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Meeting Date: October 23, 2024

Staff Contact: David Laughlin, Planning & Engineering Division Manager

**TITLE: C-24-30 – Approval of Contract with Atlas Polar for the Purchase of HB9100 HydroBrush Switchout System**

**ACTION: Recommend Approval**

**SUMMARY:**

This service was procured pursuant to the authority contained in Section 7, Exemptions from the Procurement Ordinance, of the Rules Governing Procurement for the Albuquerque Bernalillo County Water Utility Authority. Resolution R-18-14 requires board approval for any purchase in an amount exceeding \$500,000.00.

Requesting approval to enter into an agreement with Atlas Polar to purchase HB9100 HydroBrush Switchout system through the issuance of a purchase order. The Hydrobrush system is a brush system that cleans the intake screens at the Alameda Raw Water Intake structure where raw water from the Rio Grande is diverted and, together with the Raw Water Pump Station, delivered to the SJCWTP for subsequent treatment and potable supply to Albuquerque. There are two separate customized brush systems (one for each intake channel) that keep the intake screens cleans so that water can continuously be diverted. These brush systems are critical equipment components that requires electrical and mechanical upgrades in order to remain operable/functional.

If approved by the Board, a purchase order will be issued by the Albuquerque Bernalillo County Water Utility Authority to enable Atlas Polar to purchase and install the HB9100 HydroBrush.

Approval of this item shall also serve as delegation of authority for the Executive Director to approve all future amendments to this purchase order, if any.

**FISCAL IMPACT:**

\$766,000.49 which amount includes NM GRT.

Annual Purchase for FY2025

Other Exempt Purchase – (ME) Manufacturer Exemption Form

Vendor: Atlas Polar

Requesting Department: Centralized Planning and Engineering

Equipment/Parts/Services: Atlas Polar HB9100 HydroBrush Replacements

**Please answer the required responses to the below questions.**

- Are these parts, maintenance, or services required to match equipment currently in use, if so, why?

Yes. They are needed at the Raw Water Intake Fish Brush System. Atlas Polar is the sole source for replacement and repair parts for this system.

- Is standardization in the best interest of the Water Authority, if so, why?

This application is unique within the Water Authority. Standardization is not possible.

- Are these Equipment/Parts/Service only available from this vendor? If, so please provide supporting documentation.

Yes. Atlas Polar is the sole source for replacement and repair parts. This equipment operates along a steel railway infrastructure with specific dimensions that are only compatible with the Atlas Polar HB9100 Model HydroBrush system.

Signature: Charles F. Lee  
Department Staff

Date: 10/14/24 11:06 MDT


Signature: [Signature]  
Division Manager

Date: 10/14/24 11:37 MDT



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## HydroBrush Systems Division

Quotation	RQ2403 R5
Date	September 30, 2024
Model	HB9100 Switchout
Atlas Polar Site Reference #	AP22403
Prepared For	Dustin Jackson
Company	Albuquerque Bernalillo County Water Utility Authority
Prepared By: Simon Templeton Tec. Support Manager	 Signature



58 Northline Rd. Toronto, ON - M4B 3E5 Tel. (416) 751-7740 / FAX (416) 751-2094  
E-mail: [mfg@atlaspolar.com](mailto:mfg@atlaspolar.com) Website: [www.atlaspolar.com](http://www.atlaspolar.com)

Quotation: RQ2403R2



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Atlas Polar is pleased to provide quotation # **RQ2403 R2** for a HB9100 HydroBrush Switchout system for the **City of Albuquerque site #2411**.

## **Benefits of Choosing an Atlas Polar HydroBrush**

- **Increase Efficiency** with brushing available 24 hours a day.
- **Eliminate Worker Injury** that can occur manually brushing.
- **Purchase with Confidence** with the industry leader in Brushing Systems.
- **Technical Support** available for the life of the unit.

## **Features of the Atlas Polar HB9100 HydroBrush**

- Double Brush Head
- Brushing speed 0 – .75 feet/second
- PLC controlled automated system with options for remote operation and start up based on time/day, and time intervals.
- HMI user interface for ease of set up and interval programming
- Boom and oil heaters for cold temperature operation.
- Reach depths of up to 20 feet.
- Deck mount for ease of installation and unit access.
- Nema 4 enclosure available for outdoor control panel installation.
- Stainless steel boom/brush head option.
- No hydraulic hoses or electrical lines enter the water
- Dry contacts for remote operation and monitoring.
- Personnel safety cables run full length of screens
- Integrated maintenance scheduling on the HMI

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Quotation: RQ2403R2



## Pricing

Component	Description	Price (USD)
HB9100	2 (two) BRUSH CHASSIS SYSTEM	\$ 643,450.00
HB9100	2 (two) STRENGTHENED BOOM C/W BRUSHHEAD	INCLUDED
HB9100	** 2 (two) ALLEN BRADLEY PLC/HMI CONTROL PANEL	INCLUDED

<b>Equipment Supply Total</b>	<b>\$ 643,450.00</b>
<b>*Startup/Commissioning/Training Estimation (2 trips)</b>	<b>\$ 24,500.00</b>
<b>Delivery Estimation</b>	<b>\$ 8,500.00</b>
<b>***Additional installation inspection (2 Days for 2 Units)</b>	<b>\$ 4,900.00</b>
<b>Custom program to automatic lift boom on over pressure brush travel</b>	<b>\$ 16,250.00</b>
<b>All Festoon cables 6 pcs 12con &amp; 2 pc 8con</b>	<b>\$ 9,761.00</b>
<b>1 Spare Parts Per unit, as attached</b>	<b>\$ 4,370.00</b>

<b>Double (2) Systems Total</b>	<b>\$ 711,731.00</b>
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\*Startup/commissioning/training & inspection time is estimated at 5 days (2 days travel & 3 days on-site) with 2 support workers provided by the customer. Customer to remove old chassis, boom and control panel from enclosure prior to our technician called to site. Atlas Polar technician can be on site during old equipment tear down at an additional cost per day.

\*\* Allen Bradley PLC/HMI program passwords released after one (1) year warranty period complete.

\*\*\*Detailed inspection of installation to ensure all electrical and mechanical systems are working according to Atlas Polar specifications.





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## **Atlas Polar Project Scope of Supply:**

- HB9100 automatic HydroBrush Chassis.
  - Standard Brush Boom c/w Standard Brush head.
  - NEMA 12 PLC/HMI Allen Bradely Control panel.
  - Remote unit status contacts i.e. start, stop, running and alarm condition.
  - All standard hardware to complete installation.
  - Delivery to site (nearest trailer access, see pricing).
  - Installation supervisor (see pricing).
  - Three (3) O/M manuals w/ as built drawings.
  - Provide a detailed inspection of installation to ensure all electrical and mechanical systems are working according to Atlas Polar specifications.
  - Operation and Maintenance school at the completion of the installation.
- The following Allen-Bradley hardware for the control panel:
- 10 slot chassis for ControlLogix PLC, Communications, and I/O cards.
  - Power supply for ControlLogix Rack.
  - 7" PanelView 5510 HMI
  - ControlLogix 1756-L81E Controller.
  - Rack mounted Ethernet communications module for plant Ethernet connection.
  - Modbus communications module.
  - Stratix Managed switch for local Ethernet communications and programmer Ethernet connection.
  - AC digital input modules as required.
  - AC digital and relay output modules as required.
  - Terminal blocks as required for I/O modules.



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### **Customer Project Scope:**

- Crane services to off-load and position equipment.
- Three phase power supply w/ breaker wired to the control panel and hook-up.
- All conduits where required.
- Removal of existing handrails and/or any operational interference.
- All grounding where required.
- Any and all grouting where required.
- All permits, licenses, bonds or taxes, if applicable.
- Removal of equipment being replaced.
- All on-site labour to perform work required.





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## **HB9100 Technical Specifications:**

### **1.0 MECHANICAL AND STRUCTURAL DESCRIPTION**

- 1.1. MATERIALS OF CONSTRUCTION
- 1.2. CAPACITIES
- 1.3. ELECTRICAL SYSTEM
- 1.4. EXTREME TEMPERATURE OPERATION
- 1.5. PAINT

### **2.0 MODES OF OPERATION**

- 2.1. CONTINUOUS OPERATION
- 2.2. INTERMITTENT OPERATION
- 2.3. SHORT RAKING DEPTH
- 2.4. HAND HELD CONTROLLER

### **3.0 TERMS OF PAYMENT**

- 3.1. PAYMENT
- 3.2. SPECIFICATION
- 3.3. INSTALLATION AGREEMENT

### **4.0 DELIVERY**

### **5.0 VALIDITY**

### **6.0 WARRANTY**

### **7.0 GENERAL SITE CONDITIONS**

### **8.0 TERMS AND CONDITIONS**

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Quotation: RQ2403R2



## 1.0 MECHANICAL AND STRUCTURAL COMPONENTS

### 1.1 MATERIALS OF CONSTRUCTION

All structural components are constructed using standard mild steel designated ASTM-A36/CSA44W 36,000 psi minimum yield point. The existing supporting rail structure will be utilized for the new HydroBrush Chassis, Boom and Brush Head system.

### 1.2 CAPACITIES

The HYDROBRUSH will have a boom assembly capable of brushing the screens **10 ft.** on an angle of **0 degrees** from the vertical. During the screen sweeping cycle a pressure of 75-100 lbs will be applied to the screens, spread over the brush length.

The side travel brush unit speed will be adjustable from 0-.75 feet per second.

### 1.3 ELECTRICAL SYSTEM

The electrical system is contained in a separate control panel and includes PLC controls, relays, timers, micro switches, motor contactors with overload protection, external alarm contacts, fuses and door mounted switches as required for the modes of operation described in Section Two. Supply **480V**, 3 Phase is to be supplied by the customer at a location to be determined.

### 1.4 EXTREME TEMPERATURE OPERATION

For extreme cold, heaters are installed in the oil reservoir electrical control panel and boom support assembly. All are thermostatically controlled.

### 1.5 PAINT

- Blast - SSPC – SP10
- Prime - 1 coat carbozinc 859 2-3 mil dft.
  - 1 coat carboguard 890 4-6 mil dft.
- Paint - 1 coat carbothane 133 HB 3-5 mil dft.
- Colour - RAL7037



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## 2.0 **MODES OF OPERATION**

### 2.1 **CONTINUOUS OPERATION**

The machine will operate continuously during the heavy trash season to minimize head loss. The continuous mode is selected manually at the control panel.

### 2.2 **INTERMITTENT OPERATION**

The intermittent mode is activated four (4) ways:

- 1) A start switch located on the HMI control screen and/or Remote operation via dry contact.
- 2) By an adjustable exercise timer. It will give as many or as few complete brushing cycles as desired in a 24 hour period. The timer is located and set from the HMI control screen.
- 3) Level Differential Start Contacts (signal and differential controls provided by others)
- 4) Hand-held, wireless pendant station.

### 2.3 **HAND HELD WIRELESS CONTROLLER**

The remote mode is activated by selecting manual mode on the HMI control screen. The control panel is bypassed and all functions are controlled by the operator (travel direction, brushing direction, brushing depth and on/off). All systems, both electrical and hydraulic are overload protected with manual reset required at the control panel.



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**3.0 TERMS OF PAYMENT (Subject to Credit Approval)**

- 3.1
- (1) Twenty percent upon placement of order.
  - (2) Twenty percent on approval of submittal data.
  - (3) Fifty percent upon shipment date or readiness to ship.
  - (4) Ten percent upon completion of installation.

All of the above due net 30 days.

**Prices provided are based on the terms and conditions shown in this quotation.**

**3.2 SPECIFICATIONS**

Equipment which we supply will meet or exceed the specifications shown above. Modifications are available at additional cost, subject to Atlas Polar engineering approval. If your tender specifications are supplied prior to our quote, we will note their receipt, and meet where possible any changes requested from standard.

Tender Specifications Received [  ] Tender Specifications Not Received [  ]  
Date: \_\_\_\_\_ Specification # \_\_\_\_\_

**3.3 INSTALLATION AGREEMENT**

When an installation date has been arranged a copy of the Atlas Polar Installation Agreement Form will be sent to your company for your approval and consent. If a delay does occur after approval, additional charges could occur.

During installation, our crew must be able to access the site and work from Monday to Saturday from 7:00 am to 5:30 pm. If access is not possible during this time additional charges could be applicable.



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**4.0 DELIVERY**

Atlas Polar will deliver and install 32-36 weeks from date of returned submittal approval.

**5.0 VALIDITY**

Price quoted herein is valid for thirty (30) days.

**6.0 WARRANTY**

Atlas Polar Company Limited warrants the HydroBrush System to be free from defects in materials or manufacture for a period of one year or 2000 hours, whichever comes first, from the installation date or from ship date if installed by others. Atlas Polar will furnish, without cost, parts required to correct defects in material or manufacture, within the period of the warranty.

Warranty does not apply to any defect which has arisen due to normal wear, negligence, insufficient maintenance, incorrect type of hydraulic oil, use of spare parts other than original parts or other reasons not within Atlas Polar's control. During the Warranty period, Atlas Polar reserves the right to repair or replace the defective goods at its sole discretion.



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## **7.0 GENERAL SITE CONDITIONS**

Atlas Polar will complete arrangements to supervise or install the HydroRake equipment on site, on the agreed upon delivery date. The following items are considered to be part of our quotation covering site installation and are intended to avoid problems on site.

- 7.1** It is understood that construction work, concrete work and rack reposition or installation required to enable Atlas Polar to start and complete HydroRake installation, will be complete before Atlas Polar is called on site.
- 7.2** It is understood that 3 phase power will be available on site, and pre-wired to the prearranged rake panel location, before Atlas Polar is called on site. (Customer is responsible for wiring 3 phase power into HydroRake control panel.) It is also understood that 110 volts AC will be available on site, and hard wired to a location easily accessible for Atlas Polar portable tools, before Atlas Polar is called on site.
- 7.3** It is understood that if the delivery time for the rake is extended by the customer more than 30 days past the agreed upon delivery date, then the equipment will be invoiced, and becomes due and payable, as if it had been shipped. It is also understood that if a new installation date becomes necessary, Atlas Polar will receive a minimum of two (2) weeks' notice. Preparation for a new installation date by Atlas Polar may require up to four (4) weeks.
- 7.4** It is understood that Atlas Polar HydroRake is offered F.O.B. site, off-loading charges and crane charges for locating equipment at site will be to the account of the customer. If equipment is not available, then the cost of renting equivalent equipment will be invoiced by Atlas Polar at cost to customer.
- 7.5** It is understood that Atlas Polar will not be called on site if a labour dispute is in progress which will stop Atlas Polar from initiating installation of the equipment.



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- 7.6** It is understood that as part of the installation procedure, Atlas Polar will allow one full working day for training and instruction of customer's service and operations personnel. It is also understood that the customer's service and operations personnel will be available for this training during the installation period.
- 7.7** It is understood that should Atlas Polar experience additional site installation costs, as a result of having been called on site before preparations above have been completed, then Atlas Polar will invoice and be paid for the additional costs involved. These will include travelling and living expenses at cost, plus labour at a standard charge out rate of \$125.00 per hour.
- 7.8** During installation, our crew must be able to access the site and work from Monday to Saturday from 7:00 am to 5:30 pm. If access is not possible during this time additional charges could be applicable.
- 7.9** It is understood that our quotation includes three operations and maintenance manuals, extra manuals available at \$150.00 per item.
- 7.10** With available supply voltages of 120, 208, 220, 440 or 575 VAC a variation of  $\pm 10\%$  is allowable. During hydraulic motor start-up a 0.20 second drop of 25% of supply voltage is allowable. Motor to be started is five (5) horsepower.





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## **8.0 TERMS AND CONDITIONS**

### **8.1 Agreement**

**8.1.1** In the Contract and each Purchase Order referencing the Contract or, in the absence of a Contract, executed by the parties, the customer Purchase Order must incorporate Terms and Conditions listed below. If there is any inconsistency between these terms and other reference terms Atlas Polar terms will apply.

### **8.2 Force Majeure**

**8.2.1** Atlas Polar shall not be liable for failure to perform any of its obligations under this Agreement when such failure is due to causes beyond its reasonable control, including but not limited to fire, flood, storm, earthquake, acts of God, strikes or other labor disputes, war, terrorism, inability to obtain labor or materials, civil insurrection, or the actions of any government or governmental or public authority.

### **8.3 Termination**

**8.3.1.** If the customer terminates the Agreement, or any portion, Atlas Polar shall stop work and invoice for full amount of equipment only. Shipping cost, installation material, on-site labor, and other related cost performed to date will be calculated and invoiced. Upon full payment of equipment only, customer may arrange to have equipment shipped to their location. All expenses for shipping will be to the customer.



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## **8.4 Payment**

**8.4.1** Invoices shall be paid within thirty (30) days, **to:**

**ATLAS POLAR COMPANY LTD.  
60 NORTHLINE ROAD  
TORONTO, ONTARIO M4B 3E5  
CANADA**

**8.4.2** All prices provide din this agreement, are exclusive of any and all local, state or federal Taxes. Customer is responsible for paying any and all required taxes, for equipment and services provided by Atlas Polar.

## **8.5 Ownership Title**

**8.5.1** Upon full payment of this agreement, title shall be passed to the customer free and clear of any and all liens and encumbrances.

## **8.6 Termination**

**8.6.1** Atlas Polar (Original Equipment Manufacturer) will provide an Installation supervisor for the above agreement (additional charges may be applicable).

**8.6.2** If the customer wants Atlas Polar to provide a crew (additional charges applicable) to assemble install and commission the equipment, it should be noted that the customer will be responsible for any contractor licenses or state obligation for the installation of the equipment. Atlas Polar will not provide or be responsible for any and all State Contractor license or other installation licenses.

**8.6.3** This agreement does not cover any and all permits, licenses, and bonds.