orientated analyses which require significantly more than two hours to complete. Consultation with SEM lab personnel would make this determination. A memo or email would be required, which describes the problem and/or specific information needed.

2009 Naperville Analytical Test and Price List - Fuel Testing

Fuel Testing				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Use Sample Shipper 500-P0274.88)
Fuel Oil Analysis	FOA	\$128	\$256	24 Metals by ICP, plus percent Sulfur and calculated ash. Requires a minimum of 60mls of sample. ASTM D5185, ASTM D1552
Pour Point	POR	\$175	\$350	Lowest temperature at which a fuel will still pour. Requires a minimum of 100mls of sample. ASTM D97
Gravity of Fuel Oil	API	\$11	\$22	Requires a minimum of 400mls of sample. ASTM D287
Heating Value as Received	BTU	\$210	\$420	Requires a minimum of 300mls of sample. Reported as per lb.
Water & Sediment	BS&W	\$56	\$112	Requires a minimum of 200mls of sample. Specifically for samples containing <u>only trace amounts</u> . Maximum range for this test is <0.2% water and sediment <u>combined</u> . Cannot be performed on No. 6 Fuel Oils. ASTM D2709
Water by Karl Fischer	KARL	\$5	\$10	Requires a minimum of 10mls of sample. Percent water is determined by titration. This test should be used when there is >0.2% of water present. ASTM D1744
Gravimetric Solids	SS_OIL	\$15	\$30	Requires a minimum of 10mls of sample. This test should be used when there is >0.2% of sediment present. Sample matrix must be able to pass through filter paper for this analysis.
Viscosity @ 40°C	VISCOSITY	\$4	\$8	Requires a minimum of 2mls of sample. ASTM D445
Asphaltenes	ASPHX	\$58	\$116	Thermal stability. Percentage based on the tendency to produce asphaltenes at high temperatures. Requires a minimum of 120mls of sample. ASTM D6468
Flash Point	FLP	\$52	\$104	Lowest temperature at which the vapors of a combustible liquid will ignite momentarily in air. Requires a minimum of 200mls of sample. ASTM D93

NOTES: Please pay special attention to the minimum sample amounts for testing as many values have changed. All Fuel Oil samples will receive a \$40 handling fee in addition to the charge for testing. Additional testing is available. Please contact the Naperville Analytical Help Desk at 630-305-2315 for details on additional testing and pricing.

SHIPPING: ALL Fuel Oil samples MUST be shipped with an MSDS. This is a US DOT requirement!! Unless shipping in bulk quantities, a hazardous shipper is NOT required. Non-bulk Fuel Oils may be shipped as a combustible liquid when shipped DOMESTICALLY, BY LAND ONLY. When shipped as non-bulk combustible, samples are considered non-hazardous, but still require the inclusion of an MSDS. Violating this shipping procedure is a breach of Federal Law!!

ION Exchange Resin Analysis				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Sample Shipper 500-P0211.88 OR 500-P0260.88 [plastic bottle only] - Use Form 74 see back of form for sampling requirements)
Ion Exchange Resin Analysis	ANI	\$220	\$440	Strong Base Anion Resin Analysis – Includes total exchange capacity, percent of original capacity, salt splitting capacity, microscopic bead examination, color photograph, contaminants determined by X-ray fluorescence, plus comments and recommendations.
	CAT	\$220	\$440	Strong Acid Cation Resin Analysis - Includes total exchange capacity, percent of original capacity, water retention capacity, microscopic bead examination, color photograph, contaminants determined by X-ray fluorescence, plus comments and recommendations.
	WAC	\$220	\$440	Weak Acid Cation Resin Analysis – Includes total exchange capacity, percent of original capacity, microscopic bead examination, color photograph, contaminants determined by X-ray fluorescence, plus comments and recommendations.
	WBA	\$220	\$440	Weak Base Anion Analysis - Includes total exchange capacity, percent of original operating capacity, microscopic bead examination, color photograph, contaminants determined by X-ray fluorescence, plus comments and recommendations.
	MB	\$440	\$880	This code covers both mixed beds (strong acid cation/strong base anion resin mixtures) and layered beds (either strong acid/weak acid cation resin mixtures or strong base/weak base anion resin mixtures). Mixed bed analyses include strong acid cation and strong base anion resin analyses, as described above (CAT + ANI), plus percentages of each resin and comments on ease of separation. Layered beds analyses include the appropriate strong and weak analyses, as described above (CAT + WAC or ANI + WBA), plus percentages of each resin and comments on ease of separation.

Reverse Osmosis Membranes				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (See Analytical Lab Resources Database in Notes for shipping information and forms)
Complete Autopsy	MEMBRANE	\$1,500	\$1,850	Destructive analysis of an RO membrane to determine the nature of the fouling and to recommend a cleaning program. Analytical tests include chemical analysis of the deposition on the membrane surface (including x-ray fluorescence, x-ray diffraction and infrared spectroscopy), deposit density, microbiological analysis, the physical condition of the membrane (including both digital photographs and the Fujiwara Test plus a dye test for membrane integrity) and the results of different cleaning studies performed on the fouled membrane.
Fouling Autopsy	ROF	\$1,000	\$1,350	Destructive analysis of an RO membrane to determine the nature of the fouling. Analytical tests include chemical analysis of the deposition of the membrane surface (including x-ray fluorescence, x-ray diffraction and infrared spectroscopy), deposit density, microbiological analysis, the physical condition of the membrane (including digital photographs and only a Fujiwara Test). There will not be any cleaning studies performed, no dye test for membrane integrity, nor will any cleaning recommendations be made.
Membrane Deposit	ROD	\$480	\$810	The membrane will be sampled in the field and samples collected of deposit and microbiological analyses. Analytical test include chemical analysis of the deposit (including x-ray fluorescence, x-ray diffraction and infrared spectroscopy) along with a microbiological analysis. An integrated report with the deposit and microbiological analysis will be issued. There will not be any cleaning studies performed, no Fujiwara Test, no dye test for membrane integrity, nor will any cleaning recommendations be made. Use Sample Shipper Whirl Pak™ 500-P0214.88 for dry deposit samples and 500-P0224.88 for wet deposit samples. Use 500-P0228.88 Water Microbio Shipper or 420-C0243.88 (surface microbio) for the microbiological sampling.

Analex Cartridge Analysis				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Use Sample Shipper as noted below)
Anionic	OHX	\$100	\$200	Reports average anion contaminants exchanged by the resin during service. Lab requires flow (mL/min) and time in service (days/hours/minutes). See Product Bulletin FS4641 for instructions. Sample Shipper 500-P4641.88
Cationic	NLX	\$100	\$200	Reports average cation contaminants exchanged by the resin during service. Lab requires flow (mL/min) and time in service (days/hours/minutes). See Product Bulletin FS4641 for instructions. Sample Shipper 500-P4640.88 or 500-P4642.88

Coupon Analysis				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS
Corrosion Coupon Analysis	COUPONS	\$6	\$20	Reports weight loss (mg), corrosion rate as mils (thousandths of an inch) per year, and corrosion type (localized or general). Pit depth is measured for localized corrosion. A completed corrosion coupon Form 346 (coupon card) must be included.
Additional Coupon Requests				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS
Deposit	DEP	\$165	\$330	To obtain a deposit analysis on the material covering the coupon, add test code DEP on the "Remarks" line of the coupon card, or on separate form 323A. Deposit results may be qualitative due to limited sample on coupons for analysis.
Single Photo	1PHOTO	\$10	\$20	A digital image of the coupon surface after cleaning. Add "1 photo" to remarks line on card.
Two Photo	2PHOTO	\$20	\$40	Digital images of the coupon surface before and after cleaning. Add "2 photo" to remarks line on card.
Metallurgy				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS
Deposit Weight Determination	DWD	\$120	\$240	Reports the amount of material present (transported deposits, scale, and formed in place oxides) on the hot and cold side internal surfaces of boiler tubes using the NACE standard test method TM0199-99 (bead blasting). The following are also included: wall thickness measurements before and after cleaning, the deepest measured pit (if any) following cleaning, and digital images of the surfaces before and after cleaning. Include the test code DEP if analysis of the deposits are also needed. If insufficient material is present for a complete deposit analysis, then the chemical analysis of the deposits will be performed by scanning electron microscopy.
Formal Metallographic Analysis	MET	\$2,200	\$2,500	A formal metallographic report typically determines the root cause of failure of a component. In the absence of a failure it is used for condition assessment of the component. The report documents the appearance of the as-received sample and microscopic observations in detail that includes digital images of key features. A conclusion is made based on careful consideration of the body of evidence obtained from visual and microstructural observations, analytical tests, chemical spot tests, background information provided on the sample, and an in-depth knowledge of the systems treated by Nalco. Remedial actions are provided where possible. The sample must include a completed Form 655 (The Metallographic Analysis Data Sheet) to provide background information on the sample. A Label Form 323A is also needed. Note that some samples may require additional analytical testing, even if not specifically requested, to determine the root cause of failure.
Consulting Services	None	\$135 / hr	\$270 / hr	Metallurgists are available for various consulting services regarding metallurgical and corrosion issues. Some examples of consulting services include onsite inspection of equipment and troubleshooting, technical presentations, and phone and email responses to involved questions. Contact the Metallurgy Lab with requests.

Pulp and Paper Deposit Analysis

TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Use Sample Shipper Whirl-Pak™ 500-P0214.88 for Dry Samples and Shipper 500-P0224.88 for wet Samples)
Pulp & Paper Deposit Analysis	IRA	\$250	\$500	Infrared Analysis. Use this code for special requests involving infrared spectral analysis, such as paper sheet defect analysis. Infrared tests will be performed based on the nature of the sample and the type of information requested. Include Form 619 and Label Form 323A.
	IRA EXTENDED	\$330	\$660	Extended Infrared Analysis: the same tests as IRA (above) using a new report style with a cover page, description of sample section, description of analysis section, and conclusion section. Also, embedded photos and IR spectra will be included where appropriate.
	PPD	\$330	\$660	Pulp & Paper Deposit analysis. Includes loss at 105°C, loss at 925°C, CO2 analysis, dichloromethane extractables and an Infrared analysis on the extractables plus inorganic analysis by XRF of the 925°C ashed sample. Include Form 619 and Label Form 323A.
	PPD EXTENDED	\$450	\$900	Extended Pulp and Paper Deposit analysis: the same tests as PPD (above) using a new report style with a cover page, description of sample section, description of analysis section, and conclusion section. Also, embedded photos and IR spectra will be included where appropriate.

Press Fabric

TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS
Press Fabric Analysis	PFAL	\$530	\$1,060	Paper Press Fabric Analysis. Characterizes the condition of a press fabric sample. Includes elemental analysis of the ash, % organic extractables, % non-extractable solids, and % filled. An infrared analysis is performed on the organic extractables and reported. The non-extractable solids will be tested for the % alkaline solubles, % acid solubles, % paper fines, and % ash. Include Form 619 and Label Form 323A. A typical press fabric sample is 2-foot by 2-foot square and taken from the center of the press fabric. The sample should be free of excessive water and wrapped in plastic.
	PFALIT	\$180	\$360	A less comprehensive version of PFAL (above). Includes elemental analysis of the ash, % organic extractables, % non-extractable solids, and % filled. The % ash is determined on the non-extractable portions. Include Form 619 and Label Form 323A.
	PFAL_CLEAN	\$150	\$300	A press fabric cleaning study conducted using press fabric cleaning chemicals. This may be used to demonstrate the effectiveness of a current chemical program or to help select a product for new business. The cost quoted is for 2 tests (2 chemicals @ 1 concentration or 1 chemical @ 2 concentrations). Additional tests are \$25 each.

Individual Tests - Pulp and Paper / Press Fabric Analysis

TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS
Acid/Ether Extraction	ETH	\$145	\$290	Acid/Ether extraction of pulp and paper deposit. Performed as an optional test in conjunction with pulp and paper deposit analysis (PPD). Used to help quantify wood pitch or size content of deposits. Performed by request or at the discretion of the analyst. Include Form 619 and Label Form 323A. Use Whirl-Pak™ Bag 500-P0214.88.
Reference Sample for IR Analysis	IRD_REF	\$60	\$120	This code should be added when a reference or suspect material is included along with the sample. The report will compare the spectrum obtained from the sample and the reference(s).
Physical Analysis of a Press Fabric	PFAL-PHYS	\$190	\$380	Physical analysis of a press fabric sample. Includes the permeability, caliper and basis weight of cross section of the press fabric. The data is presented in graphic form. Include Form 619 and Label Form 323A. A 12-inch section of press fabric in the entire machine cross-direction is required for this analysis.
Damage Analysis	PIMAGE	\$190	\$380	Used to identify chemical and/or mechanical damage to the press fabric. Low magnification images of press fabric surfaces and high magnification images of individual press fabric fibers will be included in a memo explaining results. Include Form 619 and Label Form 323A. Minimum sample size is a 6-inch by 6-inch section of press fabric.

2009 Naperville Analytical Test and Price List - Investment Casting

Investment Casting Analysis				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Sample Shipper 500-P0211.88 OR 500-P0260.88 Plastic Bottle Only)
Slurry Tests	INV_CAST	\$50	\$100	Characterizes the properties of a investment casting slurry. The analysis determines the percent polymer in the slurry and the percent polymer in the binder. In addition, the specific gravity, pH, and conductivity of the supernate are reported.
Individual Tests - Investment Casting				
TEST	TEST CODE	DISTRICT COST	CUSTOMER PRICE	COMMENTS (Sample Shipper 500-P0211.88 OR 500-P0260.88 Plastic Bottle Only)
Microbiological Testing	BIO	\$64	\$130	Characterizes the colony forming units of aerobic, anaerobic, and fungi present in the slurry. Note this is actually a suite of tests from the BIO test list chosen for investment casting slurries. Requesting "Bio" on the label will automatically include the BIO lab tests: AEROBIC, ANEROBIC, and FUNGI.
% Fiber in Slurry	SLURRYFIBE	\$15	\$30	This optional test will quantify the percent fibers in the received slurry.

WATER TEST Packages										
INDIVIDUAL TEST	SRC	RC	METRO_WAT	Makeup	Recirc	RO	BLR	STEAM	WASTEWAT	GRAIN
	Shortened Routine Monitoring	Routine System Monitoring	Metro Water-Basic Makeup Water Analysis for City Waters	Data required by Optimizer Program	Comprehensive Monitoring for Cooling Water	Reverse Osmosis System	Boiler Systems	Hipurity	Waste Water	Ethanol industry. Samples are stillage and steepwater.
pH		X	X	X	X	X	X		X	
CON	X	X	X	X	X	X	X	X	X	
CON-N							X			
Alkalinity		X	X	X	X	X	X		X	
ICP Metals-Total	X	X			X	X	X		X	X
ICP Metals-Filtered	X	X	X	X	X		X			
IC Anions (Filtered)	X	X		X	X	X	X			X
Suspended Solids									X	
Total Filtered Solids						X				
H2S-W									X	
True Color						X				
Turbidity					X					
Fluoride							X			
Molybdate Reactive Silica							X			
Trace Metals Total						Al, Ba, Mn, Sr		X		
Trace Anions (Total)								X		
TOC						X			X	X
COD-F(Filtered)									X	
Kjeldahl									X	
Oil and Grease									X	
5-Day BOD									X	
Ammonia				X						
Organic Acids									X	
Orthophosphate (Total)			X		X	X				
Orthophosphate (Filtered)				X	X					
Inorganic Phosphate (Total)			X							
Inorganic Phosphate (Filtered)										
Total Phosphate- (Total)			X		X	X				
Total Phosphate (Filtered)				X	X					

Test Packages are designed to provide a convenient group of tests. We do encourage requesting individual tests, that meet the situation, thus avoiding excess costs and wasted information. For example if all you need is soluble metals and suspended solids, request ICP_F and SS.

WATER ANALYSIS - TEST PACKAGES																																		
SPECIAL TEST PACKAGES	ANALYSES	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS																												
Shortened Version of Basic Metals, Anions and Wet Chemistry	Total and soluble metals (includes hardness & silica), chloride, nitrate, nitrite, sulfate, bromide, conductivity	SRC	\$116	\$300	P0211 or plastic bottle P0260 (500 mL)	ICP and ICP-F for 21 metals, IC anions, P/M/O alkalinity, unneutralized conductivity.																												
Basic Metals, Anions and Wet Chemistry	Total and soluble metals (includes hardness & silica), chloride, nitrate, nitrite, sulfate, bromide, alkalinity, pH, conductivity	RC	\$133	\$350	P0211 or plastic bottle P0260 (500 mL)	ICP and ICP-F for 21 metals, IC anions, P/M/O alkalinity, unneutralized conductivity.																												
Make-Up/Raw Water	Soluble metals (includes hardness & silica), chloride, sulfate, nitrate, nitrite, bromide, alkalinity, pH, conductivity, soluble orthophosphate, soluble total phosphate, ammonia.	MAKEUP	\$150	\$550	P0211 or plastic bottle P0260 (500 mL)	Determines 21 ICP-F 0.45 micron filtered metals, IC anions, P/M/O alkalinity ALK, pH, unneutralized CON, 0.45 filtered orthoPO4 and Total PO4, NH3-W ammonia and SS solids. Suitable for 3DTRASAR Optimizer.																												
Recirculating Cooling Water	Total & soluble metals (includes hardness & silica), chloride, sulfate, nitrate, nitrite, bromide, alkalinity, pH, conductivity, total & soluble phosphates (total, ortho), turbidity	RECIRC	\$205	\$590	P0211 or plastic bottle P0260 (500 mL)	Determines 21 ICP metals, 21 ICP-F 0.45 micron filtered metals, IC anions, P/M/O alkalinity ALK, pH, unneutralized CON, total and soluble ortho and total phosphate, TUR turbidity in NTU units.																												
Reverse Osmosis Membrane Water	Total metals (includes hardness & silica), low level Al, Ba, Fe, Mn and Sr metals, chloride, nitrate, nitrite, sulfate, bromide, alkalinity, pH, conductivity, fluoride, total dissolved solids, TOC, True Color, Total and Ortho PO4	RO	\$186	\$400	one P0211 & one P0243 (500 mL + 4 oz)	Determines 21 ICP metals, including Al, Ba, Fe, Mn and Sr at ppb low levels if the conductivity of the sample is less than 300umhos, IC anions, ALK, pH, unneutralized CON, FLUORIDE by ion selective electrode, TDS, True Color, and non-purgable organic carbon. Total and Ortho PO4. Always send one 500 ml and one trace bottle.																												
Boiler Water	Total and soluble metals (includes hardness & silica), chloride, nitrate, nitrite, sulfate, bromide, alkalinity, pH, neutralized conductivity, soluble silica, colloidal silica	BLR	\$150	\$300	P0211 or plastic bottle P0260 (500 mL)	Determines 21 ICP metals, 21 ICP-F 0.45 micron filtered metals, IC anions, ALK, pH, neutralized conductivity, SIMO molybdate reactive soluble silica and SICOL colloidal silica. To obtain suspended solids, send a separate sample bottle and request test code SS.																												
Steam	Test package for typical steam purity components. Includes ICP-Steam & Trace Anions.	STEAM	\$93	\$220	P0243 or P4369 (4 oz)	<table border="0"> <tr> <td><u>Elc</u></td> <td><u>RI</u></td> <td><u>Elc</u></td> <td><u>RI</u></td> </tr> <tr> <td>Ca</td> <td>5</td> <td>Na</td> <td>5</td> </tr> <tr> <td>Cl</td> <td>5</td> <td>NO₃</td> <td>5</td> </tr> <tr> <td>Cu</td> <td>2</td> <td>Si</td> <td>5</td> </tr> <tr> <td>Fe</td> <td>5</td> <td>SiO₂</td> <td><17</td> </tr> <tr> <td>K</td> <td>40</td> <td>SO₄</td> <td>5</td> </tr> <tr> <td>Mg</td> <td>1</td> <td></td> <td></td> </tr> </table> <p style="text-align: right;">RI in µg/L</p>	<u>Elc</u>	<u>RI</u>	<u>Elc</u>	<u>RI</u>	Ca	5	Na	5	Cl	5	NO ₃	5	Cu	2	Si	5	Fe	5	SiO ₂	<17	K	40	SO ₄	5	Mg	1		
<u>Elc</u>	<u>RI</u>	<u>Elc</u>	<u>RI</u>																															
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Fe	5	SiO ₂	<17																															
K	40	SO ₄	5																															
Mg	1																																	
Pulp and Paper Machine Waters	Total & soluble metals (includes hardness and silica), chloride, nitrate, nitrite, sulfate, bromide, alkalinity, pH, unneutralized conductivity, suspended solids, soluble organic carbon, filtered chemical oxygen demand, total dissolved solids	PPMC	\$254	\$550	must send two P0211 bottles (1 liter) OR 2 P0260 Bottles	Determines 21 ICP metals, 21 ICP_F 0.45 micron filtered metals, IC anions, ALK, pH, CON, SS suspended solids, non-purgable filtered organic carbon, COD-F filtered chemical oxygen demand by dichromate reflux @150C, TDS-W total dissolved solids.																												
Wastewater	Total metals, SOC, BOD5, alkalinity, pH, suspended solids, COD, oil & grease, Kjeldahl nitrogen, sulfide, organic acids	WASTEWAT	\$300	\$660	must send two P0260 plastic bottles and one 950ml/32 oz glass bottle (2 liters)	Determines 21 ICP metals, filtered non-purgable organic carbon, 5 day biological oxygen demand, chemical oxygen demand by dichromate reflux @ 150C, nitrogen content from organics and ammonia, EPA 1664 total oil and grease (hydrocarbons + animal oil + vegetable oil), SS, hydrogen sulfide, ORANEW acetic, butanoic & propionic acids by gas chromatography, P/M/O alkalinity, pH.																												

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2009 Naperville Analytical Test and Price List - Water Test Packages

WATER ANALYSIS - TEST PACKAGES																																																														
SPECIAL TEST PACKAGES	ANALYSES	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS																																																								
Contaminant Identification	Organic analysis of water samples for issues involving foaming, hydrocarbons, odor, solvents or any other issues involving unknown organic contamination.	CONT	variable cost \$380 minimum	variable price \$760 minimum	P0211 or plastic bottle P0260 (500 ml)	Custom analysis to identify trace levels of organics by gas chromatography with mass spectrometry, infrared spectroscopy or other advanced analytical techniques. Contact the Naperville Water Lab Help Desk @ ext. 1872 for appropriate testing and cost estimate.																																																								
CONEG- Heavy Metals	Metals required for CONEG (Confederation of North Eastern Governors) legislation	CONEG_PLNT	\$90	\$180	P0211 or plastic bottle P0260 (500 ML)	Determines 21 ICP metals plus Mercury in water or product samples, designed to satisfy CONEG requirements for products used in packaging.																																																								
EPA, RCRA and NPDES Permit Testing	All water analysis can be tested by EPA certified methods by our outside EPA certified laboratory, First Environmental Laboratories, Inc. First Environmental also offers certified RCRA analyses and NPDES permit testing	EPA	variable cost	variable price	may require special containers depending upon analysis	Contact the Naperville Water Lab Help Desk @ ext. 1872 to arrange for EPA testing for price quotes.																																																								
Nalco Product Concentration in Water Testing	Concentration of certain products can be calculated from other measured parameters (molybdate content, active polymer test, etc.)	PRODUCT	variable cost	variable price	P0211 or plastic bottle P0260 (500 mL)	Always specify product name on the sample label. Product concentration determination is offered on the following Nalco products: 1306W, 2536, 2807T, 7357, 7396, 7399, 8325, 8328, and 8337. This test is not for determining product content by Trasar - see TRASAR test codes.																																																								
Tall Oil Residual Testing	Tall Oil (Resin Acids and Fatty Acid) content of Black Liquor	TALL_OIL	\$400	\$800	P0211 or Plastic Bottle P0260 (500 mL)	Refer to Tall Oil Sampling Procedure located on the Analytical KM Homepage. The overall liquor solids must be at 5% for the analysis to be performed. Note, the analysis can't be performed if the sample contains insoluble soap.																																																								
Grain	Total Metals, chloride, nitrate, nitrite, sulfate, bromide, conductivity, and TOC	GRAIN	\$150	\$382	P0211 or Plastic Bottle P0260 (500 mL)	Stillage and Steepwater analysis. Determines 21 ICP metals, IC anions, non-purgable organic carbon, and conductivity.																																																								
Anions	chloride, nitrate, nitrite, sulfate, and bromide,	IC	\$50	\$126	P0211 or plastic bottle P0260 (500 mL)	Typical reporting limits are 0.2 mg/L - 2.0 mg/L as the anion by Ion Chromatography depending upon conductivity. Reporting limit for brine samples will be higher. Includes conductivity.																																																								
Trace Anions	Trace levels of chloride, fluoride, nitrate, sulfate and orthophosphate by ion chromatography	IC-TRACE	\$55	\$150	P0243 (4 oz)	Reporting limits are 5 ug/L (ppb) or less as the anion. For high purity waters sampled in P0243 (EE-bottles) only. Send two bottles if also requesting trace metals ICP-L. Maximum recommended sample conductivity for IC-TRACE is 20 microSiemens. Includes conductivity.																																																								
Total Metals	Determines metals concentration by ICP	ICP	\$31	\$82	P0211 or plastic bottle P0260 (500 mL)	<table border="0"> <thead> <tr> <th>Ele</th> <th>RL</th> <th>Ele</th> <th>RL</th> <th>Ele</th> <th>RL</th> <th>Ele</th> <th>RL</th> </tr> </thead> <tbody> <tr> <td>AL</td> <td>0.1</td> <td>Cu</td> <td>0.05</td> <td>Mn</td> <td>0.05</td> <td>Pb</td> <td>0.1</td> </tr> <tr> <td>B</td> <td>0.1</td> <td>Fe</td> <td>0.05</td> <td>Mo</td> <td>0.1</td> <td>Si</td> <td>0.1</td> </tr> <tr> <td>Ba</td> <td>0.05</td> <td>K</td> <td>0.1</td> <td>Na</td> <td>0.1</td> <td>Sr</td> <td>0.05</td> </tr> <tr> <td>Ca</td> <td>0.1</td> <td>Li</td> <td>0.05</td> <td>Ni</td> <td>0.05</td> <td>V</td> <td>0.1</td> </tr> <tr> <td>Cd</td> <td>0.05</td> <td>Mg</td> <td>0.1</td> <td>P</td> <td>0.1</td> <td>Zn</td> <td>0.05</td> </tr> <tr> <td>Cr</td> <td>0.05</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>RL in mg/L</td> </tr> </tbody> </table>	Ele	RL	Ele	RL	Ele	RL	Ele	RL	AL	0.1	Cu	0.05	Mn	0.05	Pb	0.1	B	0.1	Fe	0.05	Mo	0.1	Si	0.1	Ba	0.05	K	0.1	Na	0.1	Sr	0.05	Ca	0.1	Li	0.05	Ni	0.05	V	0.1	Cd	0.05	Mg	0.1	P	0.1	Zn	0.05	Cr	0.05						RL in mg/L
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Cr	0.05						RL in mg/L																																																							
Soluble Metals Samples filtered thru .45 micron filter	ICP-F	\$35	\$92																																																											
Trace Metals	barium, calcium, chromium, copper, iron, lead, magnesium, manganese, molybdenum, nickel, sodium, silica and zinc	ICP-L	\$38	\$82	P0243 (4 oz)	<table border="0"> <thead> <tr> <th>Ele</th> <th>RL</th> <th>Ele</th> <th>RL</th> <th>Ele</th> <th>RL</th> </tr> </thead> <tbody> <tr> <td>Ba</td> <td>1</td> <td>K</td> <td>40</td> <td>Ni</td> <td>5</td> </tr> <tr> <td>Ca</td> <td>5</td> <td>Mg</td> <td>1</td> <td>Pb</td> <td>15</td> </tr> <tr> <td>Cr</td> <td>2</td> <td>Mn</td> <td>1</td> <td>SiO2</td> <td>17</td> </tr> <tr> <td>Cu</td> <td>2</td> <td>Mo</td> <td>5</td> <td>Si</td> <td>8</td> </tr> <tr> <td>Fe</td> <td>5</td> <td>Na</td> <td>5</td> <td>Zn</td> <td>5</td> </tr> </tbody> </table> <p>RL in ug/L</p>	Ele	RL	Ele	RL	Ele	RL	Ba	1	K	40	Ni	5	Ca	5	Mg	1	Pb	15	Cr	2	Mn	1	SiO2	17	Cu	2	Mo	5	Si	8	Fe	5	Na	5	Zn	5																				
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2009 Naperville Analytical Test and Price List - Water Test Packages

WATER ANALYSIS - TEST PACKAGES						
SPECIAL TEST PACKAGES	ANALYSES	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Specialty Metals	Any metals not in the ICP test code- ie, antimony, arsenic, beryllium, cobalt, mercury, scandium, selenium, silver, sulfur, tin, titanium, zirconium or any standard metal with different reporting limit requirements	ICP-S	variable cost \$15 digestion fee + \$10 per metal	variable price \$30 digestion fee + \$20 per metal	P0211 or plastic bottle P0260 (500 mL)	Select desired metal(s) and specify on sample label. ICP methods used for all, except mercury. Also specify if sample should be filtered for soluble metals, otherwise total/unfiltered will be run. Specify reporting limit requirements.
Trace Specialty Metals	For trace levels of any specialty metal not in ICP-L or any standard metal with different reporting limit requirements	ICP-SL	variable cost \$15 digestion fee + \$10 per metal	variable price \$30 digestion fee + \$20 per metal	P0243 (4 oz)	Select desired metal(s) and specify on sample label. Also specify detection limit requirements. Trace metal detection limits are generally ICP methods used for all, except mercury. Trace analysis are only run on samples with less than 300 umhos dissolved solids conductivity.
Metro Water	Anions (chloride, sulfate, nitrate, nitrite and bromide), ICP metals (Ca, Mg, etc), alkalinity and ortho, inorganic,poly, organo and total phosphates	METRO_WAT	\$140	\$310	P0211 or plastic bottle P0260 (500 mL)	Basic water testing for city waters.

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TRASAR ANALYSIS

BACKGROUND ANALYSIS	REPORTING LIMIT	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Background Fluorescence for TRASAR 1 using Xenon Instrument	0.80%	TRA	\$40	\$112	P0211 or plastic bottle P0260	Used for Boiler Systems.
Background Fluorescence for TRASAR 2 using TRASAR 3000 Instrument	0.60%	TRA3000	\$40	\$112	P0211 or plastic bottle P0260	Used for Cooling Towers.
Background Fluorescence for TRASAR 3 using TRASAR 8000 Instrument	1.00%	TRAT3	\$65	\$140	P0211 or plastic bottle P0260	Used for Boiler Systems.
Background Fluorescence for 3D TRASAR Applications Reports Background for TRASAR 2, Tagged Polymer and Ratio	0.16% for TRASAR 2 and 1.5% for Tagged Polymer	3DTRASAR	\$60	\$150	P0211 or plastic bottle P0260	Not for makeup waters. Determination of background fluorescence of Tagged Polymer and TRASAR 2 in recirculating cooling tower water for use with 3D TRASAR unit. Includes Tagged Ratio and turbidity measurement.
Background Fluorescence for RO systems using TRASAR 2	0.08%	ROTRASAR	\$91	\$200	P0211 or plastic bottle P0260	Determination of background fluorescence for RO systems using TRASAR 2.
Background Fluorescence for TRASAR 1, 2, 3, when TRASAR product is present	0.60%	BCT	\$51	\$112	P0211 or plastic bottle P0260	Determination of True System Background Fluorescence with TRASAR Product present. Product number is needed!
Azole Background Fluorescence for Benzotriazole	0.80%	ABB_TRASAR	\$15	\$112	P0211 or plastic bottle P0260	Determination of Azole background for Performance TRASAR by fluorescence.
Azole Background Fluorescence for Tolytriazole	0.80%	ABT_TRASAR	\$15	\$112	P0211 or plastic bottle P0260	Determination of Azole background for Performance TRASAR by fluorescence.
Background Fluorescence for Alternate Channel customers using TRASAR 2	0.16%	SPEXBKG	\$38	\$76	P0211 or plastic bottle P0260	Determination of TRASAR 2 background for use in Alternate Channel systems.
PRODUCT RESIDUAL	REPORTING LIMIT	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Determination of NexGuard product residual	0.1 mg/l	TRAT3P	\$68	\$150	P0296	Product Number is needed! Sample must be protected from light.
Determination of TRASAR 1 and 2 Product residuals	0.1mg/l	TRAS1	\$40	\$112	P0211 or plastic bottle P0260	Product Number is needed!
DIAGNOSTIC TRASAR		TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
3DSugar - 3DT technology for the detection of organic contamination from thin juice contamination in sugar beet/cane processes.	Fluorescence intensity versus thin juice concentration	3DSUGAR	\$75	\$150	P0260(1) - water P0243 (1) - juice	3DT technology for the detection of organic contamination in boiler, system condensate, and or cooling tower water resulting from thin juice contamination in sugar beet/cane processes.
TRASAR - Cooling Water System Holding Time Index and Blowdown [Refer to CD5462 for instructions]	TRASAR 1	DTRA 1	\$74	\$162	P0291 - 1 gal 22199 and five bottles	Estimated System Volume 4,500 - 80,000 gallons.
	TRASAR 1	DTRA 2	\$74	\$162	P0293-10 gal 22199 and bottles	Estimated System Volume 80,000 - 1,600,000 gallons.
	TRASAR 2	DTRA 3	\$74	\$162	P0294-10 gal 23299 and bottles	Estimated System Volume 80,000 - 1,600,000 gallons.
	TRASAR 2	DTRA 4	\$74	\$162	P0292 -1 gal 23299 and bottles	Estimated System Volume 4,500 - 80,000 gallons.
TRASAR - Cooling Water System Volume [Refer to CD5462 for instrctions]	TRASAR 1	SYSVOL 1	\$74	\$162	P0291 - 1 gal 22199 and five bottles	Estimated System Volume 4,500 - 80,000 gallons.
	TRASAR 1	SYSVOL 2	\$74	\$162	P0293-10 gal 22199 and bottles	Estimated System Volume 80,000 - 1,600,000 gallons.
	TRASAR 2	SYSVOL 3	\$74	\$162	P0294-10 gal 23299 and bottles	Estimated System Volume 80,000 - 1,600,000 gallons.
	TRASAR 2	SYSVOL 4	\$74	\$162	P0292 -1 gal 23299 and bottles	Estimated System Volume 4,500 - 80,000 gallons.

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2009 Naperville Analytical Test and Price List - Individual Water Tests

Individual Water Analysis Tests

Reporting limits will vary based on sample matrix

INDIVIDUAL WATER ANALYSES BY ELEMENT OR COMPOUND TEST	REPORTING LIMIT - mg/L	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Acidity (mg/L as CaCO ₃)	10	ACIDITY	\$17	\$38	P0211 or plastic bottle P0260	Determination of Acidity by Autotitration.
Alkalinity - mg/L as CaCO ₃ (P/M/O)	10	ALK	\$17	\$38	P0211 or plastic bottle P0260	Determination of Alkalinity by Autotitration, includes pH
Amines - Cyclohexylamine, Diethylaminoethanol, Morpholine	1	AMINES	\$68	\$150	P0211 or plastic bottle P0260	Determination of Cyclohexylamine, Diethylaminoethanol & Morpholine by Ion Chromatography.
Amines - Diethanolamine	1	DEAG	\$102	\$300	P0211 or plastic bottle P0260	Determination of Diethanolamine by Ion Chromatography.
Amines - Monoethanolamine	1	MEAG	\$136	\$300	P0211 or plastic bottle P0260	Determination of Monoethanolamine by Ion Chromatography.
Amines - Methoxypropylamine	1	MOPA	\$102	\$300	P0211 or plastic bottle P0260	Determination of Methoxypropylamine by Ion Chromatography.
Ammonia Nitrogen - mg/L	0.1	NH3-W	\$17	\$38	P0211 or plastic bottle P0260	Determination of Ammonia Nitrogen in Water. Reporting limit of 0.10 ppm as NH ₃ . Preserve a 500 mL sample with 5 mL of 10% H ₂ SO ₄ (Nalco Solution S0295). The sample is not considered 'hazardous' when preserved as directed. No special shipping is required.
Ammonia Nitrogen - mg/L (colored solution)	0.1	NH3-WC	\$45	\$100	P0211 or plastic bottle P0260	Determination of Ammonia Nitrogen in water samples containing glycols or heavily colored samples. Preserve a 500 mL with 5 mL of 10% H ₂ SO ₄ (Nalco Solution S0295). The sample is not considered "hazardous" when preserved as directed. No special shipping is required.
Azoles (BZT and TT)	0.1	AZOLE	\$55	\$150	P0211 or plastic bottle P0260	Determination of Benzotriazole and Tolytriazole levels in water by liquid chromatography. If microbiological or hydrolysis concerns exist, preserve with 3 drops of Nalco 7338 (glutaraldehyde) per 500 ml.
Azole (MBT)	0.1	MBT	\$55	\$150	P0211 or plastic bottle P0260	Determination of Mercaptobenzothiazole level in water by liquid chromatography. If microbiological and hydrolysis concerns exist, preserve with 3 drops of Nalco 7338 (glutaraldehyde) per 500ml.
Bromate - mg/L (BrO ₃)	0.2	IC-BRO ₃	\$64	\$140	P0211 or plastic bottle P0260	Determination of Bromate by Ion Chromatography.
Carbon - mg/L (Filtered Non-Purgable Organic Carbon)	2	SOC	\$23	\$50	P0211 or plastic bottle P0260	Determination of Filtered Non-Purgable Organic Carbon in Water by Shimadzu TOC-5000A Method.
Carbon - mg/L (Total Carbon)	2	TC-W	\$23	\$50	P0211 or plastic bottle P0260	Determination of Total Carbon in Water by Shimadzu TOC-5000A Method. Samples containing visible particulates will be filtered.
Carbon - mg/L (Total Inorganic Carbon)	2	TIC	\$23	\$50	P0211 or plastic bottle P0260	Determination of Total Inorganic Carbon in Water by Shimadzu TOC-5000A Method. Samples containing visible particulates will be filtered.
Carbon - mg/L (Total Non-Purgable Organic Carbon)	2	TOC	\$23	\$50	P0211 or plastic bottle P0260	Determination of Total Organic Carbon (Non-Purgable Organic Carbon) in water by Shimadzu TOC-5000A Method. Samples containing visible particulates will be filtered. TOC value may not account for volatile and semi-volatile organics. Please contact the Naperville Water Lab Help Desk @ ext. 1872 if TOC value needs to account for volatiles.
Carbon - mg/L (Trace Total Non-Purgable Organic Carbon)	0.025	TOC-L	\$68	\$150	2 P0245	Determination of Trace Total Organic Carbon (Non-Purgable Organic Carbon) in water by Shimadzu TOC-VWS Method. Must use Shipper 500-P0245.88 to avoid pickup of TOC from plastic bottles. Please submit two bottles. Fill vial each completely.
Chelate - mg/L as CaCO ₃ (Residual)	1	CHEL _R	\$34	\$76	P0211 or plastic bottle P0260	Determination of Residual Chelate in Boiler Waters and Boiler Feedwaters by Titration.
Chelate - mg/L as CaCO ₃ (Total)	1	CHEL	\$45	\$100	P0211 or plastic bottle P0260	Determination of Total Chelate in Boiler Waters and Boiler Feedwaters by Titration
Chemical Oxygen Demand - mg/L O ₂	5	COD	\$15	\$30	P0220 or 950 ml/32 oz glass bottle	Determination of Chemical Oxygen Demand (O ₂) by dichromate reflux @ 150C. Preserve a 1 quart sample with 10 mls of 10% H ₂ SO ₄ solution (Nalco S0295). The sample is not considered 'hazardous' when preserved as directed. No special shipping is required.
Chemical Oxygen Demand - mg/L O ₂ (Filtered)	5	COD-F	\$15	\$30	P0220 or 950 ml/32 oz glass bottle	Determination of Chemical Oxygen Demand (O ₂) by dichromate reflux @ 150C on filtered sample. Preserve a 1 quart sample with 10 mls of 10% H ₂ SO ₄ solution (Nalco S0295). The sample is not considered 'hazardous' when preserved as directed. No special shipping is required.

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Chlorate and Chlorite - mg/L CLO2 & CLO3	0.2	IC-CLOX	\$68	\$150	P0211 or plastic bottle P0260	Determination of chlorate and chlorite in water by Ion Chromatography. Samples should be preserved with 0.5 ml of a 100 mg/L ethylenediamine solution per 1L of sample taken. Chlorite is susceptible to degradation during storage and shipping. Keep samples refrigerated and out of the light until shipped.
Chloride and Fluoride at Low Levels in High Conductivity Water	chloride and fluoride at 0.15 mg/L and sulfate, nitrate, nitrate and bromide at 0.2 mg/L	IC-CL-F	\$74	\$162	P0211 or plastic bottle P0260	High resolution ion chromatography determination of chloride and fluoride at a lower detection limit, plus the other routine anions. This analysis is designed for closed loop or other high conductivity waters where accurate low levels of chloride and fluoride must be detected in a high ionic strength, especially high nitrite, containing water. The method employs special separation of the chloride and fluoride peaks from the other anions.
Chromium - ppm (CRO4 - Hexavalent)	0.03	CR-HEX	\$25	\$56	P0211 or plastic bottle P0260	Determination of Chromium (CRO4)- Hexavalent by Colorimetric Method.
Chromium - ppm (CRO4 - Trivalent)	0.1	CR-TRI	\$56	\$122	P0211 or plastic bottle P0260	Determination of Chromium (CRO4)- Trivalent (by difference of ICP and CR-HEX).
Color- TRUE(filtered) - (APHA units)	1	COLOR-True	\$13	\$28	P0211 or plastic bottle P0260	Determination of APHA Color by Spectrophotometric Method with platinum cobalt standards
Color- Apparent(unfiltered) - (APHA units)	1	COLOR-Apparent	\$13	\$28	P0211 or plastic bottle P0260	Determination of APHA Color by Spectrophotometric Method with platinum cobalt standards
Conductivity - µmhos	1	CON	\$0	\$0	P0211 or plastic bottle P0260	Determination of Unneutralized Conductivity using Conductivity probe.
Cyanide - mg/L (Free and Combined)	0.002	CN	\$45	\$100	P0274	Determination of Free and Combined Cyanide by Automated Colorimetric Method. Sample pH must be raised to >12 with 1.0 N NaOH (Nalco Solution H6, S0279). This sample will be hazardous at pH > 12, requiring the use of Hazardous Shipper P0274.
Fluoride - mg/L	0.1	FLUORIDE	\$25	\$50	P0211 or plastic bottle P0260	Determination of routine soluble Fluoride in Water by Ion Selective Electrode.
Fluoride - mg/L (Free and Combined)	0.2	IC-F	\$136	\$300	P0211 or plastic bottle P0260	Determination of Free and Combined Fluoride by IC after distillation. Requires a minimum 500 mL sample in a dedicated bottle.
Fluoride - mg/L (Free)	0.2	IC-F-S	\$51	\$112	P0211 or plastic bottle P0260	Determination of Free Fluoride by Ion Chromatography.
Freeze Point	1%	FP	\$9	\$20	P0211 or plastic bottle P0260	Determination of Freeze Point and %v/v Glycol by Refractive Index. Glycol type must be known. Only one type of glycol maybe present.
Glycols	10	GLYCOLS	\$68	\$150	P0211 or plastic bottle P0260	Determination of concentration of the monoglycols ethylene and propylene glycol by Gas Chromatography. Request this test if the identity of the glycol in your system is unknown or if both glycols are present. Also request this test for low level analysis (<1%), otherwise request FP.
H-130 & H-130M Biocides (DDDMAC Quat)	40 ug/L (40 ppb)	H-130M	\$82	\$180	P0220 or 950 ml/32 oz glass bottle	Determination of Didecyldimethylammonium Chloride quat in H-130 and H-130M biocide products by colorimetric complex of Orange II extraction into methylene chloride. Reported as ug/L H-130/H-130M. Keep sample cool and ship immediately.
Isothiazoline (Kathon)	0.1	ISOTZ	\$148	\$326	P0211 or plastic bottle P0260	Determination of Isothiazoline biocide in water by Chromatography.
Lignin and Tannin (Hydroxylated Aromatics) - mg/L	0.1	LIGNIN	\$34	\$76	P0211 or plastic bottle P0260	Determination of Lignin and Tannin (Hydroxylated Aromatics) in Water by Colorimetric Method.
Methanol	1	MEOHG	\$68	\$150	P0211 or plastic bottle P0260	Determination of Methanol in water by Chromatography.
Mercury - ppb (Total - Low level)	0.001	HG	\$39	\$84	P0243	Determination of Mercury in Water and Products by Cold Vapor Generation and Atomic Absorption Spectrophotometer. Sent to an outside lab.
Mercury - ppb (Total - Low level)	0.05	HG-P	\$39	\$84	P0243	Determination of Mercury in Solids and Products by EPA 7473 Thermal Decomposition
Methylene Blue Active Substances - ppm (MBAS)	0.01	MBAS	\$71	\$156	P0211 or plastic bottle P0260	Determination of Methylene Blue Active Substances in Water by Colorimetric Method.

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Rushes less than 5 days require DM approval.

2009 Naperville Analytical Test and Price List - Individual Water Tests

Individual Water Analysis Tests

Reporting limits will vary based on sample matrix

INDIVIDUAL WATER ANALYSES BY ELEMENT OR COMPOUND TEST	REPORTING LIMIT - mg/L	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS																				
Moisture - % (Loss at 105 C - Pulp)	0.50%	L105-W	\$28	\$60	P0211 or plastic bottle P0260	Gravimetric Determination of % Moisture in Pulp Samples.																				
Neutralized Conductivity - µmhos	1	CON-N	\$13	\$28	P0211 or plastic bottle P0260	Determination of Neutralized Conductivity for Boiler Water using Conductivity Probe.																				
Nitrogen (Kjeldahl) - mg/L	0.1	NKJEL	\$69	\$138	P0211 or plastic bottle P0260	Determination of Kjeldahl Nitrogen (Organic + Ammonia) in Water by the Phenate Colorimetric Method. Reporting limit of 0.10 ppm as NH ₃ . Preserve a 500 mL sample with 5 mL of 10% H ₂ SO ₄ (Nalco solution S0295). The sample is not considered 'hazardous' when preserved as directed. No special shipping is required.																				
Nitrogen (Organic) - mg/L	0.1	NORG	\$54	\$112	P0211 or plastic bottle P0260	Determination of Organic Nitrogen in Water by the Phenate Colorimetric Method. Reporting limit of 0.10 ppm as N. Preserve a 500 mL sample with 5 mL of 10% H ₂ SO ₄ (Nalco Solution S0295). The sample is not considered 'hazardous' when preserved as directed.																				
Oil and Grease - mg/L	3	OIL	\$31	\$63	P0220 or 950 ml/32 oz glass bottle	Gravimetric Determination of Oil and Grease in Water by Hexane Extraction/EPA 1664. Measures total oil & grease (hydrocarbons + animal oil + vegetable oil). Preserve sample with 10% H ₂ SO ₄ (Nalco Solution S0295) to pH < 2. The sample is not considered 'hazardous' when preserved as directed. No special shipping is required. This analyses requires a separate sample in a 1 liter glass bottle. Fill bottle to the top, do not empty and refill.																				
Organic Acids - mg/L	0.2 mg/L	IC-ORGANIC	\$57	\$126	P0211 or plastic bottle P0260	Determination of Acetic, Formic, and Glycolic Acids by Ion Chromatography.																				
Organic Acids, Trace - ug/L	10 ug/L (10 ppb)	IC-ORG-L	\$68	\$150	P0243, with cold ice pack	Determination of trace levels of Acetic, Butanoic, Formic, Glycolic and Propionic Acids. Keep sample cool and ship immediately.																				
Organic Acids - Basic - mg/L	3	ORANEW	\$68	\$150	P0211 or plastic bottle P0260	Determination of Acetic, Butanoic and Propionic Acids by Gas Chromatography.																				
Organic Acids - Complete - mg/L	3	ORACID	\$102	\$226	P0211 or plastic bottle P0260	Determination of Acetic, Butanoic, Hexanoic, Heptanoic, Isobutyric, Isovaleric, 4-Methylpentanoic, Propionic and Pentanoic by Gas Chromatography.																				
Oxalate - mg/L	0.2	OXAL	\$136	\$300	P0211 or plastic bottle P0260	Determination of Oxalate by Ion Chromatography.																				
Paper Pulp Filtered ICP Analysis	0.1	ICP_PULP_F	\$57	\$126	P0211 or plastic bottle P0260	Determination of Filtered ICP Metals, with the exception of aluminum and silica.																				
Paper Pulp Total ICP Analysis	0.1	ICP_PULP	\$51	\$112	P0211 or plastic bottle P0260	Determination of Total ICP Metals, with the exception of aluminum and silica.																				
ICP Steam		ICP_STEAM	\$41	\$82	P0243 or P4369 (4 oz)	<table border="0"> <tr> <td>Al</td> <td>RL</td> <td>Al</td> <td>RL</td> </tr> <tr> <td>Ca</td> <td>5</td> <td>Mg</td> <td>1</td> </tr> <tr> <td>Cu</td> <td>5</td> <td>Zn</td> <td>5</td> </tr> <tr> <td>Fe</td> <td>5</td> <td>Si</td> <td>5</td> </tr> <tr> <td>K</td> <td>40</td> <td>SiO₂</td> <td>17</td> </tr> </table> <p>RL in ug/L.</p>	Al	RL	Al	RL	Ca	5	Mg	1	Cu	5	Zn	5	Fe	5	Si	5	K	40	SiO ₂	17
Al	RL	Al	RL																							
Ca	5	Mg	1																							
Cu	5	Zn	5																							
Fe	5	Si	5																							
K	40	SiO ₂	17																							
Pesticides	1.0 to 0.05 ug/L	PESTICIDE	\$120	\$240	P0220 or 950 ml/32 oz glass bottle	Determination of 20 pesticide compounds at trace (ug/L) levels. Sent to an outside lab. Contact the Naperville Water Lab @ ext. 1872 for list of pesticides analyzed.																				
pH	0.1	PH	\$10	\$22	P0211 or plastic bottle P0260	Determination of pH in Water by pH Electrode Method.																				
Phenols - mg/L	0.003	PHEN	\$50	\$100	P0211 or plastic bottle P0260	Determination of Phenols in Water by the 4-Aminoantipyrine Method. Fix a 1 quart sample with 5 mL of 20% copper sulfate (Nalco Solution S0803). Lower the pH of the sample to pH < 4 with 10% Phosphoric Acid (Nalco Solution S0802). Keep sample cool and ship.																				
Phosphate -mg/L total PO ₄ , total Inorganic, Ortho, Poly and Organic	0.2	PO4-ALL	\$50	\$100	P0211 or plastic bottle P0260	Determination of all total unfiltered phosphates in water by automated Ascorbic Acid Reduction method. Values for total, ortho, poly, organic and total inorganic PO ₄ are reported.																				
Phosphate, Soluble - mg/L total PO ₄ , total Inorganic, Ortho, Poly and Organic	0.2	PO4-ALL-F	\$50	\$100	P0211 or plastic bottle P0260	Sample filtered through 0.45 micron filter prior to determination of all total soluble/filtered phosphates in water by automated Ascorbic Acid Reduction method. Values for filtered total, ortho, poly, organic and total inorganic are reported.																				
Phosphate - mg/l total Orthophosphate	0.1	PO4-ORTHO	\$13	\$26	P0211 or plastic bottle P0260	Determination of unfiltered orthophosphate in Water by automated Ascorbic Acid Reduction method.																				

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2009 Naperville Analytical Test and Price List - Individual Water Tests

Individual Water Analysis Tests

Reporting limits will vary based on sample matrix

INDIVIDUAL WATER ANALYSES BY ELEMENT OR COMPOUND TEST	REPORTING LIMIT - mg/L	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Phosphate - mg/L soluble/filtered Orthophosphate	0.1	PO4-ORTHO-F	\$13	\$26	P0211 or plastic bottle P0260	Sample filtered through 0.45 micron filter prior to determination of soluble/filtered orthophosphate in water by automated Ascorbic Acid Reduction method.
Phosphate - mg/L total Organic as PO4	0.2	PO4-ORG	\$38	\$76	P0211 or plastic bottle P0260	Determination of total Organic Phosphate in water by calculation (PO4-T minus PO4-I).
Phosphate - mg/L soluble Organic as PO4	0.2	PO4-ORG-F	\$38	\$76	P0211 or plastic bottle P0260	Determination of soluble/filtered Organic Phosphate in water by calculation (PO4-T-F minus PO4-I-F).
Phosphate -mg/L total Polyphosphate as PO4	0.2	PO4-POLY	\$31	\$62	P0211 or plastic bottle P0260	Determination of Total Polyphosphate in water by calculation (PO4-I minus PO4-ORTHO).
Phosphate - mg/L soluble Polyphosphate as PO4	0.2	PO4-POLY-F	\$31	\$62	P0211 or plastic bottle P0260	Determination of Filtered Polyphosphate in Water by calculation (PO4-I-F minus PO4-ORTHO-F).
Phosphate - mg/L total Inorganic Phosphate as PO4	0.2	PO4-I	\$19	\$38	P0211 or plastic bottle P0260	Determination of Total Inorganic Phosphate (ortho + poly) in water by automated Ascorbic Acid Reduction method.
Phosphate - mg/L soluble Inorganic Phosphate as PO4	0.2	PO4-I-F	\$19	\$38	P0211 or plastic bottle P0260	Sample filtered through 0.45 micron filter prior to determination of soluble/filtered Total Inorganic (ortho + poly) Phosphate in water by automated Ascorbic Acid Reduction method.
Phosphate - mg/L Total Phosphate only as PO4	0.2	PO4-T	\$19	\$38	P0211 or plastic bottle P0260	Determination of total Phosphate in water by automated Ascorbic Acid Reduction method.
Phosphate - mg/L soluble Total Phosphate only as PO4	0.2	PO4-T-F	\$19	\$38	P0211 or plastic bottle P0260	Sample filtered through 0.45 micron filter prior to determination of soluble total phosphate by automated Ascorbic Acid Reduction method.
Polymer - mg/L (Polyacrylate)	5	POLYAC	\$56	\$122	P0211 or plastic bottle P0260	Determination of Polyacrylate by Turbidimetry.
Polymer - mg/L AHS	0.6	APT-HS	\$17	\$38	P0211 or plastic bottle P0260	Determination of Active High Stress Polymer.
Polymer - mg/L AP	0.6	APT-P	\$17	\$38	P0211 or plastic bottle P0260	Determination of Active Prism Polymer.
Polymer - mg/L TRC-233/PAA	0.6	TRC-233	\$17	\$38	P0211 or plastic bottle P0260	Determination of Calgon TRC-233 and PAA (AC-27).
Semivolatile Organic Compounds	variable	SEMIVOL	\$240	\$480	P0220 or 950 ml/32 oz glass bottle	Semivolatile Organic Compounds by GC/MS, reported as Base Neutral Acid Extractables. Preserve with Na ₂ S ₂ O ₃ if Cl ₂ is present. Ship cool.
Silica - mg/L (Colloidal)	0.1	SICOL	\$55	\$120	P0211 or plastic bottle P0260	Determination of Colloidal Silica by calculation from ICP silica and SIMO.
Silica - mg/L (Molybdate Reactive)	0.01	SIMO	\$17	\$38	P0211 or plastic bottle P0260	Determination of Molybdate-Reactive Silica in Water by automated Heteropoly Blue Method
Solids - mg/L (Suspended)	3	SS	\$27	\$60	P0211 or plastic bottle P0260	Gravimetric Determination of Suspended Solids in Water at 105 deg C. A separate 500 mL sample is required for analysis.
Solids - mg/L (Total Dissolved)	15	TDS-W	\$26	\$58	P0211 or plastic bottle P0260	Gravimetric Determination of Total Dissolved Solids in Water at 180 deg C. A separate 500 mL sample is required for analysis.
Solids - mg/L (Total Fixed Residue)	15	SF550	\$35	\$78	P0211 or plastic bottle P0260	Gravimetric Determination of Total Fixed Residue in Water at 550 deg. C.
Solids - mg/L (Total Volatile Residue)	15	SV550	\$35	\$78	P0211 or plastic bottle P0260	Gravimetric Determination of Total Volatile Residue in Water at 550 deg. C.
Solids - mg/L (Total)	15	TS	\$19	\$42	P0211 or plastic bottle P0260	Gravimetric Determination of Total Solids in Water at 105 deg. C.
Solids - mg/L (Volatile Non-Filterable Residue)	5	SSV	\$45	\$100	P0211 or plastic bottle P0260	Gravimetric Determination of Volatile Non-Filterable Residue in Water at 550 deg C. A separate 500 mL sample is required for analysis.
Specific Gravity	1	SG	\$68	\$22	P0211 or plastic bottle P0260	Determination of Specific Gravity.
Bromide and sulfamate - mg/L	0.05	SULFABROM	\$68	\$150	P0211 or plastic bottle P0260	Determination of Sulfamate and Bromide by Ion Chromatography
Sulfamate - mg/L	0.05	IC-SULFAM	\$68	\$150	P0211 or plastic bottle P0260	Determination of Sulfamate by Ion Chromatography.

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2009 Naperville Analytical Test and Price List - Individual Water Tests

Individual Water Analysis Tests

Reporting limits will vary based on sample matrix

INDIVIDUAL WATER ANALYSES BY ELEMENT OR COMPOUND TEST	REPORTING LIMIT - mg/L	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Sulfide - mg/L (Total)	0.01	H2S-W	\$17	\$38	P0211 or plastic bottle P0260	Determination of Total Hydrogen Sulfide in Water by Colorimetric Procedure.
Sulfite - mg/L	1	SO3-WATER	\$57	\$126	P0211 or plastic bottle P0260	Determination of Sulfite in Water by Ion Chromatography. Ship immediately. Should be preserved with 5 mls of 37% formaldehyde solution before shipping to stop oxidation to sulfate.
Sulfoxy (Sulfite, Sulfate and Thiosulfate Analyses)	1	SULFOXY	\$68	\$150	P0211 or plastic bottle P0260	Determination of sulfite, sulfate and thiosulfate in Liquors and Aqueous sample. Samples must be preserved with 10ml of 37% formaldehyde per 500ml of sample to prevent degradation of sulfite to sulfate
Thiocyanate - mg/L	0.2	SCN	\$80	\$176	P0211 or plastic bottle P0260	Determination of Thiocyanate in Aqueous Samples by Ion Chromatography.
Thiosulfate - mg/L	1	THIOS	\$57	\$126	P0211 or plastic bottle P0260	Determination of Thiosulfate in Water by Ion Chromatography.
Turbidity - NTU	0.3	TUR	\$8	\$18	P0211 or plastic bottle P0260	Determination of Turbidity - Nephelometric Units.
VOC - Volatile Organics	10 to 1 ug/L	VOC	\$180	\$360	Special glass vials	Determination of 35 volatile organics by GC-MS at trace (ug/L) levels. Sent to an outside lab. Contact Naperville Water Lab @ ext. 1872 to arrange for required glass vial containers.
White Rust Inhibitor- Product 73801	0.1	WRUST	\$55	\$150	P0211 or plastic bottle P0260	Determination of white rust inhibitor product 73801 by chromatography

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2009 Naperville Analytical Test and Price List - Particle Size Analysis

Particle Size Testing

In order to process samples submitted for particle size analysis in an efficient manner, it is important that you ask for a specific particle size analysis test by code (PSW_DF, PSW_100, or PS). Test Codes PSW_DF and PSW_100 are not suitable analyses for most BRINE-type samples and/or very turbid samples (Turbidity >4000 NTU). Please call the analytical help desk (x2315), if you're unsure what test will be suitable for your application.

PARTICLE SIZE TESTS	TEST CODE	DISTRICT COST	CUSTOMER PRICE	SAMPLE SHIPPER	COMMENTS
Particle Size	PSW_DF	\$46	\$110	500-P0211.88 or P0260	Particle size distribution analysis recommended for process water samples, typically for filter evaluation. Analysis reports Particle Count per 100 ml (range and cumulative percent) and particle volume in cubic mm/100 L (range and cumulative percent) in the 0.5 micron to 30 micron range. This is an in-house analysis specifically designed for side stream "sand" filter evaluation. A separate bottle is required for this analysis (it is recommended that the sample bottle be triple rinsed with process water). Typical turnaround is 1 week.
	PSW_100	\$70	\$273	500-P0211.88 or P0260	An extended particle size distribution analysis recommended for process water samples, typically for filter evaluation. Analysis reports Particle Count per 100 ml (range and cumulative percent) and particle volume in mm/100 L (range and cumulative percent) in the 0.5 micron to 100 micron range. A separate bottle is required for this analysis (it is recommended that the sample bottle be triple rinsed with process water). Typical turnaround is 1 week.
	PS	\$320	\$500	500-P0211.88 OR P0260	Particle size distribution for water, sludge and solids. This test is performed by an outside lab. Various techniques are used depending on the sample and customer needs. Size range varies depending on sample and technique. Sample size is 500 ml for water and 500 mg for dry solids. Average turnaround is 3 weeks. The rush surcharge is \$220 for 1 week turnaround and \$110 for 2 weeks. A discussion of the sample prior to submission is recommended when requesting a rush or first time submission. Submitter should request the same technique for analysis when comparing results to previous samples.

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Water Microbiology Testing

Differential Microbiological Analyses (DMA) - Determines the level of microbiological contamination within a system. Identifies "troublesome" organisms known to cause system problems. Depending on sample (approx. 50 mL) matrix, the following BIO TEST LIST analyses are performed. **ALL require the 500-P0228.88 General Microbiology/Legionella Shipper, except where noted.** Samples are to be delivered to the laboratory within 1 day, but not more than 2 days. Older samples may no longer be representative and will **not** be processed. Samples must be sent via FedEx Standard Overnight.

ANALYSES

Bio Test List	Total Viable Count	Total Coliforms & <i>E.coli</i>	Mucoid	Pigmented	<i>Pseudomonas</i>	Spores	SRB	<i>Clostridia</i>	Fungi	Microscopy	District Cost	Customer Price
BIO	X	X	X	X	X		X		X		\$65	\$110
BIOLWF	X	X	X	X	X		X		X	X	\$85	\$150
BIOCOOL	X	X	X	X	X	X	X	X	X		\$85	\$150
BIODEP	X	X	X	X	X	X	X	X	X	X	\$110	\$190
BIOSWB	X	X	X	X	X	X	X	X	X		\$94	\$160
BIOSWB_MIC	X	X	X	X	X	X	X	X	X	X	\$110	\$190
POOLCIDE	X	X			X						\$60	\$92
WOODSTUDY	Analysis (21 day test) includes physical examination, surface to fungal growth, microtome examination and resistance testing. Both Deep Rot and Delignification Coupons are needed for the analysis.										\$120	\$240

Description of BIO TEST LIST Analyses:

ALL require the 500-P0228.88 Water Microbio Shipper, except where noted.

BIO	Water Sample: Detection Limit 100-1000 cfu/mL
BIOLWF	Water Sample: Detection Limit 100-1000 cfu/mL
BIOCOOL	Emulsions Sample: Detection Limit 1000 cfu/mL
BIODEP	Deposit Sample: Suspected to be of biological origin - Detection Limit 1000 cfu/gm (Shipper 500-P0224.88)
BIOSWB	Swab Sample: Surface microbiological sample from industrial surface - Detection Limit 1000 cfu/swab (Test Kit 420-C0243.88)
POOLCIDE	Analysis for pools and spas - Detection Limit 10 cfu/mL
WOODSTUDY	Analysis includes physical description, resistance testing (to <i>L. trabea</i>), and microtome analysis. Wood Coupons are ordered through Applied Services (Redwood Coupons: 500-P5101.88 deep rot coupon & 500-P5103.88 delignification coupon / Douglas Fir Coupons: 500P5102.88 deep rot coupon & 500-P5104.88 delignification coupon). NOTE: Wood from actual tower can be submitted for analysis (required minimum 1 1/2" x 1 1/2" x 4").

There are No Rushes for Microbiological Analysis
(Microbial organisms require an incubation period for growth)

2009 Naperville Analytical Test and Price List - Microbiology

OTHER WATER MICROBIOLOGICAL ANALYSES & DESCRIPTION ALL require the 500-P0228.88 Water Microbio Shipper, except where noted		District Cost	Customer Price
APB	Acid Producing Bacteria - Determination of the presence of bacteria that produce organic acids (important in biofouling, deposit formation and MIC). Results are reported as Present or Not Detected.	\$25	\$50
BOD5	Biological Oxygen Demand (BOD) at 5-days for water samples (1 ppm) Shipper 500-P0211.88 or plastic bottle 500-P0260.88. Analysis requires a 500 mL sample that is < 48 hours from time of collection to laboratory. Sample must be kept cool, please use refrigerant pack. Provide pH & temp of the system, system treatment and COD (if known). Specify if filtered BOD is required.	\$41	\$82
CLSD	Determination of <i>Clostridium</i> species, anaerobic bacteria capable of putrefaction and hydrogen sulfide production. They can cause corrosion and mal-odors in industrial systems (detection limit 1-100 cfu/mL).	\$10	\$20
COLIFORMS	Determination of total coliforms & <i>E. coli</i> (detection limit 100- 1000 cfu/mL).	\$25	\$50
DENITRIFY	Determination of the presence of denitrifying bacteria (focus is on nitrite reduction) - important in closed loop systems where the nitrite based corrosion inhibitor program is used. Results are reported as Present or Not Detected.	\$8	\$16
FUNGI	Determination of molds and yeasts (detection limit 10 -1000 cfu/mL).	\$10	\$20
LEGION	Detection and enumeration of <i>Legionella</i> via ISO 110731 (detection limits 10 cfu/mL). Serogroup identification (Lp SG1, Lp SG2-14, and/or L. species). <u>ALL special pricing must be approved</u> by the SBU's BDM and are required to use the ReadyLabel Program.	\$45	\$185
MICROSCOPY	Microscopic exam for presence of: iron bacteria (<i>Sphaerotilus</i> and <i>Gallionella</i>), filamentous bacteria, algae, diatoms and other higher life forms; (i.e. protozoa, nematodes, etc).	\$20	\$40
NITRIFY	Determination of the presence of nitrifying bacteria (<i>Nitrosomonas/Nitrobacter</i> - nitrite/nitrate producing) - is a 20 day incubation test. Results are reported as Present or Not Detected.	\$20	\$40
SRB	Determination of sulfate reducing bacteria, an anaerobic bacteria that can cause corrosion (detection limit 1-100 cfu/mL).	\$14	\$28
TVC	Determination of general aerobes (detection limit 100-1000 cfu/mL).	\$25	\$50
PSEUDO	Determination of <i>Pseudomonas</i> spp - may produce copious amounts of extracellular polysaccharides, slime.	\$25	\$50
Paper Microbiology Testing			
Use Shipper 500-P0228.88 except for PDIS. Requires submission of Pulp and Paper Sample Analysis Form 619			
Paper Microbio Test List	Description of Analyses	District Cost	Customer Price
PBIO	Stock Analysis - Total viable counts, presence/absence of coliforms & <i>E. coli</i> , <i>Pseudomonas</i> species, sulphate reducing bacteria, <i>Clostridium</i> , spores, total fungal (mold & yeast) counts, and microscopic examination. Samples must be sent on the day of sampling via FedEx for next day delivery.	\$110	\$220
PMCR	Microscopic examination.	\$30	\$60
PMCP	Microscopic examination + photomicrographs	\$45	\$90
PDIS	Dairyman's Testing (paper disintegration analysis) total aerobic count + spore count.	\$130	\$260

There are No Rushes for Microbiological Analysis
(Microbial organisms require an incubation period for growth)

2009 Naperville Analytical Test and Price List - Wastewater Microbiological Analysis Page 23

Wastewater Microbiological Analysis				
Samples are to be delivered to the laboratory within 1 day, but not more than 2 days. Older samples may no longer be representative and will not be processed. Samples must be sent via FedEx Standard Overnight. Contact Wastewater Biomass Lab for More Details (630) 305-1760/2152.				
Test Code	WWTBIO		RESP (Requires Scheduling w/ the laboratory (630) 305-1760/2152)	
	WWTBIO Biomass	WWTBIO Foam	RESP Standard	RESP with Report
Purpose	Biomass Health, Baseline monitoring, Upset recovery, Troubleshooting (Settling/dewatering issues).	Troubleshooting microbiological causes of foam.	Study toxicity or treatability of wastewater streams by customer's biomass and/or bioaugmentation products. Includes bullet point conclusions and oxygen uptake data and graphs.	Study toxicity or treatability of wastewater streams by customer's biomass and/or bioaugmentation products. Includes a full scientific report with experimental design, observations, oxygen uptake data, additional analytical interpretation, and graphs.
Sample Needed	Mixed Liquor (MLSS) from Aeration Basin.	Foam from Aeration Basin or Clarifier. Foam samples must be sent with a WWTBIO Biomass sample.	Primary Effluent and Return Activated Sludge plus wastewater stream or chemical - Call Laboratory.	Primary Effluent and Return Activated Sludge plus wastewater stream or chemical - Call Laboratory.
District Cost	Typical cost is \$350	Typical cost is \$175	8 cells - Typical cost is \$600 16 cells - Typical cost is \$900	8 cells - Typical cost is \$1000 16 cells - Typical cost is \$1500
Customer Price	Typical price is \$450	Typical price is \$225	8 cells - Typical cost is \$1200 16 cells - Typical cost is \$1800	8 cells - Typical cost is \$2000 16 cells - Typical cost is \$3000
Sample Shipper	500-P0268.88	500-P0268.88	Use 5 gallon pail (Part# 881-P4243.88) and Nalgene 500mL bottles (Part# P0260)	Use 5 gallon pail (Part# 881-P4243.88) and Nalgene 500mL bottles (Part# P0260)
Sample Volume	80 mL. Leave headspace for biomass to breathe.	10mL. Leave headspace for biomass to breathe.	Typically: Primary Effluent-5 L, RAS-5 L - Call Laboratory.	Typically: Primary Effluent-5 L, RAS-5 L - Call Laboratory.
Processing Time	3-5 Business Days. Preliminary verbal results possible same day by special RUSH request for troubleshooting.	3-5 Business Days. Preliminary verbal results possible same day by special RUSH request for troubleshooting.	1-2 Business Days following the completion of the study. Processing times are variable and are set on a sample-by-sample basis. Contact the laboratory for more information.	10-12 Business Days following the completion of the study. Processing times are variable and are set on a sample-by-sample basis. Contact the laboratory for more information.
WWTBIO	Microscopic examination of flocs, filaments and higher life forms in wastewater treatment biomass samples. The report includes executive summary, filament identification and effect on flocs, floc morphology and size distribution, higher life forms, and photomicrographs. Comments and recommendations will be included when enough plant background is available. Sample should be fresh and shipped overnight. Submitters are to submit F-928 form for analysis request.			
RESP	Custom designed batch study to measure wastewater treatment biomass activity in response to individual waste streams or process chemicals, or to determine effectiveness of bioaugmentation products. Eight-cell and sixteen-cell options are available depending on experimental design. Contact the laboratory before submitting samples for availability, experimental design, sample volume, and process time. Respirometer Studies MUST be pre-scheduled with the Wastewater Microbiological Lab (630) 305-1760/2152.			

Material	WATER AND MICROBIOLOGY SAMPLE BOTTLES & SHIPPERS ****PRICES ARE SUBJECT TO CHANGE****	Transfer Price	Book Price
WATER SHIPPERS & BOTTLES			
500-P0211.88	SHIPPER - 1 bottle - general water (HDPE, 475 ml/16 oz)	\$2.84	\$21.00
500-P0220.88	SHIPPER - 1 quart glass bottle (950 ml/32 oz)	\$4.90	\$24.50
500-P0243.88	SHIPPER - 2 high purity HDPE bottles (120 ml/4 oz)	\$4.92	\$33.00
500-P0245.88	SHIPPER - 1 low level TOC glass vial (40 ml/1.35 oz)	\$9.09	\$16.50
500-P0260.88	BOTTLE - 1 bottle - general water (HDPE, 475 ml/16 oz)	\$0.96	\$5.50
500-P0274.88	SHIPPER - 1 bottle - Hazardous Material (475 ml/16 oz)	\$12.80	\$26.50
500-P0276.88	SHIPPER - 1 quart glass bottle Hazardous Material (950 ml/32 oz)	\$20.95	\$32.50
500-P5099.88	SHIPPER - 4 bottles bottles - general water (HDPE, 475 ml/16 oz)	\$8.09	\$45.50
881-P4369.88	BOTTLE - 1 high purity HDPE bottle (120 ml/4 oz)	\$1.64	\$3.30
0031 881-P4243.88	PAIL - plastic 5gal w/cover & spout	\$8.26	\$10.00
MICROBIOLOGY SHIPPERS & BOTTLES			
500-P0228.88	SHIPPER - General Microbiology/Legionella water shipper w/ 4 sterile vials (50 ml centrifuge tubes), neutralizing agent, ziploc and cold pack	\$9.10	\$22.00
420-C0243.88	TEST KIT (Surface Microbial Monitoring – Swabs) 24 tests per kit	\$100.82	\$204.00
500-P0262B-88	BOTTLE - Legionella bottle (250 ml/8 oz) w/neutralizing agent (for concentrates ONLY)	\$1.50	\$6.60
500-P0268.88	SHIPPER - Bio Mass sample shipper with 2 bottles (120 ml/4 oz) and cold pack	\$7.78	\$26.50
500-P0295.88	SHIPPER - Legionella shipper w/3 bottles (250 ml/8 oz), neutralizing agent, ziploc bag and cold pack (for concentrates ONLY)	\$11.55	\$31.00
500-P3068.88	VIAL - Microbiology water sterile vial alone (50 ml) w/ neutralizing agent	\$1.37	\$6.05
500-P1231.88	Cold Pack	\$2.02	\$3.85
500-P5101.88	Wood Coupon - Deep Rot Redwood, 25 mm x 38 mm x 75 mm	\$1.19	\$9.90
500-P5102.88	Wood Coupon - Deep Rot Douglas Fir 25 mm x 38 mm x 75 mm	\$27.13	\$59.50
500-P5103.88	Wood Coupon - Delign Redwood 35 mm x 10 mm x 75 mm	\$0.87	\$9.90
500-P5104.88	Wood Coupon - Delign Douglas Fir 35 mm x 10 mm x 75 mm	\$27.13	\$59.50

Ordering/Shipping Information: 800-288-0879 Technical Assistance: 800-323-8483

2009 Naperville Analytical Test Price List - Deposit Shipper and Coupons

Material	DEPOSIT SAMPLE SHIPPER AND COUPONS ****PRICES ARE SUBJECT TO CHANGE****	Transfer Price	Book Price
DEPOSIT SHIPPER			
500-P0214.88	Whirl-Pak™ alone 75mm x 175 mm (180 ml/6 oz)	\$0.08	\$0.35
500-P0224.88	SHIPPER - Wet deposit sample shipper w/specimen cup (120 ml/4 oz) and Whirl-Pak™	\$2.04	\$11.00
COUPONS			
500-P5034A.88	Copper Nickel (70/30) Bar Style C	\$3.49	\$13.50
500-P5035A.88	MS1010 Bar Style Coupon, 75 mm x 13 mm	\$2.48	\$7.70
500-P5036A.88	316L Bar Style Coupon, 75 mm x 13 mm	\$3.15	\$9.90
500-P5037A.88	SS 304 Bar Style Coupon, 75 mm x 13 mm	\$3.30	\$11.00
500-P5038A.88	Copper Bar Style Coupon, 75 mm x 13 mm	\$3.64	\$13.50
500-P5039A.88	Alum Bar Style Coupon, 75mm x 13mm	\$3.15	\$11.00
500-P5040A.88	Admiralty Brass Bar Style Coupon	\$3.73	\$12.50
500-P5049A.88	Copper Nickel (90/10) Bar Style	\$3.55	\$13.50
500-P5054A.88	MS 1010 Passivated Bar Style Coupon	\$4.07	\$13.50
500-P5057A.88	Galvanized Hot Dip Bar Style Coupon	\$5.46	\$18.00
500-P0160.88	Corrosion Study Tags w/Bags (12)	\$11.19	\$20.00
500-P1747.88	PVC Pipe Plug, 19 mm (¾")	\$4.89	\$11.00
500-P5006A.88	Nylon Holding Rod, 150 mm (6")	\$1.83	\$6.05
500-P5007A.88	304 SS Holding Rod, 150 mm (6")	\$5.72	\$15.50
500-P5008.88	Iron Pipe Plug, 25 mm (1")	\$5.46	\$8.80
500-P5069.88	Nylon Screw and Nut Set	\$4.45	\$16.50
500-P5070.88	304 SS Screw, Teflon® Washers	\$6.30	\$14.50
500-P5077.88	PVC Pipe Plug, 25 mm (1")	\$5.06	\$11.00
500-P5080.88	Iron Pipe Plug, 19 mm (¾")	\$3.90	\$9.90
500-P5082A.88	Nylon Holding Rod, 102 mm (4")	\$1.95	\$6.05
500-P5083A.88	Teflon™ Holding Rod, 150 mm (6")	\$4.24	\$16.50
500-P5084.88	SS Pipe Plug, 19 mm (¾")	\$14.96	\$30.00

Ordering/Shipping Information: 800-288-0879 Technical Assistance: 800-323-8483

Exhibit B.4
3D TRASAR Equipment Pricing

3D TRASAR Control Systems

Part Name	Part Number	Price (US\$)
TR5500 Wall Mount, small backboard	060-TR5500.88	\$6,800.00
TR5501 Frame Mount, small backboard	060-TR5501.88	\$7,600.00
TR5510 Wall Mount with Junction Box	060-TR5510.88	\$7,450.00
TR5511 Frame Mount with Junction Box	060-TR5511.88	\$8,250.00
TR5520 Enclosed Wall Mount with Junction Box	060-TR5520.88	\$10,000.00
TR5522 Enclosed Wall Mount with Junction Box and Pre-Installed Wireless Gateway	060-TR5522.88	\$11,200.00
TR5521 Enclosed Frame Mount with Junction Box	060-TR5521.88	\$10,800.00
TR5523 Enclosed Frame Mount with Junction Box and Pre-Installed Wireless Gateway	060-TR5523.88	\$12,000.00
TR5530 Air Purged Wall Mount with Junction Box	060-TR5530.88	\$13,000.00
TR5532 Air Purged Wall Mount with Junction Box and Pre-Installed Wireless Gateway	060-TR5532.88	\$14,200.00
TR5531 Air Purged Frame Mount with Junction Box	060-TR5531.88	\$13,800.00
TR5533 Air Purged Frame Mount with Junction Box and Pre-Installed Wireless Gateway	060-TR5533.88	\$15,000.00

3D TRASAR Replacement Parts

Part Name	Part Number	Price (US\$)
TR3500 Starter Controller, OBC	060-TR3212.88	\$3245.00
TR3500 Starter Fluorometer	060-TR3220.88	\$2090.00
TR5500 Controller, OBC	060-TR5212.88	\$3234.00
TR5500 Fluorometer	060-TR5220.88	\$3471.00
Fluorometer, Desiccant Canister & Indicator	060-TR5226.88	\$33.00
Fluorometer, Upper Adapter	060-TR5224.88	\$25.50
Fluorometer, Lower Adapter	060-TR5225.88	\$55.00
Pellet Feeder Brush	500-P2818.88	\$6.60
Pellet Feeder, Dam Repair Kit	060-TR5313.88	\$30.00
Pellet Feeder, Valve and Motor	060-TR5320.88	\$385.00
Pellet Feeder, Valve only	060-TR5322.88	\$75.00
Pellet Feeder, Ball Valve Rebuild Kit (o-rings)	060-TR5326.88	\$19.00
Pellet Feeder overflow device	060-TR5350.88	\$25.50
Pellet Feeder Upper Piping Assembly	060-TR5332.88	\$71.50
Pellet Feeder Lower Piping Assembly	060-TR5334.88	\$226.00
Controller, Piping Assembly	060-TR5230.88	\$1,210.00
Controller, Piping Assembly, Upper	060-TR5237.88	\$275.00
Controller, Piping Assembly, Lower	060-TR5238.88	\$160.00
Corrosion Probe Restraint	400-NCMAC15.88	\$41.00
Swage Fitting, Corrosion Probes	731-P1632.88	\$25.50
High Fouling Chemical Injection Pump Peristaltic 10 GPD	121-P01152.88	\$399.00
Operating Manual (CD format)	521-OM0108CD.88	\$12.50
Operating Manual	521-OM0108.88	\$75.50
Wireless Gateway operation manual	521-OM0188.88	\$12.50
Configurator Software CD	TK-135	\$5.00
3D TRASAR Flow Switch	6000668	\$182.00
Fuse, 2.5 A, 220V	991-50473718.88	\$1.25
Replacement Ethernet connector with cap and lanyard	060-TR5461.88	\$46.50
T-Strainer, 80 mesh, clear	991-50537710.88	\$40.00
Firmware Upgrade Recovery Serial Cable	060-TR5464.88	\$44.00

EXHIBIT C

Special Conditions at All PacifiCorp Energy Plants

PLANT SECURITY

Plant security is under the direct control of Company and is in accordance with Company's established procedures, which include the requirements stated in this Article but shall not be limited to these provisions. Contractor and its personnel and its subcontractor's personnel of any tier shall strictly adhere to All PacifiCorp Energy Plants security provisions. Except for Blundell and Gadsby plants, Company will furnish, within fenced-in areas of the plant, a guard force to control access to and from the plant.

For the Jim Bridger and Dave Johnston plants, access into and out of the fenced-in area surrounding the plant is electronically controlled by a proximity card system and Gai-tronics phones. Company may provide to Contractor the necessary security access cards coded to operate the appropriate gate(s) to access Contractor's work area during the work hours established for this Contract. Instructions for use of Gai-tronics phones are posted at most phone locations. All security access cards are to be returned to Company upon completion of the work. Contractor agrees to pay to Company a \$30 fee for each replacement card and for each unreturned card.

Except for Blundell, Carbon, Dave Johnston, Gadsby, and Wyodak plants, all personnel working at the plant site and all repeat visitors may be provided and, where provided, shall be required to keep in their possession at all times, while on the premises, an identification ("ID") badge provided by Company. Visitor's badges will be available, but persons with such badges may be required to be escorted by a designated representative of Company.

Contractor will be assigned a personnel gate through which its employees must enter and depart. ID badges issued to Contractor's employees may, at Company option, be utilized as "brass", and Contractor will be responsible for the control of badges issued to its employees, subcontractors, suppliers and visitors.

Even though Company provides guard service, Contractor shall be fully responsible for all Contractor-furnished material and equipment, as well as Company-furnished material and equipment received by Contractor.

Designated parking areas for all persons have been established outside the fenced-in area of the plant. Certain individuals, authorized specifically by Company, may drive vehicles onto the plant site and may enter and leave through the main gate at times designated by Company. Access to the plant site between the hours of 3:30 P.M. local time and 7:00 A.M. of the normal work week and all hours on weekends shall be subject to the consent of Company. Contractor shall follow the procedure designated by Company in obtaining consent for access to the plant site at other than normal working hours.

Contractor shall maintain and submit to Company an up-to-date inventory of materials, tools, and equipment brought onto the plant site.

A representative of Company shall have the unqualified right to demand identification of and/or search all persons and all vehicles entering or leaving the plant site. Materials leaving the site must have an appropriate material pass issued by Company. When leaving the site upon project completion, advanced arrangements for tool inspection must be made. These inspections must be coordinated with Company.

There are areas within the plant which are restricted. Before entering these areas, Contractor shall obtain prior consent from Company representative. Any individual found in restricted areas without Company consent shall be subject to expulsion from the site.

SAFETY, HEALTH, ACCIDENT AND DAMAGE PREVENTION

Prior to start of any work required by this Contract, Contractor shall be responsible for assuring that each of its own employees, together with all employees of its subcontractors of any tier, are fully informed concerning all safety, health, and security regulations pertaining to their work, including but not limited to, confined space, fall protection, tag out/lockout procedures, and hearing conservation regulations.

Contractor shall arrange with Company to have all its work force and/or its subcontractor work force attend a plant orientation which may include a safety video. All personnel may be required to sign a sheet with their name acknowledging attendance.

Contractor shall comply with all safety standards and accident prevention regulations promulgated by Federal, State or local authorities having jurisdiction and will take or cause to be taken such additional measures as reasonably necessary to protect the life and health of all employees engaged in the performance of this Contract and work required hereunder. Contractor shall be responsible for the manner in which tools and equipment are used including the proper use of safety devices and equipment necessary to safeguard other workmen.

Contractor's non-English speaking employees shall receive safety information in their native tongue. Contractor shall provide Company with the names, job title, work schedule, and language of non-English speaking employees that will be working at Company's facility. Contractor shall provide a translator during the plant safety orientation so that each non-English speaking employee shall be able to comprehend the information being presented. Contractor shall provide a bilingual employee who shall be responsible for communicating safety information from English to the non-English speaking employees. Contractor shall provide a bilingual employee who shall be on plant site in the immediate vicinity of non-English speaking employees at all times to communicate emergency information and instructions. Should the nature of the contract work require Contractor

to divide into smaller work groups separating non-English speaking employees from the bilingual employee by more than 1000 ft. distance, additional bilingual employees shall be utilized at a ratio of one per work group. Company shall provide a hard hat sticker to be worn by Contractor's bilingual employee(s). Contractor's bilingual employee shall conduct a walk down of the work area with all non-English speaking employees, translating signs explaining hazards and warnings prior to commencing work.

Contractor shall at all times conduct all operations under this Contract in such a manner as to avoid the risk of bodily harm to persons or risk of damage to any property. Contractor shall promptly take all precautions which are necessary and adequate against any conditions which involve a risk of bodily harm to persons or a risk of damage to any property. Contractor shall continuously inspect all work, materials, and equipment to discover and determine any such conditions and shall be responsible for discovery, determination, and correction of any such conditions.

For work performed in a confined space, as defined by Federal and State law, Contractor shall: 1) comply with all OSHA and other permit space requirements; 2) have a formal written program defining in detail Contractor's procedures for such compliance; and 3) provide a copy to Company of such program prior to performing any such work. Contractor shall promptly advise Company of any hazards confronted or created in permit or non-permit spaces and shall provide Company copies of all tests, permits, and other required documentation resulting from such work.

No scaffold shall be erected, moved, dismantled, or altered except under the supervision of competent persons.

Contractor is responsible for ensuring compliance with the requirements set forth in the regulations governing the work. Such responsibility shall apply to both its operations and those of its subcontractors of any tier. When violations of the safety and health regulations are called to its attention by Company, Contractor shall immediately correct the condition to which attention has been directed. Such notice, either oral or written, when served on Contractor or its representative(s) shall be deemed sufficient.

In the event Contractor fails or refuses to promptly comply with the directive issued by Company, Company may issue an order to suspend all or any part of the work. When satisfactory corrective action is taken, an order to resume work will be issued by Company. Contractor shall not be entitled to any extension of time, nor to any claim for damage, nor to excess costs by reason of either the directive or the suspension order. Failure of Company to order discontinuance of any or all of Contractor's operations shall not relieve Contractor of its responsibility for the safety of personnel and property.

Contractor shall:

- a. Submit a safety program to Company for review prior to start of work under this Contract.
- b. Provide for weekly five (5) minute "tool box" safety meetings, conducted by its supervisor/foreman and attended by all craft employees on the job site with a copy of the meeting minutes provided to Company within three (3) days after the meeting.
- c. Conduct regularly-scheduled safety meetings for all levels of supervision.
- d. Provide trained personnel as part of site safety team to insure prompt and efficient first aid and medical care for injured employees. Contractor shall be responsible for transporting any injured personnel. If ambulance service is required, Contractor shall notify Control Room who will make the necessary call.
- e. Designate a competent supervisory employee to carry out Contractor's accident prevention program.
- f. Reimburse Company for any costs incurred by Company resulting from citations for failure of Contractor to comply with governing regulatory agencies.
- g. Have the sole responsibility for providing fire protection in its work area and furnishing Company a written fire protection plan which shall be subject to Company's acceptance prior to commencing work.

Serious accidents and/or fires shall be immediately reported to the Control Room Operator of the unit where the emergency exists. The person that reports the emergency will give their name, state what the emergency is and the location of the emergency. The Control Room Operator will sound the appropriate alarm and will summon appropriate emergency response personnel. The alarm shall be sounded for five (5) seconds and then the location of the fire or medical emergency will be announced over the Public Address System. The alarm will then be repeated. Contractor shall notify Company's designated representative of any serious accident or fire as soon as practical.

In the event of a fire, accident, or evacuation emergency, Contractor is to assemble and account for their personnel as directed by the plant alarm system. Upon completion of the accurate accounting, Contractor is to report the status of their personnel to Company.

Contractor shall maintain an accurate record and shall provide a written report to plant Safety Administrator of all cases of death, fire, occupational diseases, or any injury to employees or the public involved, and property damage by accident, to performance of work under this Contract within forty-eight (48) hours of such incident.

Contractor shall be aware that the Company has adopted a smoke-free policy. All facilities which includes all buildings, trailers (including Contractor trailers), enclosed garages, plants, vaults, vehicles and enclosed equipment have been designated as "Non-Smoking" areas. Contractor or its employees shall not be allowed to smoke in these designated areas.

In order to prevent confusion with the permanent work force at the Jim Bridger plant, neither the Contractor nor any of Contractor's subcontractor personnel shall wear red, orange, or yellow hard hats while on the plant site.

All Contractors' employees working at the plant site shall wear protective equipment appropriate to the specific work activity and in accordance with plant safety rules. All such equipment shall be furnished by Contractor. Protective equipment includes, but is not limited to, hard hats, safety glasses, hearing protection, protective clothing, and safety toe footwear (must be appropriate for the work being performed and must meet ANSI Z41.1, 1967 or the new ASTM F2412 – 05 and F2413 – 05 standard and be non-fabric/non-perforated uppers, oils and acid resistant soles, and be a minimum of Class I/75 or C/75, effective September 1, 1991). Hard hats, safety glasses and safety toe footwear will be worn at all times while on the plant site except in locker rooms, lunch rooms, and office rooms. Hearing protection will be worn in all posted areas or when otherwise directed by Company. Protective clothing, gloves, and respirators will be used as work conditions dictate to assure the safety and health of the workmen.

Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried. Seat belts and anchorages meeting the requirements of 49 CFR Part 571 (Department of Transportation, Federal Motor Safety Standards) shall be installed in all motor vehicles. Workmen will not be allowed to ride in a pickup or truck standing up or with their feet dangling over the side while the vehicle is in motion.

All vehicles on site will observe the plant speed limit as posted.

All Contractor provided equipment and vehicles will be operated with the headlights on while operating on the property at the Jim Bridger plant. This will increase visibility, thereby enhancing the safety of all employees of Company and Contractors.

Metal ladders are prohibited on the plant site.

Contractor shall leave a job site in as safe a condition as possible. Before leaving a job, it shall be Contractor's duty to correct or arrange to give a warning on any condition which is hazardous.

Unsafe conditions shall be identified by barriers, signs or some other suitable method (Jim Bridger plant requires protective orange fencing). Danger area signs and barricades shall be designated by predominant red color. Caution area signs and barricades shall be designated by predominant

yellow color. Barricades, barricade tape and/or flagging shall have properly completed yellow information tag (supplied by Company) attached in a conspicuous location stating date, reason for barrier and person to contact. Signs and barricades shall be removed immediately upon completion of the job requirement.

Contractor's work practices shall minimize interference and disruption to plant maintenance and operation. Contractor shall not remove or alter any part of the existing structures, equipment or system without prior knowledge or consent of Company. Contractor shall, at all times during the performance of the work, be in strict compliance with the plant's Protective Tagging and Clearance Procedures.

MATERIAL SAFETY DATA

Contractor shall be familiar with and abide by all provisions of the OSHA "Hazard Communication Standard". Contractor shall pay special attention to the following sections of the "Contractor Employees" section of the PacifiCorp Hazard Communication Program:

- a. [R]equire... that suppliers furnish appropriate Material Safety Data Sheets (MSDS) and appropriate labels of all purchased chemicals.
- b. For materials Contractor brings to the jobsite, MSDS for those materials must be presented to Company for review by the Company's plant Safety Administrator and plant Environmental Engineer prior to commencement of work. All materials must meet all State and Federal Regulations for containment.
- c. [R]equire... Contractor and all employees to review the MSDS of the appropriate hazardous chemicals, and follow the requirements of the OSHA Hazard Communication Standard.

HAZARDOUS MATERIALS AND HAZARDOUS WASTE

To comply with State and Federal regulations concerning hazardous materials and hazardous wastes, Contractor using any regulated substances, including but not limited to chemicals, paints, thinners, and solvents, on the plant site is responsible for the proper storage, usage, and disposal of the material or waste. Contractor shall be responsible to inform Company Representative of the quality and type of hazardous materials brought on site in writing. This information is to be copied to the plant Environmental Engineer. Contractor shall also be responsible for the removal of all wastes and unused materials, whether hazardous or nonhazardous, at the job completion. Wastes may not be disposed of at **the Jim Bridger plant landfill unless specifically approved by the Company Representative and shall be recorded on the plant Daily Landfill Placement Log(s). The logs are to be given to the plant Environmental Engineer.**

A Contractor whose employees will be working in an area where hazardous chemicals are or may be present shall be notified in writing of the chemicals present and provided with appropriate

MSDS. It will be the responsibility of Company to inform Contractor of the hazardous chemicals in the plant to which their employees may be exposed.

The application, disposal, utilization or other handling of any lead or lead based material or product ("Lead Work") shall be performed in strict compliance with all applicable Federal, State and local laws and regulations, including without limitation Federal OSHA Construction Standard For Lead (29 CFR 1926.62). Prior to performing any Lead Work, Contractor shall prepare and have in effect a written work plan specifically for such Work. Contractor shall provide a copy of that work plan to Company for review upon request by Company, which request may be made at any time or times. Contractor shall provide documentation evidencing proof of competency of individuals under Contractor's supervision executing the work plan.

The removal or handling of any devices known or suspected to contain mercury shall be coordinated with the Company and performed in accordance with Company procedures and State and Federal regulations. Any devices which Contractor removes during the course of work which contain mercury shall be given to Company for proper disposal.

Computer wastes (cathode ray tubes, central processing units) or electronic components that contain "mother-board" like components may contain high levels of Resource Conservation and Recovery Act (RCRA) regulated wastes. These materials may not be discarded into plant landfills. If these types of waste are generated by the Contractor, the Contractor shall ensure that the wastes are properly recycled and/or removed from Company property.

CONTRACTOR IS HEREBY NOTIFIED THAT ASBESTOS IS PRESENTLY IN THE CARBON, GADSBY AND NAUGHTON PLANTS AND ASBESTOS ABATEMENT WORK IS CURRENTLY UNDERWAY. ASBESTOS IS PRESENT IN SOME AREAS IN THE JIM BRIDGER, HUNTINGTON, HUNTER, DAVE JOHNSTON AND WYODAK PLANTS.

TO THE EXTENT THAT THE WORK UNDER THIS CONTRACT INCLUDES THE HANDLING OF OR EXPOSURE TO ASBESTOS, CONTRACTOR SHALL PROVIDE PERSONNEL APPROPRIATELY TRAINED REGARDING ASBESTOS REQUIREMENTS, LAWS, AND REGULATIONS.

Contractor shall notify Company if suspected asbestos containing material is encountered. Contractor shall not disturb in any way the encountered material. If at any time while performing any maintenance or repairs, Contractor encounters insulation or gasket material and cannot identify it as non-asbestos, Contractor shall have the responsibility of notifying Company of a potential asbestos hazard. Contractor shall present samples to be tested to Company per plant procedures. Company will test samples of suspect material. Company's insulating Contractor shall contain or remove all asbestos containing material.

ENVIRONMENTAL COMPLIANCE

A representative of the Company shall provide the Contractor with a copy of the Environmental RESPECT Policy. Prior to starting any work, Contractor shall be responsible for assuring that all of its employees are fully aware of the Environmental RESPECT policy. Contractor shall conduct its work in such a manner as to minimize all harmful impacts to the environment, and take all necessary precautions to protect the environment. Contractor will be responsible to continuously inspect and monitor the performance of its employees as it relates to environmental stewardship. Environmental issues created by the Contractor's operations and/or activities shall be promptly addressed by the Contractor and reported to the plant Environmental Department, as appropriate.

Contractor is responsible for maintaining strict compliance with all State and Federal environmental regulations. Many of these regulations have important requirements associated with employee training. Contractor has sole responsibility for any employee training required by State and Federal regulations. Proof of successful training completion and periodic testing or recertification must be provided upon request by Company

In addition to the applicable local, State and Federal requirements, Contractor must comply with the following:

- a. Contractor shall abide by the plant's fugitive dust control plan including but not limited to speed limits, minimizing soil disturbance, application of water to control dust during work activity and proper operation and maintenance of equipment.
- b. Contractor shall obtain applicable Construction or Operating Permits prior to constructing activities or operating stationary equipment which:
 - 1) Emits greater than five tons per year of any of the following pollutants: particulate matter (PM10), sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen oxides (NO_x), and volatile organic compounds (VOC);
 - 2) Emits greater than 500 pounds per year of any hazardous air pollutant (HAP), and greater than 2,000 pounds per year for any combination of HAPs;
 - 3) Regulated by any standard or requirement of Section 111 or 112 of the Clean Air Act; and
 - 4) Has the potential to be a major source, as defined in R307-101-2, Utah Annotated Code (UAC) or Wyoming Air Quality Standards and Regulations, Chapter 6, Section 3.
- c. Contractor shall notify the Company Safety Administrator or plant Environmental Engineer prior to performing any sandblasting activity and abide by the plant's Title V Operating Permit conditions related to sandblasting activities. In the event that Contractor performs sandblasting activities, the Contractor shall have a certified Method 9 Visible Emission

Observer on site and provide Method 9 observations as required by the plant's Title V Operating Permit.

- d. Contractor shall obtain a Storm Water Construction Permit for construction activities disturbing greater than one acre. Contractor has sole responsibility to perform inspections every 14 days of the runoff control devices, transfer the Storm Water Permit and the inspection sheets to the Company Environmental Engineer within ten (10) days of construction completion. Contractor shall seed disturbed ground as required by the Storm Water Construction Permit.
- e. Contractor shall secure required permits and request approval by Company Environmental Engineer prior to the discharge of any water into the Water of the State. Contractor shall secure required permits and request approval by Company Environmental Engineer prior to dredging or disturbing any waterways on Company property.
- f. Contractor shall abide by the plant's Spill Prevention Control and Countermeasures requirements and shall:
 - 1) Notify the Company Environmental Engineer in writing of any equipment or containers that contain 55 gallons or more of petroleum products;
 - 2) Store all containers of petroleum products that are equal to or greater than 55 gallons in Company approved secondary containment;
 - 3) Inspect for leaks on any and all Contractor provided tanks and drums while on site;
 - 4) Report and clean up all spills in a timely manner in accordance with the plant's Spill Prevention Control and Countermeasures Plan;
 - 5) Immediately report to the plant Environmental Department any spill or leak which enters, or threats to enter, any Water of the State, including ground water;
 - 6) Ensure all spills and leaks are cleaned in a prompt and timely manner.

WORK RULES

Contractor shall at all times maintain strict discipline among its employees, including the employees of its subcontractors of any tier. Contractor shall comply with job site conditions and work rules established by Company and shall cooperate with Company in enforcing such rules.

Any employee of Contractor or of its subcontractors of any tier, who is deemed by Company to be incompetent or disorderly or who possess a danger to the safety of the work, shall be immediately removed from Contract work upon the request of Company and shall not again be employed in the Contract work without the consent of Company.

CONTRACTOR DRUG AND ALCOHOL POLICY

Contractor shall establish, maintain, and provide proof of a confidential drug and alcohol testing

program for all of Contractor's employees and subcontractors assigned to work for any PacifiCorp Energy Plant (collectively, the "Contractor's Representatives").

Contractor's Representatives are prohibited from possessing, using, distributing, dispensing, manufacturing, selling or having in their possession or control any drug/banned substance while on any PacifiCorp Energy Plant property.

The Contractor shall provide for random drug testing that shall include all of Contractor's Representatives. Contractor may be asked, at anytime, to provide documentation that such testing has taken place. Contractor will cooperate when asked to drug test for safety violations, suspicious or inappropriate behavior, reports of drug use, or physical signs of drug use. Contractor's Representatives selected for random testing shall be accompanied to the testing site by Contractor's supervisory personnel as soon as practical on the same day they are selected.

The tests required pursuant to this program must be conducted by a laboratory certified by the National Institute on Drug Abuse (NIDA). The tests must screen at a minimum for the following substances and levels.

Compound	Screen	Confirming
Amphetamines	1000 ng/ml	500 ng/ml
Barbiturates	300 ng/ml	300 ng/ml
Benzodiazepines	300 ng/ml	300 ng/ml
Cocaine Metabolites	300 ng/ml	150 ng/ml
Marijuana (THC)	50 ng/ml	15 ng/ml
Methadone	300 ng/ml	300 ng/ml
Methaqualone	300 ng/ml	300 ng/ml
Opiates	300 ng/ml	300 ng/ml
Phencyclidine	25 ng/ml	25 ng/ml
Propoxyphene	300 ng/ml	300 ng/ml
Ethanol (alcohol)	0.02% percent blood alcohol or equivalent, as indicated by blood, saliva, breathalyzer or similar test.	0.02% percent blood alcohol or equivalent, as indicated by blood, saliva, breathalyzer or similar test.

Test levels that meet or exceed the above stated levels shall constitute immediate removal of the individual from any PacifiCorp Energy Plant property for no less than one year and responsibility for a tracking mechanism to confirm that the individual has not returned to any

PacifiCorp Energy Plant property during that one year period is the obligation of the Contractor.

Failure of the Contractor or any of Contractor's Representatives to comply with this policy shall be grounds for immediate removal from any PacifiCorp Energy Plant property.

In maintaining a drug free workplace, all PacifiCorp Energy Plants expect the full cooperation of the Contractor and any of Contractor's Representatives.

EXHIBIT D
COMPANY'S CRITERIA
Background Check Criteria

The Company has a Badge and Access Standards policy which outlines company standards, procedures, compliance policies and workforce responsibilities regarding badges and access to all PacifiCorp controlled areas. Access to Company's Facilities is subject to this policy and requires access to be granted on an as-needed basis after completion of the required background check and training requirements.

In addition, the Company is required to comply with the mandatory Critical Infrastructure Protection Standards (CIPS) issued by the North American Electric Reliability Corporation (NERC) and approved by the Federal Energy Regulatory Commission on January 17, 2008. These CIPS were adopted to ensure that electric utilities, as part of the nation's critical infrastructure, are able to sustain and secure against vulnerabilities that may threaten the electric system and the utilities that operate it. Specifically, CIP-001 through CIP-009 provide a cyber security framework for the identification and protection of assets critical to the reliable operation of the electric system.

In order to ensure compliance with CIPS and the Company's access policy, Company requires that all personnel who will have authorized unescorted physical access to Company's Facilities and/or authorized cyber or unescorted physical access to CIPS Covered Assets (including control centers, substations, generation plants, critical cyber assets, etc.) have the appropriate security clearance and security training.

Individuals who are considered "restricted persons" may not have unescorted access to Company's Facilities or CIPS Covered Assets. An individual will be considered a "restricted person" if the person meets any of the following criteria:

- Is currently under indictment for a crime punishable by imprisonment for a term exceeding one year;
- Has been convicted (within the past seven years) in any court of a crime punishable by imprisonment for a term exceeding one year;
- Is currently a fugitive from justice; or
- Is an alien illegally or unlawfully in the United States.

If an individual's background check indicates that he/she meets any of the above criteria, the individual will be considered a "restricted person" and unescorted access to Company's Facilities or CIPS Covered Assets will not be authorized.



Contractor / Vendor Information Form (CIF)

Contractor / Vendor Name: _____
(Last, First, Middle Initial)

Company Name: Nalco Company (4700000726)

Address: _____

Phone: _____ Fax: _____

- (1) Successfully Passed Employer's Drug and Alcohol Exam?
Yes No (if no, please complete grey box below) Date Completed: _____
(MM/DD/YYYY)
- (2) Successfully Passed Employer's Background Check?
Yes No (if no, please complete grey box below) Date Completed: _____
(MM/DD/YYYY)
- (3) Completed PacifiCorp's Security training? Date Completed: _____
(MM/DD/YYYY)
- (4) Completed PacifiCorp's CIPS Overview training? Date Completed: _____
(MM/DD/YYYY)

I hereby certify that the information provided regarding the Contractor / Vendor is accurate and documentation to support this information will be retained by Contractor / Vendor employer and provided upon Company's request

REQUIRED SIGNATURES:

_____ <i>Signature of Manager from Contractor / Vendor Company</i>	_____ <i>Date</i>
_____ <i>Printed Name</i>	

If Contractor / Vendor did not pass the Background Check or Drug and Alcohol Exam, please contact Colt Norrish at "colt.norrish@pacificorp.com" or 503-813-5545 to discuss:

_____ <i>Accepted by PacifiCorp Chief Compliance Officer</i>	_____ <i>Date</i>
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- **Contractors / Vendors will not be permitted PacifiCorp unescorted access without the completion of a drug/alcohol screening, background check and required training.**
- **Contractor / Vendor Companies should send this completed form to the PacifiCorp hiring/sponsoring manager.**
- **The hiring/sponsoring manager will use the information on this form to complete a Personnel Action Input Form (PAIF), and will submit this form along with the PAIF to the HR Service Center.**



Background Check Requirements:

- 1) Background checks shall be updated no less frequently than every seven (7) years or upon request by Company, and shall, at a minimum, consist of a social security number verification and seven-year criminal background check, including all convictions for a crime punishable by imprisonment for a term exceeding one year.

Drug and Alcohol Screening Requirements:

- 1) Drug test shall, at a minimum, be a five (5) Panel Drug Test, which should be recognizable at testing labs as a "SamHSA5 panel at 50NG – THC cut-off".

Exhibit F

Letter Of Credit Requirement

The following are the terms and conditions required by PacifiCorp when establishing a Letter Of Credit.

- PacifiCorp must approve the issuing bank.
- Applicant (Contractor and/or Supplier) name appearing in the Letter of Credit and Contract must be EXACTLY the same.
- If issuing bank is located outside the United States (US) then it must be confirmed by US banking institution approved by PacifiCorp.
- It is to be an Irrevocable Standby Letter Of Credit in favor of PacifiCorp.
- Drafts are payable at sight.
- The expiry date must be no earlier than 12 months from issuance.
- Partial and multiple drawings are permitted.
- The Letter of Credit is available by PacifiCorp's draft (s) at sight when accompanied by a copy of an invoice and one of the two following statements, signed by a representative of PacifiCorp, reading as follows:
 1. We hereby certify that the Applicant has violated the terms and conditions of the Contract dated month/date/year. The undersigned, an authorized representative of PacifiCorp (Beneficiary) hereby certifies that the Applicant has failed to comply with and/or violated the terms and conditions of that certain Contract (s) signed by and between the Applicant and Beneficiary and the amount of the accompanying draft drawn under Letter of Credit No. #0000000 represents the amount the Beneficiary is entitled to draw on the Letter of Credit as a result of the occurrence of such failure to comply and/or violation; or
 2. Applicant has not renewed or provided to Beneficiary an acceptable replacement Letter of Credit within 30 days of expiration of the original Letter of Credit No. 0000000.
- In all events the issuing bank will fund the draw of the beneficiary within 24 hours of presentment.
- The LOC will provide for the beneficiary to deliver the required documents to fund the draw by either mail or courier with the address of the issuing bank stated as the point of delivery.

EXHIBIT G

FORM OF PARENT GUARANTEE

THIS GUARANTEE ("Guarantee"), effective as of [_____], 200_ , by [_____], a [_____] corporation ("Guarantor"), to and for the benefit of PacifiCorp ("hereinafter Company").

WITNESSETH:

WHEREAS, Company proposes to

_____ ; and

WHEREAS, Company and [_____], a company organized under the laws of [_____] (hereinafter, "Contractor"), propose to enter into that certain [*insert contract name*] dated as of [_____], 200_ (as such agreement may be amended, modified or supplemented from time to time, the "Contract");

WHEREAS, Contractor is a wholly owned subsidiary of Guarantor; and

WHEREAS, ARTICLE ___ of the Contract requires that this Guarantee be executed and delivered by Guarantor concurrently with the execution of the Contract;

NOW THEREFORE, for valuable consideration and as an inducement to Company to enter into the Contract, Guarantor covenants with Company as follows:

1. Guarantor hereby unconditionally guarantees to Company the full and timely performance when due and observance when due of all covenants, terms and agreements to be performed and observed by Contractor under the Contract and all other present or future agreements and instruments between Company and Contractor in connection with the performance of the Contract (such obligations of Contractor collectively, the "Obligations"). Notwithstanding any other provisions of this Guarantee to the contrary, this Guarantee shall not modify the Obligations under the Contract or require Guarantor, when performing or causing work to be performed on Contractor's behalf, to expand the Obligations from those set forth in the Contract.
2. Guarantor covenants to Company that if at any time Contractor should default in the performance when due and observance when due of, or should commit a breach of, any Obligation, Guarantor shall, promptly upon written notice by Company, perform in Contractor's stead, or cause the performance of, such covenants, terms or agreement.
3. It is expressly understood and agreed by Guarantor that to the extent Guarantor's obligations hereunder relate to the Obligations which require performance other than the payment of money, Company may proceed against Guarantor to effect specific performance thereof (to the extent such relief is available) or for payment of damages resulting from Contractor's nonperformance or breach of the Contract, Guarantor hereby covenants to perform or cause to be performed all of the Obligations for the balance of the term thereof in the event of Contractor's bankruptcy, if the Contract is disaffirmed by the Trustee in bankruptcy, or at the Company's request. Guarantor

shall make and enter into a new agreement performing or causing to be performed the Obligations, which said new agreement shall be in form and substance identical to the Contract with no increase in the Contract Price.

4. All payments by Guarantor to Company shall be made in the United States in United States Dollars and shall be paid within thirty (30) days after receipt by Guarantor from Company of written demand for such payment and shall not be the subject of any offset against any amounts which may be owed by Company to Guarantor for any reason whatsoever. Each and every default or failure by Contractor to perform an Obligation shall give rise to a separate liability of Contractor to Company and a separate cause of action hereunder and a separate suit may be brought hereunder as each liability or cause of action arises.
5. Guarantor agrees to pay all costs, expenses and fees, including all reasonable attorneys' fees, which may be incurred by Company in enforcing this Guarantee, whether by suit or otherwise.
6. The obligations of Guarantor under this Guarantee shall be irrevocable, absolute and unconditional and, subject to Section 16, shall remain in full force and effect until such time as all the Obligations shall have been absolutely and completely discharged and performed. The obligations of Guarantor shall not be affected, modified or impaired upon the happening from time to time of any event, including without limitation, any one or more of the following (unless based upon performance by Contractor), whether or not with notice to or consent of either the Guarantor or Contractor:
 - (a) the compromise, settlement, release, change, modification or termination of any of the Obligations;
 - (b) the waiver by Company of any Obligation;
 - (c) the extension of time for payment of any amounts due or of the time for performance of any Obligation;
 - (d) the modification or amendment (whether material or otherwise) of any covenants, terms and agreements set forth in the Contract;
 - (e) the failure, omission, delay or lack on the part of Company to enforce, ascertain or exercise any right, power or remedy under or pursuant to the terms of the Contract or this Guarantee;
 - (f) the fact that Guarantor may at any time in the future dispose of all or any part of its interest in Contractor, or otherwise alter its investment in Contractor in any manner;
 - (g) the bankruptcy, insolvency or other similar or dissimilar failure or financial disability of either Contractor or Company;
 - (h) the addition, substitution or partial or entire release of any guarantor, maker or other party (including Contractor) primarily or secondarily liable or responsible for any Obligation or by any extension, waiver, amendment or thing whatsoever which may release a guarantor (other

than performance);

- (i) the invalidity, nonbinding effect or unenforceability of any covenant, term or agreement set forth herein (other than with respect solely to such Obligation or any covenant, term or agreement);
 - (j) the addition, substitution, subordination, or partial or entire release of any security for the performance of any Obligation.
7. Guarantor irrevocably and absolutely waives any and all rights of subrogation, contribution, indemnification, reimbursement or similar rights against Contractor with respect to this Guarantee, whether such rights arise under an express or implied contract or by operation of law, it being the intention of Guarantor and Company that Guarantor shall not be deemed to be a "creditor" (as defined in Section 101 of the U.S. Bankruptcy Code) of Contractor by reason of the existence of this Guarantee in the event that Contractor becomes a debtor in any proceeding under the U.S. Bankruptcy Code. In addition, Guarantor will not exercise any rights which it may acquire by way of subrogation under this Guarantee by any payment made hereunder or otherwise, until all of the Obligations shall have been performed or indefeasibly paid in full. If any amount shall be paid to Guarantor on account of such subrogation rights at any time when all such Obligations shall not have been indefeasibly paid in full, such amount shall be held in trust for the benefit of the Company and shall forthwith be paid to Company and applied to the Obligations, whether matured or unmatured.
8. Company shall have the right, in its sole judgment and discretion, from time to time, to make demand for payment or performance and to proceed against Guarantor for recovery of the total of any and all amounts due, or for the performance of any nonmonetary obligation owed, to Company pursuant to this Guarantee, or to proceed from time to time against Guarantor for such portion of any and all such amounts, or for the performance of any and all such non-monetary obligations, as Company may determine.
9. So long as any Obligations are owed to Company, Guarantor shall not, without the prior written consent of Company, commence, or join with any other Person in commencing, any bankruptcy, reorganization, or insolvency proceeding against Contractor. The obligations of Guarantor under this Guarantee shall not be altered, limited or affected by any proceeding, voluntary or involuntary, involving the bankruptcy, reorganization, insolvency, receivership, liquidation or arrangement of Contractor, or by any defense which Contractor may have by reason of any order, decree or decision of any court or administrative body resulting from any such proceeding.
10. Guarantor hereby waives and relinquishes all rights and remedies accorded by Applicable Law to sureties or guarantors and agrees not to assert or take advantage of any such rights or remedies, including without limitation:
- (a) any right to require Company to proceed against Contractor or any other Person or to proceed against or exhaust any security held by Company at any time or to pursue any other remedy in Company's power before proceeding against Guarantor;

- (b) the defense of the statute of limitations, waiver or estoppel in any action hereunder or in any action for the collection or performance of any Obligations;
- (c) any defense that may arise by reason of the incapacity, lack of authority, death or disability of any other person or the failure of Company to file or enforce a claim against the estate (in administration, bankruptcy or any other proceeding) of any other person;
- (d) demand, presentment, protest and notice of any kind, including without limitation notice of the existence, creation or incurring of any new or additional indebtedness or obligation or of any action or non-action on the part of Contractor, Company, any creditor of Contractor or Guarantor or on the part of any other person under this or any other instrument in connection with any obligation or evidence of indebtedness held by Company as collateral or in connection with any Obligations;
- (e) any defense based upon an election of remedies by Company which destroys or otherwise impairs the subrogation rights of Guarantor, the right of Guarantor to proceed against Contractor for reimbursement, or both;
- (f) any duty on the part of Company to disclose to Guarantor any facts the Company may now or hereafter know about Contractor, regardless of whether Company has reason to believe that any such facts materially increase the risk beyond that which Guarantor intends to assume, or has reason to believe that such facts are unknown to Guarantor, or has a reasonable opportunity to communicate such facts to Guarantor, since Guarantor acknowledges that Guarantor is fully responsible for being and keeping informed of the financial condition of Contractor and of all circumstances bearing on the risk of non-payment of any Obligations;
- (g) any defense arising because of Company's election, in any proceeding instituted under the Federal Bankruptcy Code, of the application of Section 1111(b)(2) of the Federal Bankruptcy Code; and
- (h) any defense based upon any borrowing or grant of a security interest under Section 364 of the Federal Bankruptcy Code.

Without limiting the generality of the foregoing, Guarantor specifically acknowledges Contractor is obligated to provide letters of credit to Company as security for the Obligations. Guarantor hereby agrees that Company may (but shall not be obligated to) first proceed against Guarantor under this Guarantee before proceeding against the letters of credit, or Company may proceed against both the letters of credit and Guarantor concurrently.

11. This Guarantee shall inure to the benefit of and be binding upon the Parties hereto and their respective successors and permitted assigns, provided, however, that Guarantor may not make an assignment or other transfer of this Guarantee or any interest herein by operation of law or otherwise unless it has obtained the prior written consent of Company to such assignment or other transfer. Any purported assignment contrary to this provision is void.

- 12. All notices to Guarantor required to be served under this Guarantee shall be in writing and shall be served by registered mail and shall be addressed as follows:

or at such other address as Guarantor may from time to time designate in writing.

- 13. This Guarantee shall in all respects be interpreted, and construed and governed by and in accordance with, the internal, substantive laws of the State of Oregon and the United States of America. All agreements, instruments and notices referred to herein or supplementary hereto shall be prepared, furnished in, and governed, and controlled by the English language. Guarantor irrevocably consents to the jurisdiction of the state and federal courts located in Oregon, agrees that any action, suit or proceeding by or among Company and Guarantor may be brought in any court in Oregon and waives any objection which Guarantor may now or hereafter have regarding the choice of forum whether on personal jurisdiction, venue, forum non conveniens or on any other ground. Guarantor irrevocably consents to the service of process outside of the territorial jurisdiction of such courts by mailing copies thereof by registered or certified United States mail, postage prepaid, to Guarantor's last known address as shown in the records of Company with the same effect as if Guarantor were a resident of the State of Oregon and had been lawfully served in such state. Nothing in this Guarantee shall affect the right to service of process in any other manner permitted by law. Guarantor further agrees that final judgment against it in any action or proceeding shall be conclusive and may be enforced in any other jurisdiction within or outside the State of Oregon by suit on the judgment, a certified or exemplified copy of which shall be conclusive evidence of the fact and the amount of such judgment.

- 14. Guarantor represents, covenants and agrees to and with Company that:
 - (a) the execution and delivery of this Guarantee and its performance have been duly authorized by all necessary corporate action on the part of Guarantor;
 - (b) this Guarantee is the legal, valid and binding obligation of Guarantor, enforceable against it in accordance with its terms, subject to the application of bankruptcy and similar laws and of general equitable principles;
 - (c) the execution, delivery and performance of the Guarantee will not violate any law or any provision of any security issued by the Guarantor or of any agreement, instrument or undertaking to which the Guarantor is a party or by which it or any of its property is bound, and do not require any license, consent or approval of any governmental authority; and
 - (d) except as may be disclosed in writing to Company, no litigation, investigation or proceeding of or before any arbitrator or governmental authority is pending or, to the Guarantor's knowledge, threatened by or against the Guarantor or any

of its subsidiaries or against any of such parties' properties or revenues which, if adversely determined, would be reasonably likely to have a material adverse effect on the ability on the Guarantor to perform its obligations hereunder.

15. Guarantor agrees that:

- (a) It will maintain in full force and effect all consents of any governmental or other authority that are required to be obtained by it with respect to this Guarantee and will obtain any that may become necessary in the future.
- (b) It will comply in all material respects with all applicable laws and orders to which it may be subject if failure so to comply would materially impair its ability to perform its obligations under this Guarantee.
- (c)
 - (i) Quarterly Financial Statements. Guarantor will deliver to Company, within sixty (60) days after the close of each of the first three quarterly accounting periods in each fiscal year of Guarantor, a copy of its 10-Q as filed with the United States Security and Exchange Commission the ("SEC").
 - (ii) Annual Financial Statements. Guarantor will deliver to Company, within ninety (90) days after the close of each fiscal year of Guarantor, a copy of its 10-K as filed with the SEC.
 - (iii) Other Information. From time to time, such other information or documents (financial or otherwise) regarding Guarantor as Company may reasonably request and as may be available to Guarantor without undue cost or effort; provided, however, that Guarantor may impose reasonable confidentiality requirements in connection with the disclosure of such information and documents in the nature of those set forth in Article 27 of the Contract.
- (d) Upon the occurrence of a default by Guarantor (i) in the payment of any principal, interest or other amount due under any agreement involving the borrowing of money or the advance of credit, or (ii) in the payment of any amount due under any guarantee of any agreement or obligation of the type and in the amount described in the foregoing clause, Guarantor shall be obligated immediately to provide a letter of credit in the amount satisfactory to Company to secure the obligations of Guarantor hereunder or provide such other security for the performance of this Guarantee as shall be acceptable to Company.
- (e) Guarantor shall not sell, assign, transfer, convey, mortgage, encumber, hypothecate, pledge or otherwise dispose of or grant any interest in Contractor.
- (f) In the event that Guarantor at any time during the effectiveness of this Guarantee, has experienced, in the reasonable opinion of Company, a material adverse change in the ability to fulfill its obligation under this Guarantee ("MAC"), then such MAC shall be deemed a default hereunder whereupon Guarantor shall immediately upon demand by Company, either pay to Company the Unamortized Replacement Value in immediately available funds in full satisfaction of its obligations hereunder, or (y) provide to Company a letter of credit in the amount

Water Treatment Chemicals

of the Unamortized Replacement Value from a financial institution satisfactory to Company and in the form of an Acceptable Letter of Credit (as defined in the Contract), in each case in Company's sole discretion, to secure the obligations of Guarantor hereunder.

(g) For purposes of this Section 15, "Unamortized Replacement Value" means the positive difference, if any, obtained by subtracting the payments made by Company under the Contract from the replacement price of any equipment, materials or services otherwise obligated to provide during the remaining term of the Contract.

16. Reinstatement of Guarantee. This Guarantee shall be reinstated if at any time following the termination of this Guarantee under Section 6, any payment by Guarantor pursuant to this Guarantee or by Contractor pursuant to the Contract is rescinded or must otherwise be returned by Company or other Person upon the insolvency, bankruptcy, reorganization, dissolution or liquidation of Contractor, Guarantor or otherwise, and is so rescinded *or* returned to the party or parties making such payment, all as though such payment had not been made.

17. Any invalid or unenforceable provisions in this Guarantee shall be deemed severed herefrom, and such whole or partial invalidity shall not affect the enforceability or validity of the balance of this Guarantee.

18. Any capitalized terms used herein and not herein defined shall have the meanings given to them in the Contract and the rules of interpretation as set forth in the Contract shall also apply to this Guarantee.

IN WITNESS WHEREOF, Guarantor has caused this Guarantee to be executed as of the date first above written.

[Parent Company],
a [_____]

By:

Name: _____

Title: _____