

NAMS Certified Marine Surveyor
Hull & Machinery
Yachts & Small Craft
Cargo
ASA Accredited Senior Appraiser
ARM / MTS
Commercial Marine Surveying

DANA R. TEICHEIRA
ASA ARM/MTS ; NAMS CMS
TEICHEIRA MARITIME SURVEYORS, INC.
P.O. Box 2222, PETALUMA, CA 94953
Telephone: 707-769-9171
email: dt@maritimesurveyor.com

Casualty Investigations
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September 12, 2024

BOPC Received
9-16-2024

CONDITION AND VALUATION SURVEY / APPRAISAL REPORT

VESSEL: "PITTSBURG"

File No. 24011

This is to certify that the undersigned Marine Surveyor did on August 27, 2024, acting at the request of Mr. Jason Covell, attend on board the P/V "PITTSBURG," while at Pittsburg Marina, Pittsburg, California, for the purpose of performing a Condition and Valuation Survey. At the time of survey the vessel was afloat.

The purpose of the survey was for establishing the general condition of the vessel, as well as the Fair Market Value (FMV) and Replacement Cost New (RCN) as of the effective date of the report.

The client is the San Francisco Bar Pilots.

The intended user of the survey is San Francisco Bar Pilots, The California Pilot Commission, and the vessel's hull underwriters.

SCOPE OF WORK FOR APPRAISAL

I investigated the value of the vessel based upon the definition of values listed above.

Sales Comparison (Market) Approach, Cost Comparison Approach, and Income Approach were considered. No information regarding the vessel's income was provided so this approach could not be used. This vessel is a specialized type of vessel with limited appropriate comparable vessels available for developing valuation based upon the market approach. The cost approach was used to determine the opinion of value.

The scope of work is further detailed in the appraisal section of the report contained on pages 8-11.

GENERAL INFORMATION

Client: San Francisco Bar Pilots
Vessel Name: "PITTSBURG"
Official Number: 922579
Hull Identification No. (HIN) ALF00494G787
Owner: San Francisco Bar Pilots Benevolent and Protective Association
Address: Pier 9 East End San Francisco, CA 94111
Home Port: San Francisco, CA
Gross Tons: 18
Net Tons: 14
Builder: Munson Marine Edmonds, WA
Year Built / Rebuilt 1987 / 2014
Intended Service: Inland pilot boat
Cruising Speed/ Range: 25 kts./ 875 NM (8 GPH fuel burn and 20% fuel reserve assumed)
Last Dry Docking: April 2021 for routine maintenance
Recent Conversions/ Modifications: In 2020 the vessel was hauled out for hull repairs to the bow plating and bottom painting.

VESSEL PARTICULARS

Length Over All: 36'
Registered Length: 35.2'
Beam: 12.6'
Draft: 4'
Depth: 6.2'
Shell Plate: ¼" Welded aluminum plate
Superstructure: 3/16" Welded aluminum plate

GENERAL DESCRIPTION AND ARRANGEMENT

The subject vessel is an all-welded aluminum hull pilot vessel with twin Volvo Penta diesel engine propulsion through Volvo Penta stern drives.

There is an open foredeck with diamond plate with non-skid coating applied, followed by a low deckhouse and an open aft deck. There are heavy pipe handrails surrounding the foredeck and leading aft forming grab rails along the house. The aft deck is surrounded by rails.

The bow is scow shaped and the slab sides forward form a hard chine creating a spray rail. The underbody hull has a fine entry forming a shallow keel with moderate deadrise. The transom is nearly flat and has bars across to protect the stern drives.



(Photo from prior survey)

There is an emergency retrieval system on the port side operated by a 12VDC winch and equipped with a davit for personnel retrieval.

The interior is laid out as follows:
Forepeak separated by collision bulkhead with freeman hatch.
(2) Bunks forward.
Main cabin with (4) aircraft type seats helm to port forward and fuel tanks beneath sole.

PROPULSION

<i>Number Of Engines:</i>	Two
<i>Fuel:</i>	Diesel
<i>Make/Model:</i>	Volvo Penta D4-226A-F tier III 2014 model
<i>Total Horsepower:</i>	450
<i>Port Serial Numbers:</i>	A314796
<i>Starboard Serial Numbers:</i>	A308510
<i>Port Engine Hours:</i>	2958
<i>Starboard Engine Hours:</i>	2960
<i>Cooling:</i>	Fresh water through heat exchanger
<i>Exhaust:</i>	Wet out stern drives
<i>Starting:</i>	12V DC
<i>Reverse/Reduction Gear:</i>	Volvo Penta DPH-C stern drives
<i>Engine/Gear Foundations:</i>	Integral welded aluminum girders

Propulsion Comments:

Engine and outdrive last serviced at 200 hours by Helmut's Marine Service

ELECTRICAL SYSTEM

AC System Description: There is a shore power plug on the aft deck. The main 30-amp breaker is located in a panel at the helm. There are four 15-amp breakers for the AC circuits. Shore power is the only source of AC power in the vessel.

DC System Description: There are two 8-D size 12V DC wet cell batteries in two 12V DC banks charged by either the engine driven alternators or a Powermania Turbo M220 battery charger. There are rotary parallel disconnect switches in the engine room and breakers in the pilothouse.

MISCELLANEOUS EQUIPMENT AND SYSTEMS

Marine Sanitation Device: None

Bilge Pumps/Piping: (2) Rule 3500 with automatic switch main cabin and engine room (engine room bilge pump new in 5/2014)

Bilge Pumps Tested: Yes

Domestic Water System: N/A

Ventilation: Natural and 12V DC

Lpg System: N/A

Lpg System Meet Governing Standards: N/A

HVAC Systems: Coflow portable AC/heater permanently mounted in cabin

Alarms:

- Main engines are equipped with the engine manufacturer's alarm package.
- Engine room high bilge level connected to ringer/strobe (tested).

STEERING SYSTEM

Number Of Stations: One

Description/Type Of Equipment: Low pressure helm pump to power assisted hydraulic steering integral to outdrives

CORROSION CONTROL

Zincs: On transom and outdrives
Condition: Unknown; underwater body not inspected
Bonding System: N/A
Other: Electroguard / Mercathode impressed current system

THROUGH HULL FITTINGS

There are no through hull fittings installed below the static waterline. Both bilge pump discharges were at least 18" above the static waterline.

TANKAGE

Fuel Tanks: Two (100 g fwd; 250 g aft)
Total Capacity: 350
Material: Integral welded aluminum
Grounding: Yes
Shut Off Valves: N/A
Vents: Yes
Vent Screens: Yes

GROUND TACKLE

Anchors: 20# Danforth type emergency anchor with 150' 5/8" nylon rode and 10' of 3/8' galvanized chain (lengths estimated)

FIRE AND SAFETY

No. Portable Extinguishers: (2)
Type/Size: 2:BC Halon (see Findings and Recommendations)
Date Last Inspection: 8/2024
Type Of Fixed System and Size: Halon FE241 425ft³
Approximate Size of Engine Space: Less than 425ft³
Date Last Inspection: 8/2024
Fire Main, Hose, Nozzle: N/A
Fire Axe: N/A

Number/Type Pfd's: (3) USCG Type V work vests; (4) floatation coats
Ring Buoys: (2) 24" with lights (see F&R's); Lifesling on aft railing
EPIRB: The EPIRB from the Golden Gate was now on the vessel. The registration expired on 6/24 (see Findings and Recommendations). The battery expires on 7/26
Flares: Yes (see comments below)
Life Raft: Zodiac 6-man expires 1/2025. Hydrostatic release expires 1/2025
Horn: Yes (see F&R's)
Bell: N/A (vessel less than 12 meters)
Navigation Lights: Side, stern, red and white 360°
Navigation Lights Tested: Yes
General Alarm: N/A
Oil Discharge Placard: Yes
Garbage Discharge Placard: Yes
Carbon Monoxide Alarm: None (see Surveyor's Notes)
First Aid Kit: Yes

Fire and Safety Comments:

1. Flares- (4) parachute expire 8/2026; (6) hand red expire 7/2026; (3) hand red expire 8/2026 (6) hand orange expire 8/2026
2. Defibrillator with batteries new 2/9/21 and pads expire 6/6/26. Batteries have a 5 year life so will need to be replaced 2/26
3. Medical Oxygen carried onboard
4. 12VDC winch which raises and lowers MOB steps on the portside amidships

NAVIGATION/ELECTRONIC EQUIPMENT

Radar: Furuno FR-8065
Depth Sounder: Hummingbird digital
VHF Radios: (2) Standard Horizon Eclipse; (1) Standard Horizon handheld
GPS: Furuno GP-1850DF with c-map chart chip dated 2/23/2003
Plotter: See GPS
Compass: Ritchie 3"
Hailer: Raytheon Raymarine 430
AIS: Furuno Class B AIS transponder
Entertainment: Sony Marine CDX-M10 AM/FM CD Stereo
Other:

- Electroguard Inc. electrolysis protection level meter
- HP laptop computer with Rose Point Coastal Explorer charting software updated

- Humphree trim tab control

Navigation/Electronics Comments:

1. Compass deviation card dated 9/27/2011 posted.

GENERAL CONDITION

This vessel underwent extensive rebuilding in 2014 and the hull and machinery appears to be well maintained and in excellent condition.

FINDINGS AND RECOMMENDATIONS

HIGH PRIORITY (Recommendations to do immediately due to safety issues):

1. The USCG has changed their fire extinguisher ratings, going from the B-1, B-2 etc., to a UL rating system. For commercial vessels less than 65' (motorboats), 26' to 40' in length, they require a minimum of two 5-B extinguishers, or one if there is a fixed extinguishing system installed in the engine room. Both American Boat and Yacht Council (ABYC) and National Fire and Protection Association (NFPA) require additional extinguishers, over and above those required by the USCG. NFPA has not yet updated their requirements to reflect the new ratings. ABYC recommends three 5-B extinguishers. RECOMMEND since the vessel currently only carries two portable extinguishers with a 2-B rating the vessel should add three additional 5-B.
2. The vessel was not fitted with USCG B-II life jackets. RECOMMEND carry at least one USCG approved PFDs for each person onboard the vessel.

MODERATE PRIORITY (Recommendations which should be accomplished as soon as possible):

1. The water light battery on the port side ring buoy was labeled as being installed in 2022. There was no label on the starboard side. RECOMMEND change batteries annually and record battery change with a label affixed to the outside of the casing (or another recording device i.e. logbook).
2. The fuel hoses from the fuel tanks to valves and to the RACOR filters were old and brittle and none of these hoses were USCG A1-15 hose as required. RECOMMEND change fuel hose as required.
3. The vessel's horn did not function when tested. RECOMMEND troubleshoot and repair/replace as required.

LOW PRIORITY (Recommendations considered as best practices or betterment):

- A. There were salt crystals with poultice corrosion forming in the bilge area accessible in the forward compartment. RECOMMEND have this area inspected and cleaned free of salt and corrosion products at the next scheduled dry-docking period.
- B. The EPIRB registration needs to be updated and changed to the P/V "Pittsburg"

APPRAISAL

<i>Opinion of Vessel's Fair Market Value:</i>	\$100,000
<i>Opinion of Vessel's Replacement Cost New:</i>	\$800,000

Notes for Appraisal:

- A. An "as is, where is", cash equivalency, 100% ownership interest assumption was made in determining the opinion of Fair Market Value.
- B. The estimated Fair Market Value is the definition from the American Society of Appraisers (ASA) Machinery and Technical Specialties (MTS) Committee: "*Fair Market Value* is an opinion expressed in terms of money, at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts, as of a specific date."
- C. The estimated Replacement Cost New is the definition from the ASA MTS Committee website: "*Replacement Cost New* is the current cost of a similar new property having the nearest equivalent utility as the property being appraised, as of a specific date."
- D. Sales Comparison (Market) Approach, Cost Comparison Approach, and Income Approach were considered. No information regarding the vessel's income was provided so this approach could not be used. This vessel is a specialized type of vessel with few, if any, comparable vessels available for developing valuation based upon the market approach. The cost approach was used to determine the opinion of value.
- E. The California Air Resources Board (CARB) has harbor craft regulations requiring diesel engines on commercial vessels to be compliant with U.S. E.P.A. emission tiers were amended going into effect on 1/01/2023. The amended regulations require tier 3 engines with the original date of manufacture between 2013-2015

to be updated by 12/31/2026 (page 79, table 17 of "Commercial Harbor Craft Final Regulation Order").

- F. In October 2020 I obtained an emailed estimate from the vessel builder to replace the bare vessel (hull, deckhouse and propulsion) with a new identical unit for \$350,000. I added \$125,000 for internal furnishings and electronics to arrive at the estimated replacement cost new of \$475,000.
- G. Using the Producer Price Index for "Ship Building and Repairing, Nonmilitary", obtained from the Federal Reserve of St. Louis ¹. The index for 10/2020 was 213.1 and for 8/2022 it was 269.6. The formula for the current value is:

$\text{Current Value} = (\text{Current Index} / \text{Base Index}) \times \text{Cost}$
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Using this formula:

$\text{Current Value} = 357.1/213.1 \times \$475,000, \text{ or } \$798,000$
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- H. In my opinion the work accomplished in 2014 added 10 years of service life to the vessel, having the effect of changing the effective age from 27 years to 17 years in 2014. The current effective age of the vessel would be 27 years.
- I. For the Cost Approach calculations, I assumed a replacement cost of \$798,000 (rounded up to \$800,000 for the opinion of replacement cost new), a current Effective Age of 27, a Normal Useful Life of 30 years, and a residual salvage value of \$50,000. However, based upon the CARB Commercial Harbor Craft Regulations proposed amendments (see Note E above), the vessel would require it to be repowered by 12/31/2026, one year short of the vessel being 30 years old. For that reason, the Normal Useful Life was changed to 29 years.
- J. The calculation of Fair Market Value by the Cost Approach, with only Physical Obsolescence (depreciation) considered is as follows:

Current Replacement Cost New	\$798,000
Less Terminal Value	<u>- \$50,000</u>
	\$748,000
Less depreciation (551,000 x .862)	<u>- \$696,388</u>
	\$51,612
Plus Terminal Value	<u>+ \$50,000</u>
	\$101,612

¹ <https://fred.stlouisfed.org/series/PCU336611336611A>

- K. Deducting the residual salvage value, applying straight-line depreciation for 27 years (based upon a 29 year useful life), then adding back the salvage value resulted in a Fair Market Value of \$101,612, rounded down to \$100,000.
- L. The following assumptions were made regarding the valuation:
- Information provided by others that was considered in the valuation is from sources believed to be reliable and no further responsibility is assumed for its accuracy.
- M. The definition of Extraordinary Assumption is "Is an assumption made that if proved false, could affect the appraiser's opinions and conclusions."
- N. The definition of Hypothetical Assumption is "a condition which is contrary to what is known to exist on the effective date that has been assumed to use for analysis".
- O. The following Extraordinary Assumptions were made regarding the valuation:
- The vessel's underwater body condition supports the fair market value.
 - The CARB Commercial Harbor Craft rule require complete repowering of the engines with tier 4 engines with DPF.
- P. No Hypothetical Conditions were assumed.
- Q. In addition to the above listed Extraordinary Assumptions and Hypothetical Conditions, the following assignment conditions apply to this report:
- All information presented in this report is true and accurate to the best of the surveyor / appraiser's knowledge and belief.
 - The surveyor / appraiser renders no opinion as to legal title. Prevailing liens or other encumbrances were disregarded, and the property was appraised as if free and clear, unless otherwise specifically stated.
 - This study was made for the purpose stated and cannot be relied on for any other purpose. This report is for your internal use only and, unless otherwise stated, should not be disseminated to the public or third parties in any part of form.
 - All estimates of value are presented in this report and the surveyor / appraiser's considered opinion. The opinion of value is only valid for the stated effective valuation date (effective date is located adjacent to the signature line on the last page of the report), and for the stated purpose (located on the first page, second paragraph).

- We reserve the right to make such adjustments to the valuation herein reported as may be required by consideration of additional or more reliable information that may become available.
- Testimony or attendance in court by reason of this appraisal shall not be required unless arrangements for such services have previously been made.
- Neither all, nor any part, of this report is to be conveyed to the public through advertising, public relations, news, sales, or other media without written consent and approval of the undersigned.
- This appraisal was made in accordance with the code of ethics set forth by the American Society of Appraisers and the Uniform Standards of Professional Appraisal Practice.
- This appraisal did not consider the possibility of the existence of hazardous materials or toxic wastes. Should there be concerns about the existence of such substances on the property, we consider it imperative that you retain the services of a qualified independent engineer or contractor to determine the existence and extent of any hazardous materials, as well as the costs associated with any required or desirable treatment or removal.
- This examination has been conducted without making removals, or opening up to expose areas or components ordinarily concealed, or testing for tightness, or testing and/or running machinery or equipment, and does not, therefore, address any damages and/or deficiencies which might have been revealed if such procedures had been executed.
- No incline experiment, stability studies or stability analysis was performed in conjunction with this condition and valuation survey. This report and the attending surveyor and this office express no opinion relative to the stability of this vessel. Acceptance of this report or its use for any purpose shall serve as acknowledgment of and agreement with the above conditions.

SURVEYOR'S NOTES

- A. Vessel's call sign is WDA 9145.
- B. Carbon Monoxide (CO) is an odorless gas produced during the burning of hydrocarbons. Vessel equipped with gasoline engines and enclosed accommodation spaces are required by American Boat and Yacht Counsel (ABYC) A-24.7.1 to be equipped with a CO detection system. Vessels equipped with solid fuel or LPG appliances, or diesel engines, are recommended to be equipped with a detection system.
- C. With the exception of the deficiencies noted above, this vessel appeared to be in satisfactory condition for operation as a pilot vessel in inland service.

This report is issued without prejudice to any parties who may be concerned.



Dana R. Teicheira
NAMS Certified Marine Surveyor
ASA Accredited Senior Appraiser
Enclosures

1. Appraisal Certification

August 27, 2024
Effective Date