



Form GSOP 1-PIN (04/98)

STATE OF CALIFORNIA
Department of General Services - Office of Procurement

PURCHASE ORDER

Purchase Order No. **62184** Rev. **6/30/2008** Date

Supplier No.	Solicitation No.	Delivery Date	FOB Point	Invoice Terms
811606	57058	140 Days ARC	Destination	

ADVANCED SURGICAL INC 54 ALPINE CIRCLE MAMMOTH LAKES, CA 93546 Attn: KATHY STEWART Phone: 760-934-1857	S NAPA STATE HOSPITAL h T 2100 NAPA-VALLEJO HIGHWAY i o NAPA, CA 94558-6293 p Attn: MAIN WAREHOUSE	C NAPA STATE HOSPITAL h a T ACCOUNTING OFFICE r o 2100 NAPA-VALLEJO HIGHWAY g e NAPA CA 94558-6293	
	Agency Billing 49802	Agency Purchase Estimate 7-EST-0003	Purchase Estimate 67106 Revision 2
	Agency Contact VICTOR GARCIA	Phone 707-253-5667	Date Received

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
<p>THE GENERAL PROVISIONS FOR NON-IT COMMODITIES ARE HEREBY INCORPORATED BY REFERENCE. THESE GENERAL PROVISIONS CAN BE OBTAINED BY PHONING (916) 375-4400 OR BY ACCESSING OUR WEBSITE AT: www.documents.dgs.ca.gov/pd/modellang/GPnonIT0407.pdf</p> <p>THE FOLLOWING INFORMATION IS PROVIDED FOR AGENCY USE ONLY: PRIME CONTRACTOR: SB FISCAL YEAR: 2007/2008</p> <p>FOR THE PURPOSE OF THIS AWARD, ONLY F.O.B. Destination will be accepted.</p> <p>This Purchase order has been registered into the state contact and procurement registration system (https://www.scprs.dgs.ca.gov/). The registration number is: 17600908333720.</p> <p>NOTE: Attachments accompany this PO as follow:</p> <p>SPECIFICATIONS ATTACHED #6630-0028 OF THREE (3) PAGES DATED, 05/21/08</p> <p>DRAWINGS ATTACHED OF TWO (2) PAGES</p>						
1	1	EA	6830-683-0200-6	OXYGEN LIQUID NINE HUNDRED (900) GALLONS, PER THE ATTACHED SPECIFICATIONS #6630-0028	53,711.0000	53,711.00
2	2	EA	6630-478-8093-3	AMBIENT AIR VAPORIZER (AS DESCRIBED) 2500 SCFH	3,230.0000	6,460.00
3	1	EA	6625-005-0016-2	MONITOR DATA TELEMETRY	0.0000	0.00
4	1	EA	6530-002-0154-2	CABINET MEDICAL INSTRUMENT MEDICAL CONTROL CABINET W/ ALARM	15,435.0000	15,435.00

Sales and/or use tax to be extra unless noted above

Buyer EVONNE ROGERS	Phone 916-375-4346	BOC Number
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Department of General Services - Office of Procurement

PURCHASE ORDER CONTINUATION

Form GSOP 2-PIN (04/98)

<i>Purchase Order No.</i>	<i>Revision</i>	<i>Date</i>	<i>Supplier No.</i>	<i>Supplier Name</i>
62184		6/30/2008	811606	ADVANCED SURGICAL INC

<i>Item No.</i>	<i>Quantity</i>	<i>Unit</i>	<i>Commodity Code</i>	<i>Description</i>	<i>Unit Price</i>	<i>Extension</i>
					Total Value:	75,606.00
<p>This purchase order is being awarded on September 19th, 2008 pursuant to Government Code Section 13332.17. Any encumbrances made pursuant to this purchase order shall be construed to have been made on the last day of the preceding fiscal year.</p> <p>CHANGE ORDERS:</p> <p>This Purchase Order may be amended, modified or terminated at any time by mutual agreement of the parties in writing. Change orders amending, modifying or terminating the Purchase Order, including any modifications of the compensation payable, may be issued only by the State Procurement Officer. All such change orders shall be in writing and issued only upon written concurrence of the supplier. Termination, as that term is used in this section, does not include termination for default of the supplier.</p>						

STATE OF CALIFORNIA

Bid Specification System, Liquid Oxygen

6630-0028



1.0 SCOPE

This document describes the minimum requirements for a liquid oxygen system. The system will be used for storage of liquid medical grade oxygen and supply of oxygen gas to the hospital for patient use.

2.0 APPLICABLE SPECIFICATION AND STANDARDS

Specifications and standards referenced in this document in effect on the opening of the Invitation for Bid, form a part of this specification where referenced.

3.0 REQUIREMENTS

The oxygen supply system shall, at minimum, consist of a liquid storage tank, two ambient vaporizers, remote telemetry, and medical gas control cabinet. These components shall come with all necessary components (valves, switches, etc.)

3.1 Liquid Oxygen Tank (Diagram #M15-CONT01):

3.1.1 Vertical mounting, double-wall construction with inner vessel fabricated according to ASME Boiler and Pressure Vessel Code for unfired pressure vessels and suitable for medical gas service. The design shall include insulation and vacuum seal between walls. The tank shall include the following features, specialties, and components(as shown in Diagram # M15-CONT01):

- a) Safety Valves: ASME construction with pressure setting to correspond to tank working pressure and as required for component or system being protected.
- b) Pressure Gages: For tank pressure and facility service line pressure.
- c) Content Gage: High and low level indicator with electric signal circuit connection.
- d) Drain Valves: For piping, inner vessel, and outer shell.
- e) Fill Assembly: Fill connection, piping, valves, relief devices, and controls.
- f) Facility Service Assembly: Piping, valves, relief devices, vaporizer, shutoff valve, pressure regulator, line shutoff valve or check valve, and reserve supply connection for connection to building service piping.
- g) Include permanent label showing medical gas type, storage tank capacity, tank pressure rating, vaporizer capacity, and operating instructions.
- h) Working Pressure: At least 250 psig.
- i) Storage Capacity: 900 gallons of liquid oxygen.
- j) Inner vessel material: SA353 9% nickel-steel.
- k) Outer vessel material: A36 carbon steel with factory-applied manufacturer's standard protective paint finish suitable for exterior wall.

l) Design temperature: -20°F to 200°F.

m) Control: As identified on the attached diagram # M15-CONT01. Include actuating switch for alarm system connection and means for automatic actuating of supply, complying with 2004 NFPA 99.

n) Tank outer diameter: Not more than 85".

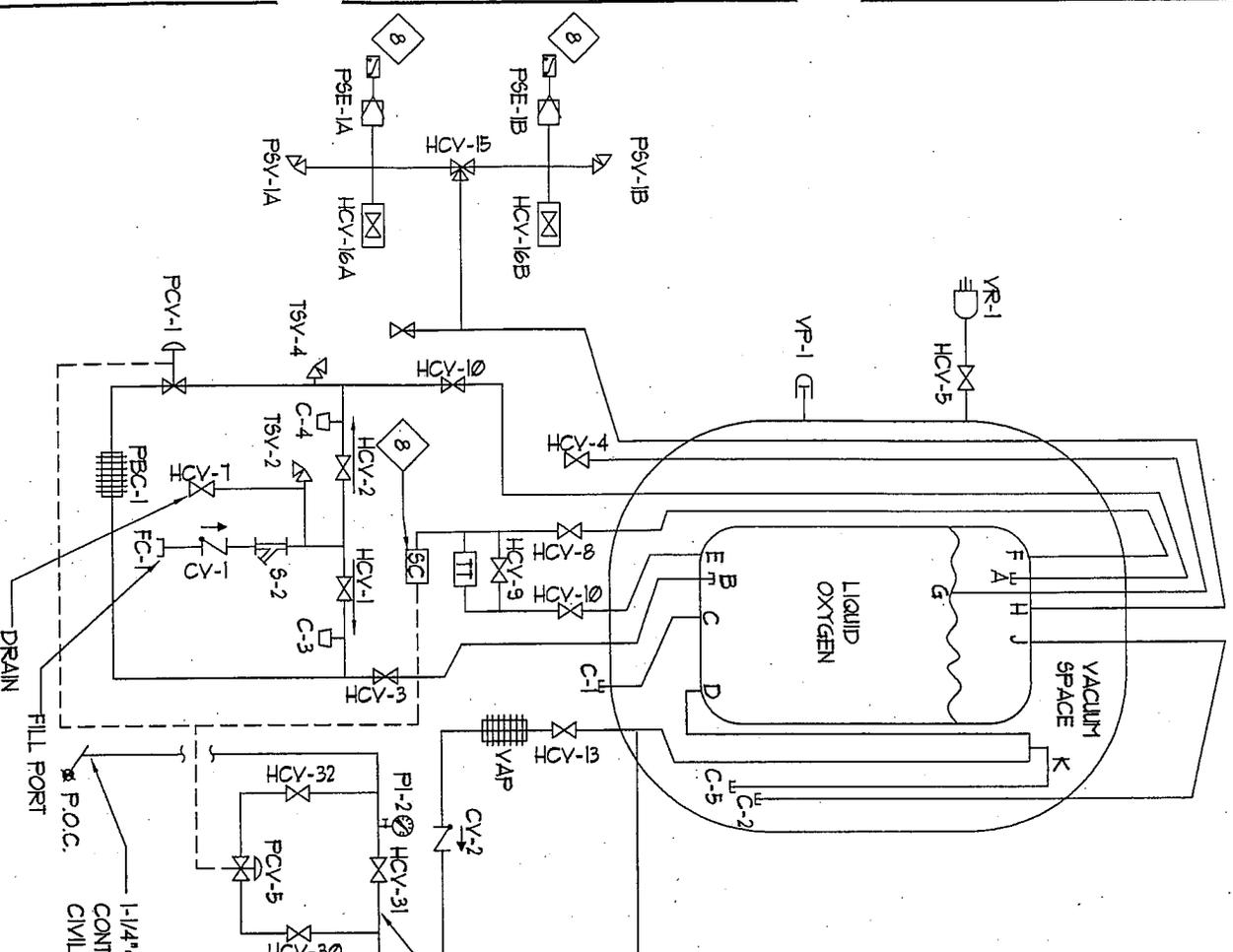
3.2 Ambient Vaporizer:

- 3.2.1 Type: Stand-Alone module. All aluminum, stainless steel lined, high-pressure and electro-polished, with five-inch gap minimum between finned elements.
- 3.2.2 Thermal Cycling: ANSI B313
- 3.2.3 Wind Load Criteria: 2007 CBC, 100 mph minimum.
- 3.2.4 Seismic Design: 2007 CBC, Chapter 16 and ASCE 7-05.
- 3.2.5 Rating: 8-24-hour, based on 11 SCFH/sq. ft. of external surface and a 10°F/20°F approach temperature of 70°F./70% RH.
- 3.2.6 Capacity: 3185 SCFH

3.3 Medical Gas Cabinet with alarm (Diagram # M15-CONT02):

- 3.3.1 To monitor main oxygen supply and reserve supply.
- 3.3.2 Will be interfaced with the hospital alarm system.
- 3.3.3 Construction: NEMA 4X
- 3.3.4 Exterior Finish: Stainless steel
- 3.3.5 Power: 115 VAC to 24 VDC transformer at 1.3amps.
- 3.3.6 Pressure Switches: a) Reserve in use pressure, b) Reserve pressure- low pressure.
- 3.3.7 Alarms:
 - a) To hospital "Reserve in-Use Alarm". Main tank low.
 - b) To hospital "Reserve Pressure Low- Alarm." Reserve cylinders low.
 - c) To hospital "Reserve Low-Level Alarm-Main." Main tank.
 - d) To hospital "Low-Level Alarm-Reserve." Reserve Cylinder.
- 3.3.8 Relief: 1) 350 psi value, 2) 75 psi value.
- 3.3.9 Check valves:
 - Pressure rating: 300 psig, minimum
 - Operation: Spring loaded
 - Ends: Manufacturer-installed ASTM B819, copper-tube extensions.
- 3.3.10 Ball Valves:
 - Pressure rating: 300 psig, minimum
 - Ball: Full-port, chrome-plated brass.
 - Seats: TFE
 - Handle: Lever type with locking device
 - Stem: Blowout proof with PTFE or TFE seal.

Ends: Manufacturer-installed ASTM B 819, copper-tube extensions.
Seals: Viton



- A TOP FILL
- B BOTTOM FILL
- C AUX LIQUID
- D GAS USE
- E LIQUID PHASE
- F VAPOR PHASE
- G FILL TRYCOCK
- H VENT
- J AUX VAPOR
- K ECONOMIZER

- C-1 CONNECTION, AUX LIQUID (NOT USED)
- C-2 CONNECTION, AUX VAPOR (NOT USED)
- C-3 CONNECTION, SECONDARY AUX LIQUID
- C-4 CONNECTION, SECONDARY AUX VAPOR
- C-5 CAP, ECONOMIZER (NOTE USED)
- FC-1 CHECK VALVE, FILL
- FC-1 CONNECTION, FILL
- HCV-1 VALVE, BOTTOM FILL
- HCV-1 VALVE, TOP FILL
- HCV-2 VALVE, TOP FILL
- HCV-3 VALVE, TOP FILL
- HCV-4 VALVE, REDUNDANT BOTTOM FILL
- HCV-5 VALVE, REDUNDANT BOTTOM FILL
- HCV-7 VALVE, FILL TRYCOCK
- HCV-8 VALVE, VACUUM GAUGE TUBE
- HCV-8 VALVE, FILL LINE DRAIN
- HCV-8 VALVE, 12-2 VAPOR PHASE
- HCV-10 VALVE, L1-1 EQUALIZATION
- HCV-11 VALVE, L1-1 LIQUID PHASE
- HCV-12 VALVE, REDUNDANT TOP FILL
- HCV-13 VALVE, VAPOR VENT
- HCV-15 VALVE, GAS USE
- HCV-16A VALVE, SAFETY RELIEF SELECTOR
- HCV-16B VALVE, RELIEF LINE PURGE
- HCV-16B VALVE, RELIEF LINE PURGE
- HCV-16B VALVE, RELIEF LINE PURGE
- SC TANK TEL (LIQ LEVEL, PRESS INR YES) SYSTEM CONTROLLER
- TSV-2, 1A, 1B PRESSURE BUILDING COIL, INR. VESSEL
- TSV-3 PRESSURE CONTROL VALVE
- TSV-4, 8 PRESSURE SAFETY ELEMENT, INR. YES.
- TSV-4, 8 PRESSURE SAFETY ELEMENT, INR. YES.
- TSV-4, 8 PRESSURE SAFETY VALVE, INR. YES.
- TSV-4, 8 STRAINER, PRESSURE BUILDING STRAINER, FILL
- TSV-4, 8 THERMAL SAFETY VALVE, FILL
- TSV-4, 8 THERMAL SAFETY VALVE, PB CIRCUIT
- TSV-4, 8 THERMAL SAFETY VALVE, PB CIRCUIT
- VP-1 VACUUM PORT
- VP-1 VACUUM READOUT, OUTER VESSEL
- VP-1 CONNECTION, CUSTOMER HOUSELINE
- VP-1 CHECK VALVE, HOUSELINE
- VP-1 VALVE, INLET HOUSELINE
- VP-1 VALVE, BYPASS HOUSELINE
- VP-1 VALVE, OUTLET HOUSELINE
- VP-1 PRESSURE CONTROL VALVE, HOUSELINE
- VP-1 PRESSURE INDICATOR HOUSELINE
- VP-1 THERMAL SAFETY VALVE, HOUSELINE
- VP-1 AMBIENT VAPORIZER
- VP-1 INR. VESSEL

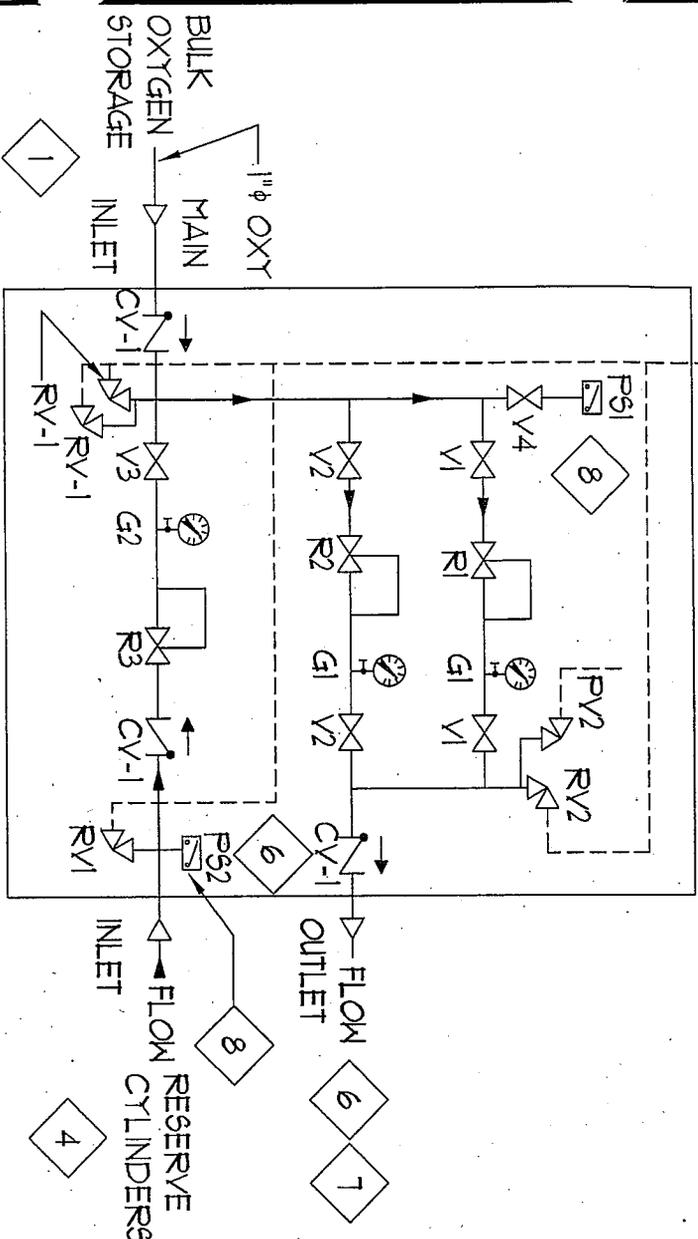
NOTE: TANK AND COMPONENTS SHALL BE PROVIDED, CLEANED, INSTALLED AND TESTED BY TANK SUPPLIER AS AN ASSEMBLY.

BULK OXYGEN STORAGE TANK CONTROL DIAGRAM

M15 CONT01

NTS

ALARM	P52	P61
ON	50 P51G	55 P61G
OFF	55 P51G	59 P61G



- R1 MAIN FINAL LINE REGULATOR
- R2 BACK-UP FINAL LINE REGULATOR
- R3 RESERVE SYSTEM REGULATOR
- V1 MAIN FINAL LINE REGULATOR ISOLATION VALVES
- V2 BACK-UP FINAL LINE REGULATOR ISOLATION VALVE
- V3 RESERVE SYSTEM REGULATOR ISOLATION VALVE
- V4 RESERVE N-USE PRESSURE SWITCH ISOLATION VALVE
- RV1 RELIEF VALVE (350 P51)
- RV2 RELIEF VALVE (75 P61)
- G1 FINAL LINE PRESSURE GAUGE
- G2 RESERVE SYSTEM PRESSURE GAUGE
- CV-1 CHECK VALVES
- P51 RESERVE IN-USE PRESSURE SWITCH
- P52 RESERVE PRESSURE LOW PRESSURE SWITCH

FLOW SCHEMATIC-MEDICAL GAS CABINET

M15_CONT02

NTS