

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

CALIFORNIA MARINE CLEANING,
INC.,

Plaintiff,

v.

UNITED STATES OF AMERICA,
through the DEPARTMENT OF THE
NAVY,

Defendant.

Case No.: 22-cv-00741

**FINDINGS OF FACT AND
CONCLUSIONS OF LAW
FOLLOWING BENCH TRIAL**

Plaintiff California Marine Cleaning, Inc. (“CMC”), a Navy subcontractor, provided cleaning services aboard the USS Bonhomme Richard while it was docked for repairs. Dkt. 1. Because a massive fire lasting five days broke out on the ship and destroyed CMC’s equipment, Plaintiff filed suit against Defendant, the Department of the Navy (“the Navy”), alleging negligence and ultrahazardous activity. *Id.* After conducting a one-day bench trial, the Court finds Defendant liable for negligence in the amount of \$305,620. Dkts. 77, 82.
///
///

I. EVIDENTIARY RULINGS

Plaintiff only sought to introduce two exhibits at trial: (1) an Executive Summary of the Navy’s “Command Investigation into the Fire Aboard USS Bonhomme Richard (LHD-6) 12 July 2020” Report (“Command Investigation Report”) and (2) Plaintiff’s Estimated Damages Chart. Dkt. 82 (“Trial Tr.”). The Court will address its evidentiary rulings regarding these two documents before turning to its trial findings and conclusions.

A. The Navy’s Executive Summary

First, the Court took judicial notice of the facts that (1) the Navy published a report on its Command Investigation into the fire aboard the USS Bonhomme Richard and (2) that Plaintiff’s Exhibit 1 (“the Executive Summary”) comprised a portion of that published report. Dkt. 81 (“Evid. Hr’g Tr.”) at 4–8.

Under Federal Rule of Evidence 201, the Court can judicially notice “fact[s] that [are] not subject to reasonable dispute.” Fed. R. Evid. 201(b). A fact is “not subject to reasonable dispute” if it is “generally known,” or “can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned.” *Id.* Critically, “a court may take judicial notice of government-provided information on its official website.” *Balboa Cap. Corp. v. Shaya Med. P.C. Inc.*, 623 F. Supp. 3d 1059, 1066, n.3 (C.D. Cal. 2022) (citing *Stoyas v. Toshiba Corp.*, 896 F.3d 933, 946 n.17 (9th Cir. 2018) (taking judicial notice of government-provided information published on an official website).

Because the Navy features the Command Investigation Report on its official website, it was both easily ascertainable and beyond dispute that the Navy produced and published the report, including the Executive Summary section. Evid. Hr’g Tr. at 4–5; *see Stoyas*, 896 F.3d at 946 n.17 (internal citation omitted). Further clarifying the provenance of this report, the Navy published a press release, also posted on the official website, explaining that the Navy had commissioned and released this Command Investigation Report investigating and determining the causes of the fire aboard the Bonhomme Richard. Evid. Hr’g Tr. at 4–5, 8; *see Vice Chief of Naval Operations Public Affairs, Navy Releases Extensive Bonhomme Richard Fire Report, Major Fires Review*, United States Navy (Oct.

1 20, 2021), [https://www.navy.mil/Press-Office/News-Stories/Article/2816283/navy-](https://www.navy.mil/Press-Office/News-Stories/Article/2816283/navy-releases-extensive-bonhomme-richard-fire-report-major-fires-review/)
2 [releases-extensive-bonhomme-richard-fire-report-major-fires-review/](https://www.navy.mil/Press-Office/News-Stories/Article/2816283/navy-releases-extensive-bonhomme-richard-fire-report-major-fires-review/) (including link to
3 full report: <https://www.secnav.navy.mil/foia/readingroom/SitePages/Home.aspx>).¹

4 Therefore, the Court took judicial notice of the Navy’s publication of the Command
5 Investigation Report, including the Executive Summary portion. Dkt. 81 at 4–5.

6 Second, the Court found that the Executive Summary segment of the Command
7 Investigation Report was admissible as a party-opponent statement pursuant to Federal
8 Rule of Evidence 801(d)(2). Evid. Hr’g Tr. at 4–8. Under Federal Rule of Evidence
9 801(d)(2), an opposing party’s statement may be admissible if it (1) is offered against an
10 opposing party and (2) the opposing party (or their agent or employee) either made the
11 statement, adopted the statement, or demonstrated a belief in its truth.² Fed. R. Evid.
12 801(d)(2). The Court concluded that the Executive Summary which was offered by
13 Plaintiff was a party-opponent statement because the Navy authored it and adopted it as its
14 own by publishing it on its website. Evid. Hr’g Tr. at 4–8; *see* Fed. R. Evid. 801(d)(2). As
15 discussed above, the Navy published a press release, announcing that the Navy had
16 commissioned an investigation into the fire and released a report. *See* Vice Chief of Naval
17 Operations Public Affairs, *Navy Releases Extensive Bonhomme Richard Fire Report,*
18 *Major Fires Review, supra.* Moreover, it also published the report itself—which was
19 authored by the Vice Admiral and officially approved by both the Vice Chief of Naval
20

21 ¹ The Court notes that while the full Command Investigation Report was previously available via
22 this link prior to May 15, 2024, the link is now corrupted.

23 ² Specifically, Federal Rule of Evidence 801(d)(2) applies when:
24 the statement is offered against an opposing party and: (A) was made by the
25 party in an individual or representative capacity; (B) is one the party
26 manifested that it adopted or believed to be true; (C) was made by a person
27 whom the party authorized to make a statement on the subject; (D) was
28 made by the party’s agent or employee on a matter within the scope of that
relationship and while it existed; or (E) was made by the party’s
coconspirator during and in furtherance of the conspiracy.
Fed. R. Evid. 801(d)(2).

1 Operations and the Commander of the United States Pacific Fleet—on its official website.
2 *See id.* Given these representations, the Court found that Defendant authored and/or
3 adopted the entire report as its own, including the Executive Summary portion. Evid. Hr’g
4 Tr. at 4–8; *see* Dkt. 66-2 (Pl.’s Ex. 1); *see Fla. Conf. Ass’n of Seventh-Day Adventists v.*
5 *Kyriakides*, 151 F. Supp. 2d 1223, 1225–26 (C.D. Cal. 2001) (finding that a report
6 submitted by defendant to the SEC constituted a party-opponent statement).

7 Defendant argued that the Executive Summary is inadmissible under Federal Rule
8 of Evidence 1006 on the basis that it constitutes a summary of the larger Command
9 Investigation Report, some of which contains inadmissible hearsay. Evid. Hr’g Tr. at 5–8.
10 Rule 1006 permits parties to present a “summary, chart, or calculation” to reflect the
11 “content of voluminous writings, recordings, or photographs that cannot be conveniently
12 examined in court.” Fed. R. Evid. 1006. Principally, Rule 1006 applies where the
13 underlying documents are so “voluminous” that they cannot easily be reviewed by a court.
14 *In re Citric Acid Litig.*, 191 F.3d 1090, 1102 (9th Cir. 1999). In such cases, a party may
15 present a summary (often created by the party for trial purposes) in lieu of the voluminous
16 documents themselves. *See United States v. Wood*, 943 F.2d 1048, 1054 (9th Cir. 1991).
17 If a party intends to present a summary or chart in place of the underlying evidence, the
18 “underlying materials” must be admissible in and of themselves. *See Amarel v. Connell*,
19 102 F.3d 1494, 1516 (9th Cir. 1996).

20 The Court agreed that this could not be admitted under Federal Rule of Evidence
21 1006 as a summary without a showing that the underlying materials were admissible. Evid.
22 Hr’g Tr. at 5–8. However, the Court rejected Defendant’s argument that because the
23 Executive Summary does not satisfy Rule 1006 requirements for admissibility, it cannot
24 be admissible as a party-opponent statement under Federal Rule of Evidence 801(d)(2). *Id.*
25 at 8. Here, the Executive Summary is not just a clerical summarization of the entire
26 Command Investigation. *See* Pl.’s Ex. 1. Nor did Plaintiff present it as such. *See* Dkt. 66.
27 Instead of constituting a condensed version of the more voluminous report, the Executive
28 Summary presents the Navy’s high-level conclusions and lessons learned following its

1 investigation into the causes of the fire, including how the fire unfolded, the conditions that
2 allowed the fire to grow, and the Navy’s failures to meet its own standards. *See* Pl.’s Ex.
3 1. The Court, therefore, found that the Navy’s statements regarding their conclusions about
4 the causes of the fire constitute party-opponent statements under Federal Rule of Evidence
5 801(d)(2) and not an inadmissible summary under Rule 1006. Evid. Hr’g Tr. at 8.

6 Finally, the Court found that the probative value of the Executive Summary was
7 significant, and not substantially outweighed by the danger of unfair prejudice, because it
8 shed light on the Navy’s role in causing and furthering the July 2020 Bonhomme Richard
9 fire. *Id.*; *see* Fed. R. Evid. 403. Contrary to the government’s contentions otherwise, the
10 Court found that the Executive Summary did not present a risk of confusion or require an
11 expert because its conclusions were concise and clear. *See* Dkt. 72. Moreover, the Court
12 provided Defendant with an opportunity to submit other portions of the Command
13 Investigation Report pursuant to Federal Rule of Evidence 106, or any other admissible
14 evidence, to clarify any potentially misleading portions. Trial Tr. at 157–60; *see* Fed. R.
15 Evid. 106 (“If a party introduces all or part of a statement, an adverse party may require
16 the introduction, at that time, of any other part — or any other statement — that in fairness
17 ought to be considered at the same time.”).³

18 In conclusion, the Court took judicial notice of the fact that the Navy had published
19 the Command Investigation Report, including the Executive Summary portion, on its
20

21
22 ³ In fact, the Court admitted some other portions of the Command Investigation Report pursuant
23 to Federal Rule of Evidence 106. Trial Tr. at 157–60. For purposes of clarifying the statement that “87
24 percent of the ship’s fire stations remained in inactive equipment maintenance status” from the Executive
25 Summary, Pl.’s Ex. 1 at 1, the Court permitted Defendant to introduce paragraph 328 of the report, Dkt.
26 42-4 at 106, which clarified that although the fire stations had not received maintenance, they should have
27 still been operational. Trial Tr. at 157–58. However, the Court did not permit Defendant to introduce
28 paragraph 259 from the report, Dkt. 42-4 at 93, to provide context concerning the Executive Summary’s
explanation of the hazardous conditions that made the ship vulnerable to fire, Pl.’s Ex. 1 at 2. Trial Tr. at
158–60. The Court reasoned that because paragraph 259 contained an ambiguous term, it did not provide
any clarity. *Id.*; *see United States v. Collicott*, 92 F.3d 973, 983 (9th Cir. 1996), *as amended* (Oct. 21,
1996) (establishing that other evidence may only be admitted if the original segment creates a “misleading
impression” by “taking matters out of context”).

1 website as the results of its investigation. This information, in turn, provided the necessary
2 foundation for the Court to find that the Executive Summary constituted a party-opponent
3 statement and thus, was admissible under Federal Rule of Evidence 801(d)(2). Evid. Hr’g
4 Tr. at 4–8.

5 **B. CMC’s Estimated Damages Chart**

6 Pursuant to Federal Rule of Evidence 803(6), the business records hearsay
7 exception, the Court granted Plaintiff’s request to admit CMC’s Estimated Damages Chart
8 (page 3 of Defendant Exhibit 1) into evidence. Trial Tr. at 136–37.

9 The business records exception provides that a writing is admissible if (1) it is “made
10 or transmitted by a person with knowledge at or near the time of the incident recorded,”
11 and (2) “is kept in the course of regularly conducted business activity.” *United States v.*
12 *Miller*, 771 F.2d 1219, 1237 (9th Cir. 1985) (internal citation omitted); Fed. R. Evid.
13 803(6). The record is not admissible, however, if the source of information or the method
14 of circumstances of preparation indicate a lack of trustworthiness. *Id.*

15 Here, the Court determined that the Estimated Damages Chart was admissible given
16 the undisputed testimony establishing that CMC created this document near the time of the
17 fire pursuant to its usual business protocols. Trial Tr. at 134–38. During his direct
18 examination, Plaintiff’s CEO and former general manager, Joseph Carr, testified that
19 shortly after the fire, he and his team created the Estimated Damages Chart approximating
20 the quantities of equipment on the ship and costs to replace Plaintiff’s equipment aboard
21 the Bonhomme Richard during the fire. *Id.* at 116–17, 120–28. Carr explained that
22 National Steel and Shipbuilding Co. (“NASSCO”) was the entity that directly contracted
23 with the Navy for work aboard the Bonhomme Richard and that CMC was its
24 subcontractor. *Id.* at 117. At the request of NASSCO, Carter and other CMC employees
25 created this chart to provide an estimate of the damages that CMC suffered. *Id.* at 119–21,
26 125. Given this testimony that (1) Carr had made this chart, (2) near the time of the fire,
27 (3) about the equipment on the ship during the fire, and (4) that Carr was qualified to testify
28 to this information as the former general manager of CMC, neither party contested the fact

1 that the document satisfied Rule 803(6)'s requirements that a record be contemporaneously
2 created by someone with knowledge of the underlying data. *Id.*

3 Instead, Defendant argued that, because the chart was made under unique and novel
4 circumstances, it did not reflect "regularly conducted business activity" as required by
5 Federal Rule of Evidence 803(6). *Id.* at 135. Carr admitted that he did not regularly
6 calculate damages on account of fires, but also explained that, as a subcontractor, CMC
7 regularly corresponds with NASSCO about matters pertinent to their business relationship
8 such as finances and equipment. *Id.* at 125–29. In addition to clarifying that the document
9 was made in the course of CMC's ordinary business communications with its contractor,
10 Carr attested that he employed his usual techniques and review procedures, such as using
11 a ship's schematics to identify the quantity of equipment onboard, in providing these
12 estimates. *Id.* at 120–29, 134. Accordingly, the Court found that while the fire was an
13 unusual occurrence, CMC's business correspondence with the contractors for whom they
14 provided work was not—it was a regularly conducted business activity. *Id.* at 133–38. The
15 Court therefore concluded that this document met the requirements of Rule 803(6) and
16 overruled Defendant's hearsay objection. *Id.*

17 II. FINDINGS OF FACT

18 After holding a one-day bench trial and reviewing the Command Investigation
19 Report and Plaintiff's Estimated Damages Chart admitted into evidence, as well as the
20 testimony of Kirk Boettner⁴ and Josh Carr, the Court makes the following Findings of Fact.

21 **Plaintiff was a Subcontractor Who Performed Work on the Bonhomme Richard**

- 22 1. Defendant contracted with NASSCO for repairs on the Bonhomme Richard. *Id.* at
23 117.
- 24 2. NASSCO hired Plaintiff as a subcontractor to perform part of this work for the Navy.
25 *Id.*

26
27
28 ⁴ The majority of Kirk Boettner's testimony was stricken from the record given his inconsistent statements regarding his role in creating the Estimated Damages Chart. Trial Tr. at 50.

- 1 3. Plaintiff is a defense sub-contractor that services ships, submarines, and carriers by
2 cleaning the tanks on board, including human waste tanks, hydraulic oil tanks, diesel
3 fuel tanks, and potable water tanks. *Id.* at 10. In addition, Plaintiff cleans and
4 maintains critical systems, such as gears, propellers, diesel engines, and gas turbine
5 engines. *Id.*
- 6 4. Plaintiff was contracted by NASSCO to provide tank cleaning and gas-free services
7 to the Bonhomme Richard while the ship was off-duty and docked at the pier. *Id.* at
8 117.
- 9 5. On July 12, 2020, while operating under its contract to perform this work, Plaintiff
10 had stored equipment aboard the Bonhomme Richard. *Id.* at 12.
- 11 6. On July 12, 2020, a massive fire broke out on the Bonhomme Richard that lasted
12 five days. Pl.'s Ex. 1 at 2.

13 **Conditions Aboard the Bonhomme Richard Prior to the July 12, 2020 Fire**

- 14 7. From December 2018 through July 2020, the Bonhomme Richard was off-duty for
15 purposes of repairs and maintenance. *Id.* at 2. The ship's Commanding Officer and
16 crew were primarily responsible for managing these risks. *Id.* at 6.
- 17 8. Despite these designated responsibilities, those in charge generally failed to (1)
18 ensure that the ship's systems and equipment were in good condition; (2) adequately
19 train the ship's crew for a possible fire; (3) mandate that the Southwest Regional
20 Maintenance Center (which was responsible for the planning, execution, and close
21 out of maintenance actions) adhere to fire safety standards; or (4) prepare civilian
22 firefighters to assist the Navy with a fire. *Id.* at 2, 6.
- 23 9. During this period, the material condition of the Bonhomme Richard was in
24 disrepair. *Id.* at 2. Its heat detection capabilities, communications equipment, and
25 firefighting systems were all degraded. *Id.* In addition, combustible material had
26 accumulated around the ship and various spaces were cluttered with gear. *Id.*
- 27 10. Three months before the fire, after unloading more than 900,000 gallons of fuel, the
28 Bonhomme Richard was required by policy to restore all its onboard firefighting

1 systems. *Id.* at 4. However, this policy was not followed. *Id.* For example, the
2 ship’s crew decided to only restore a limited portion of the ship’s sprinkling systems.
3 *Id.*

4 11. Prior to July 12, 2020, (1) many of the Bonhomme Richard’s systems were turned
5 off and flagged for maintenance; (2) scaffolding, temporary services, and other
6 contractor equipment were scattered around the ship; (3) gear, equipment,
7 flammable and combustible material were packed into various spaces on the ship;
8 and (4) the operational readiness of over 75% of the ship’s firefighting equipment
9 was “unknown.” *Id.* at 3.

10 12. During this period, the Bonhomme Richard’s staff failed to perform regular fire
11 drills with the entire crew and repeatedly underperformed in the drills that they
12 undertook. *Id.* at 2. As a result, the ship’s crew lacked basic knowledge of how to
13 firefight in an industrial environment and how to collaborate with civilian
14 firefighters in tackling such a fire. *Id.* For example, on fourteen consecutive
15 occasions, the crew failed to timely apply firefighting agent on the source of the fire.
16 *Id.*

17 13. In addition, the San Diego Naval Base failed to (1) familiarize civilian firefighters
18 with Navy vessels, (2) verify that they were trained to respond to a shipboard fire,
19 or (3) prepare them to support the ship’s crew in fighting a fire. *Id.*

20 14. Critically, the Navy Commanders across various organizations also lacked a clear
21 system for identifying roles and responsibilities in handling an event such as a fire.
22 *Id.*

23 15. Despite established Navy policies on how to prepare for fire prevention, the
24 Bonhomme Richard’s crew did not comply with these policies as required. *Id.* at 6.
25 Although the Navy developed a manual titled Industrial Ship Safety Manual for Fire
26 Prevention and Response, which outlined the importance of creating a Fire Safety
27 Council to manage these risks and of adequately performing drills to coordinate a
28 response to a shipboard fire, the crew did not comply with either directive. *Id.*

1 **The July 12, 2020 Bonhomme Richard Fire**

2 16. On July 12, 2020, at around 8 a.m., an arsonist started a fire in the Lower Vehicle
3 Stowage Area of the Bonhomme Richard. *Id.* at 2–3. That day, the Command Duty
4 Officer oversaw the response to the fire. *Id.* at 3.

5 17. At least ten minutes elapsed after the initial detection of smoke before any action
6 was taken to address the fire. *Id.* This delay was caused by the fact that (1) the crew
7 on duty lacked radios; (2) the Officer of the Deck requested that the crew further
8 investigate the smoke before taking action; (3) when the Officer of the Deck decided
9 action was needed, he directed the Damage Control Central unit to address it; (4) the
10 One Main Circuit technology in many areas of the ship did not reach the Damage
11 Control Central; and (5) there was a general lack of urgency. *Id.*

12 18. When initial responders from the Bonhomme Richard’s crew descended into the
13 Lower Vehicle Stowage Area where the fire was, they lacked a collective
14 understanding of what firefighting systems were restored and available. *Id.* This
15 hindered their ability to apply agent to the fire or contain the fire, which only enabled
16 the smoke and heat to intensify. *Id.*

17 19. During this time, other Navy ships’ crews began deploying their Rescue and
18 Assistance teams to help with the firefighting effort. *Id.* However, these teams were
19 never directed to action nor incorporated into the firefighting efforts. *Id.*

20 20. Aboard the Bonhomme Richard, the ship’s crew deployed two teams to locate a
21 usable fire house in the Upper Vehicle Stowage Area. *Id.* However, the nearest
22 onboard fire station had missing or damaged hoses, even though these issues should
23 have been corrected through routine maintenance checks. *Id.* Accordingly, the
24 teams were unsuccessful in locating a serviceable fire station and failed to come up
25 with a new strategy in light of these complications. *Id.*

26 21. Shortly after 8:30 a.m., the San Diego Naval Base’s Federal Fire Department
27 (“Federal Fire Department”) arrived. *Id.* The Command Duty Officer failed to
28 provide the Federal Fire Department with actionable information or direction and

1 did not inform them that the sideport door located further down the pier provided the
2 most immediate access to the fire. *Id.* Accordingly, without this information, the
3 firefighters began using their own hoses by pulling them nearly 30 feet vertically up
4 the elevator into the ship. *Id.* Without guidance, the Federal Fire Department
5 ultimately operated as an independent unit without any oversight or coordination
6 with the ship's crew. *Id.*

7 22. Given this lack of actionable information, the Federal Fire Department ran its hoses
8 for a significant distance. *Id.* Because there was no installed firemain system on the
9 pier, the fire department had to connect their hoses to a potable water source that
10 supplied water to another ship. *Id.* at 3–4. However, the Federal Fire Department's
11 vantage point was seriously compromised because it could only partially access the
12 Lower Vehicle Stowage Area where the fire had broken out. *Id.* at 4. While the team
13 attempted to apply agent on the fire, within a few minutes, the team backed out due
14 to a low air warning. *Id.*

15 23. At the same time the Federal Fire Department attempted to hose the fire with water,
16 firefighters from the San Diego Fire Department arrived. *Id.* However, neither the
17 Commanding Officer, Commanding Duty Officer, nor any other Bonhomme
18 Richard leaders meaningfully attempted to integrate civilian firefighters for the first
19 three hours after their arrival. *Id.* This was in large part because their radios were
20 not compatible with the Federal Fire Department's equipment. *Id.*

21 24. While the Bonhomme Richard had extensive shipboard firefighting systems,
22 including a firemain, sprinkling systems, and hoses, none of these were used during
23 the firefighting effort. *Id.* This was largely in part because the equipment was
24 degraded, maintenance had not been properly performed to keep it ready, and the
25 crew lacked familiarity with how to operate or access it. *Id.*

26 25. Throughout the entire morning, the Bonhomme Richard leadership failed to direct
27 firefighting efforts and coordinate an integrated attack using either the San Diego
28 Fire Department or the Federal Fire Department to help the ship's crew. *Id.*

1 26. Around 9:35 a.m., the San Diego Fire Department entered the ship through the
2 sideport door to locate the origins of the fire. *Id.* However, ship and contractor
3 equipment blocked their pathway. *Id.* at 5.

4 27. By this time, combustible materials stored in the Upper Vehicle Stowage Area had
5 ignited from the heat radiating from the Lower Vehicle Stowage Area, creating
6 additional fires. *Id.* The San Diego Fire Department attempted to access the Lower
7 Vehicle Stowage Area but were forced to back out before engaging with the fire due
8 to the heat, lack of visibility, and unfamiliarity with the ship's layout. *Id.*

9 28. Around 10:30 a.m., the San Diego Fire Department and the Federal Fire Department
10 ordered the withdrawal of all firefighters from the ship due to deteriorating fire
11 conditions. *Id.*

12 29. At 10:50 a.m., after all the firefighters had exited the Bonhomme Richard, a major
13 explosion rocked the ship, blowing debris across the pier. *Id.* Accordingly, all
14 personnel evacuated the pier, allowing the fires to continue unimpeded. *Id.*

15 30. Subsequent attempts to address the fire relied on ad hoc strategies that did not apply
16 enough firefighting agent to combat the fire's spread. *Id.* Throughout the first day
17 of efforts, firefighting agent was never applied to the origins of the fire and the
18 opportunity to do so was lost once the fire spread beyond the Lower Vehicle Stowage
19 Area. *Id.*

20 31. The fire continued to spread and burn for the next four days despite efforts of the
21 ship's crew and various firefighting teams. *Id.* Because the fire had not originally
22 been contained or extinguished at the beginning, some compartments reached
23 temperatures above 1,200 degrees Fahrenheit. *Id.* As a result, the interior of the
24 ship's aluminum superstructure melted and converted into molten metal that flowed
25 into the spaces below. *Id.*

26 32. Although the fire was started by an act of arson, the Navy concluded that the ship
27 was lost due to an inability to extinguish the fire largely on account of the
28 accumulation of fire hazards and inadequately prepared leadership and crew. *Id.* at

1 2. As a result of the fire, the Bonhomme Richard was damaged beyond economical
2 repair and was decommissioned. *Id.* at 5.

3 **Damages to Plaintiff's Equipment Following the Fire**

4 33. On the morning of July 12, 2020, shortly after the fire began, Plaintiff was notified
5 of the fire on the Bonhomme Richard. Trial Tr. at 119.

6 34. After the fire was extinguished, Plaintiff could not go aboard the Bonhomme
7 Richard to assess its equipment. *Id.* Instead, the fire department and emergency
8 service personnel placed any remaining equipment on the pier. *Id.* Plaintiff was
9 able to recover some of its equipment left on the pier. *Id.*

10 35. A week after the fire was extinguished, NASSCO, Plaintiff's contractor, requested
11 that Plaintiff make a list of its estimated damages. *Id.*

12 36. Accordingly, Plaintiff's general manager, Joseph Carr, testified that he coordinated
13 and oversaw the preparation of estimates for the equipment that Plaintiff had stored
14 aboard the Bonhomme Richard. *Id.* at 120–22. He relied on schematics of the ship
15 to understand what equipment was aboard and calculated the type and amount of
16 equipment lost in the fire. *Id.* Then, he looked at the current market value of such
17 pieces to determine the costs to replace such equipment. *Id.* at 130.

18 37. The chart, Def.'s Ex. 1 at 3, reflected that:

- 19 a. Plaintiff had 96 three-inch oil hoses onboard, at \$755 per hose, totaling
20 \$72,480;⁵
- 21 b. Plaintiff had 149 half-inch wash hoses onboard, at \$182 per hose, totaling
22 \$27,118;
- 23 c. Plaintiff had 20 three-inch jumpers onboard, at \$378 per jumper, totaling
24 \$7,560;
- 25
26

27
28 ⁵ While the chart reflects that the total is \$71,725, this calculation is erroneous. *See* Def.'s Ex. 1
at 3.

- 1 d. Plaintiff had 145 two-inch oil hoses onboard, at \$692 per hose, totaling
- 2 \$100,340;
- 3 e. Plaintiff had 20 two-inch jumpers onboard, at \$35 per jumper, totaling \$700;
- 4 f. Plaintiff had 25 one-and-a-half-inch clean oil hoses onboard, at \$552 per hose,
- 5 totaling \$13,800;
- 6 g. Plaintiff had 93 one-and-a-quarter-inch air hoses onboard, at \$259 per hose,
- 7 totaling \$24,087;
- 8 h. Plaintiff had 18 one-and-a-quarter-inch chemical hoses onboard, at \$259 per
- 9 hose, totaling \$4,662;
- 10 i. Plaintiff had 88 one-inch wash hoses onboard, at \$297 per hose, totaling
- 11 \$26,136;
- 12 j. Plaintiff had 18 one-inch clean oil hoses onboard, at \$220 per hose, totaling
- 13 \$3,960;
- 14 k. Plaintiff had 95 three-quarter-inch wash hoses onboard, at \$269 per hose,
- 15 totaling \$25,555;
- 16 l. Plaintiff had 86 three-quarter-inch air hoses onboard, at \$87 per hose, totaling
- 17 \$7,482;
- 18 m. Plaintiff had 66 two-inch pumps onboard, at \$1,742 per pump, totaling
- 19 \$114,972;
- 20 n. Plaintiff had 3 three-inch nomad pumps onboard, at \$3,000 per pump, totaling
- 21 \$9,000;
- 22 o. Plaintiff had 3 three-inch warren pumps onboard, at \$4,936 per pump, totaling
- 23 \$14,808;
- 24 p. Plaintiff had 2 two-inch plastic pumps onboard, at \$5,785 per pump, totaling
- 25 \$11,570;
- 26 q. Plaintiff had 150 two-inch valves onboard, at \$68 per valve, totaling \$10,200;
- 27 r. Plaintiff had 75 three-inch valves onboard, at \$211 per valve, totaling
- 28 \$15,825;

- s. Plaintiff had 150 three-quarter-inch valves onboard, at \$13 per valve, totaling \$1,950;
- t. Plaintiff had 75 one-and-a-quarter-inch valves onboard, at \$45 per valve, totaling \$3,375;
- u. Plaintiff had 20 three-inch manifolds onboard, at \$900 per manifold, totaling \$18,000;
- v. Plaintiff had 20 one-and-a-quarter-inch manifolds onboard, at \$400 per manifold, totaling \$8,000;
- w. Plaintiff had 20 three-quarter-inch manifolds onboard, at \$250 per oil hose, totaling \$5,000;
- x. Plaintiff had 10 three-inch Y manifolds onboard, at \$600 per Y manifold, totaling \$6,000; and
- y. Plaintiff had 10 two-inch Y manifolds onboard, at \$400 per Y manifold, totaling \$4,000.

38. The chart also accounted for the equipment that had been recovered from the pier and would not need to be replaced, including tanks, power equipment, pressure washer, filters, toolboxes, and calibrated equipment. Def.'s Ex. 1 at 3.

39. Carr testified that CMC replaced the lost equipment on an as-needed basis following the fire. Trial Tr. at 141–52. Carr attested that while not all of the equipment lost in the fire was new, the company needed to replace the lost items as needed for future contracts. *Id.* at 141–42, 148–49. Although Carr could not precisely recall when or how some of the equipment had been replaced, he stated that it was safe to assume that CMC had replaced the lost equipment prior to this hearing. *Id.* at 141. He specifically asserted that CMC had most definitely purchased more than 96 lengths of the three-inch hoses it lost in the fire. *Id.* When it came to hoses, Carr clarified that no used market for hoses existed and thus, that Plaintiff had no choice but to purchase new hoses at market value price to replace them. *Id.* at 150–52.

///

III. CONCLUSIONS OF LAW

After rendering the above Findings of Fact, the Court makes the following Conclusions of Law.

A. Legal Standards for Admiralty Cases

40. Governing admiralty lawsuits, the Public Vessels Act waives federal sovereign immunity for damages caused by a public vessel of the United States. 46 U.S.C. § 31102(a)(1). The Ninth Circuit has interpreted the phrase “damages caused by a public vessel” broadly “to encompass *all* tort and contract claims arising out of the possession or operation of the ship.” *Tobar v. United States*, 639 F.3d 1191, 1198 (9th Cir. 2011) (emphasis in original) (internal citations and quotation marks omitted); *see Canadian Aviator, Ltd. v. United States*, 324 U.S. 215, 224–25 (1945) (holding that “[t]he consent to suit embodied in the [PVA] thus extends to cases where the negligence of the personnel of a public vessel in the operation of the vessel causes damage to other ships, their cargoes, and personnel”). Under this Act, an injured party has no greater claim against the United States than one would have against a private person under similar circumstances. *Canadian Aviator*, 324 U.S. at 227–28.

41. A plaintiff’s “[t]ort claims may sound in admiralty jurisdiction if they satisfy a test with three components showing that the claim has the requisite maritime flavor.” *Ali v. Rogers*, 780 F.3d 1229, 1235 (9th Cir. 2015). “The relevant tort or harm must have (1) taken place on navigable water (or a vessel on navigable water having caused an injury on land), (2) ‘a potentially disruptive impact on maritime commerce,’ and (3) a ‘substantial relationship to traditional maritime activity.’” *Id.* (quoting *Jerome B. Grubart, Inc. v. Great Lakes Dredge & Dock Co.*, 513 U.S. 527, 534 (1995)).

42. Plaintiff’s tort claims are sound in admiralty jurisdiction because the June 12, 2020 fire occurred aboard the *Bonhomme Richard* while it was docked at Naval Base San Diego undergoing repairs and maintenance. *See Sisson v. Ruby*, 497 U.S. 358, 367

1 (1990). Plaintiff has satisfied all three requirements for admiralty jurisdiction: (1)
2 the fire occurred aboard the Bonhomme Richard while it was docked at Naval Base
3 San Diego; (2) the fire had a potentially disruptive impact on maritime commerce
4 by spreading to nearby vessels or making the marina inaccessible while the fire was
5 being contained and extinguished over five days; and (3) maintenance or repairs of
6 a vessel at a marina on navigable waters is related to maritime activity. *See id.*⁶

7 **B. Defendant Was Negligent**

8 43. To establish negligence under admiralty law, a plaintiff must prove the same
9 elements as a common law negligence claim by a preponderance of the evidence.
10 *Morris v. Princess Cruises, Inc.*, 236 F.3d 1061, 1070 (9th Cir. 2001). These include
11 duty, breach, causation, and damages. *Id.*

12 44. Duty: “In admiralty the duty of care may be derived from three basic sources: (1)
13 duly enacted laws, regulations, and rules; (2) custom; and (3) the dictates of
14 reasonableness and prudence.” Thomas J. Schoenbaum, *Admiralty and Maritime*
15 *Law* § 5:4 (6th ed. 2023). “It is a settled principle of maritime law that a shipowner
16 owes the duty of exercising reasonable care to those lawfully aboard the vessel.”
17 *Kermarec v. Compagnie Generale Transatlantique*, 358 U.S. 625, 630 (1959).

18 45. Breach: The degree of care required is reasonable care. Schoenbaum, *supra*, § 5:4.
19 The duty to provide reasonable care is breached where a defendant has “fail[ed] to
20

21 ⁶ Defendant still contends that Plaintiff’s claims fall under the Contract Disputes Act, 41 U.S.C.
22 §§ 7101 *et seq.* (“CDA”) because the claims arise from and relate to a federal government contract between
23 the U.S. Navy and NASSCO. However, as Judge Burns addressed in his order denying Defendant’s
24 motion to dismiss, Dkt. 18, Plaintiff’s claims are not governed by the CDA because they are rooted in the
25 common law torts of negligence and ultrahazardous activity—not contract disputes. The fact that
26 Plaintiff’s claims arise out of a contractual relationship does not render them contractual in nature. *See*
27 *id.* Furthermore, Plaintiff does not have a contract with the Navy, but rather with NASSCO, and thus, the
28 CDA does not have jurisdiction over this dispute. *See NavCom Def. Elecs., Inc. v. Ball Corp.*, 92 F.3d
877, 879–80 (9th Cir. 1996) (collecting cases making clear the CDA only has jurisdiction over claims “by
contractors against the government, not over claims brought by subcontractors” and emphasizing that in
order for the CDA to have jurisdiction over the subcontractor’s claim, the “prime contractor” must “certify
the subcontractor’s claim.”) (emphasis in original) (internal citations omitted).

1 observe that degree of care, precaution, and vigilance which the circumstances
2 demand.” *Id.* “What is required . . . is merely the conduct of the reasonable man of
3 ordinary prudence under the circumstance;” however where there is “greater
4 danger,” there is “an increased amount of care” required. *In re Catalina Cruises,*
5 *Inc.*, 137 F.3d 1422, 1425–26 (1998) (internal citation omitted); *see also*
6 *Weyerhauser Co. v. Atropos Island*, 777 F.2d 1344, 1347 (9th Cir. 1985)
7 (establishing that “human skill and precaution, and a proper display of nautical skill”
8 is essentially synonymous with “reasonable care under the circumstances.” (internal
9 citation and quotation marks omitted)).

10 46. Causation: Causation is a two-part analysis, including (1) factual causation, whether
11 the particular event or injury would have occurred without an act or omission; and
12 (2) proximate or legal causation, including whether a superseding cause or a policy
13 consideration should relieve the defendant of liability. Schoenbaum, *supra*, § 5:5.
14 In establishing “factual causation,” many courts use the “substantial factor” test in
15 examining whether it is “more likely than not[] that the defendant’s act or omission
16 played a substantial part in bringing about the injury.” *Id.* With regard to proximate
17 cause, “the injury or damage must be a reasonably probable consequence of the
18 defendant’s act or omission.” *Id.*

19 47. Damages: In admiralty, “monetary damages for negligent injury to property are
20 assessed according to the principle that such damages serve a compensatory function
21 and must be tailored to place the aggrieved party in as good a position as she was
22 before the accident.” Schoenbaum, *supra*, § 5:8; *see also Standard Oil Co. v. S. Pac.*
23 *Co.*, 268 U.S. 146, 155 (1925). “If the plaintiff suffers a total loss, either actual or
24 constructive, he or she may recover the value of the property lost just before the
25 damage. If there is not a complete loss and repairs are feasible, the cost of repair is
26 the measure of damages. But, if those costs exceed the value just before the damage,
27 then the plaintiff is limited to the value just before the damage.” *BP Expl. & Oil,*
28 *Inc. v. Moran Mid-Atl. Corp.*, 147 F. Supp. 2d 333, 337 (D.N.J. 2001) (internal

1 citations omitted). The burden is on the plaintiff to prove the extent of its damages,
2 including the actual value of any item damaged at the time just prior to damage. *Id.*
3 Because “a [c]ourt sitting in admiralty is a court of equity,” it “has the authority to
4 award what is fair and just in light of all the facts and circumstances of the case.”
5 *Norfolk & Portsmouth Belt Line R. Co. v. M/V MARLIN*, No. 2:08CV134, 2009 WL
6 3363983, at *9 (E.D. Va. Oct. 9, 2009) (citing *BP Expl.*, 147 F. Supp. 2d at 341)
7 (“[I]t is clear that a federal court sitting in admiralty is not tied to any strict rules of
8 the common law, but has the authority to make equitable decisions, considering all
9 of the facts and circumstances of the individual case.”).

10 48. Here, the Court finds that Defendant acted negligently towards Plaintiff because (1)
11 Defendant had a duty of reasonable care to Plaintiff; (2) it breached this duty by
12 failing to adequately prepare for a fire and to employ proper firefighting techniques
13 in its handling of the July 12, 2020 Bonhomme Richard Fire; (3) this breach
14 foreseeably caused and was a substantial factor in damaging Plaintiff’s equipment
15 aboard the ship; and (4) this damage required Plaintiff to replace its equipment. *See*
16 *Schoenbaum, supra*, § 5:4. The Court will address each of these elements in turn.

17 49. First, the Court finds that Defendant owed Plaintiff a duty of reasonable care
18 because Plaintiff was contractually obligated to perform services and stow its
19 equipment aboard the Bonhomme Richard. *See* Trial Tr. at 12, 117; *Schoenbaum,*
20 *supra*, § 5:4. As Plaintiff and its equipment were lawfully present on the Bonhomme
21 Richard, the Navy, as the ship owner, owed CMC a duty of reasonable care. *See*
22 *Schoenbaum, supra*, § 5:4.

23 50. Second, the Court finds that Defendant breached its duty to Plaintiff because it failed
24 to provide “reasonable care under the circumstances.” *Id.* The Navy’s failure to
25 maintain firefighting equipment aboard the ship after knowing it had loaded over
26 900,000 gallons of fuel onboard amounted to a violation of its duty to exercise
27 reasonable care. Pl.’s Ex. 1 at 2, 4, 6. Despite the enormous fire hazard created by
28 storing this fuel, they failed to exercise the proper precautions to address this risk,

1 such as (1) ascertaining and maintaining the readiness of its firefighting systems and
2 equipment; (2) clearing clutter and fire hazards from crucial spaces; and (3)
3 preventing the unnecessary accumulation of combustible material. Pl.’s Ex. 1 at 2.

4 51. In addition to failing to ensure that the Bonhomme Richard’s firefighting systems
5 were intact, the Commanding Officer failed to adequately prepare the ship’s crew
6 for such an event. *Id.*

7 52. Moreover, the Bonhomme Richard’s leadership failed to follow Navy protocols on
8 how to adequately prepare for a fire. *Id.* at 2, 6. Critically, the Navy itself admitted
9 that its performance deviated from its own standards and created the conditions for
10 the ship’s destruction. *Id.*

11 53. Third, the Court finds that Defendant’s breach of its duty to Plaintiff ultimately
12 caused damage to Plaintiff’s equipment aboard the ship. *See* Schoenbaum, *supra*,
13 § 5:5.

14 54. Foremost, the Navy’s failure to adequately maintain its equipment, remove obvious
15 fire hazards, and prepare its staff was a substantial factor in the duration of and extent
16 of damage caused by the fire, including the destruction of Plaintiff’s equipment. *See*
17 Pl.’s Ex. 1 at 2; Schoenbaum, *supra*, § 5:5. Importantly, the Navy itself admitted
18 that although the fire was started by arson, the ship was ultimately lost due to the
19 Navy’s general unpreparedness to combat the situation once it began. Pl.’s Ex. 1 at
20 2. First, the Navy’s failure to maintain and have operational firefighting equipment
21 played a role in furthering the fire due to (1) broken and ineffective communication
22 gear and (2) the lack of maintained and operational firefighting gear, including
23 sprinkler systems and hoses. *Id.* at 2–4. The clutter of gear prevented the firefighting
24 team from accessing the source of the fire, and the accumulation of combustible
25 material sparked additional fires. *Id.* at 2–5. Also, because the leadership and crew
26 were not adequately trained for such an event, this led to delayed and/or failed
27 attempts to extinguish and contain the fire. *Id.* Finally, because there was no
28 cohesive plan on how to combat the fire, leadership was unable to direct a targeted

1 and efficient attack on the source of the fire, which only led it to spread. *Id.* at 2–6.
2 Accordingly, the Navy’s inability to control and limit the extent of the fire played a
3 substantial role in Plaintiff’s equipment being destroyed. *See* Schoenbaum, *supra*,
4 § 5:5.

5 55. Next, the Court concludes that the damage to Plaintiff’s equipment was a
6 foreseeable outcome of Defendant’s breach. *See id.* Given that Defendant violated
7 its duty to provide reasonable care by failing to maintain effective firefighting
8 response systems, it was foreseeable that Defendant would not be able to adequately
9 contain and extinguish a fire if one were to begin on the *Bonhomme Richard*. *See*
10 *generally* Pl.’s Ex. 1. As Plaintiff’s equipment was onboard at the request of the
11 Navy, it was foreseeable that Defendant’s failure to prepare for a fire would lead to
12 the damage of Plaintiff’s property. *See* Trial Tr. at 12, 117; Pl.’s Ex. 1.

13 56. Finally, regarding damages, the Court finds that Plaintiff has only met its burden to
14 prove the amount of damages it suffered with respect to its lost hoses. *See BP Expl.*,
15 147 F. Supp. 2d at 337. Plaintiff’s Estimated Damages Chart included the
16 approximate amount of equipment lost—813 hoses, 40 jumpers, 74 pumps, 450
17 valves, and 80 manifolds—and the market cost to replace these items with brand
18 new equipment. Def.’s Ex. 1 at 3. Plaintiff provided no evidence about the state of
19 equipment at the time of the fire, such as whether it was new or had depreciated due
20 to significant wear and tear. CMC also offered no evidence about the value of the
21 lost equipment at the time of the fire, which would have depended in large part on
22 its condition. All Plaintiff offered was the cost of replacing these lost items with
23 new items, which, because of depreciation, does not necessarily equate the lost value
24 of the equipment. *See* Trial Tr. at 141–42, 148–49; *BP Expl.*, 147 F. Supp. 2d at 337
25 (explaining that if the cost of repairs or replacement exceed the depreciated value of
26 the equipment before the damage, a plaintiff is only entitled to its value just before
27 the damage, *not* the full cost to replenish such items). The Court therefore concludes
28

1 that Plaintiff has not met its burden of proving the damages amount for its lost
2 valves, pumps, jumpers, and manifolds.

3 57. In exercising its equitable powers, the Court reaches a different conclusion with
4 respect to Plaintiff's lost hoses. *Norfolk*, 2009 WL 3363983, at *9. During trial,
5 Joseph Carr testified that there is no used market for hoses. Thus, in order to replace
6 the destroyed or damaged hoses, CMC had no choice but to purchase new hoses at
7 market value. Trial Tr. at 150–52. Because Plaintiff clarified that it would not be
8 feasible to substitute the used hoses with other equipment of equivalent depreciated
9 value, it established that the condition or value of the hoses on the ship prior to the
10 fire was irrelevant; no matter what, CMC would only be able to substitute these items
11 with brand new versions. *See id.* Because Plaintiff would require new hoses to be
12 made whole (whereas CMC could feasibly be fairly compensated with used
13 equipment for its valves, pumps, jumpers, and manifolds), CMC was able to prove
14 its amount of damages solely by providing the market value of new hoses and the
15 approximate amount of hoses lost aboard the ship. *See BP Expl.*, 147 F. Supp. 2d at
16 337. Plaintiff is, therefore, entitled to the estimated market value cost of replacing
17 its 813 hoses lost aboard the ship during the fire. Def.'s Ex. 1 at 3.

18 58. According to Def.'s Ex. 1 at 3, the Court finds that Plaintiff's damages for the
19 replacement of all its hoses amounts to \$305,620 given the following:

- 20 a. Plaintiff had 96 three-inch oil hoses onboard, at \$755 per hose, totaling
21 \$72,480;
 - 22 b. Plaintiff had 149 half-inch wash hoses onboard, at \$182 per hose, totaling
23 \$27,118;
 - 24 c. Plaintiff had 145 two-inch oil hoses onboard, at \$692 per hose, totaling
25 \$100,340;
 - 26 d. Plaintiff had 25 one-and-a-half-inch clean oil hoses onboard, at \$552 per hose,
27 totaling \$13,800;
- 28

- e. Plaintiff had 93 one-and-a-quarter-inch air hoses onboard, at \$259 per hose, totaling \$24,087;
- f. Plaintiff had 18 one-and-a-quarter-inch chemical hoses onboard, at \$259 per hose, totaling \$4,662;
- g. Plaintiff had 88 one-inch wash hoses onboard, at \$297 per hose, totaling \$26,136;
- h. Plaintiff had 18 one-inch clean oil hoses onboard, at \$220 per hose, totaling \$3,960;
- i. Plaintiff had 95 three-quarter-inch wash hoses onboard, at \$269 per hose, totaling \$25,555; and
- j. Plaintiff had 86 three-quarter-inch air hoses onboard, at \$87 per hose, totaling \$7,482.

Defendant Did Not Engage in Ultrahazardous Activity⁷

59. Plaintiff also alleges that Defendant’s conduct constituted an ultrahazardous activity.

60. To establish the elements of ultrahazardous activity, a plaintiff must prove by a preponderance of the evidence that: (1) the defendant engaged in an ultrahazardous activity; (2) the plaintiff was harmed; (3) the plaintiff’s harm was the kind of harm that would be anticipated as a result of the risk created by the ultrahazardous activity; and (4) the defendant’s ultrahazardous activity was a substantial factor in causing Plaintiff’s harm. Judicial Council of California Civil Jury Instruction 460 (citing *Smith v. Lockheed Propulsion Co.*, 247 Cal. App. 2d 774, 780 (1967) & *Garcia v. Estate of Norton*, 183 Cal. App. 3d 413, 418 (1986)).

⁷ Defendant argues that an ultrahazardous activity cause of action is not recognized under maritime law. The Court declines to address this argument because it concludes that even if the claim were cognizable under maritime law, Plaintiff would still fail to meet the required elements under California state law.

1 61. “[A]n activity is ultrahazardous only if (1) it involves a risk of serious harm to the
2 person, land or chattels of others which cannot be eliminated by exercise of utmost
3 care, and (2) it is not a matter of common usage.” *Moore v. R.G. Indus., Inc.*, 789
4 F.2d 1326, 1328 (9th Cir. 1986).

5 62. The Court concludes that Plaintiff has failed to demonstrate that Defendant engaged
6 in ultrahazardous activity by carrying 900,000 gallons of fuel on a ship because it
7 offered no evidence on whether the risk of a fire in such situations could be mitigated
8 through the exercise of reasonable care. *See id.*

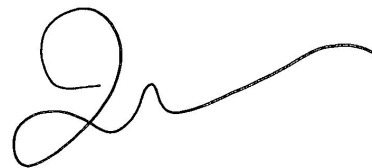
9 63. Instead, Plaintiff prosecuted its negligence case by pointing to actions that the Navy
10 should have taken to mitigate this risk, such as maintaining working sprinkler
11 systems, training and employing a well-prepared firefighting team, clearing gear and
12 entryways, and creating and executing an organized plan of attack. *See* Dkt. 67 at
13 14–15; *see generally* Pl.’s Ex. 1. Accordingly, the Court concludes that Plaintiff has
14 failed to prove by a preponderance of the evidence that the Navy was engaged in an
15 ultrahazardous activity.

16 **IV. CONCLUSION**

17 64. For the reasons stated above, the Court grants judgment in favor of Plaintiff on its
18 negligence claim and grants judgment in favor of Defendant on Plaintiff’s
19 ultrahazardous activity claim. The Court finds that Plaintiff is entitled to a damages
20 award of \$305,620.

21 **IT IS SO ORDERED.**

22
23 Dated: January 14, 2025



24
25 _____
26 Honorable Jinsook Ohta
27 United States District Judge
28