



Supply Contract

Invitation to Tender

SCA Information

Contract Title: **Supply and Delivery of Combined Anti-Vacuum and Anti-Surge Valves**

Tender Number: **02899251**

Date Tender Issued: **2 March 2012**

Contact Officer: **Ananda De Costa**

Closing Date: **Wednesday 28 March 2012**

Telephone No.: **02 4724 2261**

Closing Time: **10.00am**

Email: ananda.decosta@sca.nsw.gov.au

Lodgement of Tenders

Either

through the NSW Government

eTendering web site

www.tenders.nsw.gov.au/sca

or

SCA Tender Box, Level 4

2-6 Station Street,

PENRITH, NSW 2750

Delivery: Within the defined delivery dates nominated in the individual Supply Request.

Nominated Delivery Hours: 9:00am – 4:00pm with prior approval

Suppliers Information

Name and Address of Company, Firm or Person submitting the Tender:

Contact Person: _____
Telephone: _____

Email: _____
Facsimile: _____

Signature of Authorised Representative
of the Tenderer

Name and Title of Authorised Representative

Date: _____

Schedule A Tender Price

Item No	Description of Good	Unit	Rate \$ (excluding GST)	Total \$ Excluding GST
1	Supply and Delivery of DN 100/PN16 Valves	Each		
2	Supply and Delivery of DN 150/PN16 Valves	Each		
3	Supply and Delivery of DN 200/PN16 Valves	Each		
4	Supply and Delivery of DN 250/PN16 Valves	Each		
			Sub Total	
			GST	
			Total Including GST	

Refer page 14 for details of valves required.

Signature of Authorised Representative
of the Tenderer

Name and Title of Authorised Representative

Date: _____

Schedule B – Tenderers Capacity to Supply Required Equipment.

Provide information on the tenderers previous experience, history of supply, company capacity to meet financial and organisational demands.

Provide contact details of referees who can be contacted to confirm company's past performance.

Signature of Authorised Representative
of the Tenderer

Name and Title of Authorised Representative

Date: _____

Schedule C – Technical data of Equipment Proposed

Provide complete technical data of the equipment proposed clearly indicating how the proposed equipment meet the specification. Provide all performance data and maintenance requirements associated with the equipment.

This information will need to include where the proposed valve has been installed in an Australian water industry environment and details of its reliability in that installation.

Signature of Authorised Representative
of the Tenderer

Name and Title of Authorised Representative

Date: _____

Schedule D Departures and Qualifications

The Tenderer is required to submit and conforming Tender in accordance with the Tender Document. If the Tenderer proposes to include any Departures and Qualifications, including commercial and /or technical requirements, all such departures and or qualifications must be fully documented in this schedule for evaluation by the Sydney Catchment Authority. Any Departures or Qualifications not listed in this schedule will not be considered. Consequently, it will be deemed that the offer is fully conforming to the Tender document and the Tenderer, if successful, proposes to carry out all work as specified in the Tender document.

The Tenderer shall identify in this schedule, any cost implications of the Sydney Catchment Authority not accepting the Tenderer's proposed departures or qualifications.

It is mandatory that tenderers satisfy all Tender Conditions and Instruction clauses.

Signature of Authorised Representative
of the Tenderer

Name and Title of Authorised Representative

Date: _____

Schedule E Warrantees

The Suppliers shall and provide warranties on the Goods as specified in the Contract and shall ensure that the Sydney Catchment Authority has the sole benefit of the warranties. The Supplier shall also ensure that the Sydney Catchment Authority has the benefit of any warranties specified in the contract that are obtained by/from manufacturers, subcontractors and/or contractors.

Signature of Authorised Representative
of the Tenderer

Name and Title of Authorised Representative

Date: _____

CONDITIONS OF TENDER

1. The Tender

- (a) The Tenderer submits its tender to supply the goods for the Purchase price set out on the front page of this document. The Purchase price must be submitted in Australian currency.
- (b) The tender is submitted as an offer that may be accepted by the SCA by a letter of acceptance. The SCA reserves the right to accept a Tender on an item-by-item basis where applicable.
- (c) Tenderer shall submit the original, signed Tender. The Tender is to be submitted electronically or deposited in Tender Box on Level 4, 2-6 Station Street, Penrith NSW 2750 addressed to the Procurement Manager.
- (d) The SCA reserves the right not to consider tenders received after the Closing Date.
- (e) The Tenderer acknowledges that no information provided by or on behalf of the Tenderer to the SCA is or will be false or misleading.
- (f) The Tenderer's tender shall remain open for acceptance by SCA for 90 days from the Closing Date.
- (g) The SCA may, in its sole discretion, reject or accept any tender and abandon the invitation to tender process at any stage.
- (h) The SCA will not, in any circumstances, be responsible for any costs incurred by the Tenderer in preparing and submitting the Tender.
- (i) Unless otherwise agreed the terms of the Contract will be in accordance with the Invitation to Tender and the Conditions of Contract.
- (j) Tenderers are required to independently acquaint and satisfy themselves with all aspects of the Supply and shall be deemed to have examined all information available.
- (k) The SCA reserves the right to seek clarification, verification and additional information from third parties and the Tenderer authorises the SCA to do so.
- (l) Where a Tenderer offers an alternative option that may benefit the SCA it should be fully described, including how it differs from the requirements of the Invitation to Tender, and all foreseen advantages detailed. All such alternatives will be considered on their merits.
- (m) All Tenderers must comply with the NSW Government Procurement Policy (2004) and the NSW Code of Practice for Procurement (the 'Code'). Lodgement of a Tender will be evidence of the Tenderer's agreement to comply with the Code.
- (n) The SCA will evaluate the Tender based on the technical response to the requirements of the Tender along with the commercial risk and compliance and the Tender Purchase price.
- (o) No contract whatsoever shall come into existence between the SCA and the Tenderer until a formal letter of acceptance is issued in relation to this Invitation to Tender and then only on the terms outlined in that letter of acceptance and any contract which may have come into existence regarding the tender process, which may but for this clause have come into existence, is excluded. If notwithstanding this clause such a contract is found then the SCA's liability in respect of this contract is limited to \$1.00.
- (p) The SCA may be required, under the Government Information (Public Access) Act 2009 or Premier's Memorandum 2007-01, Public Disclosure of Information arising from NSW Government Tenders and Contracts.

CONDITIONS OF CONTRACT

(viii) 'Tender' means the tender submitted by the Supplier.

1. Contract Instructions

- (a) The law governing the Contract is the law of NSW.
- (b) Unless otherwise provided, the Purchase price includes everything undertaken by, provided or carried out under this Contract by the Supplier.
- (c) In the interpretation of this Contract, no rule of construction applies to the disadvantage of one party on the basis that that party put forward or drafted this Contract or any provision in it.
- (d) A notice (and other documents) shall be deemed to have been given and received if addressed to the relevant address in the Contract or the address last notified in writing to the other party, on delivery by hand, confirmation of the correct transmission of fax, email or 3 days after posting (whichever is the earlier).
- (e) The terms below have the following meanings:
 - (i) 'Contract' means these Conditions of Contract and the Tender, and any attachments (in that order of precedence in the case of ambiguity).
 - (ii) 'Completion' is the date specified on the Supply Request.
 - (iii) 'Purchase price' means the purchase price stated in the Tender for the supply of the Goods.
 - (iv) 'Letter of Acceptance' means the letter by the SCA to the Supplier accepting its Tender for the Supply of the Goods.
 - (v) 'SCA' means the Sydney Catchment Authority.
 - (vi) 'Supplier' means the person or company so described in the Letter of Acceptance, including its employees, agents, sub-contractors, consultants and consigns.
 - (vii) 'Goods' means the items, plant and equipment, chemicals or other materials which are specified in the Tender and includes the work performed or required to be performed by the supplier pursuant to this contract.

2. Nature of Contract

The Supplier shall perform and provide the Goods to the SCA by the date specified in exchange for the Purchase payment in accordance with the Contract.

3. Supplier's Rights and Obligations

- (a) The Supplier acknowledges that it may have responsibilities as a Principal Contractor particularly in relation to WorkCover, Worker's Compensation insurance and other safety matters. The Supplier is fully aware of all of these responsibilities (if relevant) and will conduct the supply activities in full compliance with them.
- (b) The Supplier shall comply, at its own cost and expense, with all legislative and other legal requirements and all or any regulations, by-laws, ordinances or orders made there-under including but not limited to OHS&R and Environmental legislation.
- (c) The Supplier must not assign or subcontract any part of the supply of Goods without the prior written approval of SCA. An approval given by SCA permitting the Supplier to subcontract any portion of the Supply does not relieve the Supplier from its obligations and liabilities pursuant to this Contract.
- (d) The Supplier warrants that no conflict of interest exists at the date of this Contract. The Supplier must immediately inform SCA upon becoming aware of the existence, or possibility, of a conflict of interest at any time.
- (e) The Supplier shall comply with all relevant Australian Standards in performing and providing the Goods.
- (f) The provision of the Goods is subject to these terms and conditions. Any conditions or terms on delivery documents or other documentation of the Supplier are hereby specifically excluded. Such exclusion includes any retention of title provisions set out in any of the Supplier's documentation or delivery dockets.
- (g) Without the prior written permission of the SCA, the Supplier shall not disclose or make public any information or

material acquired or produced in connection with this Contract.

- (h) The Supplier shall comply with the terms and conditions of the Contract.
- (i) If the SCA determines, in its absolute discretion, that the Supplier requires an Access Permit or equivalent the Supplier shall not commence the Supply until such permit is received and the Supplier shall comply with the terms and conditions of the Access Permit in carrying out the Supply of Goods.
- (j) The Supplier acknowledges that the SCA has obligations pursuant to the Privacy and Personal Information Protection Act 1998 (NSW) and:
 - (i) Warrants that it will at all times assist the SCA meet its obligations under the act.
- (k) The Supplier shall manage all incidents in a manner which minimises the adverse effects of the incidents and confirms with the requirements of all relevant legislation and the SCA's Incident Management Procedures.

"Incidents" shall include but are not limited to, those events causing or with the potential to cause a threat to or impact upon:

- a) the life, health and safety of any persons;
- b) the environment;
- c) public or private property;
- d) interruption to availability and/or quality of goods to Client's customers;
- e) the principal's property or systems
- f) the principal's business operations including infrastructure, staffing, major suppliers;
- g) community infrastructure including electricity, gas telephone, rail, road, footpaths;
- h) prosecution or fines by a regulatory authority;
- i) requirements for urgent action under legislation;
- j) customer expectations (Goods quality, quantity, damage, social inconvenience)

"Incidents" shall also include an anticipated imminent incident arising from a flood, fire, and/or weather warning, terrorist threat, industrial action, potential electrical failure etc.

4. SCA's Rights and Obligations

SCA will as soon as practicable, or as required by this Contract, make available to the Supplier all relevant instructions, information, documents, specifications, and any other material and particulars, and answer queries made by the Supplier, relating to SCA's requirements in connection with this Contract.

5. Obligations of Both Parties

Each party enters into the Contract in good faith and shall carry out its obligations under the Contract in accordance with this principle.

6. Time Considerations

- (a) The Supplier shall ensure that the Goods are supplied by the nominated date and time.
- (b) If the supplier encounters events or circumstances that delay or are likely to delay delivery, the supplier is to notify the SCA of the delay or potential delay and mitigate the consequences of the delay so far as is reasonable practicable and to remedy the cause of the delay
- (c) The SCA may grant an extension of time (on the application of the Supplier or otherwise), if, in its sole opinion, an event occurs that is outside the Supplier's control that will or does affect the supply of the goods.

7. Payment

- (a) The SCA shall pay the Supplier the purchase price within 28 days of receipt of the Supplier's tax invoice.
- (b) The Supplier shall not be entitled to payment if the Goods do not meet the requirements of the specification or standards nominated in the request from the SCA.
- (c) The Supplier shall not be entitled to payment if the Supplier has failed to provide proof of the insurance policies required by Clause 10.

- (d) The Purchase price as specified in the Tender may not be increased except with the consent in writing of the SCA.
- (e) The Purchase price is subject to annual cost adjustment for the term of the contract. Cost adjustment shall be in accordance with the advertised CPI of the period immediately prior to the anniversary of the contract.
- (f) The Supplier warrants that it will pay the wages and allowances of all employees involved and make payments to sub contractors (if applicable) with the Supply of the Goods. If the SCA becomes liable to pay such payments, the amount paid may be recovered by the SCA as a debt to the SCA by the Supplier.
- (g) Where supply is made and GST is included in the total amount payable by the SCA, the Supplier shall provide a Tax Invoice (as specified in A New Tax System (Goods and Services Tax) Act 1999 to the SCA with each claim for payment.

8. Intellectual Property

- (a) The Supplier acknowledges that all material and documents (and all intellectual property in such material or documents) created or generated as a result of this Contract is the property of the SCA.
- (b) The Supplier warrants that it will not breach any intellectual property rights of any third party and indemnifies the SCA in respect of any such breach.
- (c) The Supplier hereby grants to the SCA a royalty free, non-exclusive, assignable, transferable, perpetual licence to use any intellectual property brought to this Contract or required by the Supplier to carry out the Supply other than the material vested in the SCA pursuant to paragraph (a) above.

9. Indemnity

- (a) The Supplier indemnifies the SCA from and against all actions, claims, costs, expenses and damages including the costs of defending or settling any action or claim in respect of:
 - (i) loss of or damage to property of the SCA;

- (ii) personal injury (including death) to any person; or
- (iii) loss of or damage to any property,

arising out of anything done or omitted intentionally or negligently by the Supplier in respect of the Supply of the Goods.

- (b) The Supplier is not liable to indemnify the SCA in relation to indirect and consequential losses as well as loss of profits, loss or revenue, business interruption, and any losses not reasonably foreseeable by either party at the time of entering into this Contract and the Supplier's liability in respect of such liability is excluded from this Contract.
- (c) The amount of all claims, damages, costs and expenses which may be paid, suffered or incurred by the SCA as a result of any of the events specified in clause 9(a) above shall be made good at the Supplier's expense and may be deducted from any monies due or becoming due to the Supplier under this Contract.
- (d) The Supplier's liability to indemnify the SCA is reduced proportionally to the extent that the negligence of the SCA or employees or agents (other than the Supplier) of the SCA have contributed to the injury, damage or loss.

10. Insurance

The Supplier shall be responsible for all insurance required by the law and shall produce evidence of such insurance on demand to the Principal. In addition the Supplier must effect and maintain the policies of insurance listed below for the amount and duration stated:

Type	Amount	Duration
Public Liability	Minimum \$5m for each occurrence.	Relevant Period
Workers Compensation	As required by legislation	As above

Where permitted by law, the Supplier's workers compensation insurance shall be extended to provide indemnity for SCA's statutory liability to the Supplier's employees.

The effecting and keeping in force insurance required by the above clauses shall not in any way limit the responsibilities and obligations of

the Supplier under any other provisions of the Contract.

11. Force Majeure

Neither party shall be considered in default in performance of obligations hereunder to the extent that performance of such obligations, or any of them, is affected by Force Majeure. Force Majeure shall include, but not be limited to, hostilities, restraint of rulers or peoples, revolution, civil commotion, strike, epidemic, accident, fire, flood, wind, earthquake, explosion, blockade, or embargo, or any law, proclamation, regulation or ordinance, demand or requirement of any Government or Governmental agency having or claiming to have jurisdiction, or over the parties hereto, or any Act of God, or other act of Government, or any cause whether of the same or different nature existing or future, which is beyond the control and without the fault or negligence of the parties hereto.

12. Variations

- (a) The SCA may, on the recommendation of the Supplier or otherwise, instruct the Supplier in writing to vary the quantity and specification of the Goods, the date of delivery, the location of delivery and the manner in which the delivery is to be made.
- (b) Where the SCA instructs a variation the supplier shall, within five working days, advise if they can comply.
- (c) Where the variation is within the general scope of Supply, the Supplier shall not be entitled to any additional payment.
- (d) Where the SCA directs a variation that is outside the scope of Supply, the price such variation shall be based on (in order of precedence) applicable rates or prices in the Tender or reasonable rates or prices applicable. Purchase price
- (e) If the Supplier requests the SCA to direct a variation of supply for the convenience of the Supplier, the SCA may do so at its sole discretion.

13. Delivery.

Delivery is deemed to have occurred when the goods have been supplied to the location or site nominated on the documentation. Delivery of the goods does not imply acceptance of the goods should they not be

supplied in accordance with the terms of the contract.

Unless otherwise specified the contractor shall supply all labour and equipment for the loading and unloading at the place of manufacture, storage and delivery to site.

Delivery to be made during the nominated working hours. Unless specified elsewhere the working hours shall be between 9.00am and 4.00pm, Monday to Friday, excluding public Holidays.

14. Acceptance.

Acceptance of the goods will occur when the supplier has been notified by the SCA of acceptance or deemed acceptance will occur if no advice has been provided to the Supplier by 5.00pm of the fifth business day after delivery.

15. Risk Transfer

At the time of acceptance all risk for the security and protection of the goods will pass to the SCA

16. Warrantees.

The supplier warrants that the goods are;

- a) free from any third party claims or have been used as security
- b) have not been used unless specified in the specification,
- c) fit for purpose as required by the specification and are of merchantable quality
- d) Free of defects and comply with all relevant standards

If no purpose is stated in the specification the goods must be fit for purpose for which the Goods would normally be used.

17. Supply Request

A supply request is a request from the SCA for the supply of goods that are the subject of this contract. The supply request will outline details of the supply, including the location and timing of delivery.

18. Customer

The customer is the SCA's nominated representative providing the supply request to the Supplier nominating the goods to be supplied.

19. Operation and Maintenance Manuals

The supplier must provide to the SCA at the time of delivery of the Goods the information and documents listed in Schedule D of the Tender.

20. Dispute Resolution

- (a) If a dispute arises between the parties, the parties shall meet at least twice to try to resolve the dispute.
- (b) If the dispute is not resolved after at least 2 meetings (or a failure by one party to attend 1 or both meetings provided the meeting was at a reasonable time and

on reasonable notice), the parties shall refer the dispute to mediation.

- (c) Any mediation between the parties shall be in accordance with the rules and procedures of the Australian Commercial Disputes Centre rules (current at the time of the commencement of the mediation) and each party shall bear their own costs in relation to such mediation.
- (d) Notwithstanding the existence of a dispute, the parties shall continue to perform the Contract, but the SCA may, in its sole discretion, withhold the payment of money for the matter that is the subject of the dispute, until it is resolved.

21. Termination

- (a) Notwithstanding anything herein contained to the contrary, the SCA may terminate this Contract for convenience at any time and without prior notice.
- (b) Upon termination by the SCA under paragraph (a) above only, the Supplier shall be entitled to payment for all Goods Supplied prior to the cancellation of the Contract and all reasonable out of pocket expenses
- (c) If the SCA terminates the Contract due to the non-compliance or breach by the Supplier the SCA may obtain the Goods from an alternative Supplier.
- (d) The Supplier shall be liable to reimburse the SCA for any difference in the cost of the Goods as described in the Contract, if the Goods are supplied by an alternative supplier.
- (e) The SCA may deduct an amount equal to the difference in the costs of the Goods from any money due and payable to the Supplier.
- (f) This clause shall not merge on the termination of the Contract.

Specification of Equipment Required

Scope of Works:

This Contract shall cover the testing, supply and delivery of combined Anti-Vacuum and Anti-Surge Valves (AVAS Valves) as specified hereunder.

Background:

Warragamba Dam located approximately 50 km west of Sydney is the major water supply of raw water to Sydney metropolitan areas. Water is conveyed from the dam via twin steel cement-lined pipelines of 2100mm and 3000mm diameter to Prospect Water Treatment Plant. The twin pipelines run for approximately 27km and comprise a number of cross connections, main isolating valves, off-takes and anti vacuum valves.

In 2006 Water hammer analysis using the "WATHAM" computer program was carried out by the Snowy Mountains Engineering Corporation (SMEC). The analysis recommended the upgrading of the current Anti Vacuum Valves and determined stringent requirements for suitable Anti-Vacuum and Anti-Surge type of Valves (AVAS Valves) that have specific characteristics and the capability to protect the twin pipelines.

Requirements:

The table below lists the required valve size, quantities and delivery times. The SCA requires 70 valves for delivery in the stated timeframes below and possibly a further 155 over a five year period. Pricing for each size of valve shall be provided in the contract schedule.

	DN100	DN150	DN200	DN250
	PN16	PN16	PN16	PN16
Apr 2012	1	2	1	32
July 2012				12
Nov 2012				11
Mar 2013				11
Total	1	2	1	66
Possible Extra Required 2011-2016	5	5	5	140

DN – Nominal Diameter

PN – Pressure Rating (Bar)

The SCA will require the successful vendor to have on hand at any time across the five years, for emergency supply if required.

5 x 250mm valves of the supplied type

1 x 200mm valve of the supplied type

2 x 150mm valve of the supplied type

2 x 100mm valves of the supplied type

Refurbishment Kits of the same quantities kept in stock across the five years and prices provided for these in the contract schedule.

Specific Requirements:

AVAS Valves: the valves, equivalent to VENT-O-MAT Model No. RBXc constructed from non corrosive materials for wetted components such as stainless steel, suitable composite plastics (eg: high Density Polyethylene) including stainless steel spring and fasteners. Direct contact between dissimilar materials will not be accepted. The contractor shall be able to demonstrate that the design of proposed AVAS Valves is such that abrasive particles normally found in the supply water running through old cement lined pipes and decomposed vegetations from the dam could not accumulate in the valves and affect their performances without requiring manual flushing and cleaning. The assembly and disassembly of the units shall be simple and require no special tools or skills.

The floats shall be durable and made of a stable compound with unlimited service life. Their design shall be such they don't violently rotate or agitate every time when there is a rush of air passing over the float during operation. The direct contact impact between the floats shall be avoided or cushioned by a separation of o-rings or other methods.

The valves shall contain a high volume orifice for pipeline filling and to prevent high vacuum pressure from occurring, an anti-surge orifice to dampen the damaging water hammer pressures and a control orifice which is needed during the normal pipeline operations and allows accumulated air to escape.

Note: AVAS type valves containing floats in form of round balls will not be accepted.

The vendor shall ensure that the surface protection of AVAS valves complies with Sydney Water Specification for Coating of New Valves PCS 100 found on the Sydney water website at the following link:

<http://www.sydneywater.com.au/BuildingDeveloping/SupplierInformation/ProtectiveSpecifications.cfm>

Works Testing:

As part of the contract, the successful vendor shall supply all certified documents detailing the materials of construction, the design and guaranteed performances of each size and type where applicable for acceptance by the Principal prior to delivery.

Installation:

As part of the contract, the successful vendor shall provide detailed instructions for installation and commissioning procedures covering all valves. The vendor shall supply Operations & Maintenance manuals for valves supplied in an electronic format.

Warranty:

The tenderer shall include a proposed warranty period on both the valves and protective surface coating.

Performance Characteristics:

Anti-Vacuum Pressure: The valve mechanism shall operate automatically to prevent pipelines damage from the high induced pressure transients associated with high velocity of discharged air.

Tables 1 & 2 specify the required air intake and discharge for each valve.

1. AIR INTAKE CAPACITIES OF DN100, DN150, DN 200, DN 250, DN 300

Differential head (m)	DN 100	DN 150	DN 200	DN 250	DN 300
0.5	273 nl/s	614.2 nl/s	1094 nl/s	1706.6 nl/s	2461.5 nl/s
1.0	351 nl/s	789.7 nl/s	1406 nl/s	2193.3 nl/s	3163.5 nl/s
1.5	398 nl/s	895.0 nl/s	1593 nl/s	2485.0 nl/s	3584.2 nl/s
2.0	452.4 nl/s	1017.9 nl/s	1812.5 nl/s	2827.5 nl/s	4078.1 nl/s
2.5	483.6 nl/s	1088.1 nl/s	1937.5 nl/s	3022.5 nl/s	4359.3 nl/s
3.0	507 nl/s	1138 nl/s	2031 nl/s	3168.3 nl/s	4569.7 nl/s
3.5	515 nl/s	1155 nl/s	2063 nl/s	3218.2 nl/s	4641.7 nl/s

nl/s =normal Litres per second @ 20degrees Celsius and 1.01325 bar absolute

2. AIR DISCHARGING THROUGH THE “ANTI-SHOCK” ORIFICE

Differential head (m)	DN 100	DN 150	DN 200	DN 250	DN 300
10	90 nl/s	178 nl/s	250 nl/s	375 nl/s	540 nl/s
20	120 nl/s	280 nl/s	375 nl/s	562.5 nl/s	810 nl/s
30	170 nl/s	370 nl/s	540 nl/s	810 nl/s	1166.4 nl/s
40	210 nl/s	465 nl/s	650 nl/s	975 nl/s	1404 nl/s
50	260 nl/s	550 nl/s	790 nl/s	1185 nl/s	1706.4 nl/s
60	295 nl/s	620 nl/s	995 nl/s	1492.5 nl/s	2149.2 nl/s
70	340 nl/s	730 nl/s	1050 nl/s	1575 nl/s	2268 nl/s
80	390 nl/s	800 nl/s	1160 nl/s	1740 nl/s	2505.6 nl/s
90	420 nl/s	890 nl/s	1290 nl/s	1935 nl/s	2786.4 nl/s
100	470 nl/s	970 nl/s	1480 nl/s	2220 nl/s	3196.8 nl/s

nl/s =normal Litres per second @ 20degrees Celsius and 1.01325 bar absolute

Assessment of Tenders

Tenders will be assessed on the following criteria:

- Tenderers capability and experience
- Quality and compliance of proposed valves
- Price

Attachments**A. OHS&R**

- (a) The Supplier is required to observe all statutory/regulatory safety requirements including, but not limited to, the Work Health and Safety Act 2011 (NSW), and to provide for the protection of persons and property as part of the Contract.
- (b) While working on SCA premises and/or work sites the Supplier shall also comply with all SCA's Occupational Health, Safety & Rehabilitation (OHS&R) policies and Corporate Instructions and directions.
- (c) The Supplier shall, at all times, exercise any other necessary and reasonable precautions appropriate to the nature of the Supply and the conditions under which the Contract is to be performed for the safety of all persons involved in or affected by the Goods Supply.

B. ENVIRONMENTAL CONSIDERATIONS AND RECYCLED PRODUCTS

- (a) The Supplier shall comply with all environmental legislation and regulations including, but not limited to, the *Protection of the Environment Operations Act 1997* (NSW).

C. HAZARD RISK IDENTIFICATION

The hazards identified in this checklist shall be taken into consideration by the Supplier in the development of Safe systems of work.

This document is not intended to be a comprehensive or exhaustive survey of the requirements. Tenderer's should not rely solely on the information contained in the Contract and should undertake independent assessment of the hazards and risks associated with the supply of goods.

PART 1: Generic Hazards Associated with the Supply

The purpose of this list is to notify Tenderer's (and the Supplier) of general hazards associated with the Goods, including the Site(s) on which the Goods are to be Supplied.

HAZARD IDENTIFICATION

NO.	HAZARD IDENTIFIED DURING TASK	Y	N	NO.	HAZARD IDENTIFIED DURING TASK	Y	N
1.	Traffic Movements (e.g. vehicles around worksite)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25.	Poor Lighting	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	Falls (e.g. From ladders, steps, platforms etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	26.	Animal bites & stings (e.g. snakes, spiders etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	Working at height (>2 meters)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	27.	Lifting & loading hazards (e.g. cranes, slings, bridges)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	Slips and trips	<input type="checkbox"/>	<input checked="" type="checkbox"/>	28.	Asbestos	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Exposure to Noise (e.g. > 85 dBA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	29.	Contact with Chemicals	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	Moving machinery (e.g. Hoists, lifts etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30.	Other hazardous substances (e.g. Lead paint etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7.	Vibration (e.g. From power tool etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	31.	Biological Hazards (e.g. AIDS, Hep B etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	Powered equipment (e.g. Angle grinder, drill etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	32.	Radiation Hazards (Other than sun)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	Struck against / Impact hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	33.	Ergonomic Hazards (e.g. Workplace layout etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.	Stuck by object / Impact hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ENVIRONMENTAL IMPACTS If Y is ticked – Identify appropriate control/s from the Standard Environmental Safeguards, record in Risk Assessment Section below and forward to Environmental Evaluation Team for review.			
11.	Confined Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
12.	Access & egress hazards (e.g. To and from work site)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	34.	Local water quality (e.g. Erosion, cold water release)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13.	Fire / Explosion	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35.	Flora (e.g. Removal, endangered species present)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14.	Hot Work (e.g. Welding etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	36.	Fauna (e.g. Fish kill, endangered species present)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15.	Potential to start Bushfire	<input type="checkbox"/>	<input checked="" type="checkbox"/>	37.	Waste (e.g. Removal, disposal, asbestos, lead)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16.	Contact with Electricity / High Voltage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	38.	Heritage (e.g. European, aboriginal)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17.	Wall / Underground / Overhead hazards (e.g. Electric)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	39.	Community (e.g. Noise, air, access)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18.	Manual Handling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OTHER HAZARDS IDENTIFIED – List any other hazards identified			
19.	Stored energy hazards (e.g. Hydraulic pressure)	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
20.	Working on or near water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	40.		<input type="checkbox"/>	<input type="checkbox"/>
21.	Lone Worker / Remote Worker	<input type="checkbox"/>	<input checked="" type="checkbox"/>	41.		<input type="checkbox"/>	<input type="checkbox"/>
22.	Compressed gasses (e.g. cylinders, gas lines etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	42.		<input type="checkbox"/>	<input type="checkbox"/>
23.	Dust / Gas / Fumes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	43.		<input type="checkbox"/>	<input type="checkbox"/>
24.	Sun / Heat / Cold / Rain		<input checked="" type="checkbox"/>	44.		<input type="checkbox"/>	<input type="checkbox"/>
				45.		<input type="checkbox"/>	<input type="checkbox"/>

D. HAZARD CONTROL PLAN (IF APPLICABLE)

The Tenderer shall identify control measures to address the key hazards nominated by SCA in the Hazard Risk Identification in Attachment E of this Invitation to Tender.

The Tenderer shall also identify any additional significant hazards associated with the supply that may not have been identified by the SCA in the Hazard Risk Identification. The Tenderer shall also in this schedule identify control measures to address such hazards.

Hazard	Control Measures