

**United States Court of Appeals
for the Federal Circuit**

**SHELL OIL COMPANY, ATLANTIC RICHFIELD
COMPANY, TEXACO, INC., UNION OIL COMPANY
OF CALIFORNIA,**
Plaintiffs-Appellees

v.

UNITED STATES,
Defendant-Appellant

2017-1695

Appeal from the United States Court of Federal
Claims in Nos. 1:06-cv-00141-SGB, 1:06-cv-01411-SGB,
Senior Judge Susan G. Braden.

Decided: July 18, 2018

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Before PROST, *Chief Judge*, WALLACH and CHEN, *Circuit Judges*.

WALLACH, *Circuit Judge*.

This case returns to us for a third time. Following two remands on liability determinations, *see Shell Oil Co. v. United States (Shell II)*, 751 F.3d 1282, 1285–90 (Fed. Cir. 2014); *Shell Oil Co. v. United States (Shell I)*, 672 F.3d 1283, 1285 (Fed. Cir. 2012), the U.S. Court of Federal Claims issued two orders, which are the subject of the present appeal. In its 2015 Order, the Court of Federal Claims (1) granted appellees Shell Oil Company, Atlantic Richfield Company, Texaco, Inc., and Union Oil Company of California’s (collectively, “the Oil Companies”) motion for partial summary judgment to prevent discovery into any insurance coverage settlements and policies, and (2) denied appellant the United States’ (“Government”) motion for leave to amend its answer to assert counterclaims in fraud. *See Shell Oil Co. v. United States (Shell III)*, 123 Fed. Cl. 707, 714–15, 727 (2015). In its 2017 Order, the Court of Federal Claims awarded damages in the amount of \$99,509,847.32 to the Oil Companies for breach of certain contracts entered into during World War II to produce 100-octane aviation gasoline (“avgas”) (the “Avgas Contracts”) for the war effort. *See Shell Oil Co. v. United States (Shell IV)*, 130 Fed. Cl. 8, 11–13 (2017).

The Government appeals. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(3) (2012). We affirm.

BACKGROUND

I. The Avgas Contracts¹

In 1942 and 1943, the Government contracted with the Oil Companies to purchase avgas, “the most critically needed refinery product during World War II.” *Shell II*, 751 F.3d at 1285 (internal quotation marks omitted).² Under the Avgas Contracts, the Government would purchase large quantities of avgas, and would “enable[] the Oil Companies to build the new refining facilities needed to produce the high levels of avgas vital to the war effort.” *Id.*; *see, e.g.*, J.A. 1467–90 (April 10, 1942 contract), 1560–88 (May 1, 1943 contract). The Avgas Contracts permitted a profit margin for the Oil Companies of “between 6% and 7%.” *Shell II*, 751 F.3d at 1287. “Given the low profit margin,” the Avgas Contracts “contained various concessions to the Oil Companies.” *Id.*; *see id.* (describing contract clauses wherein the “agreed-upon base price of avgas was subject to adjustment depending on the Oil Companies’ costs” and contracts were signed for “three-year[s]” to “provid[e] some measure of certainty that the newly-constructed avgas production facilities

¹ The relevant factual and procedural background has been set forth in earlier opinions. *See Shell II*, 751 F.3d at 1285–90; *Shell IV*, 130 Fed. Cl. at 12–34; *Shell III*, 123 Fed. Cl. at 710–15. Therefore, only the facts necessary for an understanding of the issues that give rise to this appeal are discussed here. We cite to these prior opinions where facts are undisputed.

² The Oil Companies entered into three-year contracts to sell avgas to the Government between January 17, 1942, and May 1, 1943. *See Shell IV*, 130 Fed. Cl. at 13 nn.4–7; *see also Shell II*, 751 F.3d at 1287.

would pay off over time”). Under the Avgas Contracts, “avgas production increased over twelve-fold” from 1941 to 1945, and “was crucial to Allied success in the war.” *Id.* (footnote omitted).

II. The Oil Companies’ Production of Avgas and Disposal of Associated Waste Products

The manufacture of avgas from crude oil uses a 98% purity sulfuric acid to serve as a catalyst in a process known as alkylation. *Id.* at 1288. The alkylation process dilutes the sulfuric acid such that it turns it into a waste product called “spent alkylation acid.” *Id.* Spent alkylation acid may be used to (1) catalyze the alkylation process again following purification; (2) produce non-avgas petroleum by-products; or (3) be disposed of as waste. *Id.*

If spent alkylation acid is used to produce other non-avgas petroleum by-products, it becomes a secondary waste product with a lesser percentage of acid content called “acid sludge.” *Id.* Acid sludge can be (1) used to manufacture fertilizer; (2) burned; or (3) disposed. *See Shell IV*, 130 Fed. Cl. at 22 (stating “both of the parties’ petroleum engineering experts essentially agreed on how crude oil was processed”).

The Avgas Contracts placed no restrictions on how the Oil Companies could use the spent alkylation acid that resulted from catalyzing crude oil to produce avgas. *See, e.g., J.A.* 1467–90, 1560–88. The Oil Companies used some of the spent alkylation acid to acid treat other products and produce non-avgas petroleum by-products. *Shell IV*, 130 Fed. Cl. at 23, 29. Unable to reprocess the increased amount of spent alkylation acid given the Government’s prioritization of production over reprocessing,³ the Oil Companies dumped additional spent

³ “The Government twice refused applications to construct new acid processing facilities,” and “the scarcity

alkylation acid, along with acid sludge, on property in California owned by Eli McColl (“the McColl site”). *Shell II*, 751 F.3d at 1285, 1288; *see Shell IV*, 130 Fed. Cl. at 29.⁴ Twelve percent of the waste dumped at the McColl site was spent alkylation acid, and 82.5% was acid sludge resulting from the treatment of non-benzol products. *Shell II*, 751 F.3d at 1288.⁵ The McColl site closed on September 6, 1946. *Shell IV*, 130 Fed. Cl. at 14.

III. The Relevant Procedural History

In 1991, the Government and California sued the Oil Companies under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §§ 9601 et seq., for costs of cleaning up the McColl site. *Shell II*, 751 F.3d at 1285. The Oil Companies countersued, alleging the Government was jointly and severally liable for clean-up costs under CERCLA. *Id.* at 1289; *see* 42 U.S.C. § 9607(a)(3) (extending CERCLA liability to “any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances”). After twelve years of litigation, the Ninth Circuit held that the Oil Companies were liable for all clean-up costs (including cleanup of

of available railroad tank cars (and the [Government’s] refusal to make transportation of acid waste a priority) meant the Oil Companies were unable to transport acid sludge for reprocessing or other uses.” *Shell II*, 751 F.3d at 1288.

⁴ The Oil Companies also continued to burn limited quantities of acid sludge until 1944. *See Shell II*, 751 F.3d at 1288; *Shell IV*, 130 Fed. Cl. at 25 & nn. 23, 24.

⁵ The remaining 5.5% of waste was comprised of acid sludge from treatment of benzol. *See Shell II*, 751 F.3d at 1288 (differentiating between benzol and non-benzol acid sludge).

benzol and non-benzol acid waste) at the McColl site and the Government was liable under CERCLA only for clean-up costs with respect to the disposal of benzol acid waste, *United States v. Shell Oil Co.*, 294 F.3d 1045, 1056, 1060–62 (9th Cir. 2002), which comprised 5.5% of the waste remediated at the McColl site, *see Shell II*, 751 F.3d at 1288.

The Oil Companies filed a new complaint in the Court of Federal Claims, seeking reimbursement for CERCLA costs of the non-benzol acid waste clean-up under a breach of contract theory. *Id.* at 1289. They argued that a clause in the Avgas Contracts in which the Government agreed to reimburse the Oil Companies for “any new or additional . . . charges . . . which [the Oil Companies] may be required . . . to collect or pay *by reason of* the production, manufacture, sale[,] or delivery of [avgas],” J.A. 1482 (emphasis added), entitled them to remediation costs at the McColl site, *see Shell II*, 751 F.3d at 1290–91. “Because there was extensive discovery and the parties entered into comprehensive stipulations of fact in the underlying CERCLA action [in the Ninth Circuit], the parties agreed that no further factual development was necessary” *Shell I*, 672 F.3d at 1285. Therefore, “the case was litigated on successive summary judgment motions—one as to liability and the other relating to damages.” *Id.* However, following our initial remand and vacatur of the Court of Federal Claims’ liability and damages determinations in *Shell I*, *see id.* at 1294, the Court of Federal Claims stated that, with respect to damages, “the issue of what portion of the non-benzol waste was created ‘by reason of’ the avgas program raise[d] factual questions that [were] simply not adequately answered by the evidence or stipulations currently before the [c]ourt,” *Shell Oil Co. v. United States*, 108 Fed. Cl. 422, 446, 448 (2013). The Court of Federal Claims made these statements “[n]otwithstanding [its] holding that the Oil Companies’ indemnification claims

fail as a matter of law,” *id.* at 445; in other words, it did not decide the issue of damages on remand because it found the Government did not breach the Avgas Contracts, *see Shell II*, 751 F.3d at 1289.

In *Shell II*, we reversed, holding that “[t]he Avgas Contracts require reimbursement of the Oil Companies’ CERCLA costs [for clean-up of non-benzol-related waste],” *id.* at 1290 (capitalization modified), and remanded because the parties did “not contest the trial court’s finding of a genuine dispute regarding how much of the acid waste at the McColl site resulted from the [A]vgas [C]ontracts,” *id.* at 1303.⁶ The Court of Federal Claims then reopened the record for further discovery on damages. *See Shell III*, 123 Fed. Cl. at 714.

During discovery, the Government requested, for the first time in the litigation before the Court of Federal Claims, information related to the Oil Companies’ insurance policies and any insurance coverage settlements that included clean-up costs at the McColl site. *Id.*; *see* J.A. 142–45 (stating, in a press release, that Shell Oil Company received insurance settlements for its environmental coverage claims based on filings against insurers in the early 1990s). The Government also filed a Motion

⁶ We also held that the Government was not collaterally estopped by the “prior CERCLA litigation” “from challenging the amount of acid waste attributable to the [A]vgas [C]ontracts” because “[t]he Ninth Circuit did not rely on or incorporate the district court’s attribution holding with respect to the non-benzol waste.” *Shell II*, 751 F.3d at 1303; *see Shell Oil*, 294 F.3d at 1062 (reversing, in the Ninth Circuit, the district court’s holding that the Government was liable for non-benzol acid waste clean-up under CERCLA and finding this holding “renders moot the [Government’s] appeal of the district court’s allocation of liability . . . as to the non-benzol waste”).

for Leave to Amend, seeking to amend its answer to assert counterclaims related to the insurance settlements based on various theories of fraud. *See Shell III*, 123 Fed. Cl. at 715. The Oil Companies opposed the Motion to Amend, and both parties filed motions for partial summary judgment on the issue. *Id.* at 714–15.

The Court of Federal Claims held the following in *Shell III*: (1) the Government could not engage in discovery related to the Oil Companies’ insurance policies or settlements because it waived any arguments related to an insurance offset by not raising them in its Answer in 2008 to the Oil Companies’ initial breach of contract claim before the Court of Federal Claims, *id.* at 719; (2) alternatively, it would exceed the scope of our mandate in *Shell II* to allow the Government to raise arguments based on any insurance offset, *id.* at 721; and (3) the Government could not amend its pleadings at such a late stage in the litigation, *id.* at 727.

Following the close of discovery and oral arguments, the Court of Federal Claims issued its order on damages in *Shell IV*. It considered “new evidence not previously considered by the . . . Federal Circuit,” 130 Fed. Cl. at 36 (emphasis omitted), and held that the Government was liable for all of the Oil Companies’ clean-up costs for non-benzol waste at the McColl site, *id.* at 38. The Court of Federal Claims allocated a total award of \$99,509,847.32, including accrued interest, accordingly: \$58,292,868.56 to Shell Oil Company, \$18,847,165.08 each to Union Oil Company of California and Atlantic Richfield Company, and \$3,522,648.60 to Texaco, Inc. *Id.* at 42.

DISCUSSION

The Government makes three primary arguments challenging the Court of Federal Claims’ Orders. The Government argues the Court of Federal Claims (1) “failed to allocate between recoverable and non-recoverable costs,” Appellant’s Br. 23 (capitalization

omitted); *see id.* at 23–33; (2) “wrongfully admitted stipulations” into evidence to calculate damages, *id.* at 41 (capitalization omitted); *see id.* at 41–51; and (3) “wrongly refused to allow the Government to prove double recovery,” by showing payment of the same costs by insurance settlements, *id.* at 33 (capitalization omitted); *see id.* at 33–41. We address each argument in turn.

I. Challenges to the 2017 Order

A. Standards of Review

We review the Court of Federal Claims’ legal conclusions *de novo* and its factual findings for clear error. *See John R. Sand & Gravel Co. v. United States*, 457 F.3d 1345, 1353 (Fed. Cir. 2006). “A finding may be held clearly erroneous when the appellate court is left with a definite and firm conviction that a mistake has been committed.” *Ind. Mich. Power Co. v. United States*, 422 F.3d 1369, 1373 (Fed. Cir. 2005) (internal quotation marks, ellipsis, and citation omitted).

“This court provides the trial court with wide discretion in determining the appropriate quantum of damages.” *Sys. Fuels, Inc. v. United States*, 666 F.3d 1306, 1310 (Fed. Cir. 2012) (citation omitted). When reviewing damages awarded by the Court of Federal Claims, “[d]ifferent standards of review are applicable to different aspects of a damages award.” *Home Sav. of Am., FSB v. United States*, 399 F.3d 1341, 1346 (Fed. Cir. 2005). “This court has held that the amount of a prevailing party’s damages is a finding of fact. Thus, where the amount is fixed by the court, review is in accordance with the clearly erroneous standard.” *Id.* (internal quotation marks, ellipsis, and citation omitted). “[T]he clear error standard governs . . . findings about the general type of damages to be awarded . . . , their appropriateness . . . , and rates used to calculate them.” *Id.* “However, certain subsidiary decisions . . . are . . . reviewed under the abuse of discretion standard.” *Id.* at 1347. “The abuse of discretion

standard applies to decisions about methodology for calculating rates and amounts.” *Id.* at 1346–47 (citation omitted). A court abuses its discretion when (1) its “decision is clearly unreasonable, arbitrary or fanciful”; (2) “the decision is based upon an erroneous construction of the law”; (3) its “factual findings are clearly erroneous”; or (4) “the record contains no evidence upon which the [trial] court could have rationally based its decision.” *Hi-Shear Tech. Corp. v. United States*, 356 F.3d 1372, 1377–78 (Fed. Cir. 2004) (internal quotation marks and citation omitted) (alterations in original).

B. The Court of Federal Claims Did Not Err in Determining the Amount of Waste Attributable to the Avgas Contracts

The Government raises four arguments on appeal as to why the Court of Federal Claims “failed to allocate between recoverable and non-recoverable costs” when it found all of the clean-up costs attributable to avgas production for the Avgas Contracts. Appellant’s Br. 23 (capitalization omitted). Specifically, the Government contends that the Court of Federal Claims failed to (1) follow our instructions for allocation based on the language in the Avgas Contracts, *see id.* at 23–28; (2) properly discount pre-contract activities, *see id.* at 31; (3) discount dumping from non-avgas waste, *see id.* at 21, 24–25, 31; and (4) discount dumping from non-contractual avgas production waste, *see id.* at 21, 24, 27. We disagree with the Government.⁷

⁷ Although the Government also argued in its briefing that “[t]he trial court misapplied the governing causation standard” when it applied the three part test from *Indiana Michigan Power Co.*, Appellant’s Br. 23 (capitalization omitted); *see id.* at 28–33, the Government disclaimed these assertions at oral argument, *see Oral Arg.*

1. Contract Interpretation and *Shell II*

The Government argues that the Court of Federal Claims' fundamental legal error was its failure to apply "longstanding canons of contractual interpretation" to allocate costs based on the language of the relevant clause in the Avgas Contracts. *Id.* at 26; *see id.* at 25 (citing the contractual clause that "charges" will be incurred "by reason of the production, manufacture, sale[,] or delivery of the commodities delivered hereunder" (emphasis omitted)); *see also id.* at 25–28. However, the Government misunderstands the limited inquiry of the damages analysis. We determined in *Shell II* that the Government was required to pay all "CERCLA costs incurred 'by reason of the [A]vgas [C]ontracts,'" 751 F.3d at 1293 (emphasis added), and remanded for "a trial on damages," including the factual question of "how much acid waste at the McColl site" was attributable to the Avgas Contracts, *id.* at 1303. As the Government acknowledges, *see* Appellant's Br. 29, by reason of "requires at least a showing of 'but for' causation," *Burrage v. United States*, 571 U.S. 204, 213 (2014). The Court of Federal Claims used this but for direct causation inquiry to determine that all costs incurred were a result of the Avgas Contracts, based on our instruction. *See Shell IV*, 130 Fed. Cl. at 38. Therefore, on remand, further contract interpretation was not a necessary part of the damages inquiry.

The Government appears to argue that because we acknowledged in *Shell II* that factual questions remained as to the amount of waste that resulted from the Avgas Contracts, *see* 751 F.3d at 1302–03, we required the Court

at 1:00–10, <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2017-1695.mp3> (Q: "You're not challenging the use of the test? A: "No . . . we're not challenging the use of a test for how you determine damages in the event of a breach."").

of Federal Claims to make a finding on remand that some of the acid waste was not attributable to the Avgas Contracts, *see* Appellant’s Br. 23 (asserting the Court of Federal Claims “misinterpret[ed] . . . the [Federal Circuit’s] mandate”), 24–28 (similar). We set no such requirement. In *Shell II*, we acknowledged that “a genuine dispute” on the issue remained, 751 F.3d at 1303, and entrusted the Court of Federal Claims to conduct an attribution analysis. The Court of Federal Claims was free to determine that some, or all, of the acid waste at the McColl site was attributable to the Avgas Contracts, and use this factual finding in its ultimate consideration of the amount of CERCLA costs incurred as a result of the Avgas Contracts to award damages.

2. Consideration of Pre-Contract Activities

The Government argues the Court of Federal Claims clearly erred in its findings on the amount of damages to award because the but for world should have been calculated from the Oil Companies’ “pre-contract activities.” Appellant’s Br. 31. This is so, it avers, because “the[Oil Companies] had been dumping waste at the McColl site months before selling any avgas under the contracts.” *Id.* The Court of Federal Claims considered this argument, *see Shell IV*, 130 Fed. Cl. at 36, but found it unpersuasive. Instead, the Court of Federal Claims decided the relevant hypothetical for the non-breach world would be 1946, and found that “none of the Oil Companies disposed of acid waste at the McColl [s]ite in 1946.” *Id.*

The Court of Federal Claims did not err in its consideration of pre-contract activities. In adopting the year 1946 as the relevant timeframe for the but for analysis, at which time the Oil Companies did not dump any spent alkylation acid or acid sludge at the McColl site, *see id.* (citing to evidence that “avgas production plummeted in 1946 to pre-Contract levels” (emphasis added)), the Court of Federal Claims gave greater weight to the Oil Compa-

nies' evidence that 1946 reflected "normal' refinery operations," as opposed to the Government's proposed year of 1941, because "by early 1940, the Oil Companies already began to increase the production of military avgas," *id.*; *see id.* (citing a 1940 letter indicating the Government was ready to buy avgas immediately).⁸ Moreover, the Government did not propose any allocation method that would take into consideration pre-contract dumping for the Court of Federal Claims to consider until its post-trial briefing. *See id.* at 35–36 (stating the Government "took a different tack in its closing argument" after it "mis-stat[ed] the but[]for causation standard"); Oral Arg. at 11:39–45 ("We did propose in our post-trial brief in this case a method of potentially allocating these waste[s] . . ."). Given the evidence presented, "[i]t was proper for the [Court of Federal Claims] to resolve conflicting testimony by weighing the evidence and making its own findings." *Precision Pine & Timber, Inc. v. United States*, 596 F.3d 817, 833 (Fed. Cir. 2010); *see id.* (stating that we give "great deference" to a trial court's determinations of assigning weight to competing evidence (internal quotation marks and citation omitted)).

⁸ The Government ignores the historical fact that prior to the U.S. Congress' declaration of war on December 8, 1941, the United States had limited powers to order avgas production by fiat. Following the Declaration, the Government could and did direct the Oil Companies on means, methods, and priorities of production. *See* Exec. Order No. 9276, 7 Fed. Reg. 10,091, 10,091 (Dec. 2, 1942) (establishing the Petroleum Administration for War and defining its functions and duties); *cf.* Evan J. Wallach, *The Use of Crude Oil by an Occupying Belligerent State as a Munition de Guerre*, 41 *Int'l & Comp. L.Q.* 287, 293, 300 (1992) (discussing international law rules and American practice for treating crude oil as a war material subject to commandeering for military purposes).

3. Allocation of Acid Sludge from Avgas Production Under the Avgas Contracts

The Government next avers that the Court of Federal Claims failed to conduct a proper damages calculation because it included acid sludge from “many other commodities in addition to avgas” that the Oil Companies produced during the contractual period, Appellant’s Br. 24, such as “motor fuel and other products,” *id.* at 26; *see id.* at 28 (citing *Shell II*, 751 F.3d at 1288, which explained that 82.5% of waste dumped was acid sludge resulting from chemical treatment of non-avgas petroleum products).

The Court of Federal Claims did not clearly err in its determination regarding acid sludge from non-avgas products. All acid sludge created from the production of non-avgas components, such as motor fuel, began as sulfuric acid that was catalyzed with crude oil during the process to create avgas and became spent alkylation acid in need of waste disposal. *See* J.A. 1868 (presenting a stipulation by the Government that “[m]ost of the acid waste at the McColl [s]ite began as fresh sulfuric acid . . . that was used in the alkylation units to produce alkylate for avgas” (brackets omitted)), 1932–37 (explaining, by the Oil Companies’ expert, that the Oil Companies produced “unnecessary non-avgas products in order to maximize avgas production”), 11804 (stating, by the Government’s expert, that acid sludge produced from treatment of non-avgas by-products is “the result of the production of alkylate in the alkylation unit for avgas”). Thus, even if the acid sludge was a secondary waste product, it is still directly related to the initial reaction used to create avgas under the Avgas Contracts. *See Swiff-Train Co. v. United States*, 793 F.3d 1355, 1363 (Fed. Cir. 2015) (holding injured parties need not “isolate the injury caused by” a particular factor, or limit damages calculations to “the ‘principal’ cause of injury” to meet the “by reason of” statutory causation standard). Moreover,

the Avgas Contracts explicitly acknowledged that avgas production would necessarily result in the production of acid sludge produced from treatment of non-avgas products, *see* J.A. 1475 (“[S]ubstantial quantities of motor fuel and other products must necessarily be produced and sold in connection with production of [avgas].”), and still provided that the Government would pay for “*any*” charges related to the production of avgas, J.A. 1482 (emphasis added).

Further, the Court of Federal Claims considered the by-products and determined they still created waste attributable to the Avgas Contracts because the Government, by setting only a 6–7% profit margin for the sale of avgas, “was aware that the Oil Companies had to maximize revenues from all non-avgas petroleum by-products or be at risk of having to ask the Government to increase their profit margins,” and “make every effort to recycle and reuse both spent alkylation acid *and* acid sludge to keep the costs of avgas production down.” *Shell IV*, 130 Fed. Cl. at 35 (emphasis omitted); *see id.* at 36 (citing a Government survey from 1941 which asked “what provisions will be made for . . . handling resultant [acid] sludge?” (alterations in original)).⁹ The Oil Companies

⁹ At oral argument, the Government stated that, if the Oil Companies had not repurposed spent alkylation acid into by-products and instead dumped the acid, the Government would not contest its obligation to reimburse. *See* Oral Arg. at 13:50–14:36 (Q: “Are you saying, then, that what the Oil Companies should have done with the spent alkylation acid is just to have dumped it rather than to have . . . repurposed it . . . ?” A: “Yes.”). Given the Court of Federal Claims’ earlier findings related to the Government’s understanding of the Avgas Contracts, which are uncontested on appeal, *see generally* Appellant’s Br., we find the Government’s new theory jejune.

even presented evidence that they tried to “reprocess[] as much acid sludge into [non-waste] fertilizer as possible,” *id.* at 25, but were stymied in their ability to do so because of the Government’s refusal to allocate rail cars to transport the acid sludge to reprocessing facilities, *id.*; see J.A. 1964 (stating that, until 1945, only one plant in southern California “could reprocess significant quantities of acid sludge”), 9449 (providing statement by Oil Companies’ witness that “[t]he [G]overnment will not allow us to use the tank cars for that purpose. . . . We have to dispose of [the acid sludge], and I tell you in all sincerity, this must go on. We must make [avgas]”). We do not find clear error based on these facts.

4. Allocation of Acid Sludge from Non-Contractual Avgas Production

Finally, the Government contests the Court of Federal Claims’ inclusion of waste from the production of non-contractual avgas. See Appellant’s Br. 27 (disputing “charges’ relating to non-[contractual] avgas”).¹⁰ The Court of Federal Claims found that, even if a small percentage of waste “nominally could be attributed” to non-contractual avgas sales, the manner of clean up at the site, which “result[ed] from the increased production of avgas” and hence the multiple “contaminants of concern,” created a scenario where the waste resulting from the Avgas Contracts mandated a large scale remediation solution. *Shell IV*, 130 Fed. Cl. at 37, 38; see *id.* at 32–33 (discussing expert testimony on clean up method chosen).

¹⁰ At oral argument, the Government stated that it believed this avgas was also being purchased by the Government, outside of the contractual scheme. See Oral Arg. at 16:29–36 (claiming the non-contractual avgas was “likely being sold to the Government, just probably directly to the military services”).

The Court of Federal Claims did not clearly err in this determination. Contrary to the Government's contention, the Court of Federal Claims did not "allocate 100 percent of all response costs" "once it found a drop of waste related to avgas production." Appellant's Br. 29. The Court of Federal Claims reasoned that the waste dumped by the Avgas Contracts caused all of the remediation costs, given the need for a broad containment clean up based on the size and scale of the contaminants. *Shell IV*, 130 Fed. Cl. at 38 (applying "but for" language to the non-contractual avgas analysis). The Court of Federal Claims' determination to allocate all remediation costs to the Government was further supported by the reasons detailed earlier in its Order explaining the difficulties of disposing of acid waste due directly to the Avgas Contracts' requirement to ramp up production immediately. *See id.* at 35 & n.40 (discussing Government's knowledge of the expense of waste disposal and that a prior disposal site "was reaching capacity" when the Avgas Contracts were signed), 35-36 (discussing "how much acid waste disposed of at the McColl [s]ite was caused by the increased avgas production and need to maximize the manufacture and sale of non-avgas petroleum by-products"), 36 n.41 (stating it was possible *after* the war for all "acid sludge produced . . . [to be] sent for reprocessing via tank cars or pipelines").

Moreover, as the Court of Federal Claims acknowledged, there is no evidence that any of the waste that may have derived from the production of non-contractual sales of avgas was actually dumped at the McColl site. *See id.* at 36-37 ("The record . . . does not establish that any of the spent alkylation acid that resulted from the sale of this avgas was disposed of at the McColl [s]ite The record . . . reflects that for the entire year 1943, Shell disposed of 112,367 barrels of sludge at the McColl [s]ite, an unknown amount of which could be attributed to non-[contractual] customers."), 37 (hypothesizing "nominally

attributed” acid sludge waste in 1943 at “3.6%”); *cf.* Appellees’ Br. 20–33 (citing to J.A. 1868, 1931–32) (arguing that all waste at the McColl site was generated by avgas production under the Avgas Contracts). The Government does not make any supported argument to rebut these findings. *See* Appellant’s Br. 24 (asserting that the Oil Companies generally were producing “non-contract avgas” but offering no evidence where waste from that production was dumped). *See generally id.* Absent evidence to the contrary, we will not find that the Court of Federal Claims erred in its determination that all costs of waste remediation at the McColl site were attributable to the Avgas Contracts. *See Ind. Mich. Power Co.*, 422 F.3d at 1373; *see also Jones v. Dep’t of Health & Human Servs.*, 834 F.3d 1361, 1369 (Fed. Cir. 2016) (“Unsubstantiated assertions do not equate to evidence.” (internal quotation marks, brackets, and citation omitted)).

C. The Court of Federal Claims Did Not Abuse Its Discretion in Its Determination of Damages with Reasonable Certainty

The Court of Federal Claims also determined that the Oil Companies had proven their damages with “reasonable certainty,” as required under the applicable legal standard for damages. *Shell IV*, 130 Fed. Cl. at 41; *see id.* at 41–42; *see also Ind. Mich. Power Co.*, 422 F.3d at 1373 (stating plaintiff must show damages “with reasonable certainty”). The Government asserts the Court of Federal Claims erred in determining that damages had been shown with reasonable certainty when it “admitted stipulations despite language in those stipulations prohibiting their use at trial” and “failed to require proof of costs” for each of the Oil Companies. Appellant’s Br. 41, 48 (capitalization omitted). We disagree with the Government.

1. Reliance on Stipulations

In its damages calculation, the Court of Federal Claims looked to as “relevant, admissible, and reliable

evidence,” *Shell IV*, 130 Fed. Cl. at 41 (citation omitted), inter alia, a stipulation from October 13, 1999 (“the Stipulation”), entered into during the litigation in the Ninth Circuit, in which the parties stated the total amount of remediation costs through 1998, excluding interest, see J.A. 1851–58, along with statements made by both parties in the earlier litigation (“Parties’ Statements”), see J.A. 1859–910; see also *Shell IV*, 130 Fed. Cl. at 38–39, 79. The Court of Federal Claims found these documents showed that the Oil Companies were entitled to \$64,219,514.46 in total remediation costs for the period up to 1998, including \$18,000,000 paid in 1994, \$46,219,514.46 paid by 1997, and certain interest payments on both these costs. See *Shell IV*, 130 Fed. Cl. at 40, 42.

The Court of Federal Claims did not abuse its discretion by crediting the Stipulation and Parties’ Statements to make its damages calculation through 1998.¹¹ See *Home Sav. of Am.*, 399 F.3d at 1346–47 (reviewing methodology for damages calculation for abuse of discretion). “[R]easonable certainty requires more than a guess, but less than absolute exactness or mathematical precision.” *Precision Pine*, 596 F.3d at 833; see *Ark. Game & Fish Comm’n v. United States*, 736 F.3d 1364, 1379 (Fed. Cir. 2013) (“All that is required is such reasonable certainty that damages may not be based wholly upon speculation.” (internal quotation marks and citation omitted)). The Court of Federal Claims did not admit the documents as stipulations or judicial admissions, but only as “admissible evidence” that “could be weighed . . . against other evidence adduced at trial,” and found that, based on all evidence on record, the Stipulation and Parties’ State-

¹¹ The parties do not dispute the amount of damages calculated after 1998. See Appellant’s Br. 48, 50; Appellees’ Br. 52 n.4.

ments supported its findings on damages with reasonable certainty. *Shell IV*, 130 Fed. Cl. at 77 (citation omitted).

The Court of Federal Claims was free to admit the Stipulation and Parties' Statements into evidence. It properly followed the Federal Rules of Evidence, *see* 28 U.S.C. § 2503(b) (2012) ("The proceedings of the Court of Federal Claims shall be in accordance with . . . the Federal Rules of Evidence."), which allow parties to submit for consideration relevant evidence, defined as that which "has any tendency to make a fact more or less probable than it would be without evidence," Fed. R. Evid. 401 (Test for Relevant Evidence). Here, the evidence is admissible as opposing party statements. *See* Fed. R. Evid. 801(d)(2)(A), (B) (stating that prior statements made by an opposing party that were "in an individual or representative capacity," or are "one[s] the party manifested that it adopted or believed to be true," are admissible if "offered against" said opposing party). The factfinder is "free to weigh" any evidence properly allowed into the record "against the other evidence" in making its factual findings. *Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1312 (Fed. Cir. 2007); *see id.* (affirming lower court's consideration of unfavorable statements not made under cross-examination as admissible evidence, rather than considering them as judicial admissions).¹²

¹² Because the Court of Federal Claims did not consider the Stipulation a binding admission in *Shell IV*, we find unpersuasive the Government's argument that the Court of Federal Claims erred by not "explicitly accept[ing] those facts" through a motion pursuant to Rules of the Court of Federal Claims ("RCFC") Rule 56(e)(2) or 56(g). Appellant's Br. 44; *see id.* at 42–49; *see also* RCFC 56(e)(2) ("If a party fails to properly support an assertion of fact or fails to properly address another party's assertion of fact . . . the court may: . . . consider the fact undis-

We are unconvinced by the Government's counterargument that the Stipulation and Parties' Statements were made for purposes of settlement, such that consideration of these statements contravenes Federal Rule of Evidence 408(a). Appellant's Br. 42. That rule "excludes factual admissions made in the course of settlement negotiations." Fed. R. Evid. 408(a)(2); *see id.* ("Evidence of the following is not admissible . . . conduct or a statement made during compromise negotiations about the claim . . ."). The documents relied upon by the Court of Federal Claims give no indication they were made for purposes of settlement. *See, e.g.*, J.A. 1856 (stating, in the Stipulation, that amounts will be paid only if the appeal of underlying liability determination is unsuccessful), 1859 (responding, by the Government, to proposed findings of fact for purposes of summary judgment), 1874 (same). Moreover, the Government agreed the Stipulation provided an accurate description of total costs should it be responsible for all remediation in the current litigation as late as 2013.¹³ *See Shell*, 108 Fed. Cl. at 425; *see also* J.A. 1886 (responding, by the Government in 2012, to the Oil Companies' proposed response costs by stating the costs were "uncontroverted"). We do not find abuse of discretion.

2. Allocation Amongst the Oil Companies

The Court of Federal Claims divided the assessed damages among the four Oil Companies in the following amounts: \$58,292,868.56 to Shell Oil Company,

puted for purposes of the motion . . ."); RCFC 56(g) (stating procedure for the Court of Federal Claims to treat a fact as established when it "does not grant all the relief requested by the motion").

¹³ Tellingly, the Government still has offered no rebuttal calculation of its own for costs through 1998. *See generally* Appellant's Br.

\$18,847,165.08 each to Union Oil Company of California and Atlantic Richfield Company, and \$3,522,648.60 to Texaco, Inc. *Shell IV*, 130 Fed. Cl. at 42. The Government disputes the quantum of damages by arguing that damages costs were not properly allocated either “between costs stemming from different products,” Appellant’s Br. 48, or between individual plaintiffs, *id.* at 50; *see id.* at 50–51. We agree with the Court of Federal Claims that requiring the Oil Companies to itemize costs among different products, where the waste accumulated over a period of years in the decades prior and the remediation cost was not itself divided into solutions tailored to treat each particular waste product, would require the kind of “absolute exactness or mathematical precision” that we have stated is not necessary to prove damages with reasonable certainty. *Shell IV*, 130 Fed. Cl. at 41–42; *see Precision Pine*, 596 F.3d at 833 (stating trial court is free to consider evidence and modify proposed damages calculations so long as it provides “well-reasoned explanations”). As plaintiffs in the case, the Oil Companies were required to show reasonable certainty with respect to damages owed by the Government to the Oil Companies collectively. They did. *See supra* Section I.C.1. They further provided a breakdown of costs, *see J.A.* 1792, 1884 (showing cost and waste disposal breakdown by company), 2129 (providing expert testimony confirming cost breakdown), and the Government has not offered any evidence to rebut or otherwise challenge this evidence, *see generally* Appellant’s Br.¹⁴

¹⁴ The Government also argues in a conclusory fashion that the Anti-Assignment Act, 31 U.S.C. § 3727 (2012), should bar recovery, *see* Appellant’s Br. 50. However, the Government has offered no argument in response to the Court of Federal Claims’ determination that the Anti-Assignment Act does not apply here because “the

The Government equates this case to *Howard Industries, Inc. v. United States*, in which our predecessor court found a plaintiff had not shown damages with reasonable certainty. See Appellant’s Br. 48–49 (citing 115 F. Supp. 481, 487 (Ct. Cl. 1953)). There, the court found a plaintiff had not proven damages because the plaintiff “had to indulge in a number of assumptions entirely unsupported by any evidence and which . . . were susceptible of actual proof,” and “the record contain[ed] *no evidence* from which the court c[ould] even approximate the amount of plaintiff’s loss, if any.” *Howard*, 115 F. Supp. at 487 (emphasis added). Here, on the contrary, the Oil Companies have submitted evidence showing damages incurred, see J.A. 1851–910, that has been unrebutted by any evidence to the contrary, see generally Appellant’s Br., and this evidence is sufficient, for the reasons stated above, to prove reasonable certainty. Therefore, we conclude the Court of Federal Claims did not err in its award of damages.

II. Challenge to the 2015 Order

A. Standards of Review

We review the Court of Federal Claims’ grant of summary judgment de novo, see *Dairyland Power Co-op. v. United States*, 16 F.3d 1197, 1201 (Fed. Cir. 1994), and decisions on motions to amend for abuse of discretion, see *Balestra v. United States*, 803 F.3d 1363, 1368 (Fed. Cir.

Oil Companies did not assign their rights to receive reimbursement . . . to any third parties.” *Shell IV*, 130 Fed. Cl. at 42. Accordingly, we find this argument waived. See *United States v. Great Am. Ins. Co.*, 738 F.3d 1320, 1328 (Fed. Cir. 2013) (“It is well established that arguments that are not appropriately developed in a party’s briefing may be deemed waived.” (citation omitted)).

2015). Summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” RCFC 56(a). An abuse of discretion occurs when, for example, “the record contains no evidence upon which the [trial] court could have rationally based its decision.” *Hi-Shear Tech.*, 356 F.3d at 1377–78 (internal quotation marks and citation omitted).

B. The Court of Federal Claims Properly Denied Discovery of Insurance Settlements and Agreements

The Court of Federal Claims granted the Oil Companies’ Motion for Partial Summary Judgment denying discovery or assertion of arguments related to insurance policies and settlements, and denied the Government’s alternative Motion for Leave to Amend its pleadings to assert claims related to insurance settlements. *See Shell III*, 123 Fed. Cl. at 719. The Court of Federal Claims thoroughly analyzed all of the parties’ arguments and concluded, inter alia, that discovery of insurance policies and settlements a decade after the case was brought to the court would contravene the requirement that affirmative defenses be raised at the time of initial pleading. *Id.* at 718. The Court of Federal Claims similarly rejected the Government’s Motion for Leave to Amend for undue delay and prejudice. *Id.* at 727. The Government argues that the Court of Federal Claims erred in its rulings related to the insurance policies. Appellant’s Br. 33–41. We disagree with the Government.¹⁵

¹⁵ Because we affirm the Court of Federal Claims’ use of its discretion to deny leave to amend, we need not address its alternative holdings as to the scope of the mandate and the statute of limitations to assert a special plea in fraud pursuant to 28 U.S.C. § 2514, or the Government’s arguments related to these alternative hold-

First, the Court of Federal Claims did not err in classifying the Government's arguments related to mitigation of damages for possible insurance payments as an affirmative defense. "[T]he failure to plead [an affirmative defense] can result in waiver." *Hor v. Chu*, 699 F.3d 1331, 1337–38 (Fed. Cir. 2012); see *Caldera v. Northrop Worldwide Aircraft Servs., Inc.*, 192 F.3d 962, 970 (Fed. Cir. 1999) (adopting rule that affirmative defenses as recited by Federal Rule of Civil Procedure 8(c), which is equivalent to RCFC 8(c), "must be timely pled or generally . . . deemed waived"). RCFC 8(c)(1) likewise provides a non-exhaustive list of affirmative defenses that "must" be asserted in response to a pleading. See RCFC 8(c)(1) (providing that "[i]n responding to a pleading, a party must affirmatively state any avoidance or affirmative defense, *including* . . ."). Although mitigation by third party payment is not explicitly listed in RCFC 8(c), generally, any defenses that "admit the allegations of the complaint but suggest some other reason why there is no right of recovery [or] concern allegations outside of the plaintiff's prima facie case that the defendant therefore cannot raise by simple denial in the answer" are considered affirmative defenses. 5 Wright & Miller, Fed. Prac. & Proc. § 1271; see *Cornwall v. U.S. Constr. Mfg., Inc.*, 800 F.2d 250, 252 (Fed. Cir. 1986) ("[A]ny matter that does not controvert the opposing party's prima facie case is to be affirmatively pleaded . . ."); see also *Ultra-Precision Mfg., Ltd. v. Ford Motor Co.*, 411 F.3d 1369, 1376 (Fed. Cir. 2005) ("The purpose of Rule 8(c) of the

ings. See *Watts v. XL Sys., Inc.*, 232 F.3d 877, 879 n.1 (Fed. Cir. 2000) (declining to address alternative arguments when affirming trial court judgment); Appellant's Br. 38–41; see also 28 U.S.C. § 2514 (forfeiting claims against the United States "by any person who corruptly practices . . . any fraud against the United States in the proof . . . thereof").

Federal Rules of Civil Procedure is to give the opposing party notice of the affirmative defense and a chance to respond.” (internal quotation marks and citation omitted)).

The Government’s assertion of mitigated damages incurred by breach of contract due to third party payment is an affirmative defense and hence waivable, as it admits the allegations of the Complaint but suggests there is no right to recovery based on payments falling outside of the Avgas Contracts. See Appellant’s Br. 33 (discussing the Government’s “proffer of evidence showing that . . . companies sustained no damages in light of their insurance recoveries”); see also 5 Wright & Miller, Fed. Prac. & Proc. § 1271.¹⁶ Indeed, the Government itself has characterized arguments related to mitigation of damages through third party payment as affirmative defenses before the Court of Federal Claims. See, e.g., *Kan. City*

¹⁶ This conclusion is in accord with that reached by our sister circuits. See *In re ZAGG Inc. Shareholder Derivative Action*, 826 F.3d 1222, 1231 (10th Cir. 2016) (“[W]e agree with the Third Circuit that in determining whether an issue should be treated as an affirmative defense . . . the critical question . . . is whether requiring the defendant to plead the matter is necessary ‘to avoid surprise and undue prejudice by providing the plaintiff with notice and the opportunity to demonstrate why the affirmative defense should not succeed.’” (quoting *In re Sterten*, 546 F.3d 278, 285 (3d Cir. 2008)); *Travellers Int’l, A.G. v. Trans World Airlines, Inc.*, 41 F.3d 1570, 1580–81 (2d Cir. 1994) (finding argument related to mitigation of damages waived when not properly asserted as affirmative defense); *999 v. C.I.T. Corp.*, 776 F.2d 866, 870 n.2 (9th Cir. 1985) (noting that mitigation of damages is properly considered as an affirmative defense subject to waiver).

Power & Light Co. v. United States, 131 Fed. Cl. 161, 168 (2017) (discussing the Government’s affirmative defense that “damages should be offset by monies plaintiff received from another source”). Thus, as an affirmative defense, the Government should have asserted any offset related to insurance policies in its 2008 Answer. Because it did not, the Government waived this defense.

Second, the Court of Federal Claims did not abuse its discretion when it denied the Government’s attempt to amend its pleadings in 2015. *See Shell III*, 123 Fed. Cl. at 721–27 (discussing Motion for Leave to Amend). Although generally “[i]n the absence of any apparent or declared reason—such as undue delay . . . [or] undue prejudice to the opposing party . . . —the leave [to amend] sought should . . . be freely given,” *Foman v. Davis*, 371 U.S. 178, 182 (1962) (internal quotation marks omitted), “amendments are not allowed where they result in undue delay or prejudice,” *Cencast Servs., L.P. v. United States*, 729 F.3d 1352, 1363 (Fed. Cir. 2013).

As for undue delay, the Government does not contest the Court of Federal Claims’ findings that the Government “was aware of the fact of the existence of the Oil Companies’ *insurance policies and coverage litigation* as early as 1992 and certainly by 1997.” *Shell III*, 123 Fed. Cl. at 719; *see id.* (citing the Government’s filings in the Ninth Circuit); *see also* Appellant’s Br. 36. Instead, the Government only contests the date at which it learned of the actual settlements. *See* Appellant’s Br. 15–16, 35. However, in a 1997 filing in the Ninth Circuit litigation, the Government stipulated that “[e]ach of the Oil Compan[ies] have [sic] sued their insurers, claiming that . . . insurance policies . . . entitle each Oil Company to be reimbursed for response costs at the McColl site.” J.A. 1832. Therefore, the Court of Federal Claims did not abuse its discretion because its factual finding was not clearly erroneous.

As for unfair prejudice, nearly a decade had passed since the Oil Companies filed their Complaint in the Court of Federal Claims, *see* J.A. 81, and more than seven decades had passed since the operative events that gave rise to the insurance policies, *see, e.g., Shell II*, 751 F.3d at 1285 (“In 1942 and 1943, the Government . . . entered into the [A]vgas [C]ontracts with the Oil Companies.”). We do not find an abuse of discretion in the Court of Federal Claims’ discovery ruling here, where the Government had “ample opportunity to broaden the scope of the litigation . . . but chose not to do so” in a timely fashion. *Am. Airlines, Inc. v. United States*, 551 F.3d 1294, 1306 (Fed. Cir. 2008); *see Cencast*, 729 F.3d at 1363 (affirming denial of a motion for leave to amend only two years after deadline for amendments had passed). Therefore, we hold that the Court of Federal Claims did not err in determining that the Government waived all arguments related to insurance settlement payments, and could not assert them for the first time on remand from *Shell II*.

CONCLUSION

We have considered the Government’s remaining arguments and find them unpersuasive. Accordingly, the Orders of the U.S. Court of Federal Claims are

AFFIRMED