Pressure Vessel Recertification

Department of the Interior

Bureau of Reclamation

LCDO - Hoover Dam

Author Note

See Reclamation Facilities, Standards, Instructions & Techniques (FIST) Manual, Volume 2-9 "Inspection of Unfired Pressure Vessels", which may be found at: https://www.usbr.gov/power/data/fist/FIST_2-9_(8-2022).pdf, and refer to ASME Code Section I and VIII for valve requirements

1. Background

The Hoover Dam utilizes many boilers and pressure vessels that require pressure relief valves (PRVs) to be operated safely. Hoover Dam requests an order of several dozen PRVs of various sizes and specifications to be delivered to the dam so that staff may have them installed throughout the powerplant and connected systems. The Bureau of Reclamation (BOR) is procuring these new PRVs to stay up to ASME Boiler and Pressure Vessel Code (BPVC) and ensure the safety of all pressurized systems and personnel.

This document will include the size, pressure setting, flow rate, and original manufacturer of the currently installed valves the BOR needs for replacement. The contractors must ensure the specs of any valves they procure match exactly to those defined by the BOR. They are specific to the connected system and any deviations in these characteristics can lead to a failure in the valve or pressure vessel. Any exceptions to procuring an exactly matching characteristic will be discussed in the Part Requirements section.

Contractors will procure and delivery the specified valves to the Hoover Dam Warehouse for the BOR to receive. The BOR requires that all parts delivered by the contractor must be new and sourced from the OEM (no refurbished parts will be accepted). The delivered PRVs shall be exactly to the specifications following the defined salient characteristics in **Table 1** of the appendix.

2. Reference Standards

Refer to AMSE BPVC Section IV, VIII, and XIII when selecting valves.

3. Technical Point of Contact

Contractors will coordinate any technical issues through the Technical Point of Contact (TPOC) Tyrese Smith via phone or E-mail at the following:

Phone: 702-494-2867

Email: tyresesmith@usbr.gov

4. Government Furnished Information, Assistance, and Facilities

The BOR will supply the following to contractor personnel:

1. A drop off area at the Hoover Dam Central Warehouse to park the delivery truck temporarily while the delivery is being unloaded and received.
2. Central Warehouse will have a forklift and forklift operator to unload bulk totes or pallets from the contractor's transport vehicle if needed.
3. Cell phone service will be available while at the top of the dam and the Central Warehouse.
4. Restroom and wash-up facilities will be available to all contractor personnel.

5. Part Requirements

The contractor shall obtain and deliver all the requested PRVs and ensure the valves follow the salient characteristics defined in **Table 1** as follows:

1. All procured PRVs must have the exact size as listed in **Table 1.** The size refers to the inlet diameter measurement of the PRV.
2. All delivered PRVs must be new and sourced from the OEM (the BOR will not accept any refurbished or second-hand parts).
3. Contractor must ensure the valves they purchase have an exactly equal set pressure or an adjustable pressure range that includes the pressure specified by the BOR in **Table 1.**
4. Contractors must ensure the flow rate of the PRVs is at least the value in **Table 1**, using SCFM as the units unless stated otherwise. Valves with lower flow rates will not be accepted.
5. If there are any issues with sourcing a valve which meets all recommendations, submit inquiry to Contracting Officer.

6. Delivery

All parts required under this contract for Hoover Dam shall be shipped to the following address:

Hoover Dam Central Warehouse
South U.S. Highway 93, SR 172
Boulder City, Nevada 89005

Deliveries will be accepted between **7:30 a.m**. to **3:30 p.m**., Pacific Time, **Monday through Friday** only. The vendor is required to include the cost of travel and delivery to the warehouse in their contract bid. The point of contact for delivery information is Hoover Dam Warehouse, (702) 494-2513. We will not be able to receive deliveries during the following federal holidays:

- New Year's Day (January 1).
- Birthday of Martin Luther King, Jr. (Third Monday in January).
- Washington's Birthday (Third Monday in February).
- Memorial Day (Last Monday in May).
- Juneteenth (June 19th).
- Independence Day (July 4).
- Labor Day (First Monday in September).
- Columbus Day (Second Monday in October).
- Veterans Day (November 11).
- Thanksgiving Day (Fourth Thursday in November).
- Christmas Day (December 25).

7. Period of Performance

The period of performance for delivering these parts to Hoover Dam is 90 days from date of award. Contractors must deliver all the required parts and submittals within this period of performance.

8. Submittals

8.1. Technical data of items to be purchased:

BOR requires the contractors to provide cut sheets or shop drawings (whichever is available) of the PRVs they intend to purchase to the TPOC for reviewing. The TPOC at Hoover must approve the selected valves before the contractor can purchase and deliver them. The technical data can be provided to the TPOC (refer to RSN 000 on page 6). A notice to proceed (NTP) to purchase the valves will be issued after approval of the valves.

8.2. List of all shipped parts

Contractors will make a list of all shipped parts, which must contain the ordered quantities, shipped quantities, item number, and description of the parts. Contractors will provide this list to the point of contact at the warehouse upon delivery to confirm if all the requested items are present. Multiple shipments are not allowed, the contractor must deliver all the requested items in a single delivery. This list will be used as the proof of purchase (refer to RSN 001)

8.3. Schedule

Contractors will provide a schedule of expected dates for when they will provide the technical data sheets, purchase the parts, provide a proof of purchase, and when the parts will be delivered to the Hoover Dam Warehouse. The schedule submittal can be referenced in RSN 003.

9. Payment

Payment: Lump-sum price. Payments will be provided as described in Table 2 on page 6, with two thirds off the payment provided once parts have been purchased and the rest of the payment provided upon successful delivery.

10. Appendix

Table 1. Part Characteristics

List of requested parts including their original manufacturer and salient characteristics

Order #	Quantity	Manufacturer	Salient Characteristics		
			Size (in)	Pressure (psi)	Flow Rate (SCFM)
1	4	Anderson Greenwood Crosby	3/4"	150	296
2	4	Anderson Greenwood Crosby	1/2"	357	460
3	2	Anderson Greenwood Crosby	3/4”	357	965
4	17	Anderson Greenwood Crosby	1”	300	567
5	2	Circle Seal	1”	250	1000
6	2	Circle Seal	3/8”	470	355
7	2	Circle Seal	1/2"	350	525
8	2	JAYCO	1”	50	202
9	2	JAYCO	2”	115	1435
10	1	Speedaire*	1/4"	153	71
11	1	Kingston	1/4"	200	162
12	1	Kingston	1/4"	250	358
13	6	Kunkle	1/2"	400	888
14	8	Kunkle	2”	150	4090
15	1	Kunkle	2”	135	6000 lb/hr
16	2	Kunkle	1”	357	2209
17	1	Kunkle	2 ½”	135	3734
18	3	Kunkle	1”	50	341
19	1	unknown	1/4"	125	116

*Speedaire was the manufacturer of the pressure vessel, which appears to have an integral PRV that may or may not be sold separately.

Table 2. Price Schedule

#	Quantity	Manufacturer and Part Number	Salient Characteristics			Unit Price (ea)	Total
			Size (in)	Pressure (psi)	Flow Rate (SCFM)		
1	4		3/4"	150	296		
2	4		1/2"	357	460		
3	2		3/4”	357	965		
4	17		1”	300	567		
5	2		1”	250	1000		
6	2		3/8”	470	355		
7	2		1/2"	350	525		
8	2		1”	50	202		
9	2		2”	115	1435		
10	1		1/4"	153	71		
11	1		1/4"	200	162		
12	1		1/4"	250	358		
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16	2		1”	357	2209		
17	1		2 ½”	135	3734		
18	3		1”	50	341		
19	1		1/4"	125	116		
		Total					

Table 3. Submittal Table

List of requested submittals with due dates and required recipients.

RSN	Submittal Title	Due Date	Recipient		
			CO	COR	TPOC
000	Technical Data Sheets	Within 14 days after receipt of notice of award.			X
001	Proof of Purchase (List of shipped parts)	Within 14 days of NTP		X	X
002	Schedule	Within 7 days after receipt of notice of award, and update regularly	X	X	X