

## **APPENDIX**

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**APPENDIX A**  
**SUPREME COURT OF THE STATE OF ALASKA**

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No. S-17772

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WILLIAMS ALASKA PETROLEUM, INC. AND  
THE WILLIAMS COMPANIES, INC.,  
APPELLANTS

v.

STATE OF ALASKA; FLINT HILLS RESOURCES, LLC;  
AND FLINT HILLS RESOURCES ALASKA, LLC,  
APPELLEES

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Filed: May 26, 2023

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BEFORE: Winfree, Chief Justice, Maassen, Carney, Henderson, Justices, and Eastaugh, Senior Justice\* [Borghesan, Justice, not participating.]

CARNEY, Justice.

**I. INTRODUCTION**

Following the release of hazardous substances that contaminated local groundwater, the State and the previous and current owners of a refinery litigated contract and statutory claims for damages, contribution, and injunctive

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\* Sitting by assignment made under article IV, section 11 of the Alaska Constitution and Alaska Administrative Rule 23(a).

relief under Alaska's environmental conservation statutes. The superior court rejected the previous owner's claims against the State and the current owner, found the previous owner strictly liable, and ordered it to pay damages to the State and make contribution to the current owner for its remediation costs. The court also issued injunctions requiring the previous owner to perform and pay for various ongoing remediation and cleanup efforts. The previous owner appeals many of the superior court's findings of fact and conclusions of law. The previous owner contends that the superior court erred by concluding the substance at issue was hazardous, awarding response costs to the State and the current owner, awarding damages for loss of groundwater access, issuing improper injunctive and declaratory relief, interpreting the purchase contract between the former and current owners to hold the former owner responsible for the substances released, and improperly allocating damages. The previous owner also contends that the decision violated its right to due process and was an unconstitutional taking. We affirm the superior court's decision except that we remand the grant of injunctive relief for more specificity as required by rule.

## **II. BACKGROUND**

### **A. Facts**

Williams Alaska Petroleum, Inc. and The Williams Companies, Inc. (collectively Williams) owned and operated a North Pole refinery beginning in 1977. The refinery is on State-owned land which Williams leased. Williams began using sulfolane as a purifying solvent in its refining process in 1985. Sulfolane is highly soluble in water, meaning it can easily seep into groundwater when released onto the ground and into waterways, and it has low

volatility, meaning it will not readily evaporate and instead remains in groundwater without attaching to the soil.

Williams allowed sulfolane to migrate into the groundwater at the refinery through various means. Sulfolane was recycled to the extent feasible, but due to its high solubility some remained dissolved in water from refinery processes and was diverted into the wastewater system. Due to poor upkeep—with documented foot-wide tears in wastewater lagoon linings and some holes “repaired” by “pulling [the] liner together and punching with . . . pieces of lumber”—several wastewater storage units leaked sulfolane into the soil and groundwater. There were also direct sulfolane spills. Williams had multiple accidental releases of sulfolane-containing solutions, resulting in the release of hundreds of gallons of solution with sulfolane concentrations ranging from 66% to 100%.

Sulfolane was detected in groundwater at the refinery in 1996 when Williams’s lab manager found sulfolane in groundwater samples in concentrations ranging from 250,000-2,700,000 parts per billion (ppb). Williams did not report its 1996 detection of sulfolane in groundwater to the Alaska Department of Environmental Conservation (DEC) until five years later in October 2001, when Williams’s consultant Shannon & Wilson prepared a report for Williams’s 2002 Site Characterization and Corrective Action Plan to address earlier environmental concerns about the refinery. By 2001 sulfolane was generally known in the scientific community to “exhibit[] low levels of toxicity,” but there otherwise was a dearth of available information about sulfolane, and DEC did not regulate it as a hazardous substance. DEC advised Williams about this uncertainty regarding sulfolane’s toxicity and cau-

tioned Williams about sulfolane's high mobility in groundwater. DEC instructed Williams to continue sampling the groundwater until it found the contamination source. DEC informed Williams it could reduce sampling frequency if its data were not changing and it could not find a source. Williams was not able to determine the specific source and stopped sampling altogether in July 2002.

Williams also used aqueous foams as part of its fire response practices. These foams at the time contained per- and polyfluoralkyl substances, commonly called "PFAS."<sup>1</sup> The PFAS in the foams included a wide range of synthetic chemicals; among the chemicals were perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA).<sup>2</sup> Testing of the groundwater and soil at the refinery shows that, at the time of trial, they contained several PFAS, including PFOA and PFOS.

On March 31, 2004 Williams sold the refinery to Flint Hills Resources, LLC and Flint Hills Resources Alaska, LLC (collectively Flint Hills). The parties to the sale signed an Asset Sale and Purchase Agreement they agreed would be governed by Texas law. It contained de-

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<sup>1</sup> See 4 LAWRENCE G. CETRULO, TOXIC TORTS LITIGATION GUIDE § 48:1 (2022-23 ed.) ("Per- and polyfluoroalkyl substances (PFAS) is a general term used to describe a group of over 5,000 different synthetic chemicals that are used in industrial and commercial applications throughout the world, most commonly to repel water and oil, to combat high temperatures, and to reduce the effects of friction.").

<sup>2</sup> Because the ingredients in the foam were proprietary information, the exact compounds contained in the foams were not known at the time. An expert witness testified at trial that, based on safety information provided by the manufacturer, the PFAS presumably included PFOA. Williams admitted the foams contained PFAS and PFOS, but stated it did not know whether they contained PFOA.

tailed provisions about the assumption or retention of liabilities related to all aspects of the refinery's operations, including environmental liabilities. The parties agreed to hold harmless and indemnify each other for costs arising from their respective retained liabilities. Williams agreed to retain most environmental liabilities arising from its operations at the refinery, excepting specific matters listed on a Disclosure Schedule.

In an effort to ensure more certainty about future indemnification obligations, the parties included a limit on indemnifiable damages with a specific Environmental Cap of \$32 million. They further agreed that for claims "arising out of" the Purchase Agreement, the remedies listed in the Purchase Agreement would be exclusive, with certain exceptions including claims for equitable relief. Williams agreed to purchase a \$50 million environmental liability insurance policy and paid \$2.4 million in premiums.

The Purchase Agreement also specified that Flint Hills was responsible for future sulfolane releases at the refinery beginning April 1, 2004. DEC informed Flint Hills in October 2004 that it considered sulfolane a regulated contaminant and would be adopting cleanup standards.

By April 2019 the sulfolane in the groundwater had laterally travelled, creating a plume approximately two miles wide, three and a half miles long, and over three hundred feet deep, and spreading offsite from the refinery. The plume then extended into the City of North Pole's groundwater, and it is expected that sulfolane will continue to flow from the refinery site. Flint Hills and the State have taken a variety of steps to mitigate damages from the groundwater sulfolane plume, including providing alternative interim water, well-testing, community

outreach, and drafting site characterization and corrective action plans. The most significant step has been expanding the City's piped water system.

## **B. Statutory Background**

The legislature passed the Environmental Conservation Act<sup>3</sup> to "conserve, improve, and protect [Alaska's] natural resources and environment and control . . . pollution, in order to enhance the health, safety, and welfare of the people of the state."<sup>4</sup> The statutes empower a court to issue injunctions and impose damages on violators.<sup>5</sup>

Alaska Statute 46.03.710 prohibits polluting or adding "to the pollution of the air, land, subsurface land, or water of the state."<sup>6</sup> Alaska Statute 46.03.760 authorizes civil damages<sup>7</sup> for violation of the Act or a DEC regulation, order, or permit. The State's available damages for a violation of the Act are limited to "\$100,000 for the initial violation" and "\$5,000 for each day after that on which the violation continues."<sup>8</sup> Subsection .760(a) also provides that the assessments

shall reflect, when applicable,

- 1) reasonable compensation in the nature of liquidated damages for any adverse environmental effects caused by the violation, which shall be

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<sup>3</sup> AS 46.03.010-.900.

<sup>4</sup> AS 46.03.010 (declaring policy).

<sup>5</sup> AS 46.03.765.

<sup>6</sup> AS 46.03.710.

<sup>7</sup> "Damages include but are not limited to injury to or loss of persons or property, real or personal, loss of income, loss of the means of producing income, or the loss of an economic benefit." AS 46.03.824.

<sup>8</sup> AS 46.03.760(a).

determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

- 2) reasonable costs incurred by the state in detection, investigation, and attempted correction of the violation;
- 3) the economic savings realized by the person in not complying with the requirement for which a violation is charged.

In addition to the damages allowed by subsection .760(a), subsection .760(d) allows uncapped liability in cases of oil pollution or releases of hazardous substances for actual damages caused to the state by a violation of AS 46.03.740-.750,<sup>9</sup> including “(1) direct and indirect costs associated with the abatement, containment, or removal of the pollutant; (2) restoration of the environment to its

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<sup>9</sup> AS 46.03.740 (prohibiting the discharge of “petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or a residuary product of petroleum, into, or upon the waters or land of the state” except as permitted). Alaska Statute 46.03.745 prohibits the uncontrolled release of a “hazardous substance as defined in AS 46.09.900.” Alaska Statute 46.09.900(4) defines “hazardous substance” as

(A) an element or compound that, when it enters into or on the surface or subsurface land or water of the state, presents an imminent and substantial danger to the public health or welfare, or to fish, animals, vegetation, or any part of the natural habitat in which fish, animals, or wildlife may be found; or (B) a substance defined as a hazardous substance under 42 U.S.C. 9601 - 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980) [CERCLA]; “hazardous substance” does not include uncontaminated crude oil or uncontaminated refined oil . . . .

former state; (3) amounts paid as grants . . . and (4) all incidental administrative costs.”<sup>10</sup> The statute cautions that “actions under this section may not be used for punitive purposes, and sums assessed by the court must be compensatory and remedial in nature.”<sup>11</sup> Section .780 provides that if a violation “causes the death of fish, animals, or vegetation or otherwise injures or degrades the environment of the state,” the violator may be additionally liable up to the “amount equal to the sum of money required to . . . replenish a damaged or degraded resource, or to otherwise restore the environment of the state to its condition before the injury.”<sup>12</sup>

To recover uncapped actual damages for a violation under AS 46.03.760(d), the State must bring a civil action under AS 46.03.822, which provides for strict liability for the release of hazardous substances.<sup>13</sup> Subsection .822(a) holds persons strictly liable if they owned or had control over the hazardous substance at the time of release, or owned or operated the facility where the hazardous substance was released or disposed.<sup>14</sup> For the State to recover damages under subsection .822(a), it must demonstrate that the released substance is a “hazardous substance” as defined by AS 46.03.826(5):

(A) an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and

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<sup>10</sup> AS 46.03.760(d).

<sup>11</sup> AS 46.03.760(b).

<sup>12</sup> AS 46.03.780.

<sup>13</sup> See AS 46.03.760(d) and AS 46.03.822.

<sup>14</sup> AS 46.03.822(a)(1)-(3).

substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found;

(B) oil; or

(C) a substance defined as a hazardous substance under 42 U.S.C. 9601(14).<sup>15</sup>

In addition to allowing the State to recover uncapped actual damages, AS 46.03.822 holds persons “strictly liable, jointly and severally, for damages, for the costs of response, containment, removal, or remedial action incurred by the state, a municipality, or a village, and for

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<sup>15</sup> 42 U.S.C. 9601(14) defines “hazardous substance” under CER- CLA as

(A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C. 1321(b)(2)(A)], (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 U.S.C. 1317(a)], (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 U.S.C. 2606]. The term does not include petroleum, . . . natural gas, . . . or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

the additional costs of a function or service, including administrative expenses for the incremental costs of providing the function or service.”<sup>16</sup>

The statute explicitly holds ineffective any “indemnification, hold harmless, or similar agreement . . . to transfer liability . . . from the owner or operator of a facility.”<sup>17</sup> However, the statute allows for indemnification and hold harmless agreements between liable parties to shift financial responsibility.<sup>18</sup> Once liability is determined by the court, parties “may seek contribution from any other person who is liable under (a) of this section.”<sup>19</sup> To resolve a claim for contribution, “the court may allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court.”<sup>20</sup>

### C. Proceedings

In March 2014 the State sued Williams and Flint Hills seeking declaratory relief, injunctive relief, and damages resulting from discharges of oil and sulfolane. The State alleged that sulfolane is a hazardous substance as defined by Alaska’s environmental conservation statutes and administrative code. In its answer, Williams denied that its sulfolane releases were unlawful; asserted various legal,

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<sup>16</sup> AS 46.03.822(a). Subsection .822(b) which relieves persons from liability if certain narrow conditions arise, is inapplicable. *See* AS 46.03.822(b) (releasing liability if the release occurred solely because of an act of war; “an intentional or negligent act or omission of a third party”; or an “act of God”).

<sup>17</sup> AS 46.03.822(g).

<sup>18</sup> *Id.*

<sup>19</sup> AS 46.03.822(j).

<sup>20</sup> *Id.*

equitable, and constitutional defenses; and made counter-claims against the State. Williams claimed the State was a responsible landowner under AS 46.03.822(a) and could not “transfer its liability” to Williams because it had not regulated sulfolane during Williams’s tenure at the refinery. Williams also claimed that DEC was ordinarily and grossly negligent in supervising the refinery during Flint Hills’s tenure, allowing sulfolane to migrate off the refinery property, which in turn resulted in damages to Williams that it should be able to recover in contribution under AS 46.03.822(j).

Flint Hills similarly denied liability under the Act and asserted legal, equitable, procedural, and constitutional defenses in its answer. Flint Hills claimed the State and Williams were responsible parties under AS 46.03.822(a), and Flint Hills counterclaimed against the State for contribution under AS 46.03.822(j). It also crossclaimed against Williams seeking contribution under AS 46.03.822(j) and indemnification under the terms of the Purchase Agreement, specific performance of the Purchase Agreement, and declaratory judgment regarding Flint Hills’s right to contribution and indemnification from Williams. Williams in turn asserted crossclaims against Flint Hills, claiming that Flint Hills had breached the Purchase Agreement, was unjustly enriched by improperly seeking coverage from Williams’s environmental insurance policy, and was ordinarily and grossly negligent in allowing sulfolane contamination. Williams sought damages for breach of contract, declaratory judgment that it was entitled to indemnification under the Purchase Agreement, contribution under AS 46.03.822(j), and application of the Purchase Agreement’s Environmental Cap to any potential liability against Williams.

The City of North Pole also filed suit that year. Its case and a case brought by a North Pole resident against Williams and Flint Hills in 2010 were consolidated with the State's suit. After PFAS contamination was discovered at the site, the State and Flint Hills filed additional claims against Williams.

In 2016 we ruled in *Flint Hills Resources Alaska, LLC v. Williams Alaska Petroleum, Inc. (Flint Hills I)* that Flint Hills's claims against Williams for contractual indemnification and statutory contribution under AS 46.03.822(j) were time-barred with respect to onsite sulfolane contamination, but not offsite sulfolane contamination.<sup>21</sup> We also determined that because Flint Hills's claims against Williams for declaratory and injunctive relief were "equitable remedies . . . identical to the legal remedies Flint Hills sought in its statutory and contractual claims,"<sup>22</sup> it had not been error for the superior court to dismiss the equitable claims.<sup>23</sup>

In February 2017 Flint Hills reached a settlement with the State and the City, agreeing to partially fund an

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<sup>21</sup> 377 P.3d 959, 973 (Alaska 2016).

<sup>22</sup> *Id.* at 974 ("Flint Hills sought a judgment from the court declaring that Williams must indemnify Flint Hills under the [Purchase] Agreement and that Williams 'is obligated to contribute to Flint Hills all [s]tatutory [d]amages that have resulted . . . from the [c]ontamination.' Flint Hills also sought an order requiring Williams to perform under the terms of the [Purchase] Agreement." (lowercase alterations in original)).

<sup>23</sup> See *Knaebel v. Heiner*, 663 P.2d 551, 553 (Alaska 1983) ("One who seeks the interposition of equity must generally show that he either has no remedy at law or that no legal remedy is adequate.").

extension of piped water to affected residents. The superior court accordingly dismissed with prejudice the State's and Flint Hills's claims against each other.

The State and Flint Hills added claims against Williams for offsite PFAS soon after it was discovered in late 2018, but because discovery deadlines had passed the parties agreed the court would refer the offsite PFAS claims to DEC under the doctrine of primary jurisdiction.<sup>24</sup> Williams moved to defer onsite PFAS issues to DEC under the same doctrine, but the superior court denied the motion, finding it was "primarily made for purposes of delay" and would not facilitate the "orderly and reasonable coordination of the work of agencies and courts" after "five years of active litigation."

In June 2019 the superior court deconsolidated the State's and the City's cases against Williams.

The State's case against Williams proceeded to a bench trial. Over 16 days each side called lay and expert witnesses and admitted thousands of pages of exhibits into evidence.<sup>25</sup> The court issued a lengthy memorandum decision and final judgment, concluding that sulfolane is a hazardous substance and that Williams is strictly, jointly, and severally liable for its sulfolane release as well as for onsite PFAS and oil releases. The court allocated 75% responsibility for offsite sulfolane costs to Williams and or-

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<sup>24</sup> "Primary jurisdiction is a judicially created prudential doctrine that applies 'to claims properly cognizable in court [but] that contain some issue within the special competence of an administrative agency.'" *Seybert v. Alsworth*, 367 P.3d 32, 39 (Alaska 2016) (alteration in original) (quoting *Reiter v. Cooper*, 507 U.S. 258, 268 (1993)).

<sup>25</sup> We discuss the relevant aspects of testimony and evidence presented when addressing each point on appeal.

dered it to pay damages for that portion of the State's response and oversight costs, as well as for natural resource damages caused by the loss of the public's access to groundwater due to sulfolane contamination. The court held Williams responsible for 75% of future State costs related to the piped water system and held further that the State could recover from Williams that portion of "DEC's future oversight costs." The court additionally ordered Williams to abide by Alaska statutes and DEC regulations related to monitoring, reporting, and cleanup of offsite sulfolane and onsite PFAS. The court found that Flint Hills was not responsible for PFAS contamination at the refinery.

The superior court then turned to Flint Hills's claims against Williams to recover costs for responding to the contamination. The court determined that Williams had retained liability for offsite sulfolane existing on the date Flint Hills acquired the refinery. The court found that, although Flint Hills could not recover its costs for responding to the contamination through the Purchase Agreement's indemnification provisions, Flint Hills could obtain statutory contribution under AS 46.03.822(j). The court granted Flint Hills recovery from Williams for its equitable share of past offsite sulfolane response costs, as well as its share of future costs related to the piped water system and other offsite sulfolane remediation costs. The court also ordered Williams to indemnify, defend, hold harmless, and reimburse Flint Hills for all onsite PFAS-related future claims and costs. And the superior court dismissed all of Williams's claims against the State and Flint Hills.

Williams appeals, claiming the superior court erred on various points of fact and law.

### III. STANDARDS OF REVIEW

We review the superior court’s factual findings for clear error.<sup>26</sup> “Clear error exists ‘when “after a thorough review of the record, we come to a definite and firm conviction that a mistake has been made.”’”<sup>27</sup> Questions of law, which include whether the superior court applied the correct legal standard, are reviewed *de novo*.<sup>28</sup>

“We review a superior court’s evidentiary rulings for abuse of discretion,” reversing only “evidentiary rulings that are both erroneous and prejudicial.”<sup>29</sup> Under this standard, we ask “whether the reasons for the exercise of discretion are clearly untenable or unreasonable.”<sup>30</sup> We also apply the abuse of discretion standard when we review grants or denials of injunctive relief<sup>31</sup> and decisions to “stay or dismiss a claim” under the primary jurisdiction doctrine.<sup>32</sup>

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<sup>26</sup> *Burton v. Fountainhead Dev., Inc.*, 393 P.3d 387, 392 (Alaska 2017).

<sup>27</sup> *Id.* (quoting *Laybourn v. City of Wasilla*, 362 P.3d 447, 453 (Alaska 2015) (quoting *3-D & Co. v. Tew’s Excavating, Inc.*, 258 P.3d 819, 824 (Alaska 2011))).

<sup>28</sup> *Janes v. Alaska Railbelt Marine, LLC*, 309 P.3d 867, 875 (Alaska 2013).

<sup>29</sup> *Id.*

<sup>30</sup> *Burke v. Maka*, 296 P.3d 976, 979-80 (Alaska 2013).

<sup>31</sup> *Lee v. Konrad*, 337 P.3d 510, 517-18 (Alaska 2014); *see also State v. Galvin*, 491 P.3d 325, 332 (Alaska 2021) (explaining that reviewing an order for injunctive relief often also involves reviewing conclusions of law and findings of fact).

<sup>32</sup> *Seybert v. Alsworth*, 367 P.3d 32, 36 (Alaska 2016); *see also Matanuska Elec. Ass’n v. Chugach Elec. Ass’n*, 99 P.3d 553, 559 (Alaska 2004) (recognizing that “primary agency jurisdiction doctrine is one of prudence, and not an absolute jurisdictional limitation”).

“The superior court’s decision to allocate and apply contribution to a damage award involves the interpretation and application of a statute.”<sup>33</sup> We apply our independent judgment to questions of law, including “the interpretation and application of a statute,” as well as “[w]hether the superior court applied an incorrect legal standard.”<sup>34</sup> “We interpret statutes ‘according to reason, practicality, and common sense, taking into account the plain meaning and purpose of the law as well as the intent of the drafters.’”<sup>35</sup>

“The constitutionality of a statute and matters of constitutional or statutory interpretation are questions of law to which we apply our independent judgment, adopting the rule of law that is most persuasive in light of precedent, reason, and policy.”<sup>36</sup>

“Questions of contract interpretation are generally questions of law which we review *de novo*; but fact questions are created when the meaning of contract language is dependent on conflicting extrinsic evidence.”<sup>37</sup> “Where the superior court considers extrinsic evidence in interpreting contract terms, . . . we will review the superior

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<sup>33</sup> *Oakley Enters., LLC v. NPI, LLC*, 354 P.3d 1073, 1078 (Alaska 2015); *see* AS 46.03.822(j).

<sup>34</sup> *Oakley Enters., LLC*, 354 P.3d at 1078 (quoting *Guttchen v. Gabriel*, 49 P.3d 223, 225 (Alaska 2002)).

<sup>35</sup> *Id.* (quoting *Native Vill. of Elim v. State*, 990 P.2d 1, 5 (Alaska 1999)).

<sup>36</sup> *Dep’t of Revenue v. Nabors Int’l Fin., Inc.*, 514 P.3d 893, 898 (Alaska 2022) (quoting *Premera Blue Cross v. State, Dep’t of Com., Cnty. & Econ. Dev., Div. of Ins.*, 171 P.3d 1110, 1115 (Alaska 2007)).

<sup>37</sup> *Afognak Joint Venture v. Old Harbor Native Corp.*, 151 P.3d 451, 456 (Alaska 2007).

court's factual determinations for clear error and inferences drawn from that extrinsic evidence for support by substantial evidence.”<sup>38</sup>

#### IV. DISCUSSION

##### A. State's Statutory Claims Against Williams

###### *1. The superior court did not err when it concluded that sulfolane is a hazardous substance under AS 46.03.826(5).*

To impose strict liability on Williams under AS 46.03.822(a) for damages caused by sulfolane releases, the superior court first needed to determine whether sulfolane is a hazardous substance.<sup>39</sup> It concluded that the sulfolane released by Williams satisfied all three statutory definitions of hazardous substance under AS 46.03.826 (5).<sup>40</sup> Williams argues that the superior court misinterpreted the law when it found that sulfolane met any of the three statutory definitions of hazardous substance. We disagree, and affirm the superior court's determination that sulfolane is a hazardous substance under the Act.

Several weeks before trial, the superior court issued a memorandum tentatively adopting interpretations of

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<sup>38</sup> *Nautilus Marine Enters., Inc. v. Exxon Mobil Corp.*, 305 P.3d 309, 315 (Alaska 2013) (quoting *Villars v. Villars*, 277 P.3d 763, 768 (Alaska 2012)).

<sup>39</sup> See AS 46.03.822(a) (describing extent to which persons are liable for costs associated with unpermitted release of hazardous substances); AS 46.03.826(5) (defining “hazardous substance”).

<sup>40</sup> See AS 46.03.826(5) (defining hazardous substance as (A) a substance which poses imminent and substantial danger to public health or welfare or natural environment when released, (B) oil, or (C) a substance defined in CERCLA's definitions section at 42 U.S.C. 9601(14)).

“hazardous substance” used in AS 46.03.822(a) and defined in subsection .826(5)(A). It later adopted those interpretations in its decision. The court construed “imminent and substantial danger to the public health” to mean “a reasonable medical concern about the public health where, given the modifier ‘substantial,’ the nature of the harm giving rise to concern is serious and, given the modifier ‘imminent,’ the threat of harm must be present, although the potential impacts may never develop or may take time to develop.” The court primarily drew from several federal circuit court decisions interpreting federal statutes with “imminent danger” requirements to cover “potential” harms,<sup>41</sup> as well as our decisions broadly interpreting AS 46.03.822.<sup>42</sup>

The superior court relied on the evidence presented at trial to find that sulfolane “presents an imminent and substantial danger to the public health” under its interpretation of AS 46.03.826(5)(A) — that it “presents a reasonable

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<sup>41</sup> See *Reserve Mining Co. v. EPA*, 514 F.2d 492, 528-29 (8th Cir. 1975) (interpreting phrase “endangering the health or welfare of persons” from Federal Water Pollution Control Act to cover discharge of “potentially harmful” substance that gave “rise to a reasonable medical concern over the public health”); *Maine People’s All. v. Mallinckrodt, Inc.*, 471 F.3d 277, 296 (1st Cir. 2006) (holding that, under Resource Conservation and Recovery Act (RCRA), “an imminent and substantial endangerment requires a reasonable prospect of a near-term threat of serious potential harm”); *Simsbury-Avon Pres. Club, Inc. v. Metacan Gun Club, Inc.*, 575 F.3d 199, 210 (2d Cir. 2009) (discussing “imminency” as used in RCRA to require only “a showing that a ‘risk of threatened harm is present’” (quoting *Dague v. City of Burlington*, 935 F.2d 1343, 1356 (2d Cir. 1991))).

<sup>42</sup> See *Berg v. Popham*, 113 P.3d 604, 609 (Alaska 2005) (interpreting AS 46.03.822(a) to impose broader arranger liability than that imposed by CERCLA); *Kodiak Island Borough v. Exxon Corp.*, 991 P.2d 757, 765 (Alaska 1999) (adopting a broad, flexible definition of AS 46.03.822(a)’s cost clauses).

medical concern, the nature of which is serious, and the threat of which is present when sulfolane is released in the environment.” The State called Dr. Ted Wu, a DEC employee and expert in toxicology and environmental chemistry who reviewed the evidence of contamination at the refinery. He testified about a number of studies demonstrating sulfolane’s toxic effects when animals were exposed to it, which could indicate potential adverse effects on humans. He testified that studies showed sulfolane exposure caused “convulsion[s] . . . in squirrel monkeys and rats” and vomiting in squirrel monkeys, decreased kidney and liver functions and white blood cell counts in guinea pigs and rats, increased aggression in dogs, and increased fetal absorption and deformation in fetuses in rats and guinea pigs. Dr. Wu explained that squirrel monkeys were more susceptible to sulfolane than were rodents, suggesting that humans could be even more susceptible than squirrel monkeys. Dr. Wu also testified that sulfolane is more toxic than about half of the hazardous substances already identified in DEC’s default groundwater cleanup level table and that sulfolane travels in groundwater to drinking water wells and thereby creates a risk to the public.

The State also called Dr. Mary Beth Leigh, a professor of microbiology at the University of Alaska Fairbanks, to provide expert testimony about her own experiments that showed sulfolane was toxic to a bacterium commonly used as a screening tool for toxicity to organisms. The State called former DEC Commissioner Larry Hartig and former North Pole Mayor Bryce Ward to testify about sulfolane’s impact on public welfare and the factors involved in gauging public welfare. Hartig testified that he understood the legislature’s intent to be that public welfare includes the people’s “overall health and welfare,”

as well as their “economic well-being” and their “opportunity to have a living” and “subsistence.” Ward testified about the negative impact sulfolane contamination had on the North Pole community, causing residents to be upset and concerned about the amount of sulfolane to which they were unwittingly exposed.

Hartig also testified that DEC considered sulfolane a hazardous substance in order to address the sulfolane plume with funding from the Oil and Hazardous Substance Release Response Act Account.<sup>43</sup> Funds from the account are available expressly to cover State response costs in the event of oil or hazardous substance releases.<sup>44</sup> The definitions of “oil” and “hazardous substance” in the enabling legislation are virtually the same as those in AS 46.03.826. To obtain funds from the response account, the DEC commissioner must find that the oil or hazardous substance released “poses an imminent environment,”<sup>45</sup> a phrase that is virtually identical to the definition of “hazardous substance” in AS 46.03.826(5)(A).

The State introduced Williams’s written emergency medical care policy into evidence. The policy described possible life-threatening effects of sulfolane if inhaled, ingested, or in contact with the skin or eyes. It listed “[c]ardiac arrhythmias, respiratory failure, pulmonary edema, paralysis, brain damage, liver damage, lung tissue and stomach tissue damage” as possible side effects from sulfolane exposure.

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<sup>43</sup> See AS 46.08.005-.080; AS 46.08.005 (establishing fund available to respond to release of oil or hazardous substance “to reduce the amount, degree, or intensity of a release or threatened release, and for other related purposes identified in law”).

<sup>44</sup> AS 46.08.040(a), .045.

<sup>45</sup> AS 46.08.040(a)(1)(A).

Williams presented deposition testimony from Stephanie Buss, a former DEC employee and toxicologist. When asked to identify “every single fact . . . that would indicate that sulfolane is and presents an imminent and substantial danger to the public health and welfare,” Buss stated that “toxicity studies . . . indicat[ed] adverse health effects” and proceeded to identify various studies. She also referred to studies indicating that sulfolane posed dangers not only to public health and welfare, but also to “fish and vegetation.”

Williams also called James Fish, a DEC employee and project manager for the refinery contamination area. Fish testified that the EPA had previously treated sulfolane as a hazardous substance at a refinery in Puerto Rico. He testified that the EPA’s approach to the Puerto Rican refinery supported DEC’s decision to consider sulfolane a hazardous substance.

The superior court relied heavily on Dr. Wu’s testimony to determine that sulfolane is a hazardous substance under AS 46.03.826(5)(A) based on the danger it posed to public health and welfare. It found Dr. Wu’s medical concerns about sulfolane were both “reasonable and serious” and that “[a]t a minimum, sulfolane exposure can reduce white blood cell counts; at a maximum sulfolane exposure can cause death.” The court also found it notable that, while operating the refinery, Williams itself treated sulfolane in its emergency medical care policy as though it were life-threatening.

In addition to sulfolane’s demonstrated toxicity, the superior court was troubled by its chemical properties as well as the concentrations in which it had been released. The court was not convinced that sulfolane concentrations found in the environment after it was released were material to establishing whether sulfolane was hazardous,

but it was persuaded that the concentrations at the time of release “into the subsurface land and water of the State presented an imminent and substantial danger to the public health and welfare.”

The court also found that DEC’s treatment of sulfolane as a hazardous substance under AS 46.03.826(5)(A) was entitled to deference. The court reasoned that “Hartig accessed the [Oil and Hazardous Substance Release] [R]esponse [A]ccount several times to address the sulfolane contamination,” and each time he had to determine that “the contamination posed an imminent and substantial threat” to the public health and welfare or to the environment. The court found that these actions by DEC reflected “the agency’s conclusions both that sulfolane is a hazardous substance *and* that the release at issue is posing an imminent and substantial threat to public health, welfare, or the environment”; “DEC’s determination that sulfolane is a hazardous substance is reasonable, supported by the record, and not an abuse of discretion”; and DEC’s determination “is entitled to judicial deference and it is therefore controlling in this case.” The court similarly concluded that sulfolane is a hazardous substance because it also “presents an imminent and substantial danger to public welfare.” In its underlying findings the court specifically cited the testimony from former officials and scientists about sulfolane’s impacts on the public health and welfare.

In addition to trial evidence, the superior court relied on admissions in Williams’s pleadings to support its conclusion that sulfolane was a hazardous substance. The State’s 2014 complaint alleged that “[s]ulfolane is a hazardous substance within the meaning of AS 46.03.745, AS 46.03.900, AS 46.03.826, and 18 AAC 75.990.” Williams initially admitted that allegation, but denied that DEC

“considered sulfolane to be a hazardous substance under any statute or regulation at any time during [Williams]’s ownership and operation of the North Pole Refinery.” Williams later amended its answer, retaining the sentence denying DEC’s classification of sulfolane as a hazardous substance, but instead asserting that the State’s allegation that sulfolane is a hazardous substance was a “legal conclusion to which no response [was] required.” But Williams did not withdraw an earlier stipulation agreeing that “Flint Hills is a liable landowner and operator under AS 46.03.822(a) for sulfolane releases.”

The superior court gave some weight to Williams’s initial admission and its stipulation. The court found that Williams’s “first answer constitute[d] an evidentiary admission that sulfolane is a hazardous substance, notwithstanding Williams’[s]” amended pleading, finding support in *Brigman v. State*, which recognizes that “[c]ourts often admit superseded or withdrawn pleadings in civil and criminal cases on the theory that they constitute evidentiary admissions.”<sup>46</sup> The court also found that Williams admitted that sulfolane is a hazardous substance when it stipulated as to Flint Hills’s liability for sulfolane. The court reasoned that “Flint Hills could not be liable under AS 46.03.822(a) for sulfolane releases if sulfolane were not a hazardous substance. If sulfolane is a hazardous substance when released by Flint Hills, it is a hazardous substance when released by Williams.”

In addition to holding Williams strictly liable under AS 46.03.822 due to hazardous substance releases as defined in AS 46.03.826(5)(A), the court held Williams strictly liable under section .822 because many of the releases were sulfolane mixed with oil and because sulfolane

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<sup>46</sup> 64 P.3d 152, 166 (Alaska App. 2003).

wastewater constituted a “petroleum-related byproduct” under AS 46.03.826(5)(B) and AS 46.03.826(7).<sup>47</sup> The court found that sulfolane was “released as a constituent of Williams’[s] oil spills” and that “Williams had numerous spills of gasoline containing sulfolane at the refinery.”

Finally, the court concluded that sulfolane is a hazardous substance under AS 46.03.826(5)(C). Subsection .826(5)(C) defines as hazardous any “substance defined as a hazardous substance under 42 U.S.C. 9601(14),” CERCLA’s expansive definition of hazardous substance that includes “any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. § 6921]” (a section better known as the Resources Conservation and Recovery Act (RCRA)).<sup>48</sup> The court found sulfolane met the hazardous substance definitions under AS 46.03.826(5)(C) because the EPA had treated it as hazardous waste under RCRA when it was released at a refinery in Puerto Rico.

Williams argues that the superior court misinterpreted the law when it found that sulfolane met any of the statutory definitions of hazardous substance in AS 46.03.826(5). Regarding subsection .826(5)(A), Williams argues that the court’s definition of “imminent” does not comport with dictionary or judicial definitions of the word. It contends that an “imminent danger” must be

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<sup>47</sup> AS 46.03.826(5)(B) (defining “hazardous substance” to include “oil”); AS 46.03.826(7) (defining “oil” to include “petroleum-related product or by-product”).

<sup>48</sup> 42 U.S.C. § 9601(14) (governing disposal of hazardous and non-hazardous solid waste).

one that “threaten[s] to occur immediately,”<sup>49</sup> not one that may take time to develop. Quoting the court’s memorandum adopting a tentative definition of hazardous substance, Williams alleges that the court improperly concluded that “imminent and substantial danger to public health” meant only a “reasonable medical concern about the public health.”<sup>50</sup> Williams argues that this definition of “imminent and substantial danger” has never been “adopted by any court, applied by DEC, or advocated by

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<sup>49</sup> Quoting *Meghrig v. KFC W., Inc.*, 516 U.S. 479, 485 (1996) (citing WEBSTER’S NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE at 1245 (2d ed. 1984)).

<sup>50</sup> This misrepresents the superior court’s definition. The court did not conclude that an “imminent and substantial danger” meant *only* a “reasonable medical concern about the public health,” but also that, “given the modifier ‘substantial,’ the nature of the harm giving rise to concern is serious and, given the modifier ‘imminent,’ the threat of harm must be present, although the potential impacts may never develop or may take time to develop.”

Moreover, the court ultimately made separate findings that sulfolane presented an imminent and substantial danger to the public health *and* welfare. Williams’s opening brief primarily argues against the danger to public health finding. Its arguments about the public welfare findings are limited to a single footnote in its opening brief that simply incorporates “all the above reasons why sulfolane is not a hazardous substance in the first instance.” Williams’s reply brief claims that the arguments are interchangeable. Williams does not challenge the court’s factual findings about the impact on North Pole residents or its finding that residents’ concerns about “economic well-being [and] opportunity to have a living” are incorporated in the public welfare prong of the definition, and fails to adequately address this issue. We thus consider Williams’s challenge to the court’s finding waived. *See* Alaska R. App. P. 212(c)(1)(H) (requiring that argument section “explain the contentions of the appellant . . . and the legal and factual support for those contentions, with citations to the authorities, statutes, and parts of the record relied on”); *Casciola v. F.S. Air Serv., Inc.*, 120 P.3d 1059, 1062 (Alaska 2005) (“We do not consider arguments that are inadequately briefed.”).

any party during five years of litigation”; that it runs counter to the plain language of the statute; that it “threatens to deprive a defendant of the constitutional right to fair notice” under *Stock v. State*;<sup>51</sup> and that it is contrary to the legislative history. Williams also argues that because the concentrations of sulfolane “had decreased dramatically and were nowhere near the ranges cited by the court” by the time the plume reached drinking water wells, the court erred by finding that sulfolane was hazardous at the time of release.

The State responds that Williams’s proposed definition of “imminent” is flawed because it would exclude substances causing delayed manifestations of harm, such as birth defects or cancer. The State emphasizes that the statute uses the word “danger” rather than “harm” to signify the possibility of harm, rather than the present existence of harm. And it argues that, even under Williams’s proposed interpretation of AS 46.03.826(5)(A), trial evidence supports finding sulfolane is a hazardous substance. The State points to the numerous studies demonstrating sulfolane’s harmful effects on animals. The State asserts that there is no legal support for Williams’s contention that “whether a substance is hazardous should turn on its concentrations in the environment after decades of dilution.”

Williams also asserts that the superior court improperly relied on evidence from Dr. Wu and DEC employee Stephanie Buss because, although they indicated they believed sulfolane was a hazardous substance, they did not

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<sup>51</sup> 526 P.2d 3 (Alaska 1974) (explaining circumstances under which environmental conservation statutes might be unconstitutionally vague). We address fair notice and due process in part IV.A.5 below.

state explicitly that it “presents an imminent and substantial danger to public health.” Williams argues that it was error to infer that sulfolane is a hazardous substance, pointing to a ruling on the parties’ 2018 motions for summary judgment which discounted Dr. Wu’s affidavit for not using these statutory terms. The State responds that “[n]o rule of evidence says that witness testimony ‘must be excluded’ and cannot be used to support a factual finding if it does not use particular words from a statutory definition.” The State also points out that Williams did not “cit[e] contrary evidence or explain [in its brief] why the studies do not show that sulfolane is dangerous.”

When we interpret a statute, we presume “that the legislature intended every word, sentence, or provision of a statute to have some purpose, force, and effect, and that no words or provisions are superfluous.”<sup>52</sup> We apply a “sliding-scale approach” to interpret the language: “[t]he plainer the statutory language is, the more convincing the evidence of contrary legislative purpose or intent must be.”<sup>53</sup> To the extent possible, we “interpret each part or section of a statute with every other part or section, so as to create a harmonious whole.”<sup>54</sup> Whether a substance meets the legal standard of “hazardous substance” is a

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<sup>52</sup> *Kodiak Island Borough v. Exxon Corp.*, 991 P.2d 757, 761 (Alaska 1999) (quoting *Rydwell v. Anchorage Sch. Dist.*, 864 P.2d 526, 530-31 (Alaska 1993)).

<sup>53</sup> *State v. Planned Parenthood of the Great Nw.*, 436 P.3d 984, 992 (Alaska 2019) (quoting *State v. Fyfe*, 370 P.3d 1092, 1095 (Alaska 2016)).

<sup>54</sup> *Id.* (original alteration omitted) (quoting *Rydwell*, 864 P.2d at 528).

“question of law to which we apply our independent judgment.”<sup>55</sup>

We are not persuaded by Williams’s arguments. The two key issues are whether “imminent” dangers under AS 46.03.826(5)(A) can include non-immediate dangers and whether the facts support concluding sulfolane is a hazardous substance.

Turning to the first issue, we note that because the parties do not discuss the legislative history of the statute,<sup>56</sup> we look primarily to the plain meaning of the statute. The undefined use of “imminent” in statutes and treaties, across diverse subject areas, has plagued legal scholars for decades.<sup>57</sup> When the legislature enacted

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<sup>55</sup> See *Burton v. Fountainhead Dev., Inc.*, 393 P.3d 387, 392 (Alaska 2017).

<sup>56</sup> Williams alludes to its October 2019 response to the court’s interpretation of “imminent and substantial danger,” when Williams did engage in a legislative history analysis. However, it makes no arguments now on appeal beyond (1) asserting that AS 46.03.826(5)(A) was enacted prior to subsection .826(5)(C) and thus could not have been designed to expand subsection .826(5)(C); and (2) making conclusory statements that the court’s interpretation of imminent and substantial danger “finds no support in the statutory text or the legislative history.” “[A] party’s briefing must contain its own arguments and may not merely incorporate arguments from other documents.” *McCormick v. Chippewa, Inc.*, 459 P.3d 1172, 1180 (Alaska 2020). We conclude Williams’s legislative history arguments were insufficiently briefed and thus waived.

<sup>57</sup> See, e.g., Authority of the President Under Domestic and International Law to Use Military Force Against Iraq, 26 Op. O.L.C. 143, 182-84 (2002) (discussing ambiguities of “imminent” in international law, including temporal elements, probabilities that threat will materialize, and magnitude of harm that threat would cause such that immediacy is no longer required).

AS 46.03.826(5)(A), Black's Law Dictionary defined "imminent" as something "[n]ear at hand; mediate rather than immediate; . . . impending; on the point of happening; threatening."<sup>58</sup> It defined "danger" as "[j]eopardy; exposure to loss or injury; peril."<sup>59</sup> Similarly, Merriam-Webster's Collegiate Dictionary defined "imminent" as "ready to take place"<sup>60</sup> and "danger" as "exposure or liability to injury, pain, or loss."<sup>61</sup> While an "imminent danger" is thus typically some harm that is threatening to occur immediately, the fact that harm ultimately did not occur does not mean that the harm was not imminent at one point. Federal case law cited by the superior court and both parties supports this interpretation of "imminent danger."<sup>62</sup> The court's interpretation of "imminent"—that

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<sup>58</sup> *Imminent*, BLACK'S LAW DICTIONARY (rev. 4th ed. 1968) (similarly defined in current 11th edition).

<sup>59</sup> *Danger*, *id.* (similarly defined in current 11th edition). Black's Law Dictionary also provides a definition for "imminent danger," but it applies to the use of self-defense and seems inapplicable to environmental harms.

<sup>60</sup> *Imminent*, MERRIAM-WEBSTER'S COLLEGiate DICTIONARY (7th ed. 1963).

<sup>61</sup> *Danger*, *id.*

<sup>62</sup> See *Meghrig v. KFC W., Inc.*, 516 U.S. 479, 485-86 (1996) (interpreting RCRA's "imminent and substantial endangerment" provision as requiring threat of danger to be then-present even if impact may not be felt until later); *Reserve Mining Co. v. EPA*, 514 F.2d 492, 528-29 (8th Cir. 1975) (interpreting phrase "endangering the health or welfare of persons" from Federal Water Pollution Control Act to cover discharge of "potentially harmful" substance that gave "rise to a reasonable medical concern over the public health"); *Maine People's All. v. Mallinckrodt*, 471 F.3d 277, 296 (1st Cir. 2006) (holding that, under RCRA, "an imminent and substantial endangerment requires a reasonable prospect of a near-term threat of serious potential harm"); *Simsbury-Avon Pres. Club, Inc. v. Metacon Gun Club*,

“the threat of harm must be present, although the potential impacts may never develop or may take time to develop”—aligns with the plain definition of statutory terms as well as federal case law interpreting like terms.

Williams’s factual and evidentiary challenges to the hazardous substance conclusion also fail to withstand scrutiny. Williams does not cite any case law or rules of evidence to support its argument that expert testimony must exactly track the relevant statutory text at issue.<sup>63</sup> Alaska Evidence Rule 702(a) allows qualified experts to rely on their “scientific, technical, or other specialized knowledge” to express opinions that will “assist the trier of fact to understand the evidence or to determine a fact in issue.” There is no indication that it would be improper for the trier of fact to rely on expert testimony if the expert fails to repeat verbatim the statutory language at issue while offering an opinion. Dr. Wu’s and Buss’s testimony demonstrated that sulfolane, “when it enters . . . in or upon the water or surface or subsurface land[,] . . . presents an imminent and substantial danger to the public health . . . including . . . to fish, animals, vegetation, or any part of the natural habitat in which they are found.”<sup>64</sup> Dr. Wu testified extensively about sulfolane’s toxic effects on animals exposed to it. And Williams mischaracterizes Buss’s deposition testimony, alleging she concluded sulfolane was a hazardous substance based only on studies

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*Inc.*, 575 F.3d 199, 210 (2d Cir. 2009) (stating “imminency” standard in RCRA “requires a showing that a ‘risk of threatened harm is present’” (quoting *Dague v. City of Burlington*, 935 F.2d 1343, 1356 (2d Cir. 1991))).

<sup>63</sup> See *Marcia V. v. State, Off. of Child.’s Servs.*, 201 P.3d 496, 508 (Alaska 2009) (rejecting argument that expert testimony must recite statutory language).

<sup>64</sup> AS 46.03.826(5)(A).

showing that “sulfolane has the potential to have adverse effects.” (Emphasis omitted). But Buss also discussed a study showing “significant impacts of high concentrations of exposure.” Her deposition testimony indicates that she believed sulfolane posed an imminent and substantial danger to the public health or welfare, but she clarified that none of the studies to which she referred used those words so she avoided saying that a study made such an explicit finding. That Dr. Wu and Buss never expressly stated “sulfolane presented an imminent and substantial danger to public health” did not preclude the superior court from making such a finding, especially in light of the ample evidence suggesting that fact. The superior court did not err by relying on Dr. Wu’s and Buss’s testimony when making its findings.

Other testimony from Dr. Wu further supports finding sulfolane presents an imminent and substantial danger to the public health or welfare. He testified about studies showing negative impacts on plants, earthworms, aquatic invertebrates, and fish when exposed to sulfolane, including a study demonstrating impacts on embryonic development in zebrafish when exposed to a range of sulfolane concentrations equivalent to concentrations found in groundwater near refineries around the world. And the fact that Williams itself treated sulfolane as a substance with life-threatening characteristics while handling it further supports the court’s hazardous substance finding.

The superior court also did not abuse its discretion by giving weight to Williams’s initial admission that sulfolane was a hazardous substance, which could shed light on Wil-

liams's own beliefs about whether sulfolane was hazardous.<sup>65</sup> Williams failed to refute the inferences that could be drawn from its earlier admission, especially when those inferences were supported by Williams's own sulfolane-handling practices at the refinery.<sup>66</sup>

**2. *The superior court did not err by awarding response costs to the State and Flint Hills.***

Alaska Statute 46.03.822(a) imposes strict liability on those responsible for the unpermitted release of hazardous substances for a range of costs, including response costs. “Response costs” are defined by regulation as

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<sup>65</sup> In contrast to binding judicial admissions, “evidential admissions are words or conduct admissible in evidence against the party making them, but subject to rebuttal or denial.” 29A AM. JUR. 2D *Evidence* § 769; *see* 2 KENNETH S. BROUN ET AL., MCCORMICK ON EVIDENCE § 254 (8th ed. 2020) (defining “judicial admission”). “Evidentiary admissions may also be made in pleadings that have been superseded, amended, or withdrawn; answers to interrogatories; and other statements made pursuant to the . . . Rule of Evidence governing statements by opposing parties.” 29A AM. JUR. 2D *Evidence* § 769. Admissions constituting opinion, such as a conclusion of law,

normally include an application of a standard to the facts. Thus, they reveal the facts as the declarant thinks them to be, to which the . . . legal or moral standard involved in the statement was applied. In these circumstances, the factual information conveyed should not be ignored merely because the statement may also indicate the party’s assumptions about the law.

BROUN, *supra*, § 256 (citations omitted); *see also* *Cikan v. ARCO Alaska, Inc.*, 125 P.3d 335, 341 (Alaska 2005).

<sup>66</sup> Because we affirm the superior court’s conclusion that sulfolane is a hazardous substance under AS 46.03.826(5)(A), it is not necessary for us to address the extent to which sulfolane may also be defined as a hazardous substance under subsections AS 46.03.826(5)(B) and (C).

“costs reasonably attributable to the site or incident” including “the costs of direct investigation, containment and cleanup, removal, and remedial actions associated with an incident or site undertaken by the department . . . as well as the costs of oversight.”<sup>67</sup>

The superior court found that the State’s and Flint Hills’s plans to “provide alternative water in the form of a piped water expansion project [were] reasonable and not arbitrary or capricious.” There was expert testimony that groundwater remediation would likely cost at least \$6 million more than expanding the piped water system, and would take decades to achieve. The court found “Williams . . . liable for the estimated costs of the piped water system, \$72,228,154, as an appropriate response cost under .822(a).”<sup>68</sup> Other response costs included those incurred by Flint Hills to deliver bulk and bottled water in the interim and to drill new public wells after sulfolane was detected in the City’s source wells. The interim water deliveries were part of a project costing \$27.67 million, and the new City source wells cost \$4.39 million.

Williams argues that the superior court erred by awarding the State response costs for the piped water system and new wells, claiming the piped water system was unnecessary, not cost-effective, and unreasonable. Williams also argues the superior court erred by award-

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<sup>67</sup> 18 Alaska Administrative Code (AAC) 75.910(b) (2021).

<sup>68</sup> The court calculated expected cost for the piped water system—\$72,228,154—based on “payments from escrow to date by the State of \$11,599,681 and \$44,378,473 from Flint Hills; an additional \$16.25 million is expected to be required to complete the project.” It then determined that Williams was equitably responsible for 75% of the State’s and Flint Hills’s future costs related to the piped water system.

ing Flint Hills costs for bottled water to North Pole residents, contending that new wells for the City and “providing alternative water to residents on an interim basis” were unnecessary.

Williams points to several environmental conservation regulations to support its assertion that “Site Cleanup Rules require those responsible for contamination to take only those actions ‘necessary to protect human health, safety, and welfare, and the environment.’”<sup>69</sup> But as the State points out, the standard in the site cleanup regulations differs from that required by statute.<sup>70</sup> The regulations mainly focus on what the responsible party must do to remedy contamination it has caused, which could be read to require only that the responsible party take the

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<sup>69</sup> Quoting 18 AAC 75.335 (requiring responsible party to generate site characterization plans prior to hazardous substance cleanup), and also citing 18 AAC 75.345 (requiring cleanup to meet specific levels), .360 (specifying cleanup operation requirements for responsible party), .380 (detailing responsible party’s reporting and site closure requirements), and .990 (chapter definitions, including “cleanup level”).

<sup>70</sup> See AS 46.03.822(a) (imposing strict liability on responsible parties for damages resulting from “unpermitted release of a hazardous substance,” including “costs of response, containment, removal, or remedial action, . . . and for the additional costs of a function or service, including administrative expenses for the incremental costs of providing the function or service”); AS 46.03.824 (“Damages include but are not limited to injury to or loss of persons or property, real or personal, loss of income, loss of the means of producing income, or the loss of an economic benefit.”); *see also Kodiak Island Borough v. Exxon Corp.*, 991 P.2d 757, 765 (Alaska 1999) (construing, in dicta, “subsection .822(a)’s statement of specific compensable costs to be exemplary and inclusive, not definitive or exclusive” and “adopt[ing] a literal and inflexible view of subsection .822(a)’s cost clauses would be fundamentally inconsistent with what we perceive to be the legislature’s primary intent in enacting these provisions: to hold responsible parties strictly liable for all provable spill-related harms”).

minimum protective actions “necessary.”<sup>71</sup> But when considered in light of the policy behind the Environmental Conservation Act and its enabling regulations, it is more likely that the provisions Williams cites operate to establish a baseline cleanup level for the responsible parties, and not a ceiling for the State to respond to the contamination.<sup>72</sup> The State incurred costs as a result of Williams’s

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<sup>71</sup> See 18 AAC 75.990(17) (defining “cleanup” to include “removal of a hazardous substance from the environment, restoration, and other measures that are necessary to mitigate or avoid *further* threat to human health, safety, or welfare, or to the environment” (emphasis added)); 18 AAC 75.335(c)-(d) (describing requirements of site characterization report submitted to DEC and allowing DEC to “modify proposed cleanup techniques or require additional cleanup techniques for the site as the department determines to be necessary to protect human health, safety, and welfare, and the environment”); 18 AAC 75.345(c) (allowing DEC to set more stringent groundwater cleanup levels than those currently published if it “determines that a more stringent cleanup level is necessary to ensure protection of human health, safety, or welfare, or of the environment”); 18 AAC 75.345(d) (allowing DEC to “require a responsible person to provide an alternative source of drinking water for the affected parties or implement other institutional controls . . . until a cleanup level is established” when “toxicity information is insufficient to establish a cleanup level for a hazardous substance or a pollutant that ensures protection of human health, safety, and welfare, and of the environment”).

<sup>72</sup> See 18 AAC 75.910(b) (holding responsible parties liable for “response costs” and defining response costs as “costs reasonably attributable to the site or incident” including “costs of direct investigation, containment and cleanup, removal, and remedial actions associated with an incident or site undertaken by the department . . . as well as the costs of oversight”); *see also* AS 46.03.760(d) (holding responsible person “liable to the state . . . for the full amount of actual damages caused to the state by the violation, including” costs for abatement, containment, restoration, and emergency response costs); AS 46.03.780 (allowing for broad recovery when hazardous substance release “injures or degrades the environment”).

hazardous substance releases and Williams is therefore strictly liable for them.

Williams further argues that the piped water system was unnecessary because DEC had not established a cleanup level required to make the groundwater safe for human consumption<sup>73</sup> and the court had not made findings that piped water was necessary for human or environmental health. For example, Williams claims there was no evidence demonstrating that “the low levels of sulfolane in North Pole area wells have caused adverse health effects.” The State again points to the text of AS 46.03.822, where the extent of liability and recovery is untethered to findings of “necessity” or “cleanup levels.” The State argues that Williams could have proposed a cleanup level<sup>74</sup> and Williams’s failure to participate “in the regulatory process . . . puts it in a poor position to now raise regulation-based objections to DEC’s response.” Furthermore, regulations expressly allow DEC to require a responsible person to provide alternative water sources when “toxicity information is insufficient to establish a cleanup level for a hazardous substance or a pollutant.”<sup>75</sup> And, as discussed below, feasibility studies showed that alternatives to the piped water system such as remediating the groundwater would be costly, difficult to implement, uncertain to succeed, and could pose additional risks. Thus establishing a level to which groundwater concentrations would need to have been returned was irrelevant in these

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<sup>73</sup> DEC had not yet set cleanup levels because of uncertainty about its toxicity data for sulfolane. In 2015 the EPA recommended that DEC refrain from doing so until the EPA had completed its own toxicity studies evaluating the health effects of sulfolane exposure.

<sup>74</sup> See 18 AAC 75.345(b)(3) (allowing DEC to approve responsible party’s proposed alternative cleanup level).

<sup>75</sup> 18 AAC 75.345(d).

circumstances. The superior court properly concluded that the statutes did not require the State to prove that the piped water system was necessary.<sup>76</sup>

Williams next argues that the piped water system is not cost-effective, and thus is not “practicable” as required by regulation.<sup>77</sup> Williams alleges that “[n]either the State nor Flint Hills offered any evidence that the piped water system was the most cost-effective remedy” and

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<sup>76</sup> While Williams alleges that the State had ulterior motives in its pursuit of the piped water system—to “save face with the public” and to remedy other nonsulfolane contamination problems with well water—our review of the record reveals no such bad-faith motives.

In contrast, Williams’s argument borders on bad faith when it selectively relies on a DEC employee’s testimony to claim that the State sought “to remedy water quality issues unrelated to sulfolane that make the well water ‘unpalatable without treatment.’” The employee, referring to aesthetic differences, said the water was “a little unpalatable without treatment.” And Williams’s references to other contamination are unsupported by the record and are irrelevant to assessing the response costs the State incurred out of concern for the potential public health and welfare impacts from sulfolane contamination.

<sup>77</sup> “Practicable” is defined as “capable of being designed, constructed, and implemented in a reliable and cost-effective manner, taking into consideration existing technology, site location, and logistics in light of overall project purposes.” 18 AAC 75.990(93). The definition “does not include an alternative if the incremental cost of the alternative is substantial and disproportionate to the incremental degree of protection provided by the alternative as compared to another lower cost alternative.” *Id.*

Williams cites 18 AAC 75.325(f)(1)(D) to support its assertion. In relevant part, this section instructs a responsible person, “to the maximum extent practicable, . . . [to] prevent, eliminate, or minimize potential adverse impacts to human health, safety, and welfare, and to the environment, onsite and offsite, from any hazardous substance remaining at the site.” 18 AAC 75.325(f)(1)(D). Williams mischaracterizes this as a requirement for DEC, rather than the responsible party.

that State witnesses conceded that this was not a factor DEC considered. While the State mostly focuses on the absence of any statute requiring that it prove piped water is the most cost-effective remedy, it also points to witness testimony discussing the benefits of piped water over other alternatives. The State noted that its permanency, cost, safety, and reliability made piped water superior to delivering bottled water or to “restor[ing] the aquifer to its natural condition.” Williams’s sole proposal besides doing nothing was to conduct air sparging, a form of remediating the aquifer that DEC, as well as Flint Hills’s environmental contractor, had already considered and determined would be costly, ineffective, and could pose additional risks to the community.

Williams further asserts that the piped water system’s cost was exorbitant rather than cost-effective because “[o]nly 86 private wells . . . in recent years” recorded measurements of at least 20 ppb of sulfolane. Williams therefore calculated the cost of the piped water amounted to “over \$837,000 per affected well.” The State responds that the statute imposes strict liability for actual damages and response costs rather than for only the most cost-effective measures taken.<sup>78</sup> Flint Hills points to trial testimony tending to show cost-effectiveness for the piped water system was considered both in its design and at trial. The record also reveals that the sulfolane plume is migrating and not expected to degrade quickly, and that the uncertainty about effects of long-term exposure to sulfolane

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<sup>78</sup> See AS 46.03.760(d) (holding responsible party “liable to the state . . . for the full amount of actual damages caused to the state by the violation, including” costs for abatement, containment, restoration, and emergency response costs); AS 46.03.780 (allowing for broad recovery when hazardous substance release “injures or degrades the environment”).

justifies preventative measures such as the piped water system.

Even if the statutes or regulations required that response costs be “necessary” and cost-effective, the State persuasively argues that the record supports such a finding. The superior court found that the piped water system would be “reasonable and not arbitrary or capricious” as an alternative water source because it is a common solution for large-scale groundwater contamination, offers an effective long term solution, would require less maintenance, and would be more convenient. Furthermore, testimony from Williams’s own experts supports finding that the interim bottled water deliveries and piped water system design were reasonable.

The record supports the superior court’s decision to hold Williams liable for the response costs for the piped water system, interim water provisions, new wells, and public outreach. The court did not clearly err by finding they were reasonable resolutions to the sulfolane groundwater contamination. We affirm the award of response costs to the State and Flint Hills for Williams’s sulfolane releases under AS 46.03.822.

***3. The superior court did not err by awarding damages for loss of access to groundwater due to sulfolane contamination.***

The superior court determined there was a “component of natural resources damage” from sulfolane “that [was] not addressed by the provision of alternative water supplies,” i.e., “loss of the right of the public to have access to uncontaminated groundwater.” The court noted that some people might prefer using well water, and it noted that if the sulfolane plume migrates—as is predicted—to areas beyond the piped water system, the impact might

create further burdens given the “inconveniences and limitations” of installing water filtration systems for well water in those areas. The court explained that, while in some instances it might not be strictly necessary for residents to use groundwater since they might have alternatives, Williams’s sulfolane releases had affected people’s access to groundwater due to pollution and this was an “uncompensated ‘adverse environmental effect’” per AS 46.03.760(a)(1) which was “deserving of reasonable compensation.” The court awarded \$2,533,125 to the State for Williams’s 75% responsibility for the groundwater-related damages.

Williams claims that awarding damages based on the public’s loss of “the option to choose” to access uncontaminated groundwater was error. Williams argues, first, that no such right to uncontaminated groundwater exists under state law and that the court based this right only on “its speculation that ‘[s]ome people may prefer well water,’” for which there was no evidence. Williams further argues that even if a right to access uncontaminated groundwater existed, it is held by the public; thus, the State is not harmed and cannot recover damages.

Williams is incorrect that the superior court based the existence of the right solely on residents’ potential subjective preference for groundwater. The court noted that preference but also considered other reasons why access to groundwater was important to the public. For instance, areas not served by the piped water system would have limited and costly means for access to clean water.

Williams is also incorrect that there is no basis in state law to award damages for the loss of access to groundwater. Liability for such contamination is explicitly laid out in AS 46.03.760. The statute provides that a person who violates the Act is liable to the State for damages in the

form of a civil assessment.<sup>79</sup> Even if there were no independent right of access to clean groundwater, the State could pursue damages for harm to this natural resource based on Williams's violations of the Act.

Furthermore, Williams's argument that the State cannot pursue legal action for harm to a right held by the public ignores the State's role as trustee of public trust resources. As we have explained, “[t]he public trust doctrine provides that the State holds certain resources (such as wildlife, minerals, and water rights) in trust for public use, ‘and that government owes a fiduciary duty to manage such resources for the common good of the public as beneficiary.’”<sup>80</sup> Alaska's Constitution provides that “[w]herever occurring in their natural state, . . . waters are reserved to the people for common use,”<sup>81</sup> articulating the

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<sup>79</sup> AS 46.03.760(a).

<sup>80</sup> *Kanuk ex rel. Kanuk v. State, Dep't of Nat. Res.*, 335 P.3d 1088, 1099-1100 (Alaska 2014) (quoting *Baxley v. State*, 958 P.2d 422, 434 (Alaska 1998)); *see also* AS 46.03.010 (articulating policy of environmental conservation statutes to “enhance the health, safety, and welfare of the people . . . and their overall economic and social wellbeing,” and to coordinate resource management “to the end that the state may fulfill its responsibility as trustee of the environment for the present and future generations”).

<sup>81</sup> Alaska Const. art. VIII, § 3. These rights are subject to appropriation and reservation rights. *Id.* at § 13. Alaska's Water Use Act, codified at AS 46.15.010-270, reiterates these provisions and regulates water appropriation and reservation. AS 46.15.030.

public trust doctrine for Alaska's waters.<sup>82</sup> "Waters" comprising the public trust are broadly defined.<sup>83</sup> Besides navigable waters, this includes "public water,"<sup>84</sup> which is defined as "all other water, whether inland or coastal, fresh or salt, that is reasonably suitable for public use and utility."<sup>85</sup> Thus, groundwater is a public trust resource over which the State serves as trustee.<sup>86</sup>

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<sup>82</sup> See *Kanuk*, 335 P.3d at 1099 ("We have frequently compared the state's duties as set forth in [a]rticle VIII to a trust-like relationship in which the state holds natural resources such as fish, wildlife, and water in 'trust' for the benefit of all Alaskans." (quoting *Brooks v. Wright*, 971 P.2d 1025, 1031 (Alaska 1999))). See also AS 46.03.010(b) ("It is the policy of the state . . . to develop and manage the basic resources of water, land, and air to the end that the state may fulfill its responsibility as trustee of the environment for the present and future generations.").

<sup>83</sup> *Owsichek v. State, Guide Licensing & Control Bd.*, 763 P.2d 488, 492 (Alaska 1988) ("A careful reading of the constitutional minutes establishes that the provisions in article VIII were intended to permit the broadest possible access to and use of state waters by the general public." (quoting *Wernberg v. State*, 516 P.2d 1191, 119899 (Alaska 1973))).

<sup>84</sup> See AS 38.05.126 (recognizing constitutional right of public access to navigable and public water).

<sup>85</sup> AS 38.05.965(21).

<sup>86</sup> Some other jurisdictions also recognize groundwater as a public trust resource, such as Hawai'i, *In re Water Use Permit Applications*, 9 P.3d 409, 445 (Haw. 2000), and Vermont, Vt. Stat. Ann. tit. 10, § 1390(5). But some jurisdictions have not extended the doctrine or have limited its applicability. See, e.g., *Env't L. Found. v. State Water Res. Control Bd.*, 237 Cal. Rptr. 3d 393, 402 (Cal. App. 2018) (holding public trust doctrine applicable to groundwater extraction only where such extraction impacts navigable waterways).

The trust relationship serves as a basis for the State's authority to manage the use of and access to trust resources for "beneficial uses or public purposes."<sup>87</sup> The public trust doctrine has been used to restrain governmental use of public resources,<sup>88</sup> but it also enables the State to recover damages from third parties for harm to trust resources.<sup>89</sup> To make a public trust claim, the government must show that a party caused unreasonable interference with the public's ability to enjoy a public trust resource.<sup>90</sup>

The superior court found that the public's ability to use and enjoy the groundwater was affected by sulfolane contamination. The court noted that "[c]lean water is critically important to the City" and "more than 7,000 people rely on the groundwater for domestic and commercial water needs." The public could no longer safely use the

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<sup>87</sup> *State, Dep't of Nat. Res. v. Alaska Riverways, Inc.*, 232 P.3d 1203, 1211-12 (Alaska 2010); *see also Brooks v. Wright*, 971 P.2d 1025, 1030 (Alaska 1999).

<sup>88</sup> *See Kanuk ex rel. Kanuk v. State, Dep't of Nat. Res.*, 335 P.3d 1088, 1102 (Alaska 2014) ("[O]ur past application of public trust principles has been as a restraint on the State's ability to restrict public access to public resources. . . .").

<sup>89</sup> *Owsichek v. State, Guide Licensing & Control Bd.*, 763 P.2d 488, 495 n.12 (Alaska 1988) (describing *In re Steuart Transp. Co.*, 495 F. Supp. 38, 40 (E.D.Va.1980) as illustrative of public trust basis for "federal and state governments to recover damages for migratory waterfowl killed in oil spill"); *see also* Allan Kanner, *The Public Trust Doctrine, Parens Patriae, and the Attorney General as the Guardian of the State's Natural Resources*, 16 DUKE ENV'T L. & POL'Y F. 57, 94 (2005) (citing case law from New Jersey, Maine, and Maryland to support claim that "[t]he right of a state to recover compensatory damages for the destruction of natural [resources] is well established").

<sup>90</sup> Kanner, *supra* note 90 at 59 (citing WILLIAM H. RODGERS, *HORNBOOK ON ENVIRONMENTAL LAW* 176 (1977 & Supp. 1984)).

groundwater for these needs because of the sulfolane contamination. Although the exact nature of the risk posed by sulfolane remains to be understood, there was extensive information in the record to support the superior court's conclusion that it presented a danger to public health and welfare. There was also sufficient evidence in the record that the contamination was caused by "unreasonable" conduct. Williams itself treated sulfolane as a hazardous substance and was aware of potential, if not yet established, environmental impacts. And at least by 1996, Williams was aware that sulfolane was entering the groundwater. Yet Williams used inappropriate wastewater treatment practices, such as directing sulfolane into the wastewater treatment system despite being warned by the sulfolane manufacturer not to do so and knowingly using corroded sumps and leaky wastewater lagoons. Williams unreasonably interfered with the public's use of groundwater resources, and the State could properly pursue damages for that interference.

Williams also argues that even if a right to uncontaminated groundwater exists, awarding damages for its violation would result in an unlawful double assessment of penalties. Williams points out that the superior court determined that imposing damages for the cost of restoring the aquifer to its original condition in addition to imposing damages for the cost of the piping system would be an "inappropriate double assessment of damages." Williams contends that it would therefore be irrational for the court to award both damages for the piping and damages to compensate the public for the loss of the option to choose well water as that, too, would be an inappropriate double assessment.

We disagree with Williams's characterization of the damages as a double assessment. The relevant statutes

provide for specific forms of recovery for violations of AS 46.03. Subsection .760(a) provides for civil assessments within a determined range to reflect “reasonable compensation in the nature of liquidated damages for *any adverse environmental effects* caused by the violation,” “reasonable costs incurred by the state in detection, investigation, and attempted correction of the violation,” and “economic savings realized by” the violator due to their noncompliance. (Emphasis added.) Section .780 allows costs for restoration following harm to natural resources, providing for damages in “an amount equal to the sum of money required to restock injured land or waters, to replenish a damaged or degraded resource, or to otherwise restore the environment of the state to its condition before the injury.”<sup>91</sup>

The superior court explained that the piped water system “substantially replaced the damaged aquifer” in “an economic usage sense,” and for this reason awarding the cost of restoring the aquifer in addition to the cost of the piping would be a double recovery. The court also determined that awarding restoration costs twice, under both subsection .760(d) and subsection .780(b), would be duplicative because these were the same categories of loss.

However, the superior court found that the public’s loss of its ability to access uncontaminated groundwater was an independent harm that was not addressed by providing alternate water supplies. We agree. The superior court explained that the loss of access is an independent harm: the plume might migrate further to areas that do not have piping and, consequently, alternatives would be inconvenient and limited. New construction or uses—including subsistence uses like growing food—within the

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<sup>91</sup> AS 46.03.780(b).

existing plume but outside the piping area will be affected by the limited alternative ways to obtain clean water. Furthermore, the damages awarded for loss of groundwater were neither restoration damages covered by section .780 nor a cost expended by the State in “attempted correction of the violation”<sup>92</sup> under subsections .760(a)(2) or .760(d); rather, the groundwater damages were compensation for a *distinct* “adverse environmental effect[]” provided for in subsection .760(a)(1). Awarding damages based on the loss of groundwater access was not duplicative or unfounded, and the superior court did not abuse its discretion by awarding compensation for this loss.

Williams raises a third challenge to the superior court’s award under section .760. Williams contends that, even if a groundwater access right exists, it could only be compensated as natural resource damages under section .780. Williams does not explain why section .760 would not apply. The language in subsection .760(a)(1) allowing compensation for “any adverse environmental effects” is broad and allows for recovery related to the groundwater access issue.

Williams further claims that AS 46.03.760(a)(1) “requires a specific finding on the ‘degree to which [Williams’s releases of sulfolane] degraded the *existing* environmental quality.’”<sup>93</sup> Williams contends that the superior court did not, and could not, make such a finding. We have not had occasion to interpret whether this subsection requires such a finding, or whether it is only one of many

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<sup>92</sup> See AS 46.03.760(a)(2); see also AS 46.03.760(d) (detailing responsible party’s liability for state’s costs “associated with the abatement, containment, or removal of the pollutant” and “restoration of the environment”).

<sup>93</sup> Quoting AS 46.03.760(a)(1).

possible factors a court may consider “when applicable.”<sup>94</sup> But it is unnecessary to decide because the extent of degradation in this case was established: previously potable water had been determined to be unusable for drinking and related purposes throughout the three-and-a-half-mile long—and spreading—plume.

It is unclear why Williams claims the court “could not” have made a finding on the degree of degradation. Even if true, that argument is unpersuasive because Williams fails to understand the purpose of liquidated damages in redressing environmental violations. As the superior court explained, liquidated damages may be used when the measure of actual damages is uncertain.<sup>95</sup> The uncertainty often inherent in determining the environmental impacts of pollution is, in part, a reason that liquidated damages were made available by the legislature. It would be nonsensical in this statutory context to preclude an award of liquidated damages due to uncertainty as to the *exact* degree of degradation. The civil assessment statute

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<sup>94</sup> The statute provides that the sum to be assessed for a violation shall reflect, when applicable,

(1) reasonable compensation in the nature of liquidated damages for any adverse environmental effects caused by the violation, which shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality. . . .

AS 46.03.760(a).

<sup>95</sup> See *Henash v. Ipalook*, 985 P.2d 442, 447 (Alaska 1999) (discussing various roles for liquidated damages, including as penalty to assist in deterrence or as compensation for damages that are “too obscure and difficult of proof” (quoting *Overnight Motor Transp. Co. v. Mis-sel*, 316 U.S. 572, 583-84 (1942))).

provides for liquidated damages within a predetermined range, limited by a ceiling established by the legislature, to enable an award for damages that are uncertain and difficult to value. The court's choice of damages within that range was guided by factors listed in the statute and does not reflect an abuse of discretion.

Williams adds that there can be no finding that sulfolane "contaminated" the aquifer because 18 AAC 75.990(22) defines "contaminated groundwater" as water "containing a concentration of a hazardous substance that exceeds the applicable cleanup level." It claims that because no such cleanup level has been set, there is no "contamination" of the groundwater and instead the State was given a "free pass to recover without an objective standard." This argument is unpersuasive. As discussed, 18 AAC 75 regulates and facilitates site cleanup. It does not purport to define or set out the measures for all potential damages available under the environmental conservation statutes. Thus, applying a definition of "groundwater contamination" drawn from these cleanup regulations is largely irrelevant to determine whether the aquifer was contaminated in violation of a provision of AS 46.03. The superior court correctly said as much in its orders. Second, the provisions that *are* related to cost recovery in 18 AAC 75.910 were promulgated pursuant to AS 46.03.760(d) and AS 46.03.822 (as well as other statutes not relevant here). To the extent that definitions from the administrative regulations apply to damages assessments in AS 46.03, they would apply only to the calculation of "actual damages caused to the state by the violation" associated with remediation and restoration under AS 46.03.760(d), rather than to liquidated damages for "any adverse environmental effects caused by the violation"

under subsection .760(a)(1).<sup>96</sup> Williams acknowledges as much, stating that “18 AAC 75.910 expressly covers claims under 46.03.760(d).”

As a final challenge to the access-to-groundwater damages award under section .760, Williams argues that the assessment of liquidated damages against it, covering the eighteen and a half years that Williams operated the refinery, is punitive rather than “compensatory and remedial in nature” as required by the civil assessments statute.<sup>97</sup> Williams claims that punitive damages are not permitted and that it “lawfully” used sulfolane because “DEC allowed Williams to leave it in the ground . . . and never once told Williams it was violating the law by doing so.” We are not persuaded. When Williams reported it had detected sulfolane in the refinery groundwater, DEC experts expressed uncertainty and some concern about the substance, for which there was a paucity of toxicity information. DEC admitted its lack of information and advised Williams to monitor its releases while DEC investigated the hazardous nature of sulfolane. These actions are not equivalent to *permitting* sulfolane releases. Moreover, as the State correctly argues, Williams’s use of sulfolane may have been allowed, but its releases into the soil and water were not; such releases would have required a permit that Williams did not obtain.<sup>98</sup>

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<sup>96</sup> And as the State points out, subsection .760(a) “does not even use the word ‘contamination,’” and instead uses the term “adverse environmental effect.”

<sup>97</sup> AS 46.03.760(b).

<sup>98</sup> The superior court concluded likewise in an order denying summary judgment to both Williams and the State for various claims: “[U]npermitted’ means without ‘the authority of a valid permit issued by the department or by the Environmental Protection Agency.’

We note that CERCLA’s regulatory scheme and analogous state statutes such as AS 46.03.822 impose strict liability, even retroactively, and are constructed so that polluters—not the public—bear the risk of uncertainty that the substances they use or dispose of may later be considered hazardous and subject polluters to liability.<sup>99</sup> Holding businesses liable for pollution caused by activities from which they profited is not punitive, but is rather a compensatory remedy to spread costs among responsible parties so they are not borne solely by the public. For these reasons, it is not punitive to assess damages over the entire period of Williams’s refinery operations in North Pole.

In sum, the superior court did not err by assessing damages under subsection .760(a) for the adverse effect of sulfolane pollution on groundwater and its impact on the public’s ability to access the groundwater for consumption. The superior court also properly interpreted the scope of damages permitted by sections .760 and .780, made the requisite factual findings without clear error,

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Because [Williams] has conceded that it did not have a permit issued by the DEC or EPA to release sulfolane, its release of that substance was unpermitted.” And testimony at trial demonstrates that Williams’s employees knew they did not have the requisite permits to release sulfolane. *See* AS 46.08.900 (defining “release” and “permitted release”).

<sup>99</sup> See *United States v. Ne. Pharm. & Chem. Co.*, 810 F.2d 726, 732 (8th Cir. 1986) (finding CERCLA applies retroactively); *Kodiak Island Borough v. Exxon Corp.*, 991 P.2d 757, 762 (Alaska 1999) (finding section .822 analogous to CERCLA in imposing retroactive liability); *see also Burlington N. & Santa Fe Ry. Co. v. United States*, 556 U.S. 599, 622 (2009) (Ginsburg, J., dissenting) (discussing CERCLA’s polluter pays principle).

and properly exercised its discretion when determining awards that were neither duplicative nor punitive.

**4. *It was error to issue injunctive relief by reference to supporting documents, but the superior court did not err by granting declaratory relief.***

The superior court awarded injunctive and declaratory relief to the State and Flint Hills under AS 46.03.765 for PFAS-related claims.<sup>100</sup> The court found “PFOS and PFOA are hazardous substances” under AS 46.03.822 and are “[t]he compounds encompassed by the acronym PFAS.” The court also found that no evidence was presented at trial that “PFAS-related products were used or PFAS releases occurred during Flint Hills’[s] tenure at the [refinery].” It therefore declared Flint Hills was not a responsible party under section .822 for onsite PFAS contamination at the refinery. The superior court concluded in paragraph 3(a) of the judgment that Williams was “strictly, jointly, and severally liable for sulfolane, [and] PFAS . . . releases, including liability for the State’s future

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<sup>100</sup> AS 46.03.765 affords the court “jurisdiction to enjoin a violation of this chapter . . . or of a regulation, a lawful order of the department, or permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under this chapter.”

Williams also argues that the superior court erred when it chose not to refer onsite PFAS claims to DEC under the doctrine of primary jurisdiction. When the superior court properly has jurisdiction, its decision to refer an issue to an executive agency is plainly within its discretion and is informed by factors such as judicial economy and administrative expertise. *See Seybert v. Alsworth*, 367 P.3d 32, 39 (Alaska 2016). The superior court did not abuse its discretion, especially in light of years of pretrial litigation of this issue and DEC’s determination that Williams was responsible for PFAS and other hazardous substance contamination during its tenure. Referral would not have served the purposes of the primary jurisdiction doctrine.

response costs.” It therefore declared in paragraph 3(b) that the State could recover 75% of its future costs related to the piped water system. In paragraph 3(d) of the judgment, the court further ordered Williams to “perform and pay for remediation and cleanup efforts as directed by DEC with respect to sulfolane groundwater contamination beyond the . . . Refinery property and with respect to PFAS contamination at the Refinery property.” And under paragraph 3(e), the superior court ordered Williams to

- i. perform monitoring and reporting of sulfolane groundwater contamination beyond the . . . Refinery property boundary required under [DEC] approved plans;
- ii. address PFAS soil and groundwater contamination at the Refinery property in accordance with DEC requirements, including characterization, monitoring, reporting, containment, and cleanup; [and]
- iii. otherwise comply with DEC’s site cleanup rules, including 18 AAC 75 and other applicable state laws, for sulfolane contamination beyond the Refinery property and PFAS contamination at the Refinery property.

Additionally, the court ordered Williams to “indemnify, defend, hold harmless, and reimburse Flint Hills for 100% of all future costs, expenses, claims, and damages incurred related to [onsite] PFAS contamination.”

#### **a. Challenges to the injunctive relief**

Williams argues that awarding injunctive relief to the State was improper because the State “failed to put on ev-

idence that irreparable injury would result absent injunctive relief.” While we have recognized that irreparable harm and inadequate remedies at law are required elements for common law injunctive relief,<sup>101</sup> the State argues that AS 46.03.765 grants the court “jurisdiction to enjoin a violation” of Title 46, Chapter 3, negating the need for the State to show either element.<sup>102</sup> In its reply, Williams argues that AS 46.03.765 permits only “temporary or preliminary relief” and is meant to provide DEC “with a tool to stop a polluter from continuing to release contaminants until final relief may be obtained.” But the statute does not prohibit permanent injunctions; it merely provides additional requirements for temporary or preliminary relief due to the reduced opportunity for due process in such situations,<sup>103</sup> further indicating that permanent injunctions—which do not entail those same due process concerns—are permitted. And even those additional requirements for temporary or preliminary relief fall

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<sup>101</sup> *Lee v. Konrad*, 337 P.3d 510, 517 (Alaska 2014) (“Equitable injunctive relief is an extraordinary remedy that is appropriate only where the party requesting relief is likely to suffer irreparable injury and lacks an adequate remedy at law.”).

<sup>102</sup> See *LeDoux v. Kodiak Island Borough*, 827 P.2d 1121, 1123 (Alaska 1992) (“Where a statute specifically authorizes injunctive relief, the plaintiff need not show either irreparable injury or lack of an adequate remedy at law.” (quoting *Carroll v. El Dorado Ests. Div. No. 2 Ass’n, Inc.*, 680 P.2d 1158, 1160 (Alaska 1984))).

<sup>103</sup> See AS 46.03.765 (“In actions brought under this section, temporary or preliminary relief may be obtained upon a showing of an imminent threat of continued violation, and probable success on the merits, without the necessity of demonstrating physical irreparable harm.”).

short of requiring irreparable harm.<sup>104</sup> Williams's arguments that the injunction should be vacated for failing to meet necessary elements are therefore unpersuasive.

Williams next argues that paragraphs 3(d) and 3(e) of the court's final judgment violate Alaska Civil Rule 65(d) for being too "vague" and "open-ended." Civil Rule 65(d) provides in relevant part that "[e]very order granting an injunction . . . shall set forth the reasons for its issuance; shall be specific in terms; [and] shall describe in reasonable detail, and not by reference to the complaint or other document, the act or acts sought to be restrained." First, Williams argues paragraph 3(d) of the judgment is impermissibly vague because: (1) "it identifies no 'remediation and cleanup efforts' that Williams must undertake and the Judgment refers to documents that did not yet exist"; (2) "the injunction's geographic scope to remedy and clean up sulfolane is apparently limitless"; and (3) "there is no time limit on Williams'[s] obligations, which exposes Williams to liability for future costs to remedy releases to which it played no part." Williams challenges paragraph 3(e) of the injunction for similar reasons: it "broadly purports to make Williams responsible *forever* for sulfolane contamination 'beyond the Refinery property,'" and "incorporates all 'applicable' Alaska laws, without further guidance or specificity" leaving Williams unable to determine exactly what conduct is required.<sup>105</sup>

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<sup>104</sup> See *id.*

<sup>105</sup> See *Hughey v. JMS Dev. Corp.*, 78 F.3d 1523, 1531 (11th Cir. 1996) (explaining Federal Rule of Civil Procedure 65 regarding injunctions "serves to protect those who are enjoined" by ensuring "an ordinary person . . . should be able to ascertain from the document itself exactly what conduct is proscribed" (quoting 11A CHARLES ALAN WRIGHT, ARTHUR R. MILLER & MARY KAY KANE, FEDERAL

The State argues that the order satisfies Civil Rule 65(d)'s specificity requirements by drawing comparisons to an Idaho federal district court opinion—*Idaho Conservation League v. Atlanta Gold Corp.*<sup>106</sup> The State argues that, similar to *Idaho Conservation League*, the court properly ordered Williams “into compliance . . . without directing every step . . . because the duration of the contamination is indefinite and Williams'[s] violations are longstanding and serious.”<sup>107</sup> The State next argues that the “site clean-up rules—which the judgment refers to—are specific enough to put Williams on notice of what it must do,”<sup>108</sup> a fact demonstrated after the judgment when “Williams managed to twice submit—and gain approval of—monitoring and characterization plans.” Third, the State argues that the cases upon which Williams relies in

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PRACTICE AND PROCEDURE § 2955 (1995)); *see also* Fed. R. Civ. P. 65(d) (“Every order granting an injunction and every restraining order must: (A) state the reasons why it issued; (B) state its terms specifically; and (C) describe in reasonable detail—and not by referring to the complaint or other document—the act or acts restrained or required.”).

Williams does not specifically challenge paragraph 3(e)(ii) of the judgment. To the extent paragraph 3(e)(ii) is distinct from paragraph 3(d)—both require PFAS cleanup but the latter requires PFAS “characterization, monitoring, reporting [and] containment” at the refinery—we consider any argument against it insufficiently briefed and therefore waived.

<sup>106</sup> 879 F. Supp. 2d 1148 (D. Idaho 2012) (upholding as proper under Federal Rule of Civil Procedure 65(d) trial court’s injunction directing defendants to comply with existing Clean Water Act permits without more specificity because parties, not court, are better placed to determine exact method of compliance).

<sup>107</sup> *Cf. id.* at 1164.

<sup>108</sup> *See* 18 AAC 75.325-.390 (describing in detail site cleanup rules and site characterization plans).

labelling the injunction as an “obey the law” injunction are distinguishable. Finally, the State disregards Williams’s concerns over the injunction’s geographically and temporally unlimited reach because the sulfolane plume is similarly unlimited. Williams replies that the State fails to show that “the injunction meets Rule 65(d)’s specificity requirements” and that the distinctions between the cases Williams cites and the facts at issue are immaterial.

We agree that the injunctive relief did not satisfy Civil Rule 65(d)’s specificity requirements. Rule 65(d) requires that injunctions “describe in reasonable detail, and not by reference to the complaint or other document, the act or acts sought to be restrained.” The paragraphs of the judgment that Williams challenges—paragraphs 3(d), 3(e)(i), and 3(e)(iii)—do not describe on their own, with reasonable specificity, the remediation and cleanup efforts Williams will need to undertake. The court’s accompanying Memorandum of Decision includes more specificity, but the parties do not discuss whether it is specific enough to satisfy Rule 65(d) or whether mere reference to the Memorandum of Decision satisfies Rule 65(d). We remand the judgment for injunctive relief for more clarity and to explicitly incorporate—not by reference—the language from the Memorandum of Decision, statutes, administrative code, and other documents to which the superior court refers.

#### **b. Challenges to the declaratory relief**

Williams next challenges the superior court’s declaratory orders on PFAS at paragraph 3(a) of the court’s final judgment. Williams argues that the court improperly declared Williams liable for PFAS generally when only PFOS and PFOA were ever mentioned at trial; that “the

State and Flint Hills only presented evidence that Williams used a product that included PFOS,” and that Flint Hills should shoulder some of the blame for PFAS.<sup>109</sup>

As Williams acknowledges, “‘PFAS’ is not a single substance, but an umbrella term referring to a diverse category of man-made chemicals,” including PFOS, PFOA, and more.<sup>110</sup> At trial, Williams representative Randy Newcomer testified that between 1991 and 2000 Williams used only one company’s brand of aqueous foams in its fire response practices, and he agreed that the foams contained “perfluoroalkyl substances” including—but not necessarily limited to—PFOS. Dr. Wu also testified that the company’s foams marketed and sold during that time

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<sup>109</sup> As it did with respect to the injunctive relief discussed above, Williams argues that the declaratory relief for PFAS improperly extends into the future. Because the court’s order holds Williams liable for future costs related to the PFAS it released prior to the trial date, this portion of the court-awarded relief is sufficiently specific and does not improperly extend into the future.

Williams also argues that the “declaratory relief in favor of Flint Hills already was rejected because Flint Hills had an adequate remedy at law.” For support, Williams cites a 2017 pretrial order dismissing Flint Hills’s “claims for declaratory judgment and specific performance” against Williams as barred by res judicata in light of *Flint Hills I*, 377 P.3d 959 (Alaska 2016). But the declaratory relief sought in *Flint Hills I* concerned sulfolane rather than PFAS, did not involve State claims, and was dependent on the availability of other legal remedies. *Id.* at 973-74. Williams does not explain how these important differences would justify barring declaratory relief based on res judicata and we see no reversible error on this issue. *See Patterson v. Infinity Ins. Co.*, 303 P.3d 493, 497 (Alaska 2013) (“A judgment is given res judicata effect by this court when it is (1) a final judgment on the merits, (2) from a court of competent jurisdiction, (3) in a dispute between the same parties (or their privies) about the same cause of action.” (quoting *Angleton v. Cox*, 238 P.3d 610, 614 (Alaska 2010))).

<sup>110</sup> *See supra* note 1 (defining PFAS).

listed “organic fluorochemicals” as an ingredient, another phrase for the “PFAS class of compounds,” including “PFOS and PFOA.” In addition, Williams admitted that “releases of . . . perfluorochemicals occurred” during its tenure at the refinery. There was also contemporary evidence of PFAS contamination more broadly, not just PFOS, in the soil and groundwater at the refinery. Though Williams points to evidence suggesting that Flint Hills *could* have used PFAS during its tenure at the refinery, Williams fails to identify any evidence that Flint Hills actually did use PFAS-containing products.<sup>111</sup>

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<sup>111</sup> Williams does not raise the argument that Flint Hills should be liable under AS 46.03.822 for PFAS contamination due to its status as current owner of the facility from where PFAS was released. *See* AS 46.03.822(a)(2), .826(9) (assigning liability to owner of facility from which hazardous substance is released and defining “release” broadly such that PFAS “leaching” from the refinery could fall within definition); *see also* AS 46.03.822(c) (maintaining liability for refinery owners that purchased property with knowledge of earlier releases of hazardous substance).

On appeal, Williams points to several sections of the record purporting to show that “Flint Hills used substantial amounts of ‘PFAS’ in fire-training exercises and ‘hot work’ at the refinery.” Some of that “evidence” consists of Williams’s own proposed findings of fact and testimony from some of its own witnesses speculating about the source of PFAS detections that occurred “upgradient” (i.e., in the opposite direction of water seepage) of firefighting areas. Williams also cites a 2018 DEC report detailing PFAS sampling at the refinery that indicates Flint Hills purchased firefighting foams, but not that those foams contained PFAS. Williams additionally points us to a lengthy 2013 environmental report without explaining its relevance, but that report was excluded from trial on hearsay grounds and in any event, it suggests Flint Hills purchased foams without PFOS or PFOA.

To the extent there may have been evidence tying Flint Hills to PFAS contamination at the refinery, we consider the argument waived for insufficient briefing and failure to cite relevant evidence in

Because the record shows that Williams released PFAS during its tenure, the burden was on Williams to prove that it did not use particular PFAS chemicals or to establish that another entity was also liable.<sup>112</sup> The superior court did not err when it declared that no evidence was presented demonstrating Flint Hills used PFAS during its time at the refinery, and that Flint Hills was not a responsible party under AS 46.03.822 for PFAS contamination.

**5. *Williams's right to due process was not violated.***

Williams argues that DEC's enforcement action and the superior court's finding of liability under section .822 and subsection .826(5)(a) violated the Due Process Clause of the U.S. Constitution<sup>113</sup> and article I, section 7 of the Alaska Constitution<sup>114</sup> because Williams did not have "fair notice" that its conduct was prohibited.

Williams implies that the hazardous substance statutes and regulations are too vague to make it clear

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the record. *See Casciola v. F.S. Air Service, Inc.*, 120 P.3d 1059, 1062-63 (Alaska 2005); Alaska R. App. P. 212(c)(1)(H).

<sup>112</sup> See AS 46.03.822; *Oakley Enters., LLC v. NPI, LLC*, 354 P.3d 1073, 107980 (Alaska 2015) ("The burden of proof is on the party seeking to avoid joint and several liability . . . ."). Williams had access to the list of PFAS present in the soil and groundwater at the refinery, and does not identify any place in the record where it challenged or otherwise indicated it would challenge its liability for specific PFAS.

<sup>113</sup> "No person shall be . . . deprived of life, liberty, or property, without due process of law." U.S. Const. amend. V.

<sup>114</sup> "No person shall be deprived of life, liberty, or property, without due process of law. The right of all persons to fair and just treatment in the course of legislative and executive investigations shall not be infringed." Alaska Const. art. I, § 7.

whether sulfolane fell within the definition and whether Williams could be liable for its release. Williams claims it relied on agency statements to understand its responsibility. Williams specifically contends that “DEC told Williams that sulfolane was not a hazardous substance and not regulated” and that DEC actually “allowed sulfolane to stay in the ground.” As a result it claims that “DEC’s actions and communications gave Williams no notice that its conduct created a substantial risk of actual harm.” Williams also claims that the superior court’s “eve-of-trial interpretation” of the terms “hazardous substance” and “imminent and substantial danger” violated the principles of fair notice because they were a “reversal” of DEC’s initial position and a prior superior court decision in the case.

Due process requires that a party be given fair notice before it can be subjected to liability,<sup>115</sup> at least with regard to “criminal or serious civil penalties.”<sup>116</sup> Williams’s potential multi-million dollar liability and remediation duties qualify as “serious civil penalties.”<sup>117</sup> Whether the constitutional requirements of due process were met is a legal

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<sup>115</sup> See *State, Dep’t of Revenue v. Nabors Int’l Fin., Inc.*, 514 P.3d 893, 899 (Alaska 2022) (explaining that lack of fair notice, such as through statutory vagueness, “violates the first essential of due process of law” (quoting *Halliburton Energy Servs. v. State, Dep’t of Lab., Div. of Lab. Standards & Safety, Occupational Safety & Health Section*, 2 P.3d 41, 51 (Alaska 2000))).

<sup>116</sup> *VECO Int’l, Inc. v. Alaska Pub. Offs. Comm’n*, 753 P.2d 703, 714 (Alaska 1988).

<sup>117</sup> See *id.* at 706 (civil penalty of \$72,600 imposed for alleged violations of Alaska Campaign Disclosure Act considered “serious civil penalty”). The State argues that this case does not require fair notice because the hazardous substance statute operates remedially to im-

question that we review *de novo*,<sup>118</sup> but factual determinations such as those regarding the meaning of DEC's communications are reviewed for clear error.<sup>119</sup>

Fair notice is a principle of "basic fairness" which requires that "a statute . . . give adequate notice to the ordinary citizen of what is prohibited."<sup>120</sup> In other words, a statute must not be so vague that people cannot know what they must do or are prohibited from doing. We have explained that even if a statute might in some contexts be too vague to give adequate notice, it "may still pass muster if: (a) there can be no question as to its applicability to the particular offense involved, and (b) a construction may be placed upon the statute so that in the future the type of

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pose "compensatory liability" rather than "civil or criminal *punishment*." We agree that sections .760, .780, and .822 are not intended to "punish" but rather to compensate for environmental damage. *See* AS 46.03.760(b) (requiring that civil assessments be "compensatory and remedial in nature" rather than punitive). But a "penalty" can be narrowly or broadly defined. *See Penalty*, BLACK'S LAW DICTIONARY (11th ed. 2019) (first describing a penalty as "[p]unishment imposed . . . for either a wrong to the state or a civil wrong (as distinguished from compensation for the injured party's loss)" but then broadly defining civil penalty as "fine assessed for a violation of a statute or regulation"). We assume without deciding that the large statutory assessments awarded against Williams may be considered "penalties" to which fair notice requirements apply.

<sup>118</sup> *See Nabors Int'l Fin., Inc.*, 514 P.3d at 898.

<sup>119</sup> *Burton v. Fountainhead Dev., Inc.*, 393 P.3d 387, 392 (Alaska 2017).

<sup>120</sup> *Stock v. State*, 526 P.2d 3, 8 (Alaska 1974); *see also F.C.C. v. Fox Television Stations, Inc.*, 567 U.S. 239, 253 (2012) ("A fundamental principle in our legal system is that laws which regulate persons or entities must give fair notice of conduct that is forbidden or required.").

offenses coming within its purview may reasonably be understood.”<sup>121</sup> The regulation of economic activity—such as through antipollution statutes—typically survives a vagueness challenge as long as there is “legislative language which is not so conflicting and confused that it cannot be given meaning in the adjudication process.”<sup>122</sup>

In *Stock v. State* we analyzed whether the broad antipollution provision in AS 46.03.710 was void for vagueness.<sup>123</sup> Section .710 states that “[a] person may not pollute or add to the pollution of the air, land, subsurface land, or water of the state.” “Pollution” in turn is defined as

the contamination or altering of waters, land or subsurface land of the state in a manner which creates a nuisance or makes waters, land or subsurface land unclean, or noxious, or impure, or unfit so that they are actually or potentially harmful or detrimental or injurious to public health, safety or welfare, to domestic, commercial, industrial, or recreational use, or to livestock, wild animals, bird, fish, or other aquatic life.[<sup>124</sup>]

We acknowledged there might be borderline or *de minimis* cases when the application of the statute might be unclear, but we refused to analyze the statute in so ab-

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<sup>121</sup> *Stock*, 526 P.2d at 8 (internal citations omitted).

<sup>122</sup> *Lazy Mountain Land Club v. Matanuska-Susitna Borough Bd. of Adjustment & Appeals*, 904 P.2d 373, 383 (Alaska 1995) (quoting *Williams v. State, Dep’t of Revenue*, 895 P.2d 99, 105 (Alaska 1995)); *see also id.* (explaining civil penalties and economic regulation are “subject to a less strict vagueness test” than, for instance, speech (quoting *Vill. of Hoffman Ests. v. Flipside, Hoffman Ests., Inc.*, 455 U.S. 489, 498-99 (1982))).

<sup>123</sup> 526 P.2d at 7-13.

<sup>124</sup> AS 46.03.900(20) (formerly AS 46.03.900(15)).

stract a manner to determine if it was void for vagueness.<sup>125</sup> Instead, we looked specifically at the act for which Stock was convicted: discharging raw sewage into a stream running through residential areas.<sup>126</sup> This act obviously fell within the statutory definition of “pollution”; even Stock’s counsel admitted that a reasonable person would know this.<sup>127</sup> We acknowledged that the term “potentially harmful” in the definition of “pollution” might be vague enough to require a narrowing construction, and we added an element requiring foreseeability which would be used in future applications.<sup>128</sup> But we affirmed the superior court’s finding that Stock had violated the provision because Stock’s conduct so clearly fell within the “hard core” of prohibited conduct.<sup>129</sup> Additionally, we explained that the need for environmental protection, the increasing number of laws and regulations governing disposal of substances used during commercial activity, and the need for the legislature to make broad statutes to balance economic growth with environmental protection all supported our conclusion that the antipollution provisions at issue were not unconstitutionally vague on their face and

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<sup>125</sup> *Stock*, 526 P.2d at 9-10 (“Courts have often recognized that the possibility of difficult or borderline cases will not invalidate a statute where there is a hard core of cases to which the ordinary person would doubtlessly know the statute unquestionably applies.”).

<sup>126</sup> *Id.* at 10.

<sup>127</sup> *Id.* at 9-11.

<sup>128</sup> *Id.* at 9-10. We determined that “the statute prohibits acts which a reasonable person would foresee as creating a substantial risk of making water actually injurious to the statutorily protected interests.” *Id.* at 10.

<sup>129</sup> *Id.* at 9-10.

that Stock was clearly on notice that discharging raw sewage into waterways was improper.<sup>130</sup>

In Williams's case, it is possible that the hazardous substance provisions of section .822 and the statutory definition of hazardous substances in subsection .826(5) could be vague in some instances. But the superior court's findings about sulfolane lead us to conclude sulfolane falls within the "hard core" of the definition of hazardous substance. And Williams itself treated sulfolane as hazardous. Furthermore, Williams may have been allowed to use sulfolane, but it knew that it was not permitted to simply dispose of the substance in any manner it wished. These facts indicate that Williams was on notice of the potential for liability under a gamut of antipollution statutes, including those related to hazardous substances. We conclude that the statute is not so impermissibly vague that it violates Williams's right to due process.

We also disagree that DEC's communications or actions prior to litigation resulted in a lack of fair notice to Williams.<sup>131</sup> DEC's failure to pursue an enforcement

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<sup>130</sup> *Id.* at 12-13.

<sup>131</sup> The superior court rejected this argument in Williams's cross-motion for summary judgment because it determined that fair notice would be required only when an agency "depart[ed] from its long-established regulations or adjudications." But fair notice requirements apply even when there have not been regulations or adjudications on point. The U.S. Supreme Court has recognized that while agencies have enforcement discretion and interpretive latitude, if the statutory interpretations are unreasonable or if the conspicuous inaction appears to be for no reason other than acquiescence, "the potential for unfair surprise is acute." *Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 158 (2012). Agency actions beyond regulations and adjudications serve to inform regulated entities and therefore are relevant to the fair notice inquiry. However, as we discuss below, DEC did not cause Williams unfair surprise.

action with regard to sulfolane was not “acquiescence”<sup>132</sup> to or approval of Williams’s conduct. In its communications with Williams, DEC acknowledged that sulfolane was not then regulated as a hazardous substance because very little was known about it and there was a “lack of EPA reviewed toxicity data,” and DEC said it first needed to gather more information regarding sulfolane and the pollution issuing from the refinery. It required Williams to conduct further monitoring and stated that it would follow up with further clarification or action. Though Williams claims DEC’s communications constituted “written determinations” that sulfolane did not pose a hazard, DEC communicated that sulfolane was not *regulated* at the time, not that it had ultimately concluded it was not hazardous. We conclude the superior court did not clearly err when it found DEC had not promulgated prior interpretations about sulfolane in legal briefs, regulations, or adjudications that Williams might have relied on to claim sulfolane was not hazardous.<sup>133</sup>

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<sup>132</sup> See *id.* (recognizing many reasons for agency lack of enforcement and finding lack of fair notice where only possible reason was acquiescence).

<sup>133</sup> The cases Williams cites as support for its argument are distinguishable on several grounds, including their stricter CERCLA context that requires the listing of substances EPA deems hazardous (whereas AS 46.03.822 does not), and their conclusions that notice was lacking only when the court found the statute ambiguous and official agency interpretations or guidance were conflicting. See *Massachusetts v. Blackstone Valley Elec. Co.*, 67 F.3d 981, 988, 993 (1st Cir. 1995) (denying, as violation of fair notice, summary judgment to EPA in enforcement action based on EPA’s categorization of ferric ferrocyanide as “cyanide” under CERCLA, because unclear if regulatory background indicated it should be so categorized and because EPA took inconsistent official positions on categorization); *Rollins Env’t Servs. (NJ) Inc. v. U.S. E.P.A.*, 937 F.2d 649, 654 (D.C. Cir. 1991)

Agencies are free to create and change policies for matters within their purview, as DEC did when it decided to regulate sulfolane and treat Williams as a responsible party. An agency should indicate that it is changing its position and demonstrate good reasons for such a change, but it does not need to “provide detailed justifications for every change” and it is not the court’s role to ask whether the chosen policy is better or best—only whether it conforms to reason.<sup>134</sup> Based on the evidence presented at trial, the superior court concluded that DEC reasonably determined sulfolane to be a “hazardous substance” and that unpermitted disposal was a violation of the antipollution provisions of Title 46, Chapter 3. We see no error with that conclusion.

Williams also argues that the superior court’s own rulings deprived it of due process because the court promulgated an “eve-of-trial interpretation of ‘hazardous substance’” and “imminent and substantial danger” under section .822 and subsection .826(5) that contradicted “both the DEC position on sulfolane during 2001-2003 . . . and the intervening decision of the same court.” Williams does not cite case law to support its claim, does not specify exactly how the superior court acted unlawfully, and does not indicate how it was prejudiced. We consider arguments that are given cursory treatment without any support to be waived.<sup>135</sup> And we do not see how the superior

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(concluding it would violate requirements of fair notice to impose penalty on company because statute was ambiguous and EPA gave conflicting advice to private parties about how to comply with statute).

<sup>134</sup> *F.C.C. v. Fox Television Stations, Inc.*, 567 U.S. 239, 250 (2012).

<sup>135</sup> See *Hagen v. Strobel*, 353 P.3d 799, 805 (Alaska 2015). Furthermore, “eve-of-trial” is a misleading portrayal of the court’s actions.

court carrying out its obligation to interpret the relevant statute—issuing rulings on a matter of law that was consistently contested throughout the proceedings—could have worked unfair surprise on Williams or violated its right to fair notice.<sup>136</sup>

**6. *Imposing civil liability for past releases was not an unconstitutional taking.***

Williams argues that the superior court’s interpretation of AS 46.03.826(5)(A) is an unconstitutional regulatory or judicial taking under the U.S. and Alaska Constitutions.<sup>137</sup> Williams argues the judgment imposes severe, unforeseeable retroactive liability, which it could not have anticipated because the superior court’s interpretation of the relevant statutes was a “change in law.” Because this imposition of liability is linked to an identified property interest and it was accomplished for a public purpose, Williams argues it constitutes a compensable taking.

Williams’s argument fails because it continuously characterizes the superior court’s interpretation as a “change in the law,” when it is not. Williams merely dis-

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The court informed the parties eleven days before trial and approximately five weeks before the close of trial how it planned to interpret the statute. Trial courts are under no obligation to issue such memoranda about tentative interpretations of the law ahead of trial, and doing so could only have assisted Williams in preparing its case.

<sup>136</sup> See *Christopher*, 567 U.S. at 161 (explaining court’s role in conducting statutory interpretation when agency adopts interpretation of statute that does not deserve deference).

<sup>137</sup> “[N]or shall private property be taken for public use, without just compensation.” U.S. Const. amend. V. “Private property shall not be taken or damaged for public use without just compensation.” Alaska Const. art. I, § 18.

grees with the interpretation and the factual basis for concluding sulfolane is hazardous. Similarly, Williams mischaracterizes DEC's communications as having previously "expressly advised Williams that sulfolane was not a concern" but now determining it to be a hazardous substance. As discussed above, the superior court made factual findings that DEC never expressly authorized the releases, and these findings are not clearly erroneous.<sup>138</sup> Finally we note that Williams's irresponsible waste management and sulfolane releases are not conduct linked to "reasonable investment-backed expectations" that takings jurisprudence seeks to protect.<sup>139</sup>

#### **B. Flint Hills's Contractual Indemnification and Statutory Contribution Claims Against Williams**

Flint Hills sought indemnification from Williams under the terms of the Purchase Agreement for the remediation

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<sup>138</sup> Because there was no "change in law" and no retroactive liability imposed here, we need not reach the arguments of Williams and the State concerning whether retroactive liability under the hazardous substance statute effects an unconstitutional taking.

<sup>139</sup> *State, Dept. of Nat. Res. v. Arctic Slope Reg'l Corp.*, 834 P.2d 134, 139 (Alaska 1991) (quoting *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1005 (1984)) (explaining that DNR's use of proprietary information from oil companies did not upset reasonable investment-backed expectations because it did not affect company's actions or investments); *see Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 124 (1978); *see also Arctic Slope*, 834 P.2d at 140-45 (further finding no unfair surprise given statute authorizing DNR use and concluding regulatory statute was legitimate use of state's police power for public welfare).

ation and litigation costs associated with the offsite sulfolane.<sup>140</sup> Flint Hills also sought statutory contribution from Williams for those costs.<sup>141</sup> The superior court determined that the Purchase Agreement terms barred Flint Hills's claim for indemnification because it had contributed to the sulfolane pollution, but that Flint Hills could seek contribution pursuant to AS 46.03.822(j).

Williams disputes the superior court's interpretation of the Purchase Agreement. It first argues that Flint Hills assumed responsibility for the offsite sulfolane. Williams also contends that the Purchase Agreement's indemnification provision is the sole remedy available to Flint Hills and therefore the superior court erred by allowing statutory contribution. Williams also argues that any award against it—whether through indemnity or contribution—is subject to the Environmental Cap negotiated in the Purchase Agreement. Because the superior court did not err when it interpreted the parties' allocation of liabilities and the remedies in the Purchase Agreement, we affirm the court's determinations regarding Flint Hills's claims against Williams.

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<sup>140</sup> We again note that the hazardous substance statute holds ineffective any "indemnification, hold harmless, or similar agreement . . . to transfer liability. . . from the owner or operator of a facility." AS 46.03.822(g). But the statute also allows for indemnification and hold harmless agreements between liable parties to shift financial responsibility. *Id.*

<sup>141</sup> AS 46.03.822(j) enables liable parties to "seek contribution from any other person who is liable under (a) of this section." To resolve a claim for contribution, "the court may allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court."

### ***1. Overview of the Purchase Agreement's indemnification and remedies provisions***

Article X<sup>142</sup> of the Purchase Agreement contains detailed provisions regarding financial liability between the parties for litigation or damages incurred following the purchase. Article X cross-references Section 10.2(a)(iv) of the "Disclosure Schedule" appended to the Purchase Agreement. That section of the Disclosure Schedule, entitled "Known Environmental Matters," begins with a sentence fragment stating, "Any and all costs of clean-up, monitoring, corrective actions and compliance with regulations incurred after the Effective Time with respect to contamination specifically identified in the referenced figures, tables and text described below." The following sentence adds detail, stating that "Buyer has agreed to assume full responsibility for all existing, known contamination at the Real Property specifically identified in the referenced figures, tables and text described below." The Disclosure Schedule also provides that

Buyer understands and acknowledges that the levels of Hazardous Materials measured in monitoring wells and contained in the figures, tables, and text below will vary over time, and that Buyer is responsible for such normal variations, as well as any changes in such contamination resulting from Buyer's actions or omissions after the Effective Time. . . . [T]he Buyer further understands that the data is representative of site conditions and can be used to support reasonable conclusions about present contaminant concentrations at the

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<sup>142</sup> The Purchase Agreement refers to articles using Roman numerals but sections within using ordinary Arabic numerals. Thus it refers to the article as "Article X," but sections within the Article as "Section 10.2," for example.

locations sampled and contaminant contours outside those locations.

Listed in the Disclosure Schedule is a table entitled “Sulfolane Data (July 2001 September 2001) for North Pole Refinery.” The table indicates varying concentrations of sulfolane were detected at monitoring wells located on the refinery property, including near the property boundaries.

Section 10.2(a)(iii) of the Purchase Agreement states that “Seller shall indemnify, defend and hold Buyer . . . harmless, from and against any and all Damages incurred by [Buyer] in connection with or arising or resulting from . . . the possession, ownership, use, or operation of the Assets prior to the Effective Time.”<sup>143</sup> However, that provision’s general language is qualified by various exceptions. Specifically, that subsection provides that Seller shall have no duty to indemnify under this Section 10.2(a)(iii) (A) with respect to Buyer’s obligations under Section[] . . . 10.2(b)(v)(C)<sup>[144]</sup> [matters set forth on the Disclosure Schedule] . . . , (B) to the extent that Damages are caused or contributed to by Buyer’s operations, actions or omissions after the Effective Time and/or (C) with respect to any Environmental Claim.

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<sup>143</sup> “Effective Time” refers to the closing date of asset transfer, March 31, 2004.

<sup>144</sup> Section 10.2(b) covers indemnification by the Buyer and states that “Buyer shall indemnify, defend and hold Seller . . . harmless, from and against any and all Damages incurred by [Seller] in connection with or arising . . . from . . . (v)(C) any and all costs of cleanup, monitoring, corrective actions and compliance with regulations incurred after the Effective Time with respect to the matters set forth on . . . the Disclosure Schedule.”

The latter type of claim is “covered exclusively by the provisions of Section 10.2(a)(iv).”

Section 10.2(a)(iv), which governs and serves to define “Environmental Claims,” states that Williams will indemnify Flint Hills for damages arising from a broad enumerated list “except to the extent that Damages are caused or contributed to by Buyer’s operations, actions or omissions after the Effective Time.” The matters listed for which Williams retains responsibility include in relevant part:

- (A) any Environmental Condition<sup>[145]</sup> *existing prior to the Effective Time, at, on or under or arising, emanating, or flowing from any of the Assets, or from the property underlying the Real Property, whether known or unknown as of the Effective Time [including damages to third parties “arising therefrom.”], . . . but excluding* (i) any and all costs of cleanup, monitoring, corrective actions and compliance with regulations incurred after the Effective Time with respect to the *matters set forth on Section 10.2(a)(iv) of the Disclosure Schedule. . .*;
- (B) [damages to third parties] arising out of or related to any Environmental Condition *to the extent (i) not located on the Assets or the property underlying the Real Property and (ii) existing prior to the Effective Time;*

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<sup>145</sup> The Purchase Agreement defines “Environmental Condition” as “any condition existing on, at or originating from, each property included within the Assets which constitutes, (a) a Release on, at or from such property of any Hazardous Materials or (b) a violation of any applicable Environmental Laws or any Environmental Permits.”

- (C) payment of penalties and fines assessed or imposed by any Governmental Authority arising out of or related to any Environmental Condition existing prior to the Effective Time; and
- (D) any *Damages that arise*, directly or indirectly, *from the Release*, generation, use, presence, storage, treatment and/or recycling of any Hazardous Materials or Petroleum Products by Seller or from the possession, use, ownership, or operation of the Assets *prior to the Effective Time*, or by a third party if any such Hazardous Materials or Petroleum Products were generated or used by Seller . . . *but excluding* (i) any and all costs of cleanup, monitoring, corrective actions or compliance with regulations incurred after the Effective Time with respect to the *matters set forth on Section 10.2(a)(iv) of the Disclosure Schedule*. (Emphasis added.)

In an effort to ensure more certainty regarding the extent of future indemnification obligations, the parties included a damages cap for indemnification, with a specific Environmental Cap of \$32 million.<sup>146</sup> And we previously

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<sup>146</sup> Section 10.4(b) provides that “the maximum amount of indemnifiable Damages which may be recovered by [Buyer] from Seller . . . and by [Seller] from Buyer arising out of, resulting from or incident to the matters enumerated in Section 10.2(a) or Section 10.2(b) shall be the Environmental Cap with respect to any and all Environmental Claims.”

concluded that the Cap applies to all environmental liabilities.<sup>147</sup>

The parties further agreed that remedies provided in the Purchase Agreement would be exclusive, with certain exceptions. Section 10.5 of the Agreement states:

Except for (a) any equitable relief, including injunctive relief or specific performance to which any Party hereto . . . may be entitled, . . . the indemnification provisions of this Article X shall be the sole and exclusive remedy of each Party . . . with respect to any and all Actions or Damages arising out of this Agreement from and after the Closing.

**2. *The superior court did not erroneously conclude that the Purchase Agreement limited Flint Hills's liability.***

The superior court considered both the language of the contract and testimony regarding the circumstances of negotiation and determined that Flint Hills had assumed responsibility only for sulfolane that was known and onsite at the time of purchase. This meant that Williams had a duty to indemnify Flint Hills for offsite sulfolane contamination—though this duty was potentially limited by Flint Hills's own actions, the Environmental Cap, and the remedies provisions of the contract.

The superior court noted that the Purchase Agreement's Disclosure Schedule was entitled "Known Environmental Matters" and referred to "contamination specifically identified" in the Disclosure Schedule. The court also noted that the Disclosure Schedule provided that Flint Hills would be fully responsible for "[a]ny and all

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<sup>147</sup> *Flint Hills I*, 377 P.3d 959, 976 (Alaska 2016).

costs of . . . corrective actions and compliance with regulations incurred” after the sale for “all existing, known contamination at the Real Property,” which was specifically identified in the Disclosure Schedule. The court found that “*at the Real Property*” supported the interpretation that Flint Hills assumed solely onsite contamination. (Emphasis added.) The court added that the studies listed in the Disclosure Schedule “did not identify contamination that was not ‘at’ the Refinery property—i.e., outside the Real Property’s boundaries.”

The superior court also analyzed the language in Section 10.2(a)(iv)(A), which referred to liabilities that Williams retained for “any Environmental Condition . . . at, on or under or arising, emanating, or flowing from any of the Assets, or from the property underlying the Real Property,” excluding the conditions on the Disclosure Schedule. The court contrasted this subsection’s language with that of 10.2(a)(iv)(B), which referenced Williams’s retained liability for harms arising from an Environmental Condition “(i) not located on the Assets or the property underlying the Real Property . . . .” The court concluded that the onsite and offsite specifications meant subsection (A) referred solely to onsite contamination, and by extension, so did the Disclosure Schedule. Therefore, the court concluded that Williams retained liability for sulfolane contamination existing offsite at the time of the asset transfer, even if that contamination was caused by migration of a pollutant that had originated onsite and was disclosed in the Schedule.

Additionally, the superior court relied on trial testimony to clarify the assumption-of-liabilities issue. Representatives of both parties described an “our watch/your watch” approach where each party would retain responsibility for issues caused during their operations, with the

very narrow exceptions enumerated in the Disclosure Schedule. Witnesses for both parties agreed that the Disclosure Schedule did not explicitly refer to offsite contamination, and the court concluded that the intent of the parties was that Flint Hills would assume liability for the sulfolane located onsite at the time of purchase.

Williams argues that the court misconstrued the plain language of the Agreement when it concluded that Flint Hills had not assumed liability for offsite sulfolane. First, Williams claims the court incorrectly concluded that the contract distinguished onsite/offsite sulfolane and that Section 10.2(a)(iv)(A) excluded offsite matters. Williams argues that subsection (A) in fact applies to both onsite and offsite conditions, because it refers to conditions “at, on or under or *arising, emanating, or flowing from* any of the Assets *or from* the property.” It argues that “*arising, emanating, or flowing from*” would be superfluous if it related solely to onsite conditions, which would have been properly encapsulated by “at, on or under.” Similarly, Williams points to the broad definition of “Environmental Condition” in the contract—“any condition existing on, at or *originating from*, each property”—to support its contention that a disclosed substance might migrate offsite yet remain part of Flint Hills’s assumed responsibilities. Second, Williams argues that the superior court erred by relying on extrinsic evidence to assist with the interpretation of the Purchase Agreement. Williams claims that reference to extrinsic evidence violated Texas contract law governing the agreement.

We conclude that the superior court’s inferences about the parties’ intent, based on extrinsic evidence, were supported by substantial evidence. We further conclude, from

these inferences and from our de novo review of the contract language, that the superior court did not err by determining Williams retained liability for offsite sulfolane.

**3. *The superior court did not err by concluding Williams retained responsibility for offsite sulfolane.***

We apply Texas law to the interpretation of the Purchase Agreement; the parties chose Texas law to govern the Agreement and neither party disputes its application here.<sup>148</sup>

The language in the Purchase Agreement is ambiguous. On one hand, its definition of Environmental Condition and the language about such conditions in Section 10.2's indemnification provisions appear to be extremely broad; they could therefore apply to both onsite and

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<sup>148</sup> See, e.g., *Jarvis v. Aetna Cas. & Sur. Co.*, 633 P.2d 1359, 1363 n.5 (Alaska 1981) (declining to disturb parties' choice of law); see also *In re Newport Plaza Assocs., L.P.*, 985 F.2d 640, 644 (1st Cir. 1993) ("When opposing parties agree to the source of the substantive law that controls their rights and obligations, and no jurisdictional concerns are present, a court is at liberty to accept such an agreement without independent inquiry."); *Schiavone Constr. Co. v. Time, Inc.*, 847 F.2d 1069, 1076 n.3 (3d Cir. 1988) (permitting parties and lower courts' consent as to choice of law to control when there is no reason to disturb that agreement); *Tidler v. Eli Lilly & Co.*, 851 F.2d 418, 421 (D.C. Cir. 1988) (allowing court to assume choice of law was correct since neither party raised the issue).

We see no obvious reason that applying Texas law to this case would conflict with Alaska's choice of law approach, which follows the Second Restatement of Conflicts. See *Peterson v. Ek*, 93 P.3d 458, 464 n.11 (Alaska 2004). As we discuss below, it is unlikely that the resulting interpretations would differ under either Alaska's or Texas's interpretive approach, as both would admit the extrinsic evidence which informed the superior court's decision. See *Tidler*, 851 F.2d at 421 (permitting analysis of claims under laws of two states).

offsite pollution. The carve-out for sulfolane in the Disclosure Schedule would, by extension, include sulfolane pollution that had migrated offsite prior to the purchase date. On the other hand, the breadth of Section 10.2(a) might apply only to Williams's retained liabilities, while Flint Hills's assumed liabilities are instead narrowly tailored to those "matters set forth" in the Disclosure Schedule only for conditions "at" the property. In that case, Williams's reference to the broad definition of "Environmental Condition" and the language of "arising, emanating, or flowing from" would not apply to Flint Hills's assumed responsibilities. Indeed, the Disclosure Schedule refers to the matters set forth therein as "*contamination*" and not "Environmental Conditions," possibly supporting this narrower construction. (Emphasis added.) In other words, assuming responsibility for "existing, known contamination at the Real Property" would not necessarily include assuming responsibility for the effects arising or emanating from such contamination off the real property.

Because the contract language is ambiguous, it was proper for the superior court to resort to extrinsic evidence. Though Texas law places greater restrictions on the admission of extrinsic evidence than Alaska law,<sup>149</sup> a

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<sup>149</sup> Under Alaska contract principles, the court's duty is to "ascertain and give effect to the reasonable intentions of the contracting parties." *Flint Hills I*, 377 P.3d at 975 (quoting *Est. of Polushkin ex rel. Polushkin v. Maw*, 170 P.3d 162, 167 (Alaska 2007)). The court need not initially determine that the disputed language is ambiguous to consider extrinsic evidence; instead, the court can look holistically at the disputed language, other language in the contract, relevant extrinsic evidence, and case law interpreting similar provisions. *Id.*; see also *Nautilus Marine Enters., Inc. v. Exxon Mobil Corp.*, 305 P.3d 309, 316 (Alaska 2013) ("We have expressly rejected the 'artificial and unduly cumbersome' two-step process used in other jurisdictions in

court can use extrinsic evidence to resolve patent and latent ambiguities as long as those ambiguities are present in the text.<sup>150</sup> In other words, Texas law “does not prohibit consideration of surrounding circumstances that inform, rather than vary from or contradict, the contract text.”<sup>151</sup> As we discuss below, we conclude that the superior court adhered to Texas contract law’s requirements when it used extrinsic evidence to resolve the ambiguities of Article X.

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which ‘resort to extrinsic evidence can take place only after a preliminary finding of ambiguity.’” (quoting *Alyeska Pipeline Serv. Co. v. O’Kelley*, 645 P.2d 767, 771 n.1 (Alaska 1982))). But extrinsic evidence cannot be used to add or contradict contract terms. *See Froines v. Valdez Fisheries Dev. Ass’n*, 75 P.3d 83, 87 (Alaska 2003).

Texas law is more restrictive. It indicates that a court’s “primary objective is to ascertain and give effect to the parties’ intent *as expressed in the instrument.*” *URI, Inc. v. Kleberg Cnty.*, 543 S.W.3d 755, 763 (Tex. 2018) (emphasis added). “Objective manifestations of intent control,” and therefore courts should interpret language according to its “‘plain, ordinary, and generally accepted meaning’ unless the instrument directs otherwise.” *Id.* at 763-64 (quoting *Heritage Res., Inc. v. NationsBank*, 939 S.W.2d 118, 121 (Tex. 1996)). However, the Texas Supreme Court has explained that the meaning of words often “turns upon use, adaptation and context.” *Id.* at 764 (quoting *Heritage Res., Inc.*, 939 S.W.2d at 121). This context is not just gleaned from the language and structure of the contract itself, but also from the “circumstances present when the contract was entered.” *Id.* (quoting *Columbia Gas Transmission Corp. v. New Ulm Gas, Ltd.*, 940 S.W.2d 587, 589 (Tex. 1996))). Thus, while a court cannot look to extrinsic evidence to add or modify contract terms—i.e., to introduce *solely* subjective intent that has not been manifested objectively in the contract—it can use extrinsic evidence where the contract language is inherently ambiguous. *Id.*

<sup>150</sup> *URI, Inc.*, 543 S.W.3d at 764-65.

<sup>151</sup> *Id.* at 767 (quoting *Hous. Expl. Co. v. Wellington Underwriting Agencies, Ltd.*, 352 S.W.3d 462, 469 (Tex. 2011)).

Flint Hills Resources' Alaska President Allen Lasater testified that, based on his understanding of the parties' intent at the time of contracting, Flint Hills did not assume responsibility for offsite contamination. He stated that there was no offsite sulfolane contamination then "known" and thus it was not included in the Disclosure Schedule. Lasater essentially equated unknown to undisclosed, and therefore liability for those unknowns "remained with Williams." He explained that this was a logical intent because Flint Hills needed to know the extent of pollution in order to agree to continue running the refinery's pollution remediation system consistent with DEC's compliance orders.

Williams representative Randy Newcomer qualified references to known conditions as "known conditions *which were primarily onsite.*" (Emphasis added.) He stated that Flint Hills took responsibility for "known cleanup" of "known contaminants" as described in the Disclosure Schedule as of the Effective Date, after which Flint Hills was responsible for additional pollution occurring on- and offsite during their ownership. Williams thus remained responsible for the unknown conditions offsite "caused . . . by Williams during its ownership." Upon further questioning, Newcomer stated that there was a "your watch/my watch kind of . . . thing" specifically for offsite contaminants. He explained that if a known contaminant offsite caused damage before the Effective Date, Williams would take responsibility, but "[i]f it was something that Flint Hills caused during their ownership of the [r]efinery," then Flint Hills assumed responsibility. Newcomer admitted that, as he understood the contract, Williams would be obligated to indemnify Flint Hills for the portion of sulfolane that had migrated off the property when Williams owned the refinery. But he said that further migration or contamination offsite after the Effective Date

would be the responsibility of Flint Hills. On cross-examination, Newcomer emphasized that liabilities were defined by their known/unknown status rather than on-site/offsite.

The Williams Companies Senior Vice President Phillip Wright, who was involved in the refinery sale negotiations, similarly testified that “as a general matter, we agreed to a your watch/our watch type principle . . . in which if the cause for a given contamination was generated while we were the owner and operator of the Refinery, we would be liable for those damages . . . and they would retain liability for anything generated on their watch which was during their ownership and operation of the Refinery.” But he specifically stated that “those damages” Williams retained responsibility for would *not* “include the cleanup costs associated with migration of known characterized contamination.” He testified that it was Williams’s intent, expressed through the language of the contract, that if the sulfolane migrated off the property, it was Flint Hills’s responsibility. He further added that “[i]t wouldn’t have been possible for [Flint Hills] to assume” the sulfolane “would be retained on site . . . because it was [in] the groundwater” and not in a “vessel.” He stated that Williams representatives “assumed we were dealing with a sophisticated player that understood these matters and understood groundwater hydrology.”

Testimony from representatives of both parties presented competing interpretations of the contract. Ultimately, the determination of the parties’ intentions and representations during negotiations are issues of fact properly within the province of the superior court. The court did not clearly err when it concluded as a factual matter that the parties intended for Williams to retain responsibility for its portion of offsite sulfolane, and for

Flint Hills to assume liability only for sulfolane contamination onsite and for any additional pollution it generated after the purchase date which might migrate offsite. Therefore we conclude as a matter of law that the Purchase Agreement language reflects that intent.

**4. *The superior court did not err by concluding that Flint Hills could pursue contribution.***

The superior court concluded that contractual indemnification was not available to Flint Hills because it had “caused or contributed” to the offsite sulfolane contamination. And the court concluded that because indemnification was not available, Section 10.4(b)’s Environmental Cap did not apply.<sup>152</sup> But the court determined that Flint Hills could pursue contribution from Williams under AS 46.03.822(j). Exercising its discretion to allocate equitable responsibility among the parties,<sup>153</sup> the court determined that Williams was required to contribute \$52.5 million to Flint Hills’s offsite response costs, reflecting its equitable allocation of 75% of costs to Williams. The court awarded \$51.4 million for offsite sulfolane and \$1.17 million for onsite PFAS contamination, plus prejudgment interest on both.

No party disputes the court’s determination that Flint Hills was barred from pursuing contractual indemnity.

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<sup>152</sup> In *Flint Hills I*, we determined that indemnification claims for environmental liabilities would be subject to the Cap. 377 P.3d at 976.

<sup>153</sup> See AS 46.03.822(j) (“[T]he court may allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court.”); cf. *Lockheed Martin Corp. v. United States*, 35 F. Supp. 3d 92, 122 (D.D.C. 2014) (discussing court’s discretion to allocate contribution in CERCLA context), *aff’d*, 833 F.3d 225 (D.C. Cir. 2016).

However, Williams contends that the superior court's assessment of damages for offsite sulfolane was erroneous because it exceeded the Environmental Cap of \$32 million. Williams claims that the Environmental Cap should apply to all forms of damages, including statutory damages and contribution allocations, rather than only to contractual indemnification damages.<sup>154</sup> Williams further argues that statutory contribution is not available to Flint Hills because the Purchase Agreement made indemnification the exclusive remedy for environmental damages claims. Williams argues that by failing to properly construe the exclusive remedies provision in Section 10.5, the superior court "allowed Flint Hills to achieve an end-run around" the indemnity bar. Williams asserts that, because money damages are not equitable relief allowable under the Purchase Agreement and because we characterized contribution damages under AS 46.03.822(j) as a legal claim in *Flint Hills I*, contribution should be barred by the Purchase Agreement. We disagree.

The Purchase Agreement at Section 10.2(a) provides that Williams would indemnify Flint Hills "(iv) except to the extent that Damages are caused or contributed to by [Flint Hills's] operations, actions or omissions after the Effective Time." The most natural reading of this language and the reading best supported by trial testimony is what the superior court first concluded: "reflecting the joint 'my watch/your watch' concept for liabilities, the par-

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<sup>154</sup> Williams also argues that the superior court made two other errors when it interpreted the Cap: the court determined that insurance proceeds paid to Flint Hills were not relevant to the Cap, and it declined to enforce the Cap for public policy reasons. Because we conclude that the Cap does not apply to the contribution claim, we do not address these arguments.

ties' cross-indemnity provisions included language clarifying their obligations to be limited *to their own* causes and contributions of Environmental Conditions, excluding reimbursement and exempting each from holding the other harmless for contributions or conditions caused by the other's conduct." However, the superior court later determined that because Flint Hills contributed to some of the sulfolane pollution during the period it operated the refinery, as a matter of law "[t]his exception precludes contractual indemnity for sulfolane contamination." Because neither Williams nor Flint Hills challenges the superior court's interpretation, we do not consider it further.

We agree with the superior court that, because Flint Hills cannot pursue indemnification under the Purchase Agreement, the Environmental Cap does not apply. Section 10.4's "Limitations on Indemnification" states in subsection (b) that "the maximum amount of *indemnifiable Damages*" arising out of Sections 10.2(a) and (b) that can be recovered by "*Indemnified Parties*" is a Cap "with respect to any and all claims *for indemnity*." (Emphasis added.) This language makes clear that the Cap will apply only to indemnification claims. Furthermore, Section 10.5 provides that "the *indemnification* provisions of this Article X shall be the sole and exclusive remedy of each Party," "[e]xcept for . . . equitable relief." (Emphasis added.) The Agreement makes clear that both parties understood equitable relief is not governed by the terms of limitation in their private contract.<sup>155</sup> It was not error for

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<sup>155</sup> *Oakley Enters., LLC v. NPI, LLC*, 354 P.3d 1073, 1080 (Alaska 2015) (discussing nature of statutory contribution remedy for recovering environmental remediation costs and explaining "contribution claims essentially seek to allocate damages equitably among those who share responsibility").

the court, when making contribution allocations, to take into account the parties' intended contractual allocations without being limited by their express terms—in this case, the Environmental Cap.<sup>156</sup>

Finally, the superior court did not err by concluding that Flint Hills could pursue statutory contribution under AS 46.03.822(j). In *Flint Hills I*, we referred to Flint Hills's indemnification claim and its statutory contribution claim under subsection .822(j) as "legal claims," in contrast with its "equitable claims" for declaratory judgment and specific performance.<sup>157</sup> We did not, however, reach the question whether statutory contribution constitutes a legal or equitable *remedy*. Contribution is an equitable remedy.<sup>158</sup> This is so regardless of whether it is

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<sup>156</sup> See AS 46.03.822(j). CERCLA case law supports this approach and because Alaska's hazardous substance statute is informed by CERCLA, case law on that federal statute is persuasive—though not dispositive—for resolving state law claims. *Berg v. Popham*, 113 P.3d 604, 606, 608 (Alaska 2005); see *Lockheed Martin Corp.*, 35 F. Supp. 3d at 123, 143-44 (explaining court has "broad discretion" to make allocation determinations in CERCLA context and "the predominant concern in equity is the intent of the parties"); *Halliburton Energy Servs., Inc. v. NL Indus.*, 648 F. Supp. 2d 840, 877, 880-81 (S.D. Tex. 2009) (explaining that even inapplicable indemnification provisions can be considered to determine intent of parties to allocate contribution responsibility); *Kerr-McGee Chem. Corp. v. Lefton Iron & Metal Co.*, 14 F.3d 321, 326 (7th Cir. 1994) (considering parties' intent as expressed in their contractual arrangements to determine equitable contribution allocations); *Beazer E., Inc. v. Mead Corp. (Beazer II)*, 412 F.3d 429, 447 n.20 (3d Cir. 2005) (explaining that indemnification provisions that do not apply directly are still factor to consider in contribution claim).

<sup>157</sup> 377 P.3d 959, 973-74 (Alaska 2016).

<sup>158</sup> See *McLaughlin v. Lougee*, 137 P.3d 267, 275-79 (Alaska 2006) (recognizing common law contribution need for fairness purposes);

provided for by statute.<sup>159</sup> Thus a claim for statutory contribution is not barred by the Purchase Agreement's exclusive remedies provision.

Williams's argument that contribution achieves an "end-run around" the indemnity bar is unpersuasive. The parties agreed they would still be able to pursue equitable relief, "including injunctive relief or specific performance." The word "including" indicates these examples are illustrations rather than an exhaustive list of allowable equitable relief. Contribution falls squarely into relief allowed even under the parties' own contractual arrangement. And Williams misconstrues our previous decision when it argues that contribution provides a duplicative and thus inappropriate remedy once indemnification is unavailable.<sup>160</sup> In *Flint Hills I*, we denied Flint Hills de-

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*Oakly Enters., LLC*, 354 P.3d at 1080 (explaining contribution claims aim to equitably allocate damages among responsible parties); *Deal v. Kearney*, 851 P.2d 1353, 1355-56 (Alaska 1993) (agreeing that "claims for contribution, indemnity, or subrogation are . . . claims grounded in equity"); *Fellows v. Tlingit-Haida Reg'l Elec. Auth.*, 740 P.2d 428, 432 (Alaska 1987) ("Contribution is an equitable doctrine adopted to remedy the unfairness of the common law rule allowing one of several tortfeasors to bear responsibility for the entire loss.").

<sup>159</sup> See *Benner v. Wichman*, 874 P.2d 949, 956 (Alaska 1994) (implying now-repealed contribution statutes provided for "equitable contribution"); *Arctic Structures, Inc. v. Wedmore*, 605 P.2d 426, 430 (Alaska 1979) (discussing former contribution statute AS 09.16.020(3) that expressly provided "principles of equity applicable to contribution generally shall apply").

<sup>160</sup> We do not decide whether contribution would have been available absent the parties explicitly permitting the pursuit of equitable remedies. We have recognized a common law contribution remedy, *McLaughlin*, 137 P.3d at 275-79, and a statutory contribution remedy in the hazardous substance context, AS 46.03.822(j). But Alaska does

claratory relief and specific performance because we determined that it still had an adequate legal remedy through indemnification or contribution—even if some of those legal remedies might be time-barred by the statute of limitations.<sup>161</sup> We noted that Flint Hills's equitable

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not have a general contribution statute, such as the proposed Uniform Contribution Among Tortfeasors Act of 1955, that discusses the relation between indemnification and contribution. And even CERCLA case law, though generally indicating that an indemnification agreement encompassing CERCLA liability between responsible parties will control, is not always clear about whether such an agreement displaces contribution altogether or controls equitable allocation in a contribution action. *See, e.g., Fina, Inc. v. ARCO*, 200 F.3d 266, 273-74 (5th Cir. 2000) (allowing claim for contribution only after concluding that parties' indemnification provision did not cover CERCLA claims); *Kerr-McGee Chem. Corp.*, 14 F.3d at 326 (finding indemnity agreement between parties remained applicable in CERCLA action, but that result of indemnification and contribution would have been identical and therefore declining to reverse contribution award; also indicating that equitable allocation informed by indemnification agreement could be modified depending on parties' ability to pay to avoid shifting cleanup costs onto public); *Beazer E., Inc. v. Mead Corp. (Beazer I)*, 34 F.3d 206, 208-10, 218-19, 219 n.10 (3d Cir. 1994) (reversing dismissal of contribution claim because indemnification claim did not cover CERCLA liability but implying that indemnification provisions, rather than equitable apportionment, would control if applicable); *Beazer II*, 412 F.3d at 447 n.20 (revisiting issues between parties and interpreting *Kerr-McGee* to mean that when "indemnification provision did cover CERCLA liability, . . . no equitable allocation proceeding was required"); *Olin Corp. v. Consol. Aluminum Corp.*, 5 F.3d 10, 16 (2d Cir. 1993) (recognizing that applicable indemnification provisions should be followed though they may incur "seemingly harsh result," but failing to specify whether sole remedy available was indemnification or if contribution could be pursued, though result would be under parties' indemnification provisions).

<sup>161</sup> *Flint Hills I*, 377 P.3d at 974 (dismissing claims for declaratory relief and specific performance of contract that duplicated its financial contribution claims); *see also Knaebel v. Heiner*, 663 P.2d 551, 553

claims sought identical relief to its legal claims, since its requests for declaratory judgment and specific performance essentially asked the court to order Williams to pay the same damages Flint Hills had requested in its indemnification and contribution claims.<sup>162</sup> We did not conclude in *Flint Hills I* that indemnification and contribution were duplicative remedies or constituted identical relief.

Unlike its claims for declaratory relief and specific performance vis-à-vis its claims for indemnification and statutory contribution, Flint Hills's contribution claims are not duplicative of its legal indemnification claims. If available, indemnification might have enabled Flint Hills to recover entirely for the offsite sulfolane pollution that Williams caused or contributed to prior to the refinery purchase, without any equitable modifications, but subject to the Environmental Cap.<sup>163</sup> By contrast, statutory contribution requires the superior court to weigh equitable factors which, besides the intent of the parties as evidenced by their contract, also includes the conduct of parties. The parties' indemnification agreement, although inapplicable, served to inform the court about the parties' intent, but it did not bind the court to the same result in its statutory contribution determination as it would reach under its contractual indemnification determination.

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(Alaska 1983) (“One who seeks the interposition of equity must generally show that he either has no remedy at law or that no legal remedy is adequate.”).

<sup>162</sup> *Flint Hills I*, 377 P.3d at 974.

<sup>163</sup> “An express indemnity generally is not subject to equitable considerations or a joint legal obligation to the injured party; rather, it is enforced in accordance with the terms of the contracting parties’ agreement.” 41 AM. JUR. *Indemnity* § 7 (2022).

For these reasons, the contract language expressly allows the statutory contribution remedy and doing so does not inappropriately provide Flint Hills an “endrun around” its contractual arrangements or inappropriately award an equitable remedy when a legal one was potentially available. The superior court did not err by granting Flint Hills statutory contribution from Williams under AS 46.03.822(j).

**5. *The superior court’s contribution allocations were not erroneous.***

A party liable for the release of a hazardous substance under AS 46.03.822(j) “may seek contribution from any other person who is liable.”<sup>164</sup> During a statutory contribution proceeding, “the court may allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court.”<sup>165</sup>

After Flint Hills sought contribution from Williams, the superior court made a series of findings regarding Flint Hills’s contribution claims. In relevant part, the court found: “Williams is strictly liable, jointly and severally, under AS 46.03.822 for hazardous substance releases as an owner and operator of the [refinery]”; “the harm caused by Williams[’s] sulfolane releases is not divisible or reasonably capable of apportionment” and thus Williams “is jointly liable for the entire amount of response costs.” Based on consideration of many equitable factors—including contractual indemnity clauses, proportions of sulfolane releases attributable to each party, the degree of cooperation by each party, and promptness of reporting sulfolane in the groundwater—the court found “Williams

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<sup>164</sup> AS 46.03.822(j).

<sup>165</sup> *Id.*

is responsible for 75% of the [offsite] sulfolane response costs, while Flint Hills is responsible for 25% of the costs, and the State is not responsible for any of the costs.”<sup>166</sup>

Williams appeals the superior court’s statutory contribution allocation under AS 46.03.822(j), arguing the court erred by (1) allocating anything for offsite sulfolane to Williams because the parties “had allocated full responsibility for sulfolane to Flint Hills under the Agreement”; (2) failing to properly consider DEC’s non-regulation of sulfolane prior to 2004; (3) penalizing Williams for defending itself; (4) “failing to allocate responsibility to the State and ignoring Williams[’s] equitable estoppel and laches defenses”; and (5) “failing to allocate responsibility to the City.”

**a. The court did not err by allocating statutory contribution for offsite sulfolane to Williams.**

We have affirmed the superior court’s conclusion that Williams retained responsibility for sulfolane that was offsite at the time of the Purchase Agreement and that Flint Hills could recover through statutory contribution in the absence of contractual indemnification. The court therefore did not err by allocating responsibility to Williams under the contribution provisions of AS 46.03.822(j).<sup>167</sup>

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<sup>166</sup> The court did not allocate any costs to the City of North Pole, which was not a party at the trial.

<sup>167</sup> See *Oakly Enters., LLC v. NPI, LLC*, 354 P.3d 1073, 1077, 1082-83 (Alaska 2015) (discussing and affirming broad, non-inclusive list of factors superior court considered in allocating responsibility for damages under subsection .822(j)).

**b. The superior court adequately considered DEC's earlier non-regulation of sulfolane when it allocated damages.**

Williams argues that the superior court erred when it “failed to compare the relative ‘culpability’ of Williams and Flint Hills given the very different regulatory environments in which each operated the refinery.” Namely, because sulfolane was not regulated as a hazardous substance when Williams released it, Williams argues the court erred by not reducing Williams’s culpability. Williams relies primarily on two cases for support: *Boeing Co. v. Cascade Corp.* for the assertion that “[a] court should consider the care a party exercised ‘in light of the practices characteristic of the time’ and may reduce a party’s share if no rules or laws prohibited the practices at the time”;<sup>168</sup> and *Oakly Enterprises, LLC v. NPI, LLC* for the assertion that “[a] court should also consider which party ‘knew or should have known’ of the contamination and which party ‘had the ability to control the [cause]’ at the time.”<sup>169</sup> Williams argues that, had sulfolane been regulated before the Purchase Agreement, it would have been able to keep it onsite because it “kept all *regulated* contaminants onsite during its tenure.”

Superior courts have broad discretion over which equitable factors to consider when allocating costs under both CERCLA and AS 46.03.822.<sup>170</sup> A court *may* choose to reduce a party’s damages according to the party’s practices and prevailing circumstances at the time, but it is not

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<sup>168</sup> 207 F.3d 1177, 1187 (9th Cir. 2000).

<sup>169</sup> 354 P.3d at 1077.

<sup>170</sup> *E.g., id.* at 1078, 1080-83 (applying clear error standard of review to factual findings and abuse of discretion standard to decisions whether to admit or exclude evidence); *Boeing Co.*, 207 F.3d at 1187.

required to. And as the State points out, neither *Boeing Company* nor *Oakly Enterprises* supports Williams's position in this case. Even though sulfolane was not yet regulated as a hazardous substance, it would have been a pollutant under AS 46.03.900(20) and thus its unpermitted releases were prohibited under AS 46.03.710. As Williams conceded at trial, releasing sulfolane regardless of its official status as a hazardous substance was prohibited by law—a fact that counts against Williams rather than in its favor. The record demonstrates that Williams knew about the sulfolane releases during its tenure at the refinery due to its own negligence, but failed to address the ongoing releases. Williams knew sulfolane was at least toxic if not "hazardous." Yet the "care" that Williams exercised included storing sulfolane-containing waste in a leaky, decommissioned lagoon, some of whose many holes were crudely "patched" by nailing two-by-fours to the liner. Williams also unilaterally stopped the monitoring that DEC requested to help identify and address the source of the sulfolane leaks. That behavior was neither typical nor allowed at the time, and Williams knew of and was in control of the cause of the contamination, supporting the court's decision to impose statutory contribution against Williams.

**c. The superior court did not penalize Williams for "defending itself."**

Williams argues that the court erred because its "allocation expressly took into account Williams'[s] alleged 'recalcitrance' and 'refusal to assist' DEC." Williams argues it was penalized for defending itself. Williams contends it was within its rights to refuse to provide alternative water

and to indemnify Flint Hills, and claims it would be unconstitutional to penalize it for doing what the law plainly allows it to do.<sup>171</sup>

The State quickly and correctly dismisses this argument by pointing out that “[a] party may be ‘within its rights’ to refuse to act until ordered by a court, but its choices can still weigh against it in equity.” Courts often consider the extent to which parties cooperate with regulators in this context.<sup>172</sup>

Williams asserts in reply, without support, “that Williams cooperated in the initial investigation” and that “six years after the refinery’s sale, Williams was participating and willing to continue doing so, until the State abruptly stopped investigating and sued.” Our review of the record confirms that Williams conducted groundwater sampling for sulfolane for about a year before stopping the sampling without having identified the source of the sulfolane

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<sup>171</sup> We agree with the State that none of the cases Williams cites for support contradict the assertion that a party’s refusal to act can “weigh against it in equity.” Williams relies for support on an incomplete quote from a dissent, without identifying it as such, but omits the following paragraph of that dissent, which acknowledges “CER-CLA strongly incentivizes voluntary compliance” and refers to a case that recognizes the court’s ability to impose fines when a responsible party willfully fails to comply with an EPA order without sufficient cause. *McGinnes Indus. Maint. Corp. v. Phoenix Ins. Co.*, 477 S.W.3d 786, 801 (Tex. 2015) (Boyd, J., dissenting) (citing *Gen. Elec. Co. v. Jackson*, 610 F.3d 110, 114 (D.C. Cir. 2010)).

<sup>172</sup> See, e.g., *Oakley Enters.*, 354 P.3d at 1077 & n.6 (allowing superior court to consider “the degree of cooperation by the parties with Federal, State or local officials to prevent any harm to the public health or the environment,” among other equitable factors, when allocating responsibility for releases under AS 46.03.822(j) (quoting *Lockheed Martin Corp. v. United States*, 35 F. Supp. 3d 92, 123 (D.C. Cir. 2014))).

leak, contrary to DEC's instructions.<sup>173</sup> And Williams attended meetings with DEC and offered to pay for and conduct certain modeling, though it did not give the models to DEC. But Williams does not point to anything in the record indicating that it cooperated with DEC. Williams has not challenged the superior court's findings of fact on this issue, including its extensive findings showing an overwhelming level of inaction by Williams even after it had received notice in 2010 that DEC would be treating sulfolane as hazardous. The court did not abuse its discretion by allocating costs against Williams in part for its lack of cooperation.

**d. The superior court did not err by not allocating responsibility to the State or by ignoring Williams's equitable defenses.**

Williams argues that because the State admitted to being a "liable landowner under AS 46.03.822(a)" as an owner of the refinery lands, the court erred by not allocating some responsibility to the State under AS 46.03.822(j). Williams also argues that "the court should have allocated some .822(j) responsibility to the State" based on laches and equitable estoppel.

Williams cites *FDIC v. Laidlaw Transit, Inc.*<sup>174</sup> for support that the State should be allocated costs for sulfolane contamination, but that case does not support its argument. In *Laidlaw* we recognized that cleanup costs need not "be borne by all potentially responsible parties

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<sup>173</sup> *Flint Hills I*, 377 P.3d 959, 963 (Alaska 2016).

<sup>174</sup> 21 P.3d 344 (Alaska 2001), *abrogated on other grounds by Buntin v. Schlumberger Tech. Corp.*, 487 P.3d 595 (Alaska 2021).

equally” and that courts can “distinguish among potentially responsible parties to avoid inequitable results.”<sup>175</sup> And AS 46.03.822(j) expressly grants discretion to “allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court.” Williams’s argument amounts to mere disagreement with how the court weighed these equitable factors.

When it found that the State was without fault as a landowner, the superior court reasoned that “[n]o persuasive evidence was presented at trial to support an equitable allocation” to the State. Williams points to several factors it suggests indicate the State’s culpability. For instance, it asserts that the State had a “but-for causal role in allowing the sulfolane to remain in the ground throughout Williams’s tenure.” Williams seems to argue that, because it notified DEC of the sulfolane release in 2001 and DEC told Williams only to keep tracking sulfolane through sampling because it was not then a regulated contaminant, Williams had no obligation to clean it up. But as early as November 2000 a representative from the Department of Natural Resources<sup>176</sup> met with Williams and DEC to discuss the adequacy of Williams’s spill prevention efforts and the preparation of a characterization and corrective action plan. In that meeting, DNR told Williams that it might be in default on its lease because of the spills.

Williams also alleges the State was indirectly responsible for sulfolane releases by allowing Flint Hills to turn off its pumping system in July 2017, which Williams

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<sup>175</sup> *Id.* at 349-50.

<sup>176</sup> DNR was the State agency that managed the lease of the land underlying the refinery.

claims “caus[ed] the sulfolane to migrate offsite.” Although the State did allow Flint Hills to turn off the pumping system, sulfolane had already been detected offsite in October 2009. Furthermore, the court expressly considered this factor and found it to be outweighed by Williams’s “other negative conduct,” such as “mismanagement . . . of its waste fluid treatment and disposal systems” and “cessation of testing for sulfolane sources on the [R]efinery property.” Williams does not argue that the court erred when it weighed this fact about Flint Hills turning off the pumps in its equitable allocation decision. We are not persuaded the court erred by not allocating financial responsibility to the State as a landowner under these circumstances.

Williams also argues that the superior court “inexplicably ignored Williams’[s] equitable estoppel defense and reasonable reliance on the State’s repeated written affirmations that sulfolane was not regulated and could be left in the ground.”<sup>177</sup> Williams alleges that the court “previously found this defense to be relevant to allocating damages under .822(j).” But the court previously explained that equitable defenses would be relevant, if at all, for allocation under subsection .822(j) rather than for establishing liability under subsection .822(a) because that would undermine the strict liability framework of the hazardous substance statute. And in any case the court did not explicitly find that Williams’s equitable estoppel defense

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<sup>177</sup> “Equitable estoppel requires proof of three basic elements: (1) ‘assertion of a position by conduct or word,’ (2) ‘reasonable reliance thereon,’ and (3) ‘resulting prejudice.’ In addition, equitable estoppel ‘will be enforced only to the extent that justice so requires.’” *Beecher v. City of Cordova*, 408 P.3d 1208, 1214 (Alaska 2018) (first quoting *Jamison v. Consol. Utils., Inc.*, 576 P.2d 97, 102 (Alaska 1978); and then quoting *Mun. of Anchorage v. Schneider*, 685 P.2d 94, 97 (Alaska 1984)).

was relevant for subsection .822(j) allocation. As the State points out, Williams does not provide any arguments undermining the court's discretionary decision not to consider Williams's defense of equitable estoppel.

Williams also argues that laches "should have comparatively reduced Williams'[s] responsibility because" in earlier proceedings "the superior court found laches barred Flint Hills'[s] claims for equitable remedies against Williams due to its 'unconscionable delay' in addressing sulfolane." Williams then states, somewhat misleadingly, that the "factual findings upon which the court's laches decision was made were affirmed on appeal" and should have preclusive effect. We earlier agreed that Flint Hills "reasonably should have concluded 'long before May 10, 200[8]' that sulfolane had migrated beyond the sampling disclosed in the Agreement."<sup>178</sup> But we explicitly did not reach the issue of Williams's laches defense on Flint Hills's equitable claims because these were not available in light of the legal remedies available by contract and statute.<sup>179</sup> Williams also challenges the court's conclusion that Williams's delayed reporting of discovering sulfolane in the groundwater was more problematic than Flint Hills's nearly two-year delay in drilling monitoring wells. We see no abuse of discretion in allocating more responsibility to the party that waited five years to report its discovery that a relatively novel solvent had leached into the groundwater than to the party that delayed drilling "recommended monitoring wells" for about two years.

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<sup>178</sup> *Flint Hills I*, 377 P.3d at 973 (alteration in original).

<sup>179</sup> *Id.* at 974.

**e. The superior court did not err by failing to allocate responsibility to the City of North Pole.**

Williams next argues that “[t]he City was a significant source of sulfolane” and the court should have allocated responsibility to the City. The court did not rule on the City’s liability and prevented Williams from presenting evidence implicating the City’s contribution to the sulfolane plume.

As both Flint Hills and the State point out, once the court deconsolidated the cases in June 2019 the City was no longer a party to these proceedings. While the cases were consolidated, Williams raised a contribution claim against the City, but the court dismissed it as untimely. Though in the State’s suit the court could have considered the City’s culpability as an equitable factor under AS 46.03.822(j), because Williams is “strictly liable, jointly and severally” under AS 46.03.822(a), the superior court did not abuse its discretion by failing to allocate costs to an absent party.<sup>180</sup>

Williams also attempts to appeal the deconsolidation order. The Rules of Appellate Procedure require that an appeal brief contain a “short conclusion stating the precise relief sought”<sup>181</sup> and that the argument section contain “the contentions of the appellant with respect to the

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<sup>180</sup> See *Laidlaw Transit, Inc.*, 21 P.3d at 349-50 (contemplating absentee responsible parties in AS 46.03.822(j) contribution claim and explaining how courts can “distinguish among potentially responsible parties to avoid inequitable results”).

<sup>181</sup> Alaska R. App. P. 212(c)(1)(I).

issues presented” as well as a “heading indicating the subject matter” for “[e]ach major contention.”<sup>182</sup> Williams asks in its statement of issues on appeal whether the superior court erred in deconsolidating the cases but does not request that the deconsolidation be reversed on appeal, and omits any mention of the order from its discussion heading. Williams claims it was prejudiced by deconsolidation, but fails to challenge the court’s detailed justifications for deconsolidating the cases. Williams adds in a heading in its reply brief that the superior court “erred by *sua sponte* deconsolidating the cases,” but again fails to cite to a rule or case indicating how the court erred. Williams waived its deconsolidation argument: we “consider as abandoned questions set forth in the Points but not argued in . . . [the] brief,”<sup>183</sup> and an appellant’s reply “brief may raise no contentions not previously raised in either the appellant’s or appellee’s briefs.”<sup>184</sup>

## VI. CONCLUSION

For the reasons stated above, we

AFFIRM the superior court’s conclusion that sulfolane is a hazardous substance under AS 46.03.822(a);

AFFIRM the superior court’s award of response costs under AS 46.03.822 to the State and Flint Hills for Williams’s offsite sulfolane releases;

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<sup>182</sup> Alaska R. App. P. 212(c)(1)(H).

<sup>183</sup> *Reilly v. Northrop*, 314 P.3d 1206, 1212 n.4 (Alaska 2013) (alteration in original) (quoting *Wetzler v. Wetzler*, 570 P.2d 741, 742 n.2 (Alaska 1977)).

<sup>184</sup> Alaska R. App. P. 212(c)(3).

AFFIRM the superior court's award of natural resource damages to the State for the loss of access to groundwater;

AFFIRM the superior court's interpretation of the Purchase Agreement's indemnification provisions;

AFFIRM the superior court's contribution awards under AS 46.03.822(j);

AFFIRM the superior court's decision not to refer on-site PFAS contamination issues to DEC; and

AFFIRM the superior court's declaratory relief; but

REMAND the superior court's injunctive relief for further proceedings in light of this opinion.

**APPENDIX B**

**SUPERIOR COURT FOR THE STATE OF ALASKA  
FOURTH JUDICIAL DISTRICT AT FAIRBANKS**

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Nos. 4FA-14-1544CI, 4FA-14-02952CI

STATE OF ALASKA, PLAINTIFF

v.

WILLIAMS ALASKA PETROLEUM, INC., THE WILLIAMS  
COMPANIES, INC., FLINT HILLS RESOURCES ALASKA,  
LLC, AND FLINT HILLS RESOURCES, LLC,  
DEFENDANTS

CITY OF NORTH POLE, PLAINTIFF

v.

WILLIAMS ALASKA PETROLEUM, INC., THE WILLIAMS  
COMPANIES, INC., FLINT HILLS RESOURCES ALASKA,  
LLC, AND FLINT HILLS RESOURCES, LLC,  
DEFENDANTS

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Filed: March 13, 2018

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**DECISION AND ORDER DENYING WAPI'S  
MOTION FOR SUMMARY JUDGMENT ON THE  
STATE'S CLAIMS; DENYING THE STATE AND  
CITY'S MOTION FOR PARTIAL SUMMARY  
JUDGMENT; AND DENYING THE STATE'S  
MOTION FOR PAST RESPONSE COSTS**

## **I. INTRODUCTION**

Williams Alaska Petroleum, Inc. and The Williams Companies, Inc. “filed a motion for summary judgment (motion #43) on the State’s sulfolane-related claims. In a single filing, the State and City filed both an opposition to motion #43 and a cross-motion for summary judgment (motion # 55) on their strict liability claims under AS 46.03.822 and for response costs under several other statutes and regulations related to pollution and hazardous substance releases.

Because the State and City failed to make a *prima facie* showing of liability under AS 46.03.822, AS 46.03.780, or AS 46.03.760, its cross-motion for summary judgment must be denied. Because WAPI failed to make a *prima facie* showing that liability should not attach under AS 46.03.822 or any other hazardous substance or pollution statute, its motion for summary judgment must also be denied.

## **II. FACTS**

The State of Alaska and the City of North Pole filed suit against Williams Alaska Petroleum, Inc.; (“WAPI”) and its parent company, Williams Companies, Inc. (“TWC”)—collectively the “Williams parties.” In a stipulation filed October 19, 2016, the State, the City, WAPI, and The Williams Companies, Inc. agreed to the dismissal of the State and City’s claims against The Williams’ Companies with prejudice.<sup>1</sup> Therefore, this decision only addresses WAPI liability.

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<sup>1</sup> But, under the stipulation, The Williams Companies, Inc. is not dismissed as to claims made by Flint Hills Resources Alaska, LLC and Flints Resources, LLC.

The State and City allege that WAPI released sulfolane into the soil, subsurface soil, and groundwater when WAPI<sup>2</sup> owned and operated the North Pole Refinery (“NPR”). The State and City seek to hold WAPI strictly liable for releases of sulfolane, oil, and other substances under Alaska’s strict liability statute, AS 46.03.822.

In motion #43, WAPI moved for summary judgment on only the State’s sulfolane-related claims.<sup>3</sup> Although WAPI maintains that a question of fact exists as to whether sulfolane is a hazardous substance for purposes of AS 46.03.822(a), it argues that summary judgment is nonetheless warranted because it is exempt from strict liability under the regulations and alternatively, that any liability under the hazardous substance or pollution statutes would be unconstitutional as applied to its sulfolane releases.<sup>4</sup> In cross-motion #55, the State and City seek a determination that, as matter of law, under AS 46.03.822

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<sup>2</sup> WAPI’s Amended Answer to Flint Hills Cross-Claim Asserted In Its Amended Answer to the State of Alaska’s Complaint filed on or about July 11, 2016 at ¶ 3 states: “WAPI admits that the same corporate entity, now named WAPI, owned and operated the North Pole Refinery from the commencement of refinery operations in 1977 through March 31, 2004.” Based upon ¶ 3 of the answer, it is the same entity and only changed its name. *See also* WAPI’s First Amended Answer to the State’s Complaint With Counterclaim and Cross Claim, dated February 29, 2016, f 11, p. 3, f 2, p. 19 (“WAPI and its predecessors owned and operated the North Pole Refinery in North Pole, Alaska from approximately 1977 through March 31, 2004.”).

<sup>3</sup> William’s Mot. for Summary Judgment on the State’s Claims, Sept. 16, 2016.

<sup>4</sup> William’s Mot. for Summary Judgment on the State’s Claims, Sept. 16, 2016.

they are entitled to response costs for releases of sulfolane and oil<sup>5</sup> as well as benzene, toluene, ethyl benzene, and xylenes; and PFOA and PFOS.<sup>6</sup> Also, the State and City have moved for summary judgment on their AS 46.03.780 and AS 46.03.760 claims for sulfolane releases.

### III. DISCUSSION

#### *Summary Judgment Standard*

Alaska Civil Rule 56 provides that summary judgment is warranted where “there is no genuine issue as to any material fact” and “the moving party is entitled to judgment as a matter of law.”<sup>7</sup> “In order for the movant to be entitled to summary judgment, the movant must first present a *prima facie* case for summary judgment: using admissible evidence, the movant must prove the absence of genuine factual disputes and its entitlement to judgment as a matter of law.”<sup>8</sup> If a *prima facie* case is established by the proponent of summary judgment, the nonmoving party must set forth specific facts showing that admissible evidence could be produced that reasonably tends to dispute or contradict the moving party’s evidence in order to demonstrate the existence of a dispute of material fact and prevent entry of summary judgment.<sup>9</sup>

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<sup>5</sup> State’s Complaint, March 06, 2014; City’s Second Amended Complaint, April 18, 2016.

<sup>6</sup> State’s Opp. to the Williams’s Mot. for Summary Judgment and State and City Cross-Mot. for Partial Summary Judgment, Oct. 12, 2016.

<sup>7</sup> Alaska R Civ. P. 56(c).

<sup>8</sup> *Sapko v. Dowell Schlumberger, Inc.*, 21 P.3d 1265, 1269 (Alaska 2001) (citation omitted).

<sup>9</sup> *Greywolf v. Carroll* 151 P.3d 1234, 1241 (Alaska 2007)(citations omitted)

The standard for finding a genuine issue of fact at summary judgment is lenient.<sup>10</sup> All reasonable inferences must be made in favor of the non-movant.<sup>11</sup> But it is improper to draw inferences in favor of the moving party.<sup>12</sup> After drawing all reasonable inferences in favor of the nonmoving party, the court must determine “whether the parties genuinely dispute any facts material to a viable legal theory and; if not, whether the undisputed facts entitle the moving party to judgment as a matter of law.”<sup>13</sup>

Conclusory statements in opposing affidavits are not sufficient to defeat a summary judgment motion.<sup>14</sup> Assertions of fact in pleadings and memoranda are not admis-

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<sup>10</sup> *Estate of Milos v. Quality Asphalt Paving, Inc.*, 145 P.3d 533, 537 (Alaska 2006). See also *Christensen v. Alaska. Sales & Service, Inc.* 335 P.3d 514, 518 (Alaska 2014) comparing the more lenient federal summary judgment standard (“Thus, both federal summary judgment and directed verdict standards required federal courts to inquire ‘whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law’”) with the Alaska summary judgment standard (“Summary judgment does not require the non-moving party to prove factual issues according to the applicable evidentiary standard, and does not allow trial judges to predict how a reasonable jury would decide the case—we explained that weighing and evaluating evidence “‘intrudes into the province of the jury.’”)

<sup>11</sup> *Alakayak v. British Columbia Packers, Ltd.*, 48 P.3d 432, 449 (Alaska 2002).

<sup>12</sup> *DeNardo v. Bax* 147 P.3d 672, 687 (Alaska 2006) (Noting it is improper to draw an inference in favor of the moving party.)

<sup>13</sup> *Prehlich v. Zorea*, 996 P.2d 730, 733 (Alaska 2000), quoting *Arctic Tug & Barge, Inc. v. Raleigh. Schwartz & Powell*, 956 P.2d 1199, 1200 (Alaska 1998).

<sup>14</sup> *Ratcliff v. Security Nat'l Bank*, 670 P.2d 1139, 1142 n. 6 (Alaska 1983).

sib[le] evidence and cannot be “relied upon for the purposes of summary judgment.”<sup>15</sup> Assertions of fact by counsel that are not contained in affidavits or are otherwise admissible may not be considered by the court. And inadmissible hearsay assertions in an affidavit cannot be used either to oppose or support a motion for summary judgment.<sup>16</sup>

The court does not evaluate witness credibility on summary judgment.<sup>17</sup> Consequently, the court “will not engage in a weighing of the evidence on summary judgment; there is a ‘genuine issue’ of material fact as long as the non-movant has presented some evidence in support of its legal theory.”<sup>18</sup> Therefore, any admissible evidence in favor of the nonmovant concerning a material fact will usually be sufficient to raise an issue of fact that renders summary judgment inappropriate.<sup>19</sup>

Because both WAPI and the State and City seek summary judgment on the issue of AS 46.03.822 liability and because the parties disagree as to the proper standard for strict liability, it is appropriate for the court to address the elements of the standard at the outset. Also, because only the State and City’s motion seeks summary judgment

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<sup>15</sup> *Brock v. Rogers & Bahler, Inc.*, 536 P.2d 778, 783 (Alaska 1975).

<sup>16</sup> *Broderick v. King’s Way Assembly of God Church* 808 P.2d 1211, 1218 (Alaska 1991) citing *Williford v. L.J. Carr Investments Inc.* 783 P.2d 235, 238 n.8 (Alaska 1989) citing *National Indem. Co. v. Flesher v. Sterneman* 469 P.2d 360, 368 (Alaska 1970).

<sup>17</sup> *Id.*

<sup>18</sup> *Estate of Milos v. Quality Asphalt Paving, Inc.*, 145 P.3d 533, 537 (Alaska 2006); quoting *Alakayak v. British Columbia Packers, Ltd.* 48 P.3d 432, 449 (Alaska 2002).

<sup>19</sup> *Meyer v. State* 994 P.2d 365, 367 (Alaska 1999); *Dansereau v. Ulmer* 903 P.2d 555, 570-71 (Alaska 1995).

based on the actual statutes—whereas WAPI’s motion advances regulatory and constitutional arguments—it is appropriate for the court to consider the State and City’s motion first, including its requests for liability under AS 46.03.780 and AS 46.03.760.

### **MOTION #55**

#### *A. AS 46.03.822 liability*

AS 46.03.822(a) imposes strict liability on responsible parties “for damages, for the costs of response, containment, removal, or remedial action incurred by the state, a municipality, or a village, . . . resulting from the unpermitted release of a hazardous substance with respect to response costs, the substantial threat of an unpermitted release of a hazardous substance.” The rationale is that the parties responsible for the release, and not the public, should pay for cleanup or other remedial costs associated with hazardous substance spills.<sup>20</sup> Basically where the state, a municipality, or a village pays to respond to or otherwise remedy someone else’s hazardous substance release, they can recover the full costs associated with their efforts.<sup>21</sup>

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<sup>20</sup> *Kodiak Island Borough v. Exxon Corp.*, 991 P.2d 757, 762 (Alaska 1999) citing 1989 House Journal 46-49 (Letter from Steve Cowper, Governor, to Sam Cotten, Speaker of the House, January 9, 1989).

<sup>21</sup> *Id.* citing 1989 House Journal 46-49 (Letter from Steve Cowper, Governor, to Sam Cotten, Speaker of the House, January 9, 1989); *see also* Letter from Steve Cowper, Governor, to Jan Faiks, Senator (May 2, 1989) (“The people of the state must be assured that they will not have to absorb the costs of cleanup from hazardous substance spills.”).

Under AS 46.03.822, the state, a municipality, or a village can recover costs it incurs as a result of either an unpermitted release of a hazardous substance or the substantial threat of an unpermitted release. Because this case does not involve allegations of threatened releases, the court analyzes the statute only as it pertains to actual unpermitted releases of hazardous substances. Where costs “resulting from an unpermitted release of a hazardous substance” are incurred, three categories of costs may be recovered:

- (1) “the costs of response, containment, removal, or remedial action ;”
- (2) “the additional costs of a function or service, including administrative expenses for the incremental costs of providing the function or service;” and
- (3) “the costs of projects or activities that are delayed or lost because of the efforts of the state, the municipality, or the village . . .”<sup>22</sup>

Moreover, under AS 46.03.822, the state, a municipality, or village may only seek reimbursement from one of the five categories of responsible persons described in the statute. The governments contend WAPI falls within under AS 46.03.822(a)(1) and (2).<sup>23</sup> That is WAPI is an

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<sup>22</sup> AS 46.03.822(a).

<sup>23</sup> In the three sentence section in their opposition and cross-motion at pages 36-37, the governments contend WAPI is a potentially responsible party. The governments do not state which subsections of 822(a) they rely upon in their opening to establish WAPI as a potentially responsible person. In their reply, they do cite AS 46.03.822(a)(1) and (3) but from the small portion of the briefing that addresses the issue it appears the governments are contending WAPI

“owner of, and the person having control over, the hazardous substance at the time of the release” under AS 46.03.822(a)(1) and “the owner and the operator of a facility, from which there is a release, . . . that causes the in-currence of response costs, of a hazardous substance” under AS 46.03.822(a) (2). The State and City seek reimbursement from WAPI as owner of the hazardous substance under subsection (1) and as owner of the facility under subsection (2) from which the hazardous substance was released.

As noted earlier, a party asking the court to grant it summary judgment must make out a *prima facie* showing on each claim or defense. To establish a *prima facie* case, the moving party must provide admissible evidence of each element of the claim or defense. The elements of a strict liability claim under AS 46.03.822(a)(1) against WAPI as an owner and controller of the use of a released hazardous substance are as follows:

- (1) A release must occur at during such time that WAPI owned or controlled the substance.
- (2) The release must be unpermitted.
- (3) The substance released must be a hazardous substance.
- (4) The release or threatened release must have caused the state, a municipality, or a village to incur one of the categories of costs listed above.<sup>24</sup>

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is a potentially responsible party under AS 46.03.822(a)(1) and (2). Consequently the court considers potential responsible party status under AS 46.03.822(a)(1) and (2).

<sup>24</sup> AS 46.03.822(a)(1).

The elements of a strict liability claim against the owner of the facility where a release occurs are as follows:

- (1) A release must occur from the facility owned by the corporation.
- (2) The release must be unpermitted.
- (3) The substance released must be a hazardous substance.
- (4) The release or threatened release must have caused the state, a municipality, or a village to incur response costs.<sup>25</sup>

The court will address the corresponding elements of each claim in assessing whether the governments have made the required *prima facie* showing that all elements of at least one of the claims have been met. And although the motion primarily addresses the State and City's sulfolane-related claims, the State and City also briefly argue that AS 46.03.822 liability should attach for releases of benzene, toluene, ethyl benzene, and xylenes; for releases of PFOS and PFOA; and for releases of oil. The court addresses these claims as well.

**1. A release must occur when WAPI owned the substance or owned the facility from which the substance was released.**

A “release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaking, dumping, or disposing into the environment, including the abandonment or discarding of barrels, con-

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<sup>25</sup> AS 46.03.822(a)(2).

tainers, and other closed receptacles containing any hazardous substance . . .”<sup>26</sup> Under AS 46.03.900(8), a “facility” includes “any offshore or onshore structure, improvement, vessel, vehicle, land, enterprise, or endeavor.” The court finds that the NPR meets the definition of facility as both an “onshore structure” and an “enterprise.”

*WAPI Owned and Operated the Facility*

WAPI admits that the same corporate entity, owned and operated the North Pole Refinery from the commencement of refinery operations in 1977 through March 31, 2004.<sup>27</sup> WAPI does not dispute that it is responsible for liability for releases from 1977 through March 31, 2004.

*Sulfolane Spills and Leaks Occurred During WAPI’s Ownership*

WAPI admits that during the time that it owned and operated the North Pole Refinery, releases of chemical substances, including sulfolane and perfluorochemicals occurred.<sup>28</sup>

Judicial findings have also been made that sulfolane spills and leaks occurred during WAPI’s ownership which contributed to sulfolane in the groundwater. In the *West* litigation, 4FA-10-1123, Williams Alaska Petroleum, Inc.,

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<sup>26</sup> AS 46.03.826(9).

<sup>27</sup> Admitted in WAPI’s Amended Answer to Flint Cross-Claim Asserted In Its Amended Answer to the State of Alaska’s Complaint ¶ 3 filed on or about July 11, 2016. The Williams Companies, Inc. purchased the stock of MAPCO in 1988 and changed the entity’s name to Williams Alaska Petroleum, Inc.

<sup>28</sup> WAPI’s Answer To Flint Hills’ Cross Claim Asserted In Its Amended Answer To The State Of Alaska’s Complaint filed on or about July, 11, 2016 (“WAPI admits that during the time it owned and operated the North Pole Refinery, releases of sulfolane and perfluorochemicals occurred.”)

The Williams Companies, Inc., Flint Hills Resources Alaska, LLC, and Flint Hills Resources, LLC vigorously litigated the allocation of liability of damages between those entities for the releases at the North Pole Refinery. The State notes several of these findings in its briefing.<sup>29</sup>

The applicability of collateral estoppel to a set of facts is a question of law.<sup>30</sup> The court finds that the factual findings made by Judge McConahy in the *West* litigation may be used by the governments against WAPI and Flint Hills as long as the particular circumstances of the prior adjudication would not make it unfair to allow the governments, who were not a party to the *West* litigation, to invoke collateral estoppel.<sup>31</sup> Here the record reveals that both Flint Hills and Williams litigated their liability as between themselves. To determine whether Flint Hills brought its claims against Williams within the statute of limitations, the parties necessarily presented evidence concerning releases of sulfolane from the refinery property. And Judge McConahy made findings concerning those releases. The Williams parties and Flint Hills had every opportunity and motivation to litigate these facts. This court finds there is no unfairness in estopping WAPI from relitigating the following facts determined in the November 5, 2013 Order Regarding Statute of Limitations:

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<sup>29</sup> The State and City cite Judge McConahy's Nov. 5, 2013 *Order Regarding Statute of Limitations* in 4FA-10-1123, at pages 3, 5, 6, 67 of their brief.

<sup>30</sup> *Rapaport v. Tesoro Alaska Petroleum Co.*, 794 P.2d 949, 951 (Alaska 1990).

<sup>31</sup> *Murray v. Feight*, 741 P.2d 1148, 1153 (Alaska 1987).

at p. 8: “In 2001, Williams discovered the presence of sulfolane in the groundwater beneath the refinery.”;

at p. 10-11: “During the time that Williams owned and operated the refinery, there were two plumes of concentration in the groundwater at the refinery that were of particular concern to the Alaska Department of Environmental Conservation (ADEC). The first was a combination of benzene, toluene, ethyl benzene, and xylenes (“BTEX”). The second was a plume of light non-aqueous phase liquid (“LNAPL”). Both BTEX and LNAPL were present in the groundwater, as the result of prior releases (for example, spills or leaks) at the time of sale to Flint Hills.

Also during the time that Williams and its predecessors-in-interest owned and operated the refinery, sulfolane was released into the ground underlying the refinery”; and

at p. 12: “Williams never determined any specific source(s) of sulfolane in the groundwater, but Williams did conclude that the sulfolane in the groundwater was due at least in part to historical releases (i.e., spills or leaks during Williams’ ownership predating 2002).”

These spills and leaks of sulfolane, benzene, toluene, ethyl benzene, and xylenes are “releases” under the definition of “release” at AS 46.03.826(9).<sup>32</sup> Additionally, the

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<sup>32</sup> AS 46.03.826(9) states: “‘release’ means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including

court finds that WAPI owned at least some of the sulfolane at issue—it is established *that* sulfolane was used as a chemical solvent at the refinery during WAPJ's operation of NPR. Thus, WAPI both owned a portion of the sulfolane when it was released, under AS 46.03.822(a)(1).

Also, the Characterization Report and proposed Corrective Action Plan prepared by Shannon & Wilson, Inc. in 2002. (“2002 Shannon and Wilson Report”)<sup>33</sup> shows that benzene, toluene, ethyl benzene and xylenes were released from NPR either during the period in which WAPI's owned the facility.<sup>34</sup>

Finally, the 2002 Shannon and Wilson Report states that on October 2, 1985, there was “an overflow of oily water” containing sulfolane. The court finds that such an overflow is consistent with the definition of release. Also, the “Release Summary” for the NPR delineates spills, including spills of oil and other petroleum products, by the number of gallons. The court finds these spills to be releases under .822. And, the 2013 Addendum to the Arcadis Onsite Characterization Report demonstrates that PFOS and PFOA were detected in the soil and groundwater. The court finds this consistent with a release of PFOS and PFOA occurring at some point prior to 2013.

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the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance, but excluding

(A) any release that results in exposure to persons solely within a workplace, with respect to a claim that those persons may assert against the persons' employer; and

(B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, or vessel.”

<sup>33</sup> Exhibit J.

<sup>34</sup> See note 27 *infra*. [Formatting note deleted.]

The governments have established a *prima facie* case as to WAPI having ownership and control of sulfolane, benzene, toluene, ethyl benzene, xylenes, and perfluorochemicals under .822(1) and (2) as an owner of the substance and as an owner of the facility from which it was released.

## 2. The release must be unpermitted.

While the statutes do not define “unpermitted release,” the statutes define a “permitted release” as “a release occurring under the authority of a valid permit issued by the department or by the Environmental Protection Agency.”<sup>35</sup> A common sense reading of the language of AS 46.03.822 in conjunction with the definition of “permitted release” indicates that “unpermitted” means without “the authority of a valid permit issued by the department or by the Environmental Protection Agency.”<sup>36</sup> Because WAPI has conceded that it did not have a permit

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<sup>35</sup> AS 46.08.900(8); AS 46.09.900(5).

<sup>36</sup> See *Alaska Center for the Environment v. State*, 80 P.3d 231, 242-3 (Alaska 2003) (rejecting the plain meaning rule “in favor of a rule wherein ‘[s]tatutory construction begins with an analysis of the language of the statute construed in light of its purpose.’”) quoting *Bullcock v. State, Dep’t of Cnty & Reg’l Affairs*, 19 P.3d 1209, 1214 (Alaska 2001) (quoting *Borg-Warner Corp. v. Avco Corp.*, 850 P.2d 628, 633 n. 12 (Alaska 1993)). Hearing, Apr. 20, 2017. WAPI argued that permitted should construed more informally as “allowed.” WAPI urged that the spills were not “unpermitted” because after the spills occurred, the DEC emailed WAPI, indicated that sulfolane was unregulated, and did not impose a cleanup obligation on WAPI. WAPI contends that because DEC did not require cleanup, the sulfolane releases were allowed. The court notes that even under that construction of the term the element would be met because WAPI did not have or obtain permission to release sulfolane *prior to the release*. The DEC email pertains to WAPI’s cleanup obligation, not to whether WAPI was allowed or permitted to spill sulfolane in the first place.

issued by the DEC or EPA to release sulfolane, its release of that substance was unpermitted. Additionally, if WAPI did not have a permit to release sulfolane, its releases of oily waste water containing sulfolane were unpermitted. However, there has been neither an allegation nor a factual showing that releases of benzene, toluene, ethyl benzene, xylenes, oil, PFOA, or PFOS from NPR were unpermitted. Thus a genuine issue of material fact exists as to whether WAPI, under its current or former name, had a permit to release benzene, toluene, ethyl benzene, xylenes, oil, PFOA, or PFOS.

The governments have made a *prima facie* showing of unpermitted releases of sulfolane. If the other elements are met with respect to unpermitted releases of sulfolane, WAPI may be strictly liable for those releases. Because the State and City failed to meet their burden on summary judgment and make a *prima facie* showing that the releases of benzene, toluene, ethyl benzene, xylenes, and oil and releases of PFOS and PFOA were unpermitted, the court need not address the other elements with respect to these substances.

**3. The substance released must be a hazardous substance.**

Under Alaska Civil Rule 56(c), a motion for summary judgment “may be supported by affidavits setting forth concise statements of material facts made upon personal knowledge,” and the adverse party “may serve opposing affidavits.” Rule 56(e) states the following:

Supporting and opposing affidavits shall be made on personal knowledge, shall set forth such facts as would

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Nor did the emails permit or “allow” WAPI to spill sulfolane in the future.

be admissible in evidence, and shall show affirmatively that the affiant is competent to testify to the matters stated therein. . . . When a motion for summary judgment is made and supported as provided in this rule, an adverse party may not rest upon the mere allegations or denials of the adverse party's pleading, but the adverse party's response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial. If the adverse party does not so respond, summary judgment, if appropriate, shall be entered against the adverse party.

In support of its motion for summary judgment, the State and City provide the affidavit of Dr. Ted Wu, an Environmental Specialist IV who works for the DEC in the Division of Spill Prevention and Response.<sup>37</sup> WAPI does not put forth an opposing affidavit. Therefore, whether summary judgment is warranted turns on whether Dr. Wu's affidavit sets forth an expert opinion necessary to support the State and City's motion for summary judgment.

Dr. Wu's affidavit is four pages long and has nine paragraphs. The first paragraph contains a description of Dr. Wu's education and occupation, and the second states that he "[has] a working knowledge of matters set forth in this affidavit." Paragraphs 3 through 9 contain the following assertions:

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<sup>37</sup> Aff. of Ted Wu attached to SOA's Opposition To Williams' Motion For S.J. And SOA and City Cross-Motion for Partial S.J. For Partial Summary Judgment

3. That Dr. Wu reviewed two animal studies regarding health effects of sulfolane exposure and a description of the study results.
4. That the main exposure pathways for humans involve water containing sulfolane.
5. That the federal regulations require chemical manufacturers, distributors, and importers to provide Safety Data Sheets to guide their employees in handling certain chemicals. The affidavit references a Chevron Philips' Safety Data Sheet and states that the Safety Data Sheet documents that "sulfolane is classified as a hazardous liquid with Category 5 acute toxicity and category 1B reproductive toxicity ... [and] warns that sulfolane may be harmful if swallowed and may damage fertility or the unborn child."
6. That Dr. Wu has reviewed "studies/reports on the development of a toxicity value (oral reference dose) and calculations of protective groundwater levels for sulfolane" and a list of the studies and reports.
7. That the highest sulfolane level in the groundwater recommended by any of these studies is 362 ppb. The affidavit then states: "A substance or compound that poses a threat to human health at or above a specified concentration is a hazardous substance as that term is defined by AS 46.03.826(5) and sulfolane is thus a hazardous substance under AS 46.03.826(5)."
8. That Flint Hills proposed toxicity value and cleanup level of 362 ppb is higher than ASTR, EPA, and Canadian guidance recommend. And

that “Flint Hills’ calculation of a level using the department approved Risk Assessment Procedures Manual, is, in and of itself, an acknowledgment that sulfolane is a hazardous substance.”

9. That Dr. Wu has reviewed certain listed information on PFOS and PFOA and that he considers them to be hazardous substances under AS 46.03.826(5).<sup>38</sup>

Under AS 46.03.826(5),

‘[H]azardous substance’ means

- (A) an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found.
- (B) oil; or
- (C) a substance defined as a hazardous substance under 42 U.S.C. 9601(14).<sup>39</sup>

AS 46.03.826(5)(8) and (C) do not apply in this case. It is undisputed that sulfolane, PFOA, and PFOS are not “oil” or listed as hazardous substances under 42 U.S.C.

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<sup>38</sup> Affidavit of Ted Wu.

<sup>39</sup> AS 46.03.826(5).

9601(14). Thus, the issue is whether any one of these substances constitutes a hazardous substance because it “presents an imminent and substantial danger to the public health or welfare.”

The statutory phrase “imminent and substantial danger” is not defined in Alaska statute. And Alaska case law does not otherwise address its meaning.<sup>40</sup> Further, the CERCLA provision defining “hazardous substance”, 42 USCA § 9601(14),<sup>41</sup> provides no guidance here because that provision does not contain language akin to AS 46.03.826(5)(C). Unlike Alaska law, federal law requires the EPA Administrator to specifically designate and list which substances are hazardous substances. Thus, under federal law there is no need to prove that a substance presents an imminent and substantial danger at trial for

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<sup>40</sup> See *Eaklor v. State*. 153 P.3d 367, 370 (Alaska App. 2007) (the meaning of an undefined statutory phrase is a question of law).

<sup>41</sup> 42 USCA § 9601(14) states in pertinent part: “The term ‘hazardous substance’ means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C. 1321(b)(2)(A)], (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation or which under the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water-Pollution Control Act (33 U.S.C. 1317(a)], (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 U.S.C. 2606].”

strict liability under the federal statute.<sup>42</sup> Thus, whether a particular substance is a hazardous substance is not the subject of federal court decisions.

Nonetheless federal case law does give meaning to “imminent” and “substantial” in the context of hazardous substance releases. CERCLA’s abatement provision requires proof that there “may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility.”<sup>43</sup> And in interpreting this language, courts consider each element of the

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<sup>42</sup> The federal scheme commences with 42 U.S.C. § 9601(14) defining “hazardous substances,” in part, as “any element, compound, mixture, solution or substance designated pursuant to section 9602 of this title.” Section 9602, in turn, delegates the determination of “hazardous substances” to the EPA. The EPA has designated “[t]he elements and compounds and hazardous wastes appearing in the table at 40 C.F.R. 302.4 as hazardous substances under [section § 9602 of the CERCLA].” In addition, “hazardous substance” under § 9601(14) includes the substances designated as hazardous or toxic under the Clean Air Act (42 U.S.C. § 7412), the Clean Water Act (33 U.S.C. §§ 1317(a) & 1321(b)(2)(A)), the Solid Waste Disposal Act (42 U.S.C. § 6921), and the Toxic Substances Control Act (15 U.S.C. § 2606). The EPA makes all such designations per regulation except those substances specifically identified by Congress when legislation was passed. All such substances are listed at 40 C.F.R. 302.4.

<sup>43</sup> CERCLA § 106(a) codified at 42 U.S.C. 9606. The operative language is “In addition to any other action taken by a State or local government when the President determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility . . .”

phrase separately: requiring factual proof of (1) endangerment; (2) imminency;<sup>44</sup> and (3) substantiality.<sup>45</sup> Much case law exists developing the meaning of those terms and suggests that whether a substance presents an imminent and substantial danger is a question of fact.

In his affidavit, Dr. Wu advances no opinion as to whether sulfolane or PFOA or PFOS “present an imminent and substantial danger.” Indeed, Dr. Wu does not rely on the definition of “hazardous substance” *specifically designated in the statute* in asserting his opinion. Instead, he creates his own puzzling definitions of “hazardous substance”<sup>46</sup> and then states, in a conclusory fash-

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<sup>44</sup> See *Meghrig v. KFC Western Inc.*, 516 U.S. 479, 485 (1996) (“Imminency” requires at least “a threat which is present *now*, although the impact of the threat may not be felt until later”); *Dague v. City of Burlington*, 935 F.2d 1343, 1356 (2d. Cir. 1991) *rev’d on other grounds* (imminency requires a showing that a “risk of threatened harm is present”); *Chem. Weapons Working Group, Inc. v. U.S. Dept. of Def.*, 61 Fed. Appx. 556, 561 (10th Cir. 2007) (“The vague possibility of future harm is insufficient”) (internal citations omitted).

<sup>45</sup> *Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d 199, 211 (2d. Cir. 2009) (substantial means serious); *U.S. v. E.I. du Pont de Nemours & Co.* 341 F. Supp. 2d 215, 247 (W.D.N.Y. 2004) quoting *U.S. v. Conserv. Chem. Co.*, 619 F. Supp. 162, 194 (W.D. Mo. 1985) (whether a danger is substantial “involves the consideration of ‘[a] number of factors (e.g. the quantities of hazardous substances involved the nature and degree of their hazards, or the potential for human or environmental exposure)’”).

<sup>46</sup> Affidavit of Ted Wu ¶ 7 (“A substance or compound that poses a threat to human health at or above a specified concentration is a hazardous substance as that term is defined by AS 46.03.826(5). . . .” Compare to the language of AS 46.03.826(5)(A): ‘[H]azardous substance’ means (A) an element or compound which, *when it enters into the Atmosphere or in or upon the water or surface or subsurface land of the*

ion that sulfolane, PFOA, and PFOS meet those definitions. For example, according to Dr. Wu “hazardous substance” can mean a “substance or compound that poses a threat to human health at or above a specified concentration;” or a level calculation contained in a “department approved Risk Assessment Procedures Manual.” Dr. Wu uses these definitions to conclude that sulfolane is a hazardous substance. Presumably he also uses these definitions in concluding that PFOA and PFOS are hazardous substances, but that is unclear from the affidavit and the court is precluded from drawing inferences favorable to the moving party when determining the merits of the moving party’s case on summary judgment.<sup>47</sup> Regardless, the affidavit wholly ignores the applicable statutory language of AS 46.03.826(5)(A) and thus fails to set forth an expert opinion showing that the substances at issue present a danger and that the danger present is imminent and substantial.

Indeed the only “danger” specified in the affidavit is contained within the reference to the Chevron Safety Data Sheet, which warns that sulfolane *may be* harmful if swallowed and *may* damage fertility or the unborn child. While Dr. Wu may rely on this hearsay in formulating his opinion, there is no indication that he adopted an opinion with respect to this information. Further, even if he wanted to rely on the information to assert that, in his opinion, sulfolane may be harmful, this factual assertion would amount to no more than the equivocal possibility of harm—which clearly ignores the imminency requirement

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*state*, presents an imminent and substantial danger to the public health or welfare, . . . .” (emphasis added).

<sup>47</sup> *DeNardo v. Bax*, 147 P.3d 672, 687 (Alaska 2006) (Noting it is improper to draw an inference in favor of the moving party.)

in AS 46.03.826(5)(C). But Dr. Wu advances no such opinion and the court may not infer one from the hearsay statement contained in the affidavit.

In order for the movant to be entitled to summary judgment, the movant must first present a *prima facie* case for summary judgment using admissible evidence.<sup>48</sup> Expert opinions are admissible at the summary judgment stage if it meets the requirements of Evidence Rule 702: “If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge; skill, experience, training; or education, may testify thereto in the form of an opinion or otherwise.”<sup>49</sup> “[O]pinion testimony . . . that would be inadmissible at trial are inadmissible in a motion for summary judgment.”<sup>50</sup> Expert opinions are admissible at trial only if the opinions will “assist the trier of fact to understand the evidence or to determine a fact in issue.”<sup>51</sup>

To succeed on summary judgment the governments must show that “when [the substance] enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare” under AS 46.03.826(S)(A). As shown above, Dr. Wu advances no opinion as to whether sulfolane or PFOA or PFOS “present an imminent and substantial danger.” And Dr. Wu does not use the standard in AS 46.03.826(5)(A) that the

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<sup>48</sup> *Sopko v. Dowell Schlumberger, Inc.*, 21 P.3d 1265, 1269 (Alaska 2001).

<sup>49</sup> ARE 702(a).

<sup>50</sup> *Broderick v. King's Way Assembly of God Church*, 808 P.2d 1211, 1215 (Alaska 1991).

<sup>51</sup> Alaska R. Evid. 702(a).

determination is made at the point “when [the substance] enters into the atmosphere or in or upon the water or surface or subsurface land of the state. . . .” Consequently, the court finds Dr. Wu’s affidavit does not assist the fact finder and is inadmissible evidence. Thus a genuine issue of material fact exists as to whether sulfolane, PFOA, and PFOS are hazardous substances. Summary judgment must be denied.

**4. The release or threatened release must have caused the state, a municipality, or a village to incur allowable costs.**

Although the court need not reach this element, the State and City’s failure to provide a factual showing that response costs were incurred with respect to the substance releases provides a separate legal ground for denying summary judgment.

The party seeking reimbursement has the burden of proving actual damages within the meanings of AS 46.03.822.<sup>52</sup> The only category of costs sought by the State and City under AS 46.03.822 are the costs of response actions—or actions taken in response to the hazardous substance release—including “mitigation, cleanup, or removal.”<sup>53</sup> In support of its allegation that it incurred response costs, the State and City include an affidavit by Kamie M. Willis, Litigation Coordinator in the Environmental Section of the Attorney General’s Office. In the affidavit she states, “DEC has incurred response costs related to the release of sulfolane and other hazardous substances the North Pole refinery.” The affidavit does not

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<sup>52</sup> *Kodiak Wand Borough v. Exxon Corp.*, 991 P.2d 757, 764 (Alaska 1999).

<sup>53</sup> See 46.04.900(22); AS 46.03.826(10)-(11).

specify which substances are included in “other hazardous substances.”

Attached to the affidavit is a spreadsheet containing NPR “site invoices” billed to FHRA and WAPI. The site invoice spreadsheet includes a list of amounts which apparently were billed to FHRA and WAPI, but it does not indicate for what FHRA and WAPI were billed. There is no showing of response costs resulting specifically from releases of benzene, toluene, ethyl benzene, or xylenes, oil, or PFOA and PFOS. The conclusory declaration in an affidavit that response costs were incurred as a result of sulfolane releases is insufficient to make a *prima facie* case on summary judgment. And the invoice spreadsheet fails to show that the billings are in any way associated with response costs incurred by the State and City or response costs resulting from releases. Therefore, the State and City’s request for AS 46.03.822 claims must be denied for failure to make a factual showing that this element is met, as well as for reasons given above.

#### *B. AS 46.03.780 liability*

The governments argue WAPI’s violation of environmental statutes and regulations also triggers liability for restoration damages. AS 46.03.780 imposes liability upon persons, who degrade the environment. Under that section, “the attorney general on behalf of the state” is entitled to collect “money required to restock injured land or waters, to replenish a damaged or degraded resource, or to otherwise restore the environment of the state to its condition before the injury.” In order to establish liability under the part of the statute relied upon by the State and City, the following must be shown:

- (1) that a person “violates a provision of [AS 46.03], AS 46.04, AS 46.09 or AS 46.14 . . . [and]
- (2) “thereby causes the death of fish, animals, or vegetation or otherwise injures or degrades the environment of the state. . . .”

The State and City argue that WAPI is liable under AS 46.03.780 for violations of AS 46.03 and AS 46.09—specifically AS 46.03.100(a), AS 46.03.710, AS 46.03.745 and AS 46.09.020. These arguments are specific to sulfolane releases—“Williams’ releases of sulfolane have injured or degraded the aquifer.”<sup>54</sup> The State and City do not make the same arguments in this motion for other substance releases. The State and City’s motion does make the conclusory and unsupported argument that WAPI violated AS 46.03.780 because it disposed of “wastewater, pollutants, oil, or industrial wastes into the environment.” But they do not address or argue that these alleged disposals violate any specific section of AS 46.03, AS 46.04, AS 46.09, or AS 46.14. Because the State and City do not address the first element of AS 46.03.780 with respect to these substances, let alone provide any argument or factual showing that the element is met, the court only addresses the sulfolane-related claims.

The government also argue that Judge McConahy’s April 10, 2012, Order<sup>55</sup> conclusively established by partial summary judgment against the Williams parties in the

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<sup>54</sup> William’s Mot. for Summary Judgment on the State’s Claims, Sept. 16, 2016, p. 48.

<sup>55</sup> “Order Regarding Flint Hills’ Motion for Partial Summary Judgment Relating to (I) the Source of the Sulfolane Contamination, (II) the Characterization of the Sulfolane Plume as an ‘Environmental Condition,’ and (III) Sulfolane Off-Site as of April 1, 2004”.

*West* litigation that the North Pole refinery is the only source of the sulfolane groundwater.

In this case, WAPI asserted an affirmative defense in its Answer and Counterclaim to the City of North Pole's Second Amended Complaint filed on April 28, 2016, alleged that WAPI is not responsible for the City's "knowing and intentional discharge of sulfolane into the environment at the City of North Pole Wastewater Treatment Facility". WAPI also raised an affirmative defense in its March 9, 2015 Answer to the City's First Amended Complaint that the City's "alleged damages were caused by its own conduct."

In the motion practice concerning WAPI's request to add a claim against the City of North Pole for release of sulfolane from its water treatment plant, it was established collateral estoppel did not preclude WAPI from raising the City's alleged unpermitted release of sulfolane into a dry channel. The river channel where the city was permitted to discharge sulfolane

first went dry in May 2012 a month after Judge McConahy's decision. (The City's permit authorized release into the Tanana River. A river channel where the releases occurred apparently went dry:) Therefore, Judge McConahy's factual determination could not include the question of whether the City alleged release of sulfolane was a source of the contamination at his in the *West Litigation*. The issue is the same—the source of the sulfolane—but since the order was issued April 10, 2012, and the channel is alleged to have went dry in May 2012, the *West Litigation* pretrial preparation and discovery relating to the alleged release by the

City could not have been included in the *Wet Litigation* prior to Judge McConahy's decision.<sup>56</sup>

To the extent that the governments rely upon Judge McConahy's factual finding, a question of fact is raised about whether WAPI's and Flint Hills sulfolane releases were the only sulfolane releases.

**1. *There must be a violation of AS 46.03, AS 46.04, AS 46.09, or AS 46.14***

**i. AS 46.03.100(a)**

AS 46.03.100(a) states:

A person may not construct, modify, or operate a sewerage system or treatment works or take any action that results in the disposal or discharge of a solid or liquid waste material or heated process or cooling water into the waters or onto the land of the state without prior authorization from the department.”<sup>57</sup>

It is clear that AS 46.03.100(a) pertains only to disposal or discharge of waste material. AS 46.03.900 contains definitions of eight different categories of “waste.”<sup>58</sup> Despite bearing the burden to establish a *prima facie* case on their motion for summary judgment, the State and

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<sup>56</sup> March 16, 2017 *Decision And Order Denying WAPI's Motion to File First Amended Answer and Counterclaim to the City of North Pole's Second Amended Complaint* (Motion #57) p. 2-3.

<sup>57</sup> AS 46.03.100.

<sup>58</sup> AS 46.03.900(9) (“hazardous waste”); AS 46.03.900(11) (“industrial waste”); AS 46.03.900(14) (“mining waste”); AS 46.03.900(16) (“municipal solid waste”); AS 46.03.900(17) (“other wastes”); AS 46.03.900(26) (“solid waste”); AS 46.03.900(35) (“waste associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy”); AS 46.03.900(36) (“waste derived intrinsically from primary field operations”).

City do not address whether sulfolane falls within any of these definitions. They have failed to make any showing that sulfolane falls within any meaning of “waste.” The State and City have not made a *prima facie* showing that AS 46.03.100 has been violated.

**ii. AS 46.03.710**

AS 46.03.710 states, “[a] person may not pollute or add to the pollution of the air, land, subsurface land, or water of the state.”<sup>59</sup> “[P]ollution” means

the contamination or altering of the waters, land, or subsurface land of the state in a manner which creates a nuisance or makes waters, land, or subsurface land unclean, or noxious, or impure, or unfit so that they are actually or potentially harmful or detrimental or injurious to public health, safety, or welfare, to domestic, commercial, industrial, or recreational use, or to livestock, wild animals, bird, fish, or other aquatic life.”

The governments’ support for a motion for summary judgment must prove every element of the cause of action, and expressly disprove every applicable affirmative defense of the answer.<sup>60</sup> Despite hearing the burden of establishing a *prima facie* case on their motion for summary judgment, the State and City merely advance a conclusory argument that WAPI violated AS 46.03.710. The State and City make no showing of the separate elements of the definition of pollution.<sup>61</sup> The State and City have not made a *prima facie* showing that AS 46.03.710 has been violated.

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<sup>59</sup> AS 46.03.710.

<sup>60</sup> *Braund, Inc. v. White*, 486 P.2d 50, 54 n.6 (Alaska 1971).

<sup>61</sup> *See also Stock v. State*, 526 P.2d 3 (Alaska 1974).

**iii. AS 46.03.745**

AS 46.03.745 states, “. . . a person may not cause or permit the release of a hazardous substance as defined in AS 46.09.900. Under that section,

‘hazardous substance’ means

- (A) an element or compound that, when it enters into or on the surface or subsurface land or water of the state, presents an imminent and substantial danger to the public health or welfare, or to fish, animals, vegetation, or any part of the natural habitat in which fish, animals, or wildlife may be found; or
- (B) a substance defined as a hazardous substance under 42 U.S.C. 9601–9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980); “hazardous substance” does not include uncontaminated crude oil or uncontaminated refined oil.

Despite bearing the burden of establishing a *prima facie* case on their motion for summary judgment, the State and City merely advance a conclusory argument that WAPI violated AS 46.03.745. In this section of the motion, the State and City make no factual showing that the separate elements of the definition of hazardous substance have been met.<sup>62</sup> As addressed above, a genuine issue of material fact exists as to whether sulfolane presents an imminent and substantial danger. Due to this factual issue, whether AS 46.03.745 has been violated cannot be decided on summary judgment.

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<sup>62</sup> See also *Stock v. State*, 526 P.2d 3 (Alaska 1974).

**iv. AS 46.09.020**

AS 46.09.020 states, “a person who causes a release of a hazardous substance shall make reasonable efforts to contain and clean up the hazardous substance promptly after learning of the release. . . .” A genuine issue of material fact exists as to whether sulfolane is a hazardous substance and, if so, whether WAPI’s efforts were reasonable or not. Due to these factual issues, whether AS 46.09.020 has been violated cannot be decided on summary judgment.

**2. The alleged violation must cause the death of fish, animals, or vegetation or otherwise injure or degrade the environment of the state**

Because the court finds that the state has failed to make a *prima facie* showing that a violation of AS 46.03, AS 46.04, AS 46.09 occurred as required by AS 46.03.780, the court need not address the second element of AS 46.03.780. The State and City’s request for summary judgment under AS 46.03.780 must be denied.

**C. AS 46.03.760 liability**

AS 46.03.760 provides a cause of action to the state for civil assessments. AS 46.03.760 applies only to

[a] person who Violates or causes or permits to be violated a provision of [AS 46.03] other than AS 46.03.250–46.03.313, or a provision of AS 46.04 or AS 46.09, or a regulation, a lawful order of the department, or a permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under this chapter or AS 46.04 or AS 46.09 is liable, in a civil action. . . .

The State and City urge that WAPI violated AS 46.03.710, AS 46.03.745, AS 46.09.020 as well as 18 AAC 75. For the reasons stated above, there has been an insufficient showing of the statutory violations. With respect to the alleged violation of 18 AAC 75, the State and City do not specify which particular section or regulation, if any, under chapter 75 WAPI violated. Because chapter 75 pertains to hazardous substance releases and a genuine issue of material fact exists as to whether sulfolane is a hazardous substance, any alleged violation under chapter 75 would be inappropriate to decide on summary judgment. The State and City have failed to make a *prima facie* showing that WAPI committed a violation as required under AS 46.03.760. The court does not address the other requirements or elements of that statute. The State and City's request for summary judgment under AS 46.03.760 must be denied.

#### **MOTION #43**

In its motion WAPI basically advances three arguments. First, it argues that a cleanup standard must be determined prior to imposing AS 46.03.822 liability. Second, it argues that regardless of whether sulfolane is a hazardous substance under AS 46.03.822, WAPI is not liable because an exception to liability—or what it denotes as a “statutory safe harbor”—applies to it under 18 AAC 75.325(d). Finally, WAPI argues that to hold them liable for the sulfolane releases under the hazardous substance and pollution statutes would violate due process and to hold them strictly liable would violate the takings clause.

##### *a. AS 46.03.822 liability*

The court delineated the elements of an AS 46.03.822 liability claim above. Whether or not a cleanup standard

exists does not impact whether a substance release presents an imminent and substantial danger. As previously stated, evidence regarding whether the substance does or does not exceed a given cleanup may be probative of the issue, but is generally not dispositive.<sup>63</sup> But a cleanup standard is not a prerequisite to WAPI's liability under AS 46.03.822(a). WAPI's argument that a cleanup standard must be determined prior to imposing AS 46.03.822 liability is completely without merit.

*b. 18 AAC 75.325(d)*

18 AAC 75.325(d) pertains only to releases of hazardous substances. A genuine issue of material fact exists as to whether sulfolane is a hazardous substance. WAPI does not argue or provide any factual showing that sulfolane is a hazardous substance. Any alleged exception to liability under chapter 75 would be inappropriate to decide on summary judgment.

*c. Constitutionality*

**1. Due Process**

When considering due process, it is a "settled rule that economic legislation enjoys a 'presumption of constitu-

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<sup>63</sup> *Lewis v. FMC Corp.*, 786 F. Supp. 2d 690, 710 (W.D.N.Y. 2011) citing *Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d 199 (2nd Cir. 2009) (even assuming lead exceeded state regulatory standards, the record was nonetheless insufficient to raise a material issue of fact as to whether it posed an imminent and substantial danger to the public); but see *Interfaith Community Org. v. Honeywell Intern., Inc.*, 399 F.3d 248, 261-4 (3rd 2005) (district court did not err in finding exposure to chromium waste constituted a "substantial risk if imminent damage to public health and safety and imminent and severe damage to the environment" where chromium levels greatly exceeded state standards).

tionality' that can be overcome only if the challenger establishes that the legislature acted in an arbitrary and irrational way."<sup>64</sup> WAPI frames its due process arguments in terms of vagueness and fair notice.

### i. The Vagueness Doctrine

"The United States Supreme Court long ago recognized, a statute which either forbids or requires the doing of an act in terms so vague that men of common intelligence must necessarily guess at its meaning and differ as to its application violates the first essential of due process of law."<sup>65</sup> While Alaska courts must consider a number of factors in determining whether criminal statutes are vague, "... economic regulation is subject to a less strict vagueness test."<sup>66</sup> When considering whether a civil statute is unconstitutionally vague, '[a]ll that should be required is legislative language which is not so conflicting and confused that it cannot be given meaning in the adjudication process."<sup>67</sup>

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<sup>64</sup> *U.S. v. Aleem Alum. Corp.*, 49 F. Supp. 2d 96 (N.D.N.Y. 1999) (quoting *Usury v. Turner Elkhorn Mining Co.*, 428 U.S. 1, 15 (1976).

<sup>65</sup> *Lazy Mountain Land Club v. Matanuska-Susitna Borough Board of Adjustment & Appeals*, 904 P.2d 373 (Alaska 1995) quoting *Connally v. General Constr. Co.*, 269 U.S. 385, 391 (1926).

<sup>66</sup> *Lazy Mountain Land Club v. Matanuska-Susitna Borough Board of Adjustment & Appeals*, 904 P.2d 373 (Alaska 1995) quoting *Village of Hoffman Estates, Inc., v. Flipside, Hoffman Estates, Inc.*, 455 U.S. 489 (1982).

<sup>67</sup> *Lazy Mountain Land Club v. Matanuska-Susitna Borough Board of Adjustment & Appeals*, 904 P.2d 373 (Alaska 1995) quoting *Williams v. State, Dept. of Rev.*, 895 P.2d 99, 105 (Alaska 1995).

In this case, WAPI relies on the heightened criminal vagueness test<sup>68</sup> without providing any authority that it should apply in this civil matter. Moreover, WAPI does not argue that any particular statute or any particular legislative language is vague. Instead it makes a blanket argument that Alaska's pollution and hazardous substance statutes, in general, are unconstitutionally vague. More is required. Under Alaska law, a party must point to some statute or language in order to adequately challenge it as vague. Failure to develop an argument constitutes a waiver of that argument.<sup>69</sup> The court considers WAPI's failure adequately develop the argument as a waiver of the claim.

## ii. The Fair Notice Doctrine

Under the fair notice doctrine, agencies must provide fair notice prior to departing from a long-established administrative construction of the law.<sup>70</sup> And if an agency departs from its long-established regulations or adjudications, it must "provide a person of ordinary intelligence fair notice of what is prohibited." The evidence shows that in email correspondence in 2002, the DEC notified WAPI that sulfolane was not a regulated substance. Then, in 2004, the DEC communicated to FHRA that sulfolane

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<sup>68</sup> See *Stock v. State*, 526 P.2d 3, 8 (Alaska 1974) (requiring the court to consider whether the statute gives "adequate notice to the ordinary citizen of what is prohibited").

<sup>69</sup> *Shearer v. Mundt*, 36 P.3d 1196, 1199 (Alaska 2001).

<sup>70</sup> *FCC v. Fox Television Stations, Inc.*, 567 U.S. 239 (2012) (Commission departed from previous decisions where it "declined to find isolated and brief moments of nudity actionably indecent" and held ABC liable for seven seconds of nude buttocks without any notice it would change its position); *FCC v. Fox Television Stations, Inc.*, 132 S. Ct. 2307 (2012); *U.S. v. Penn Industr. Chem. Corp.*, 411 U.S. 655 (1973).

would be regulated. These communications from the agency are not regulations or adjudication. Thus they are not the subject to the fair notice doctrine. The case law relied upon by WAPI is inapplicable here. And, although WAPI argues that it reasonably relied on emails from DEC employees that sulfolane was an unregulated contaminant, WAPI does not advance an equitable estoppel argument.

## 2. The Takings Clause

The Takings Clause prohibits taking or damaging “private property for public use without just compensation.”<sup>71</sup> “The aim of the Takings Clause is to prevent the government ‘from forcing some people alone to bear public burdens, which, in all fairness and justice, should be borne by the public as a whole.’”<sup>72</sup> In assessing whether a takings has occurred, the following factors carry weight, the economic impact of the regulation, its interference with reasonable investment backed expectations, and the character of the governmental action.<sup>73</sup> Generally, the imposition of an obligation to pay money does not constitute an unconstitutional taking of property.<sup>74</sup> Alaska cases do not address whether Alaska’s strict liability statute violates the takings clause. However, the federal equivalent upon which the Alaska statute is based has been challenged on that ground. Thus the case law analyzing whether CERCLA’s strict liability provision violates the

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<sup>71</sup> Alaska Const. art. I § 18.

<sup>72</sup> *Franklin County Convention Facilities Authority v. American Premier Underwriters, Inc.*, 240 F.3d 534, 552 (6th Cir. 2001) quoting *Armstrong v. U.S.*, 364 U.S. 40, 49 (1960).

<sup>73</sup> *Id.* quoting *Kaiser Aetna v. U.S.*, 444 U.S. 164 (1979).

<sup>74</sup> *Commonwealth Edison Co. v. U.S.*, 271 F.3d 1327 (2001).

takings clause provides useful guidance. And all federal courts which have addressed the issue have concluded that CERCLA does not violate the takings clause. The Sixth Circuit analyzed the issue in *Franklin County Convention Facilities Authority v. American Premier Underwriters, Inc.* and provided the following reasoning:

We agree with the district court that CERCLA, as retroactively applied to APU, does not violate the Takings Clause. Although the economic impact on APU of retroactive CERCLA application is potentially significant, it is also directly proportional to APU's prior acts of pollution. Retroactive CERCLA liability similarly does not interfere with APU's reasonable investment backed expectations, as that concept is discussed in *Eastern Enterprises*, because APU's liability directly relates to the acts of its predecessors, who expressly assumed liability for any claims concerning the land and who reasonably could have anticipated liability for environmental harms. Just as it was reasonable in *Turner Elkhorn* to impose retroactive liability for unforeseen diseases relating to mining, it is reasonable here to impose retroactive liability for possibly unforeseen costs of responding to environmental harms resulting from a party's disposal of waste. Finally, there is nothing unusual about the character of the governmental action in this case; Congress intended to spread the costs of present risks and liabilities, which were created in the past to those who benefitted from their creation. Congress' intent is furthered by allocating liability to APU in this instance. Therefore, we conclude that retroactive application of CERCLA to APU does not violate the Takings Clause.<sup>75</sup>

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<sup>75</sup> *Id.*; see also *U.S. v. Dico, Inc.*, 266 F.3d 864, 879-80 (8th Cir. 2001).

WAPI does not cite to any parallel federal authority or explain, why the reasoning given in that authority should not apply to Alaska's strict liability statute. Consistent with the federal decisions regarding CERCLA, the court concludes that the Alaska's strict liability statutes holding parties—who, by their own actions are responsible for hazardous substance releases—liable for the costs of cleanup does not violate the takings clause.

#### **IV. CONCLUSION**

Because the State and City failed to make a *prima facie* showing of liability under AS 46.03.822, AS 46.03.780, or AS 46.03.760, its cross-motion for summary judgment must be denied. Because WAPI failed to make a *prima facie* showing that liability should not attach under AS 46.03.822 or any other hazardous substance of pollution statute, its motion for summary judgment must also be denied.

**IT IS HEREBY ORDERED** that the William's parties Motion for Summary Judgment on the State's Claims (Motion #43) is **DENIED**.

**IT IS FURTHER ORDERED** that the State and City's Cross-Motion for Partial Summary Judgment (Motion #55) is **DENIED**.

DATED this 13th day of March, 2018, at Fairbanks, Alaska.

/s/ Douglas L. Blankenship  
DOUGLAS L. BLANKENSHIP  
Superior Court Judge

[Handwritten note omitted.]

## APPENDIX C

### SUPERIOR COURT FOR THE STATE OF ALASKA FOURTH JUDICIAL DISTRICT

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No. 4FA-14-01544 CI

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STATE OF ALASKA, PLAINTIFF

v.

WILLIAMS ALASKA PETROLEUM, INC., ET AL,  
DEFENDANTS

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Filed: January 3, 2020

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## MEMORANDUM OF DECISION

[Table of contents omitted.]

### Introduction

1. The North Pole Refinery (NPR) is located on a 242.8 acre site within the City of North Pole. It began refinery operations in 1977 and shut down in 2014. During that 37 year period hazardous substances entered the ground and groundwater underlying the refinery and contaminated an aquifer that was extensively used for drinking water. The present case arises from these events.

2. The State of Alaska filed suit against the refinery's past owners, Williams Alaska Petroleum, Inc. (WAPI)

and the Williams Companies, Inc. (TWC)<sup>1</sup>, and current owners, Flint Hills Resources Alaska, LLC,<sup>2</sup> and Flint Hills Resources, LLC. After five years of litigation and a settlement between the State and Flint Hills, the claims before the court are the State's claims against Williams, Williams' contribution claim against the State, Flint Hills' cross claims against Williams, and Williams' cross claims against Flint Hills.

### **Summary of Decision**

3. Between 1985 when sulfolane was first used at the refinery until 2014 when the refinery was shut down, large quantities of sulfolane contained in oil, refinery products and wastewater were released into the ground and groundwater beneath the refinery. In the groundwater the sulfolane fractionated from its host fluids, mixed with the groundwater, and traveled with it. As a result a large plume of contaminated groundwater spread into and beyond the City of North Pole. The plume is currently three and a half miles long, two miles wide and as deep as 300 feet. It has not expanded significantly since the refinery shut down, but even today quantities of sulfolane continue to flow from the refinery site. The plume will last for a lengthy, but indeterminate time.

### ***Resolution of the State's Claim***

4. The sulfolane releases were releases of a hazardous substance within the meaning of AS 46.03.822(a). The refinery operators, Williams and, after March 31, 2004, Flint Hills, are liable to the State of Alaska for damages

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<sup>1</sup> Collectively, "Williams."

<sup>2</sup> Collectively, "Flint Hills."

because of them. The damages are indivisible. The refiners' liability would be joint and several, but Flint Hills has settled with the State, so only Williams' liability is at issue.

5. Williams is liable to the State under AS 46.03.822(a) and other anti-pollution statutes. In particular, Williams is liable to the State for:

- Unpaid Oversight Costs with Interest—\$4,054,589
- The State's Contribution to the Piped Water System Constructed in Response to the Sulfolane Pollution—\$11,599,681 to date, with an estimated \$3,250,000 pending
- Natural Resources Damages—\$3,377,500

6. Williams will be required in the future to do the following:

- Reimburse the State for Future Response Costs
- Perform and Pay for Remediation and Cleanup Efforts as Directed by the State

#### ***Resolution of Flint Hills' Claim***

7. Both Williams and Flint Hills were responsible for the contamination of the aquifer, but only Flint Hills responded appropriately to the State's demands for action. Flint Hills has spent \$138,320,690 in remediation and mitigation activities. Of this total, \$97,388,932 is for expenditures for contamination beyond the refinery boundaries. Flint Hills has received liability insurance proceeds of \$44,389,236 as partial compensation for its expenditures. A portion of these proceeds, \$27,303,175, must be credited against Flint Hills' claim against Williams for costs expended concerning off-site sulfolane contamination. Flint Hills also has committed to undertake remediation actions in the future under the settlement agreement.

8. Flint Hills seeks contractual indemnity under the Asset Sale and Purchase Agreement (ASPA) it entered into with Williams. It also seeks contribution under AS 46.03.8220. Under the ASPA the refiners agreed to be responsible for pollution occurring during their respective tenures, with one exception. Flint Hills agreed to accept responsibility for on-site contamination that was known at the time of transfer. The parties knew of on-site sulfolane contamination and therefore on-site sulfolane contamination is the responsibility of Flint Hills. Otherwise each party agreed to indemnify the other for costs the other was required to pay on account of pollution released during the indemnifying party's tenure. But if both parties contributed to the pollution, this remedy was not to be available. Both parties have contributed to the sulfolane contamination, and therefore Flint Hills is not entitled to contractual indemnity for sulfolane.

9. Flint Hills is entitled to contribution under .822(j). The court makes an equitable allocation of damages among the liable parties as follows: Williams—75%, Flint Hills—25%, State of Alaska—0%. Williams is therefore liable to Flint Hills for \$52,564,318 [.75 x (\$97,388,932 - \$27,303,175) (off-site costs less credited insurance proceeds)].

10. Williams must also reimburse Flint Hills for 75% of all future costs of off-site remediation that Flint Hills incurs, including its anticipated future costs of the piped water system of approximately \$13 million.

11. Williams also released perfluorochemicals (PFAS) into the ground and groundwater at the refinery. PFAS is a hazardous substance. Flint Hills incurred response costs of \$1,173,674 to remediate PFAS. It is entitled to indemnity under the ASPA from Williams for this amount,

less pro rata insurance proceeds of \$329,042, resulting in liability for this item of \$844,632.

### **Procedural History**

#### ***The State's Complaint***

12. The court will set out the allegations in the State's complaint in some detail. The fact allegations set out in this summary are supported by undisputed documentary evidence or by testimony that was presented at trial that the court accepts. As summarized, the fact allegations are adopted by the court. They set out most of the important events that took place in this case up to the time of its filing on March 6, 2014. This account summarizes the fact allegations and sometimes quotes from them. The court could begin each paragraph with a statement that "the complaint alleged" but has done so only occasionally in the interest of brevity.

#### **Fact Allegations**

13. On March 6, 2014, the State of Alaska filed a complaint against Williams Alaska Petroleum, Inc., the Williams Companies, Inc., Flint Hills Resources Alaska LLC, and Flint Hills Resources, LLC. The complaint sought damages, response costs, and injunctive and declaratory relief from the defendants arising out of their operation of the NPR.

14. Williams Alaska Petroleum, Inc. (WAPI) is a wholly owned subsidiary of the Williams Companies Inc. (TWC). Because TWC has guaranteed payment of any liabilities of WAPI the court will refer to both WAPI and TWC: simply as "Williams" unless the context requires otherwise. Likewise, Flint Hills Resources Alaska is a wholly owned subsidiary of Flint Hills Resources, LLC.

Both entities will be referred to simply as “Flint Hills” in this decision.

15. Earth Resources of Alaska constructed NPR in 1976 and began refining operations in 1977. MAPCO operated the North Pole Refinery from 1980 to 1988 and Williams was the successor in interest to MAPCO and operated NPR from 1988 through March 31, 2004. Beginning April 1, 2004 Flint Hills operated NPR.<sup>3</sup>

16. During the period of time that MAPCO owned and operated NPR, oil spills occurred resulting from “leaking storage tanks, leaking sumps, inadequately constructed sumps and various overflows from a wastewater handling pond and from various petroleum handling procedures.”

17. Between 1977 and 1987 “there were 92 documented petroleum spill/leaks that resulted in more than 160,000 gallons of petroleum materials being leaked. . . .” These numbers do not accurately reflect the amounts actually spilled or leaked during that period since by June of 1988, MAPCO had recovered over 276,000 gallons of product from recovery wells located on the refinery site.

18. In 1986 tests showed that the groundwater beneath NPR was contaminated with benzene. At that time the Alaska Department of Environmental Conservation (DEC or ADEC) and MAPCO entered into a Compliance Order By Consent (COBC) under which MAPCO agreed

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<sup>3</sup> Subsequent information revealed that MAPCO acquired Earth Resources and assumed liability for operating NPR from the beginning of its operations, as did Williams by reason of its acquisition of MAPCO. As Williams alleged in its July 11, 2016 Answer to Flint Hills’ crossclaim “WAPI admits that the same corporate entity, now named WAPI, owned and operated the North Pole Refinery from the commencement of refinery operations in 1977 through March 31, 2004.”

to (a) reactivate existing collection wells at the refinery, (b) install 20 additional monitoring wells around the perimeter of the refinery, (c) frequently sample the monitoring wells for the presence of liquid petroleum product, (d) frequently sample the drinking water sources for the refinery for contaminants, (e) modify the wastewater holding pond at the refinery, and (f) participate in an environmental audit “to identify the sources, reasons for and corrective actions necessary to reduce the abnormally high concentration of hydrocarbons in the ground and holding pond.”

19. In March 1987 the EPA inspected the refinery. As a result EPA and MAPCO entered into a consent agreement that required MAPCO to perform numerous corrective measures.

20. In 2001 Williams' environmental consultant, Shannon & Wilson conducted a study of the NPR property and discovered the presence of sulfolane in the groundwater. Sulfolane was first used by MAPCO in its refining process in September of 1985. “Sulfolane issued to extract high purity aromatic components from crude oil in order to strip out parts of crude oil to make gasoline. Sulfolane is miscible in water. [Williams and Flint Hills] continued the use of sulfolane during the times that they operated NPR.”

21. Shannon & Wilson did not list sulfolane as a “contaminant of interest” in its report because “DEC did not consider sulfolane to be a ‘regulated contaminant’ at that time.” DEC, however, did require Williams “to sample for sulfolane until the source of the sulfolane could be determined.” Williams did not, however, identify a specific source of sulfolane.

22. Williams sold the assets of NPR to Flint Hills effective April 1, 2004 using an Asset Sale and Purchase Agreement (ASPA).

23. In September of 2004 Shannon & Wilson, now consulting for Flint Hills, notified Flint Hills that since groundwater can move contaminants off-site there was a possibility that this had occurred. Shannon & Wilson also concluded that “sulfolane data suggests fresh hydrocarbon releases have occurred” and recommended that sulfolane monitoring that it had been doing for Williams should be resumed.

24. On October 19, 2004 DEC advised Flint Hills that it now considered sulfolane to be a regulated contaminant and that it was adopting cleanup standards used in British Columbia.

25. In June of 2005 Shannon & Wilson recommended that three additional groundwater monitoring wells be installed on the refinery “to serve as sentry wells capable of detecting subsurface contaminants migrating in that direction off the refinery site.” Flint Hills did so, and sulfolane was detected.

26. In 2006 DEC notified Flint Hills again that it considered sulfolane to be a regulated contaminant in accordance with 18 AAC 75.325(g) and reiterated its reliance on the British Columbia standards under which a sulfolane cleanup level for groundwater was set at 350 ug/L (350 parts per billion). Following this, in April of 2006, Shannon & Wilson presented a proposal to Flint Hills to monitor groundwater more intensively and reiterated and expanded this recommendation in October of 2006. DEC concurred with this renewed recommendation. Flint Hills did not disagree, but did not act on the recommendations. In January of 2008 Flint Hills sought a second opinion

from another environmental consultant, Barr Engineering.

27. Barr completed its “cold eye review” in August of 2008. Its findings and recommendations were much like Shannon & Wilson’s. It noted that sulfolane had migrated beyond the monitoring network “and possibly beyond” the site. Barr recommended monitoring wells on the boundary of the property “because there was a data gap between the down gradient network and the property boundary.”

28. New wells at the boundary were completed in early October of 2008 and sampling confirmed the presence of sulfolane in some of them.

29. In late 2009 sulfolane was found in wells off the property. The Alaska Department of Health and Social Services (DHSS) and the EPA were contacted by DEC for help in evaluating the toxicity of sulfolane. DHSS, after consulting with the federal Agency for Toxic Substances and Disease Registry (ATSDR), informed DEC that the cleanup level of 350 ug/L (350 ppb) “may be insufficiently protective of human health.”<sup>4</sup>

30. “In February 2010 ATSDR published a preliminary health consultation that recommended a 25 ug/L [25 ppb] action level in drinking water to be protective of infants, 40 ug/L for children and 87.5 ug/L for adults. Upon

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<sup>4</sup> Subsequent information revealed that MAPCO acquired Earth Resources and assumed liability for operating NPR from the beginning of its operations, as did Williams by reason of its acquisition of MAPCO. As Williams alleged in its July 11, 2016 Answer to Flint Hills’ crossclaim “WAPI admits that the same corporate entity, now named WAPI, owned and operated the North Pole Refinery from the commencement of refinery operations in 1977 through March 31, 2004.”

the recommendation of ATSDR and DHSS, DEC adopted the 25 ug/L [25 ppb] as an interim cleanup level. . . .” DEC also informed Flint Hills that it had to redo a risk assessment and site characterization to come into compliance with state regulations. DEC also requested EPA to develop a toxicity value for sulfolane.

31. In May 2011 ATSDR released a revised health consultation that lowered their previous recommendation to 20 ug/L [20 ppb] in drinking water for infants, 32 ug/L for children and 70 ug/L for adults.

32. In January 2012, the EPA announced a “Provisional Peer Reviewed Toxicity Value (PPRTV) that results in an EPA regional screening level for sulfolane in groundwater of 16 g/L [16 ppb].”

33. On June of 2012 EPA found NPR to be eligible for a superfund listing.

34. “DEC completed its evaluation of the cumulative exposure from all exposure pathways and set a site-specific cleanup level of 14 ug/L [14 ppb] for NPR.”

35. Following the discovery of sulfolane in private drinking water wells in late 2009, Flint Hills provided alternative water sources to over 300 affected properties with contaminated water wells. Flint Hills delivered bottled water, installed storage tanks on individual properties and delivered potable water to them and installed point of entry filtration systems in homes.

35. The complaint notes that a long-term option for supplying water to residents living in the affected areas is to expand the existing City of North Pole piped water system to serve affected properties.

**General Allegations**

36. After pleading allegations of fact as summarized above, the complaint set out a number of “general allegations,” which are mixed questions of law and fact with which, as summarized here, the court also agrees. These were followed by five claims for relief.

37. The general allegations can be summarized as follows:

- a. Sulfolane is a hazardous substance within the meaning of AS 46.03.745, 46.09.900(4), 46.03.826(5) and 18 AAC 75.990.
- b. The defendants’ release of sulfolane violates AS 46.03.710, by rendering the groundwater impure and unfit for human consumption, as well as AS 46.03.740 and AS 46.03.822.
- c. Defendants’ discharges of oil at NPR violate AS 46.03.710 and AS 46.03.740 and their failure to contain and cleanup these discharges violate AS 46.09.020 and 18 AAC 75.

**Claims for Relief**

39. Following the general allegations the State pled five separate claims for relief: (1) for injunctive relief under AS 46.03.765; (2) for response cost recovery under AS 46.03.822 and 46.03.760(d); (3) for declaratory relief as to future response costs; (4) for civil assessments under AS 46.03.760(a); and (5) for natural resource damages and restoration costs under AS 46.03.822 and AS 46.03.780.

***Williams’ Answer and Counterclaim***

40. Williams filed an answer and counterclaim to the State’s complaint on April 30, 2014, admitting many of the

fact allegations in the State's complaint, but generally denying liability.

41. The first general allegation in the State's complaint, paragraph 54, stated: "Sulfolane is a hazardous substance within the meaning of AS 46.03.745, AS 46.09.900, AS 46.03.826, and 18 AAC 75.990." Williams admitted this allegation:

WAPI admits the allegations contained in paragraph 54 of the State's Complaint, but WAPI denies that ADEC considered sulfolane to be a hazardous substance under any statute or regulation at any time during WAPI's ownership and operation of the North Pole Refinery even after WAPI disclosed to ADEC that sulfolane was in the groundwater underlying the property that the State owned.<sup>5</sup>

42. Williams interposed 12 affirmative defenses and also pled counterclaims against the State for declaratory judgment, negligence, and gross negligence for negligent regulation. In its request for relief Williams asked, among other things, for a reduction in any percentage of the sulfolane plume attributed to it to reflect the contributions thereto "arising from the acts and omissions of the State" and requested a declaration that "the State is liable as an ordinary landowner, not a regulatory body due to DEC's determination that sulfolane was not regulated during the period of time that it owned the land at the North Pole Refinery."

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<sup>5</sup> Williams' answer of April 30, 2014, paragraph 54.

***Flint Hills' Answer, Counterclaims and Cross-Claim***

43. Flint Hills responded to the State's complaint on May 6, 2014 with an answer, counterclaims, and cross-claims against Williams.

44. In general Flint Hills denied legal responsibility for the sulfolane and other contamination at the North Pole Refinery and claimed that responsibility lay with Williams and the State.

45. Flint Hills interposed numerous affirmative defenses and counterclaimed against the State. Its counter-claim included allegations that Williams had released contaminants into the groundwater including "sulfolane and perfluorochemicals [PFAS], for which the State, as land-owner was responsible."

46. Flint Hills also cross-claimed against Williams, alleging that Williams is a responsible party under AS 46.03.822(a) and as such would be liable to Flint Hills under AS 46.03.822(i) for contribution for current and future costs paid by Flint Hills. In another count, Flint Hills claimed that Williams was liable to it for contractual indemnification under the ASPA for damages and costs that Flint Hills had and would incur. Flint Hills also sought declaratory relief under a performance guaranty that TWC executed, guarantying prompt performance of the obligations of WAPI.

***Additional Pleadings***

47. The State answered Williams' counterclaim on June 11, 2014 and Flint Hills' counterclaim on June 18, 2014.

48. Williams amended its answer to the State's complaint on February 29, 2016. In the amended answer Williams changed its prior admission to the allegation that

sulfolane is a hazardous substance and instead alleged that the paragraph in question in the State's complaint "states a legal conclusion to which no response is required." (Amended Answer, paragraph 54) It also expanded the number of affirmative defenses asserted to 23 and added an explicit counterclaim for contribution under AS 46.03.822(j) against the State. This pleading also contained cross-claims against Flint Hills for indemnity under the ASPA, for unjust enrichment for receiving insurance proceeds under a liability insurance policy provided in the ASPA, for a declaration of the parties' mutual rights and obligations under the ASPA, for negligence and gross negligence, and for contribution under AS 46.03.822(j).

49. On July 11, 2016 Williams answered Flint Hills' cross-claims generally denying liability. Williams admitted that the same corporate entity, now named WAPI, owned and operated the North Pole Refinery from the commencement of refinery operations in 1977 through March 31, 2004. Williams also admitted that during this period of operations releases of chemical substances occurred including "releases of sulfolane and [PFAS]." (Paragraph 14 of pleading of 7/11/16)

**Other Cases Arising Out of  
the Contamination of the Aquifer**

50. Two other cases have been filed against Williams and Flint Hills arising out of the contamination of the North Pole aquifer.

***James West v. Williams and Flint Hills,  
Case No. 4FA-10-01123 CI***

51. On January 27, 2010 James West, a North Pole homeowner sued Williams and Flint Hills for contaminating his well with sulfolane.

52. Williams and Flint Hills answered and Flint Hills cross-claimed against Williams seeking to recover its remediation costs. The parties eventually settled with West but continued to litigate Flint Hills' cross-claim. Specifically, Flint Hills sought indemnification under the ASPA for the sulfolane that had migrated off the refinery premises as of the date of Flint Hills' purchase of the refinery. Flint Hills also asserted a claim that Williams was strictly liable to it under the terms of AS 46.03.822(a), and for contribution under AS 46.03.822(i).

53. After substantial discovery, motion practice, and a lengthy evidentiary hearing the superior court ruled that all of Flint Hills' claims were time-barred under statutes of limitations. The superior court also ruled on a motion for partial summary judgment that off-site sulfolane was an "environmental condition" under the ASPA and as such was subject to the ASPA's \$32 million cap on the amount of indemnity that either party could recover from the other. Flint Hills appealed.

54. In August 2016 the Alaska Supreme Court issued its decision.<sup>6</sup> The court reversed the superior court's conclusion that the contractual indemnity claims of Flint Hills were time-barred and also reversed the superior court's conclusion that Flint Hills' statutory claims for reimbursement of off-site expenditures were time-barred. But the court affirmed the superior court's conclusion that Flint Hills' statutory claims for sulfolane contamination on refinery property were barred, along with associated equitable claims. The court also affirmed the superior court's decision that Flint Hills' claim for contractual indemnification for off-site sulfolane contamination was an

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<sup>6</sup> *Flint Hills Resources Alaska, LLC v. Williams Alaska Petroleum, Inc.*, 377 P.3d 959 (Alaska 2016).

“environmental claim” within the meaning of the APSA, and as such was subject to the \$32 million damages cap contained in the APSA. The court remanded the case for further proceedings.

***The City of North Pole Case,  
Case No. 4FA-14-02952 CT***

55. On November 26, 2014 the City of North Pole filed a complaint against Williams and Flint Hills, and on February 19, 2015, the City filed a first amended complaint. The amended complaint alleged that Williams and Flint Hills, as operators of the North Pole Refinery, had caused or permitted numerous or continuous releases of hazardous substances into the groundwater and that these substances had migrated off the refinery property and contaminated groundwater within the City, including wells owned by the City that supplied drinking water to City residents. The complaint alleged that one of the hazardous substances that migrated off-site was sulfolane and that the presence of sulfolane in the City’s groundwater had rendered the groundwater unfit for human consumption.

56. The City’s claim contained seven claims for relief: (1) nuisance in violation of a city ordinance; (2) cost recovery and general damages under AS 46.03.822 and a city ordinance; (3) future cost recovery; (4) damage to property, natural resources damage, and remediation costs under AS 46.03.822; (5) punitive damages against Williams; (6) liability against the TWC of which WAPI was alleged to be a “mere instrumentality;” and (7) recovery as an intended beneficiary of the TWC’s performance guaranty.

57. Flint Hills answered the City's amended complaint on March 2, 2015 generally denying liability and interposing affirmative defenses. In the same pleading, Flint Hills filed a cross-claim against Williams alleging that during the period of Williams' ownership and operation of the refinery it had permitted contaminants to enter the groundwater underlying the refinery including but not limited to "oil, sulfolane and perfluorchemicals." Flint Hills also filed a third-party action against the State seeking (1) contribution under AS 46.03.822(j) against the State as land-owner and lessor of the refinery land during Williams' tenure as owner of the refinery and (2) damage apportionment against the State as a party at fault under AS 09.17.080.

58. Williams answered the City's complaint on March 9, 2015 in a pleading that generally denied liability and interposed numerous affirmative defenses. On February 29, 2016 Williams filed an amended answer to the City's first amended complaint. In its February 29, 2016 pleading Williams also, brought a third party complaint against the State. The third party complaint charged the State with negligent and grossly negligent regulation of the sulfolane contamination. In addition it alleged that the State, as a landowner and lessor was a responsible party under AS 46.03.822(a) and claimed that the State was liable to Williams for contribution under AS 46.03.822(j). Williams also alleged that the State was a party at fault with liability for apportionment under AS 09.17.080.

59. On April 18, 2016 the City filed a second amended complaint adding claims against Williams for negligence and gross negligence, common law private and public nuisance, statutory nuisance under AS 09.45.230 and AS 46.03.800, and trespass.

60. Ultimately all of the cross-claims and third-party claims were duly answered.

**Significant Pre-Trial Rulings and Actions**

61. In the spring of 2014, discovery and motion practice began. Between March of 2014 and the beginning of trial on October 7, 2019, 177 substantive motions were made. Described below are some significant pre-trial rulings and actions.

62. On October 28, 2015 the court, per Judge Blankenship, granted the City of North Pole's motion to consolidate the case brought by the City, 4FA-14-02952 CI, with the present case. The order contained a notation, "including trial."

63. On October 28, 2015, the court entered a pretrial order setting trial for March 7, 2017. On September 21, 2016 the trial date was changed to May 30, 2017.

64. On October 25, 2016 Williams, the State of Alaska, and the City of North Pole agreed that TWC could be dismissed with prejudice as a defendant and that an inter-company receivable of approximately \$665 million, payable to WAPI by TWC, could be used to satisfy any final judgment against WAPI and meet any bond requirement imposed for appeal purposes.

65. On February 6, 2017, the State, the City, and Flint Hills entered into a settlement agreement.

66. On February 9, 2017 the court ordered the *West* case to be consolidated with the present case.

67. On March 16, 2017 the court entered an order entitled "Decision and Order Granting Flint Hills Defendants' Motion for Reconsideration and Granting in Part Williams Defendants' Motion to Dismiss Certain Cross

and Counterclaims Against WAPI.” Based on the judgment of the Alaska Supreme Court in the West case, this order dismissed Flint Hills’ claims against Williams “for declaratory judgment, specific performance, and contribution under .822(j) for damages within the refinery property.”

68. On March 16, 2017, the court granted partial summary judgment to the State and the City ruling that Williams could not assert the ASPA as an affirmative defense against the governments under AS 46.03.822(g):

First, indisputably the Governments are not parties to the ASPA contract, and therefore, not bound by it. Second, federal and state law directs that indemnity contracts between private parties may not alter *underlying* .... CERCLA and .822 liability.

69. On March 16, 2017, the court also entered an order denying Williams’ motion to file “First Amended Answer and Counterclaim to the City of North Pole’s Second Amended Complaint. (Motion 57)” This order denied Williams’ request to file a claim against North Pole for contribution under AS 46.02.822(j) based on allegations that the City discharged sulfolane-laden wastewater into a dry channel of the Tanana River, permitting sulfolane to seep into the groundwater and contaminate the North Pole aquifer. The court denied this motion on timeliness grounds, noting that trial was scheduled to begin on May 30, 2017 and that allowing the claims “would dramatically alter the suit at a late juncture.” The court also noted that Williams had been aware of the releases at least as early as April of 2016, that pretrial deadlines for amendment of claims had long since passed, and that allowing the new claim to be filed would create the need for an additional continuance of the trial date. After the May 30, 2017 trial date was vacated for other reasons, reconsideration of this ruling was

denied in an order entered November 4, 2017. The court gave additional reasons including the need to redo depositions, the need to prepare expert testimony to defend against the contribution claim, and noted that the scope of the plume was established as of April 10, 2012 thus any potential contribution by the City to the plume would be “speculative to non-existent.”

70. On October 17, 2017 the court dismissed with prejudice all of the State’s claims against Flint Hills and all of Flint Hills’ claims against the State. The order also covered similar dismissals in the City of North Pole case and was based on the settlement agreement that was reached between the State, City, and Flint Hills.

71. On March 12, 2018 the court ruled that Williams’ \$32 million maximum environmental liability indemnity cap was not exhausted by the \$44.4 million in insurance payments that Flint Hills received under the liability insurance policy that was provided under the ASP A. The court stated:

There is not contract language suggesting the insurance proceeds should be applied to Williams’ environmental indemnity obligations. There is contract language clearly indicating that indemnity payments must be paid by WAPI or its guarantor . . . . The parties intended the insurance proceeds to be paid independent of Williams’ indemnity obligations. The parties’ agreement is that the environmental insurance policy and Williams’ environmental indemnity are two independent sources of recovery for payment of environmental claims.

In summary, the parties’ unambiguously agreed:

1. Insurance proceeds may be applied to either indemnifiable or nonindemnifiable Damages.

2. Williams' environmental indemnity obligation to Flint Hills is limited to indemnifiable Damages.
3. To qualify as a payment that may be applied to WAPI's Environmental Cap indemnity obligation, the payment must qualify as both indemnifiable Damages and as a payment from Seller or Williams Guarantor.
4. Insurance proceeds do not qualify as a payment towards satisfaction of the Williams' \$32 million environmental indemnity obligation.

72. On March 13, 2018 the court entered an order entitled "Decision and Order Denying WAPI's Motion for Summary Judgment on the State's Claims; Denying the State and City's Motion for Partial Summary Judgment; and Denying the State's Motion for Past Response Costs." In this order the court denied Williams' motion for summary judgment based on its assertion that neither AS 46.03.822 nor any other Alaska pollution statute applied to it under the circumstances of this case. The court addressed, among other things, Williams' argument that a cleanup standard must be determined prior to imposing liability under AS 46.03.822. The court ruled that Williams' argument was "completely without merit" because:

Whether or not a cleanup standard exists does not impact whether a substance release presents an imminent and substantial danger. As previously stated, evidence regarding whether the substance does or does not exceed a given cleanup may be probative of the issue, but is generally not dispositive. But a cleanup standard is not a prerequisite to [Williams'] liability under AS 46.03.822(a).

73. In that same order, the court also denied the State and City's cross-motion for summary judgment on their

strict liability claims under AS 46.03.822 and for response costs under other Alaska statutes and regulations relating to pollution control. The order made it clear that the releases involved in the present case during Williams' tenure included sulfolane and PFAS. [p. 9] But the court determined that genuine issues of material fact existed as to whether sulfolane and PFAS were hazardous substances, finding that the evidence presented by the State was inadequate and unhelpful because it did not address the question as to whether those substances "present an imminent and substantial danger." [p. 19] The court also concluded that the State had failed to show that Williams had violated AS 46.03.710 because its argument was merely conclusory. [p. 24]

74. On March 13, 2018 the court granted the State's motion for partial summary judgment on the pleadings on Williams' affirmative defenses. After a lengthy analysis, the court barred the following affirmative defenses as to the State's claims: failure to mitigate damages, laches, waiver and estoppel, unclean hands, violation of public policy, conduct for which Williams is not responsible, apportionment per AS 09.17.080, comparative negligence, written determination-statutory safe harbor, ratification, State's status as a property owner, and limitation of liability based on the ASPA. In making this ruling the court distinguished between the liability aspect of the .822(a) claims and equitable allocation under AS 46.03.822(j), noting that after a determination of liability, Williams would be free to assert equitable factors under .822(j) to allocate damages.

75. On May 21, 2018 the court granted the State's motion for partial summary judgment on Williams' counter-claims and third-party claims alleging negligence and

gross negligence. The court summarized the basis for this ruling as:

WAPI argues that the State had a duty to WAPI to prevent WAPI from incurring financial responsibility for on-site sulfolane cleanup prior to 2004 and offsite cleanup after 2004. Specifically, WAPI argues that (1) the State owed a duty as a responsible party under AS 46.03.822, a strict liability statute; (2) the State owed a duty as a landowner under landlord-tenant law prior to 2004; and (3) the State owed a duty as a regulator after 2004. Because the court determines that the State owed no duty to WAPI to prevent its possible financial liability for sulfolane cleanup, the State's motion must be granted.

76. On February 25, 2019 the court scheduled trial for October 7, 2019.

77. On March 28, 2019 the case was reassigned to the undersigned.

78. On April 30, 2019 the court entered an order requesting comment from the parties as to the scope of the initial trial. The court informed the parties that it was considering limiting the case to claims and cross-claims under AS 46.03.822(a) and (j) tried to the court sitting without a jury. The court set a hearing to discuss what issues would be tried and informed the parties that the record revealed no jury demand in the State's case, while jury demands were filed in the City of North Pole case and the West case. Following a hearing, on June 12, 2019, the court entered an order deconsolidating the cases for trial "to avoid unnecessary costs, delay or prejudice, and further the convenience of the parties and the court."

79. On June 18, 2019 Williams moved for summary judgment on the State's claims for PFAS contamination

or alternatively for additional discovery regarding that contaminant. Because off-site PFAS contamination was only discovered in the fall of 2018, after discovery deadlines had run, it was clear to the court that the trial could not go forward as scheduled if the trial included claims for off-site PFAS contamination. The court set a hearing and simultaneously instructed the parties to “consider whether the court should dismiss or stay the State’s claims related to off-site PFAS contamination under the doctrine of primary jurisdiction.” At the hearing, held on June 20, 2019, both the State and Williams agreed that as to off-site PFAS contamination the State’s claim should be referred to DEC under the doctrine of primary jurisdiction. Williams also asked that the doctrine of primary jurisdiction be invoked as to the claim of PFAS contamination at the refinery site.

80. On July 12, 2019 the court entered an order referring the State’s off-site PFAS claims to DEC under the theory of primary jurisdiction. The order also stated that the court would make no ruling on Williams’ request for primary jurisdiction referral as to on-site PFAS “as it is beyond the scope of the court’s request, it was not presented in the form of a motion, and the State has had no opportunity to file a written response to it.” [p. 3]

81. On July 15, 2019 the court denied Williams’ motion for summary judgment on the State’s PFAS claims, noting that, as to off-refinery contamination, the motion was moot in light of the court’s referral. As to the on-refinery claims, the motion was denied because Williams had fair notice that the on-refinery PFAS claims were encompassed in the State’s claims.

82. On August 12, 2019 the court denied Williams’ motion seeking primary jurisdiction referral for on-site PFAS claims and off-site sulfolane claims on several

grounds including that this motion was made primarily for the purposes of delay.

83. On September 9, 2019, the parties filed a stipulation providing in part:

- (6) Prior to April 1, 2004, some sulfolane was released at the Refinery.
- (7) After April 1, 2004 some sulfolane was released at the refinery.
- (8) Flint Hills is a liable landowner and operator under AS 46.03.822(a) for sulfolane releases.
- (9) The State Department of Natural Resources is a liable landowner under AS 46.03.822(a).

84. On September 26, 2019 the court informed the parties of its interpretation of “hazardous substance” as used in AS 46.03.822(a) and defined in AS 46.03.826(5). Under the latter statute, “hazardous substance” is defined as “an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare . . . .” The court concluded that the phrase “imminent and substantial danger to the public health” “refers to a reasonable medical concern about the public health where, given the modifier ‘substantial,’ the nature of the harm giving rise to concern is serious and, given the modifier ‘imminent,’ the threat of harm must be present, although the potential impacts may never develop or may take time to develop.” [p. 5] Williams responded in opposition, but the court did not recede from its interpretation.

85. On October 7, 2019, trial began and continued for each business day through October 29, 2019. The length of the trial was justified by the complexity of the evidence

and the magnitude of the claims. The evidence for the most part was presented efficiently. Counsel were well prepared and cooperated with each other to the extent possible. The court appreciates and commends their professionalism.

### **Findings of Fact and Conclusions of Law**

86. There are several major subjects that are covered by these findings and conclusions. Some of them are inter-related and many of the findings necessarily involve more than one subject. As an aid to understanding, the court presents in narrative form a separate overview, chronologically where possible, on the following subjects: (1) the releases of sulfolane; (2) DEC's regulation of sulfolane; (3) the sulfolane plume; (4) sulfolane as a hazardous substance; and, (5) the response to the sulfolane contamination.

#### ***Overview of Sulfolane Releases***

87. Shortly after the beginning of the refinery operations at the NPR, oil and oil waste was released into the ground and groundwater in a virtually continuous, but uneven stream. [Ex.14 (Consent Order), P. 8] For example, outdoor sumps constructed of concrete froze and cracked. [Ex. 141, p. 94] The initial lagoon was not constructed to EPA standards and leaked. Bolted steel tanks leaked into containment areas and then out of the containment areas and into the ground because the areas were defectively lined. [Ex. 141, p. 94] Recovery of floating product from groundwater at the refinery began in 1982. [Ex. 14, p. 9] In 1985 sulfolane began to be used in the refining process. In the course of its use, it became mixed with oil and oil derivatives and oily wastewater. Spills and leaks of these fluids continued as they had before, but now they also contained sulfolane.

This was important because sulfolane fractionates from the hydrocarbons that carry it and mixes readily with water. Unlike hydrocarbons, sulfolane is transported in groundwater without significant impedance by the surrounding medium. The significance of this seems not to have been meaningfully appreciated for almost two decades by the refiners or DEC. Between 1985 and 2002 massive amounts of sulfolane were released into the ground and groundwater.

Between 2002 and 2004 Williams attempted a culture change, instituting better management practices in an effort to reduce the amount and quantities of pollutants released. As of April 1, 2004 Flint Hills took over NPR. Unlike Williams, Flint Hills is an experienced refiner. [Tr. 2513] It employed superior management practices that resulted in lower release levels of sulfolane. The court estimates that approximately 90% of the sulfolane released into the environment at NPR came from releases during Williams' tenure as operator of the refinery. [Tr. 2524-25]

As of 2014, Flint Hills shut down and began to dismantle the refinery. No known releases of sulfolane took place after the refinery was shut down, but sulfolane remains in the ground and continues to flow from the refinery site, albeit in reduced and decreasing quantities as it leeches out of the ground into groundwater.

#### *Overview of the Regulation of Sulfolane by DEC*

88. Between 1985 and 2001 sulfolane seemingly was not on DEC's horizon. It was not a listed hazardous substance. Beginning in 1988 the City of North Pole public sewer system was utilized by the refinery. Sulfolane limits were imposed on the influent from the refinery of 100 ppm (100,000 ppb). Williams often had trouble meeting this limit and had to treat sulfolane-laden fluids on-site in an

effort to reduce their sulfolane content. This entailed much movement of the fluids between lagoons and sumps.

Between 2000 and 2004, DEC appears to have had a casual attitude toward sulfolane, especially when it was first reported in the groundwater. DEC regarded it as a less important problem than the hydrocarbons in the groundwater of the refinery. But this gradually changed. In October of 2004 after a meeting to identify hazardous substance issues and strategies at the refinery, DEC announced to Flint Hills that sulfolane would be regulated and subject to soil and water cleanup guidelines. DEC adopted a British Columbia groundwater cleanup standard of 350 ppb. When sulfolane was discovered off-site and in drinking water wells in October of 2009 DEC became very focused on sulfolane. It asked the EPA to make a recommendation as to safe levels for sulfolane in drinking water. DEC commissioned a report on sulfolane from a private firm, OASIS, in 2010 and DEC asked the Agency for Toxic Substances and Disease Registry (ATSDR) to prepare a sulfolane health consultation.

ATSDR responded promptly on February 3, 2010, recommending that human exposures be limited to not more than 25 ppb for infants, 40 ppb for children, and 87.5 ppb for adults. [Ex. 143, p. 13] It noted also that the current Canadian standard for sulfolane in drinking water was 90 ppb, that there were no relevant chronic exposure studies and that sulfolane is acutely toxic in tested animal species at high doses. [Ex. 143]

On February 10, 2010 DEC staff requested authority to spend \$465,000 from the Oil and Hazardous Substance Release Response Account to address the North Pole sulfolane contamination. The request stated that the spill posed an imminent and substantial threat to the public health and welfare. [Ex. 148a] It was approved by DEC

Commissioner Hartig who notified Governor Parnell, as required under AS 46.08.045(b). [Ex. 145b]

On March 3, 2010 DEC wrote Flint Hills stating that thus far sulfolane had been detected in over 100 drinking water wells ranging three miles down gradient of the refinery and as deep as 200 feet. The letter notified Flint Hills that the previous 350 ppb cleanup level was no longer sufficiently protective and that an interim 25 ppb level would be set. DEC also asked Flint Hills to complete a characterization and corrective action plan under the Alaska Oil and Other Hazardous Substances regulations, 18 AAC 75, Art. 3. Further, DEC required that Flint Hills continue to provide alternative water to prevent current human exposure until a permanent remedy could be identified and implemented. [Ex. 2123]

On October 6, 2010 DEC staff again requested funds from the Oil and Hazardous Substance account. Again DEC determined that the spill posed an imminent and substantial threat. By this time sulfolane had been detected in approximately 200 private drinking water wells, at least four public wells, and the City's water supply wells, and had been found some 3.5 miles from the source area at the refinery. The staff request also noted that residents had possibly been exposed to sulfolane for 20 years. The request was approved by the Commissioner, funds were withdrawn from the account, and the Governor was notified as required by law. This process took place three more times, in October 2011, February 2013, and June 2014.

In May of 2011 ATSDR lowered its human exposure recommendations to not more than 20 ppb for infants, 32 ppb for children, and 70 ppb for adults.

In January 2012 the EPA announced a provisional report (PPRTV) resulting in a regional screening level for sulfolane in groundwater of 16 ppb. According to the 2017 settlement agreement the EPA regional screening level is currently 20 ppb.

In May of 2012 Flint Hills through its contractor AR-CADIS submitted a draft risk assessment document to DEC providing suggested alternative cleanup levels ranging from 14 ppb to 362 ppb. [Ex. 7735]

On November 13, 2013 DEC approved Flint Hills' risk assessment draft with a 14 ppb cleanup level based on EPA's PPRTV. [Ex. 7125] This was challenged by Flint Hills. On April 4, 2014 Commissioner Hartig vacated the 14 ppb standard in Flint Hills' administrative appeal. To date no new standard has been imposed.

In 2014 DEC consulted with an organization, TERA, seeking advice as to what the sulfolane cleanup standard should be. TERA recommended 362 ppb, with medium confidence.

But the EPA advised DEC not to adopt the TERA recommendation and instead to await its final recommendation. To date the DEC has followed EPA's advice, but EPA has not made its final recommendation.

The current regulatory levels for sulfolane in drinking water set by other entities as shown by the record are as follows:

ATSDR – 20 ppb infants, 32 ppb children, 70 ppb adults

EPA PPRTV – 20 ppb

Puerto Rico Refinery Site standards set by EPA – 16 ppb

Texas drinking water standards per OASIS report – .49 ppb residential, 1.5 ppb commercial/industrial [Ex. 2520, p. 25]

Canada drinking water standard per ATSDR and OASIS reports – 90 ppb

#### *Overview of the Sulfolane Plume*

89. Beginning in 1985 sulfolane entered the ground and groundwater, fractionated from its oil and oily water hosts and mixed with the groundwater. It was then able to travel anywhere the groundwater could travel and at about the same speed. In 1996 sulfolane was discovered in high concentrations in wells on the refinery site, but this was not reported by Williams to DEC. In 2001 the firm of Shannon and Wilson noted the presence of sulfolane in the groundwater. This was reported to DEC. In 2002 sulfolane was discovered in refinery wells in concentrations of up to 32,000 ppb.

As of the time of transfer, April 1, 2004, sulfolane had migrated off-site and the plume was nearly as large as the current plume. But no one knew it had moved off-site. In October of 2009 sulfolane was discovered off-site and in drinking water wells. By 2010 sulfolane was discovered in approximately 200 drinking water wells. [Ex. 133]

Presently, the sulfolane plume is about three and a half miles long, two miles wide, and as deep as 300 feet. Its outer boundaries seem not to have moved much since 2014. Whether it is stable is contested and unresolved. Wells in some areas show increasing concentrations, others show decreasing concentrations. The plume will last a long but indeterminate time. Eventually it will become diluted and dispersed to undetectable limits. The court ac-

cepts Dr. Leigh's testimony that no appreciable biodegradation is taking place, and that if there were the plume could not have become as large as it is.

The plume has spread out and sunk into the flood plain alluvium of the Tanana River. A 1989 report prepared by MAPCO for the EPA describes the complexity of the geology and soils underlying the refinery and the North Pole area.

Typical subsurface soil conditions consist of several feet of surficial silt, underlain by sands and gravels to a considerable depth. The granular deposits generally become coarser with depth, although deep deposits of fine sands have been encountered in the North Pole area. The granular deposits can exhibit considerable lateral variability, apparently representing old channels filled with materials of different grain sizes. Silt filled sloughs generally represent former positions of rivers and streams.

The 1989 MAPCO report also observes that the thickness of the sediments overlying bedrock is unknown, "but in the Fairbanks area is estimated to be as great as 400 to 500 feet, and at the Moose Creek Dam is reported to be 616 feet." [Exhibit 2560, Report, p. 3-10] The report notes that there are areas of discontinuous permafrost at locations under the refinery and elsewhere. The groundwater at the refinery begins 3 to 10 feet below ground and is subject to seasonal variation. "[W]ith the exception of local disruptions caused by masses of permafrost, the groundwater at the refinery is hydraulically connected to the groundwater in the entire floodplain of the Tanana and Chena Rivers." [Exhibit 2560, Report, p. 3-10] Flow direction "is about north 10 degrees west, with some suggestion of slight seasonal variation." [Exhibit 2560, Report, p. 3-11]

Groundwater velocity is estimated to be "100 to 500 feet per year." [Exhibit 2560, Report, p. 3-11] As to groundwater velocity, the court notes that there was other evidence that described different averages and ranges of velocity, often with a faster moving upper range. The court does not attempt to resolve these conflicts and concludes only that the groundwater flows in the area are complex and variable flows:

The MACPO report details some of these complexities:

The subsurface soil information from the refinery appears to indicate finer grained material near the surface, with zones of coarser material at depth. This would result in lower groundwater velocities near the surface. The presence of permafrost north of the refinery could also reduce the velocity of the shallower groundwater, which must flow beneath or around the permafrost. Most flood plain aquifers exhibit . . . variations in permeability caused by horizontal lenses of finer grained soils. This results in a lower permeability in a vertical direction than in a horizontal direction. This . . . would further reduce the velocity of the shallow groundwater as it converges beneath the permafrost. Silt-filled sloughs on and in the vicinity of the refinery site may also reduce the velocity of the shallow groundwater, depending on how deep they project below the groundwater surface.

[Exhibit 2560, Report, p. 3-10]

The report also notes other ways that permafrost adds to the variability of groundwater flows:

The presence of permafrost may present other alterations of groundwater flow, depending on its configuration. If the active layer of seasonal thaw is deeper than

the summer water table, some flow may occur above the permafrost, while the predominant flow is beneath the permafrost. Thawed areas between isolated masses of permafrost may produce channels for flow. Likewise, the thaw bulb beneath clearings such as the railroad spur may form a conduit for localized ground-water flow.

[Exhibit 2560, Report, p. 3-11. 3-12]

#### ***Overview of Sulfolane as a Hazardous Substance***

90. Centrally involved in this case is AS 46.03.822(a) which imposes strict liability for an unpermitted release of a hazardous substance. "Hazardous substance" for section 822 purposes is defined in AS 46.03.826(5) to mean:

- (A) an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found;
- (B) oil; or
- (C) a substance defined as a hazardous substance under 42 U.S.C. 9601(14)

The court has determined that the sulfolane releases at the North Pole Refinery were releases of a hazardous substance as defined in subsection (5)(A) of the statutory definition of that term. Described in this overview are the three main reasons why the court has reached this decision.

First, DEC determined that the sulfolane releases were releases of a hazardous substance; its findings are

entitled to judicial deference. While overseeing the response to the NPR sulfolane releases DEC several times found that the releases posed an imminent and substantial threat to the public health or welfare, or to the environment. [Ex. 148A] These determinations were in the context of requests to withdraw money from the Oil and Hazardous Substance Release Response Account established under AS 46.08.010. The uses of this fund are carefully controlled. Under AS 46.08.040 the commissioner of DEC is authorized to withdraw money from the fund to address “a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment.”<sup>7</sup>

When the commissioner does so, the commissioner must, within 120 hours provide a written report to the governor.<sup>8</sup> Such reports were made in this case.

This process was employed five times during the course of responding to the sulfolane contamination at North Pole. Each time formal administrative findings were made. Typical are the following as reflected in the DEC memo of February 10, 2010:

Sulfolane has been detected in the City of North Pole drinking water supply wells and residential drinking water wells, down gradient of the refinery. Response actions have discovered sulfolane nearly three miles down gradient from the source area on the refinery. Multiple releases of sulfolane-containing gasoline and sulfolane have occurred from the North Pole Refinery. There are no known releases occurring at this time,

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<sup>7</sup> AS 46.08.040(a)(1)(A).

<sup>8</sup> AS 46.08.045(b).

but the *migration of sulfolane off the refiner's property poses an imminent and substantial threat to the public health and welfare and to the environment.*

Determinations involving technical subjects on matter of policy within an agency's expertise and authority where an agency applies the law to a particular set of facts are reviewed for reasonableness by Alaska courts.<sup>9</sup> A court “will not substitute its judgment for the [agency’s] or alter the [agency’s] policy choice when the [agency’s] decision is based on its expertise.”<sup>10</sup>

This deferential standard applies to the DEC’s determinations made to draw on the response fund because the subject matter is technical and involves both the application of the agency’s expertise and a policy choice as to whether a withdrawal from the response fund should be made. In the present case, DEC’s actions were reasonable, fact-based, and are based on a reasonable interpretation of the law. They are therefore entitled to judicial deference.

Second, knowledgeable witnesses testified that sulfolane is a hazardous substance. Toxicologist Stephanie Buss, and Risk Assessor Dr. Ted Wu so testified. Their testimony was detailed and well substantiated. They were credible witnesses whose testimony the court accepts.

Third, many, if not most, of the sulfolane releases at the refinery were in concentrations far exceeding existing regulatory levels for sulfolane in drinking water. As detailed above, these regulatory levels range from .49 ppb to

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<sup>9</sup> *Native Village of Elim v. State*, 90 P.2d 1, 5 (Alaska 1999) (“Under this standard we ‘merely determine whether the agency’s determination is supported by the facts and is reasonably based in law.’”

<sup>10</sup> *Id.*

90 ppb. By contrast, the record in this case reflects multiple releases above 10,000 ppb, and some that ranged above a million ppb. Federal case law recognizes that evidence of releases in excess of state standards can be “relevant and useful in determining the existence of an imminent and substantial endangerment.”<sup>11</sup> The court considers the fact that many of the sulfolane releases in this case were in concentrations orders of magnitude higher than regulatory standards to be not only relevant and useful but highly probative of the hazardous nature of the sulfolane releases in this case.

The court has also determined that sulfolane is a hazardous substance on additional grounds. *See infra* paragraphs 378-384; 403-428; 618-623; 644-657. These are not summarized in this overview because they seem cumulative in light of the above reasons.

***Overview of the Parties’ Responses  
to the Sulfolane Contamination***

91. Williams discovered sulfolane in high concentrations in refinery products in the groundwater in 1996. It did not report this discovery to DEC or any other regulatory agency and seems to have made no response to it.

Contemporaneous with the submission of Shannon & Wilson’s site characterization report of October of 2001 that found sulfolane in the groundwater underlying the refinery, either Williams or Shannon & Wilson notified DEC of this fact. Initially DEC was uncertain as to whether sulfolane should be regulated as a hazardous substance. DEC directed Williams to perform weekly sam-

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<sup>11</sup> *Interfaith Com. Org. v. Honeywell Intern., Inc.*, 399 F.3d 248, 261 n.6 (3rd Cir. 2005).

pling for sulfolane in an effort to identify its sources. Williams appears to have begun this effort around the first of January, 2002.

On March 1, 2002 DEC wrote Williams a memo stating that sulfolane would not be considered a regulated contaminant “at this time due to the lack of EPA reviewed toxicity data.” DEC directed Williams to continue sampling for sulfolane weekly until its source could be established. [Ex. 3645] Shortly thereafter Williams asked for permission to reduce the frequency of its groundwater sampling from weekly to semi-annually. [Ex. 3687, p. 1-2, email from Freeman to Bauer dated March 21, 2002.] DEC granted permission to reduce the sampling frequency. In the summer of 2002 Williams stopped all sampling for sulfolane without having located its source.

Williams and DEC’s responses to the announcement of the discovery of sulfolane in October of 2001 until transfer of the refinery assets in April 2004 seem, in hindsight, modest and insufficient. But DEC took a more strict approach after the transfer. In the summer of 2004 DEC asked Flint Hills to locate the sources of the sulfolane contamination. [Ex. 3036] In accordance with this instruction, Flint Hills began a sampling program so that it might infer source areas. On October 19, 2004, DEC advised Flint Hills that sulfolane would be regulated and subject to soil and water cleanup guidelines, the latter at 350 ppb. Flint Hills installed additional monitoring wells in 2005.

In October of 2006 Shannon & Wilson, now working for Flint Hills, recommended that Flint Hills install monitoring wells near the refinery’s northern boundary to confirm that sulfolane was not leaving the property. DEC concurred with this recommendation. But instead of promptly following the recommendation Flint Hills sought a second opinion from Barr Consulting. In 2008

Barr Consulting made a similar recommendation. Flint Hills instilled additional wells as recommended and some of them tested positive for sulfolane. At that point, Flint Hills asked and received permission to install three monitoring wells beyond the refinery boundary, two near the North Pole high school, and one near the City water treatment plant. [Tr. 1506]. In October of 2009 sulfolane was detected in these wells, triggering a rapid series of events. [Tr. 1507]

Flint Hills' 2006 response in seeking a second opinion seems, in retrospect, to be somewhat casual. It contrasts with Flint Hill's response after sulfolane was found off site. Flint Hills' manager Hillarides explained the reasons for the difference: "In this case we've now stepped over the line . . . We thought we had a small problem, and were looking at the leading edge of it. We now realize that there's a massive problem that we didn't understand." [Tr.1509]

In response to the offsite discovery, Flint Hills proceeded in "multiple action lanes." [Tr.1507 (Hilarides)] It began knocking on doors to get permission to sample wells. When the wells tested positive, residents were immediately supplied with bottled water. [Tr. 1507] It installed new wells for the City of North Pole outside of the contaminated area. It started a field investigation of all aspects of the contamination and helped form with DEC a technical project team to manage activities. [Tr. 1509] Flint Hills and DEC also held outreach meetings with members of the community, many of whom expressed alarm and concern that they had been drinking water contaminated by sulfolane for a substantial period of time.

On March 3, 2010 DEC notified Flint Hills that a 25 ppb cleanup level for sulfolane would be set, and asked

Flint Hills to complete a characterization and corrective action plan and to continue to provide alternative water.

Flint Hills opened a water office in North Pole as part of its community outreach efforts, and continued to provide bottled water. It also began to install complex filtration systems and tank systems in individual residences and other structures throughout the plume area. All of these alternatives had drawbacks and none were wholly satisfactory.

On May 17, 2010 DEC notified Williams that it was a responsible party liable for the sulfolane contamination. [Ex. 2703] Williams thereafter sent representatives to attend meetings of the technical project team. It agreed to create a transient groundwater model, engaged a firm to build one, but never delivered it to DEC. Williams did no other remediative work.

Between 2011 and 2013 Flint Hills improved the groundwater recovery system at the refinery by installing additional monitoring and recovery wells and increasing the groundwater extracting volume.

In May of 2012 Flint Hills, through the firm ARCADIS submitted a draft plan in response to DEC's request with alternative cleanup levels ranging from 14 ppb to 362 ppb. [Ex.7735] On November 13, 2013 DEC conditionally approved the draft of the ARCADIS document with a 14 ppb cleanup level. Flint Hills took an administrative appeal from this aspect of DEC's decision. DEC Commissioner Hartig ruled on the administrative appeal on April 4, 2014, vacating the 14 ppb standard. No new standard has been approved.

In May of 2014 Flint Hills discontinued refinery operations at NPR. Since then it has disassembled the refinery structures.

Between 2014 and 2017 it became clear to DEC and Flint Hills that the best response to the contamination of the aquifer would be to extend the city's piped water system to residents affected by the plume. The State and Flint Hills agreed that the cost of this would be split on an interim basis 80/20 between Flint Hills and the Stat, subject to reimbursement from Williams. Between 2018 and the date of trial, the piped water extension was constructed. It is in operation now, but the project has not been fully completed.

The State, Flint Hills, and the City of North Pole entered into a settlement agreement on February 6, 2017. [Ex. 7985] Under the settlement agreement Flint Hills and the State agreed to fund the extension of the piped water system. In addition, if the sulfolane level outside the piped water project area were found to exceed EPA's regional screening level (currently 20 ppb) in a private drinking water well, Flint Hills would be required to supply an alternative water source to the affected property.

In July of 2017 DEC allowed Flint Hills to turn off the pump and treat system at the refinery. This allowed sulfolane in increased quantities to migrate off the refinery property. According to Jim Fish, the DEC project manager, concentrations of sulfolane leaving the property do not exceed 50 ppb.

In summary regarding the refiners' responses, Flint Hills work with respect to the sulfolane contamination from 2009 to the date of trial included immediate sulfolane testing of residential, commercial and public wells; participation in community meetings; creation of a water office for citizens to visit for information and to have concerns addressed; comprehensive investigation of the sulfolane plume and sources; installation of hundreds of additional

monitoring wells both on-site and off-site including continuous monitoring of these wells; upgraded remediation systems at the refinery; installation of new city wells; study of potential remedial measures; soil excavation; extensive work in coordination with the technical project team; provision of clean water at the option of landowners and businesses including bottled water, and installation of tank or filtration systems; and construction of a piped water system to ensure clean water for residents. Williams attended technical project team meetings and contracted for a transient groundwater model that it did not deliver.

## **DETAILED FINDINGS OF FACT**

### ***a) Introductory Detailed Findings***

92. The North Pole Refinery began operations in 1977. [Tr. 2335:19-2336:13, 2373:20-2374:1 (Newcomer); Ex. 2026 at 2]

93. The NPR is the source of pollution from sulfolane, PFAS, and petroleum products. [See, e.g., Tr. 1471:13-1472:2 (Davis) (sulfolane); Tr. 2418:14-2419:22 (Hook) (petroleum pollution); Ex. 2815 at 3-4 (PFOS/PFOA)]

94. Earth Resources of Alaska constructed NPR in 1976 and began refining operations in 1977. MAPCO operated the NPR from 1980 to 1988. Williams Alaska Petroleum, Inc., a subsidiary of The Williams Companies, Inc., acquired MAPCO in 1988 through a stock acquisition. “WAPI admits that the same corporate entity, now named WAPI, owned and operated the North Pole Refinery from the commencement of refinery operations in 1977 through March 31, 2004.” [Tr. 1001:11-13, 1019:11-23 (Davis); Tr. 2335:19-2336:13, 2373:20-2374:1 (Newcomer); Ex. 2026 at 2; *see also* Williams Alaska Petroleum, Inc.’s Answer to Flint Hills’ Cross Claim Asserted in its

Amended Answer to the State of Alaska's Complaint, p. 2  
¶3 (July 11, 2016)]

95. As part of its refinery operations, the NPR would receive crude oil feedstock from the Trans-Alaska Pipeline System ("TAPS"). The NPR used a distillation process to refine crude feedstock into various fractions—such as naphtha, kerosene, and gas oils—to produce such products as jet fuel, heating fuel, gasoline, and asphalt. [See, e.g., Tr. 1001:23-1003:23 (Davis); Ex. 2576 at 5]

96. Williams began using sulfolane at the NPR in 1985. [See Tr. 1001: 14-16 (Davis)]

97. Sulfolane was used within the NPR extraction unit. Once the naphtha was separated from the TAPS feedstock, it was sent to the extraction unit and combined with Sulfolane to remove compounds such as benzene, toluene, ethylbenzene, and xylene. [Tr. 1002:4-1003:23 (Davis)] Water would also be removed during this process, which would ultimately be diverted to the NPR's wastewater treatment system. This was done because the water possessed remnants of the foregoing compounds. [Id.]

98. Because sulfolane was an expensive solvent, the intention was to recycle as much as possible for reuse after processing. [Tr. 1003:16-18 (Davis)]

99. Structures at the NPR included crude oil processing units, rail and truck loading racks, tanks for storage of oil and petroleum products (with corresponding containment areas), fuel transfer locations, and an extraction unit ("EU"). [Tr. 1002:4-1003:23 (Davis); *see also* Ex. 2576] The NPR also had wastewater collection and treatment systems, aboveground storage tanks, piping, lagoons, and a groundwater extraction and treatment system. [See, e.g., Tr. 1008:20-1014:12 (Davis); Ex. 2576]

100. In 1986, Williams' predecessor, MAPCO, entered into a compliance order by consent (COBC) with DEC "to resolve a disputed matter" from "oil spills onto or into the land of the State directly attributable to the operation of the refinery. These spills have occurred as a result of leaking storage tanks, leaking sumps, inadequately constructed sumps, an overflow of the waste water handling pond, and certain handling procedures." Ex. 5, at 1.

101. The compliance order required MAPCO to reactivate all existing collection wells, "install additional collection wells determined, in DEC's sole discretion, to be reasonably necessary for the collection of liquid product," install 20 monitoring wells "located at sites and constructed in accordance with specifications previously submitted to DEC," test drinking water supply sources, expand and modify the waste water holding pond, submit an environmental audit, and correct all deficiencies noted in the audit. Ex. 5, at 2-5.

102. Sulfolane is highly soluble in water, has a low potential to attach to sediments and organic matter in soils, and does not biodegrade in anaerobic conditions such as those in much of the North Pole aquifer. [Tr. 998:23-1000:24 (Davis)]

103. Sulfolane from the NPR has contaminated the North Pole aquifer and has spread in a 3.5 by 2 mile plume, contaminating hundreds of drinking water wells. [See Tr. 1471:13-1472:2 (Davis); Ex. 148D at 2 (noting "discovery of sulfolane in 300 drinking water wells")]

104. Williams had sampled and detected sulfolane in refinery products in the groundwater as early as 1996. [See Tr. 1121:18-1123:08 (Davis); Ex. 2276] Samples indicated sulfolane up to and potentially exceeding 2.7 million parts-per-billion. [Tr.1121:18-1123:13 (Davis); Ex. 2276 at

372-77; *see also* Ex. 2836 at 23 (noting that sulfolane “sinks’); Tr. 3641:21-23 (Johnson) (tendency of sulfolane to mass transfer and get into water)] Williams did not report this to the Alaska Department of Environmental Conservation (“DEC”). [See Tr. 1125:18-21 (Davis)]

105. At the beginning of October 2001, Williams or Shannon & Wilson informed DEC of concentrations of sulfolane in the onsite groundwater monitoring wells. This was at about the same time that Shannon & Wilson issued a contaminant characterization study required by DEC and EPA. [Ex. 2236] The study included results from monitoring wells upgradient from the recovery wells with sulfolane concentrations as high as 32,000 ppb. [Ex. 2236, at 50, and Report, p. 20]

106. When sulfolane was first reported, DEC was uncertain whether it should be regulated as a hazardous substance. [Ex. 1741] DEC noted limited information, apparent low toxicity, and a high risk of migration. [Ex. 3741]

107. Jim Frechione at DEC recommended that in considering whether sulfolane was a “hazardous substance,” DEC needed to evaluate “its presence at the site [] based on its concentrations; location; nature of site; receptors; degradation rate” to “determine what (if anything) we do about it.” [Ex. 3741, at 4]

108. DEC directed Williams to perform weekly sampling for sulfolane in order to attempt to identify sources of sulfolane. [Ex., 3687, p. 3] This direction appears to have been given in December of 2001.

109. DEC’s initial decision concerning sulfolane is reflected in a memo from DEC to Williams dated March 1, 2002. The memo stated that sulfolane is not considered a regulated contaminant “at this time due to the lack of EPA reviewed toxicity data.” Ex. 3645, at 1. DEC directed

that sulfolane should be sampled for at a frequency that “should remain as it is until its source is established with some confidence.” [Ex. 3645]

110. Unable to locate the sources of the contamination in the winter of 2001-2002, Williams requested DEC allow it to reduce the frequency of its groundwater tests the following spring. [See, e.g., Tr. 2878:5-8 (Hook); Ex. 3687] By summer of 2002, Williams ceased testing for the sulfolane sources on the refinery property. [See Tr. 2958:13-2959:7 (Lindstrom); Ex. 3210, at 3]

111. Williams conveyed the refinery assets and the real property and certain liabilities, to Flint Hills on March 31, 2004, through the ASPA. [Stipulated Fact; Ex. 3000]

112. Shortly after the execution of the ASPA, DEC tasked Flint Hills with the same investigation that Williams was previously tasked with: locate the sources of the sulfolane contamination at the NPR. [Ex. 3036] DFC internally estimated it would take at least four years—until the fall of 2008—before Flint Hills would begin to be able to “infer the source areas” of the onsite contamination. [Tr. 3654:4-3655:6 (Johnson); Ex. 6078]

113. On October 19, 2004, DEC also advised Flint Hills it would be adopting new soil and groundwater cleanup levels for the sulfolane contamination at the NPR based on a 2001 Canadian Association of Petroleum Producers guideline and a 2002 British Columbia guideline. [Ex. 3036]

114. Sulfolane became a regulated substance in October 2004. [Ex. 3036; Tr 3580:10-15 (“The Court understands that—that throughout the whole ownership of the refinery assets by Williams, the State took the position

that sulfolane was not regulated within the sense of it being a hazardous substance.”).

115. In October 2006, Shannon & Wilson (a contractor that had previously worked for Williams and had been retained by Flint Hills) told Flint Hills that “[t]he extent of subsurface sulfolane contamination has not been determined, and the sources of this contamination remain poorly defined.” Ex. 8284, at 9.

116. Shannon & Wilson recommended installation of additional monitoring wells in late 2006. Shannon & Wilson recommended Flint Hills install one or two monitoring wells at the Refinery’s property boundary “to serve as sentry wells to confirm that sulfolane is not leaving the refinery property.” [Ex. 3210 at 11, Ex. 8284, at 11] DEC sent a letter to Flint Hills in November of 2006 to concur with the recommendations made by Shannon & Wilson. [Ex. 3067] Flint Hills subsequently sought an independent environmental opinion concerning conditions at the NPR, hiring Barr Consulting in 2007 to conduct a “cold-eye review.” [Tr. 1488:23-1489:14, 1490:07-1491:13 (Hilarides); Ex. 2836] In 2008, Barr Consulting recommended installation of additional monitoring wells along the property boundary at the NPR. [Tr. 1495:01-16, 1496:02-1497:01 (Hilarides)]

117. The detections that resulted from wells installed in locations recommended by Barr Consulting prompted further investigation by Flint Hills, including installing monitoring wells beyond the NPR’s property boundary on City and School District properties. [See, e.g., Tr. 1506:03-11 (Hilarides)]

118. Sulfolane was discovered in October 2009, in these new wells. [Tr. 1506:12-1507:23, 1619:17-22 (Hilarides); *see also* Tr. 176:3-25 (Hartig)]

119. Sulfolane had also contaminated the City of North Pole's public drinking water wells. [Tr. 448:22-44:10] Flint Hills installed new wells for the City outside of the contaminated area. [Tr. 448:22-449: 10 (Ward)].

120. It was unknown how long people might have been drinking sulfolane-contaminated water, or what concentrations they may have been consuming. [Tr. 177: 16-24 (Hartig)]

121. In response to the discovery, Flint Hills immediately provided alternative water sources to affected citizens and coordinated with state officials on how to address the newly discovered sulfolane plume. [Tr. 1506:18-1507:23 (Hilarides); Tr. 449: 11-13 (Mayor Ward)]

122. DEC reached out to the community through public meetings and newsletters. [Tr. 177:1-6, 180:12-21 (Hartig)] Members of the public expressed distress and concerns, including the fact that they had been drinking sulfolane without their knowledge, the risk that may pose to their health, what would be done about the contamination, and how contamination would impact property values and construction. [Tr. 180:22-182:4 (Hartig)]

123. DEC and Flint Hills formed the Technical Project Team. [Tr. 1509 (Hilarides); Ex. 132]

124. At the State's request, Williams became involved in the Technical Project Team 2010. [Tr. 4058:23-4059: 17 (Gebbia)] "Williams participated in numerous TPT meetings" "almost on a monthly basis for a consistent three-year period." [Tr. 4068:8-24 (Gebbia); Ex. 132] However, its contribution was limited to attending meetings.

125. Flint Hills undertook a significant amount of work over time to characterize the extent of the sulfolane contamination. [Tr. 183: 15-25 (Hartig)] Characterization of

the sulfolane plume was a challenge because of the complicated hydrology from the permafrost re-routing the plume. [Tr. 183: 15-25 (Hartig)]

126. Characterization of subsurface contamination necessitated installing monitoring wells to identify contaminants and to understand groundwater flow, including the direction of flow. [Tr. 184: 13-25 (Hartig)]

127. Williams was not involved in the characterization, provision of alternative water, or public outreach. [Tr. 185:7-10 (Hartig)]

128. Flint Hills sent a letter to Williams and TWC on February 4, 2010, providing notice of the offsite contamination and seeking to be held harmless under the ASPA and performance under the Performance Guaranty. [Ex. 6555] This notice was provided by Flint Hills with reasonable promptness after the offsite contamination was discovered.

129. DEC advised Williams on May 17, 2010, that Williams remained liable for the contamination at the North Pole Refinery as a responsible party. [Tr. 1775:24-1777:1 (Napoli-Fultz); Ex. 140]

130. In May of 2014, Flint Hills discontinued operations at the NPR. After that time there was no sulfolane use on the site. Flint Hills has demolished the refinery structures. [Tr. 1516: 13-19 (Hilarides)]

131. To date, 233 private wells have contained sulfolane of 20 ppb or more. Of those, 31 have had sulfolane over 198 ppb at some point in time between 2009 and the present (the 31 number is calculated by taking the 25 wells above 198 ppb and adding the 6 wells above 362 ppb = 31 wells. That number has decreased over time so that today

there is only one well above 198 ppb: PW 1230. The current level of this well is 900 ppb. [Tr. 3717:14:3718:17 (Woods); Tr. 2656 (Fish)]

132. The State allowed Flint Hills to turn off the pump and treat system in July 2017. This decision allowed sulfolane in increased quantities to migrate offsite into the plume. But the levels did not exceed 50 ppb. [Tr. 2555; Tr. 2654: 12-2655:5 (Fish)]

133. Based on the sampling from 2017 and 2018, 86 private wells had detections over 20 ppb of sulfolane. Ex. 7726, App. B-3, p. 178; Tr. 2154:17-23 (Paris)]

134. In 2018, PFAS from the refinery was detected off-site in groundwater. [Ex. 7790, Booz Allen Report, p. 2] Until then it was thought that no contaminant other than sulfolane had left the refinery property. [Buss depo. 196-7]

***b) Regulatory Findings***

135. Discovery of sulfolane off the refinery prompted DEC to critically review the on-refinery groundwater cleanup level of 350 ppb that it had set in 2004. [Tr. 281:10-19 (Hartig)] That value had been set using limited toxicity information, assuming the sulfolane was contained under the refinery, and knowing that the refinery was not using the groundwater as a drinking water source. [Tr. 281:10-19, 283:5-12 (Hartig); Tr. 943:3-6, 948:16-25 (Wu); Tr. 2810:25-2811:13 (Bainbridge); *see* Tr. 4024: 1-21 (Newcomer); Ex. 2560 at 34; Ex. 141 at 112]

136. As of 2010 in a State-commissioned report, Oasis reported protective levels set in Texas for drinking water of .49 ppb to 1.5 ppb and in Canada for drinking water of .09 mg/L (90 ppb). [Oasis Report, p. 26]

137. There is a lack of human or chronic data to guide DEC in setting a cleanup level. [Tr. 178: 12-18 (Hartig)]

138. EPA has not set a maximum contaminant level (MCL) under the federal Safe Drinking Water Act for sulfolane in public drinking water systems. [Tr. 383:4-14 (Hartig)]

139. In late 2009, DEC requested that EPA Region 10 nominate sulfolane for provisional peer-reviewed toxicity value evaluation (“PPRTV”). [Tr. 278:16-279:7 (Hartig), Ex.123]

140. DEC also requested that the Agency for Toxic Substances and Disease Registry (ATSDR) prepare a health consultation for sulfolane. [Tr. 755:23-756:14 (Wu); Ex. 143] In 2010, ATSDR concluded that “[s]ulfolane is acutely toxic at relatively high doses (over 200 mg/kg) in species tested.” [Ex. 143 at 17] ATSDR noted “a paucity of data exists on the longer term effects of sulfolane.” [Ex. 143 at 17]

141. In 2010, after reviewing the animal studies and existing literature, ATSDR provided recommended action levels for sulfolane in drinking water. For children, the ATSDR recommended 40 ppb and for adults, the group recommended 87.5 ppb in drinking water. Ex. 143, at 17.

142. ATSDR recommended health-based levels for sulfolane in drinking water, the lowest being 25 ppb for infants. [Tr. 767:19-769:2 (Wu)] In 2011, ATSDR updated the levels, reducing the infant level to 20 ppb. [Tr. 769:6-12 (Wu)]

143. In 2010, DEC informed Flint Hills, based on the ATSDR review, “that concentrations of sulfolane above these [ATSDR] advisory levels may pose a potential risk to human health and should be further investigated on a

site-specific basis until a regulatory level for sulfolane can be determined . . . . DEC considers the most conservative health advisory level (25 ppb) as an interim cleanup level for groundwater at the site until the site characterization is complete and a final cleanup level can be set." Ex. 2123, at 1.

144. As of February 2010, DEC determined that: "The discovery of sulfolane in drinking water wells downgradient of the refinery poses a potential threat to approximately 100 private drinking water wells, at least two Class B public wells, and the City of North Pole's primary water supply wells. Trace amounts have been detected in the City's supply wells and, to date, sulfolane has been detected in 55 private wells. Fifty to sixty private wells remain to be tested." Ex. 148A, at 1.

145. In October 2010, DEC determined that: "Sulfolane released from the refinery has been detected in approximately 200 private drinking wells, at least four Class B public wells, and the City of North Pole's primary water supply wells. Additional drinking water wells are being found and need to be tested, the vertical extent of the contamination is not yet fully determined, and the fate and transport of the chemical is still being investigated. Since sulfolane is not a common contaminant, remedial options are untested and the chronic toxicity is unknown. It is possible individuals in the impacted area have been exposed to the chemical for 20 years." Ex. 148B, at 1; 148C, at 1.

146. On January 30, 2012, EPA issued a provisional peer-reviewed toxicity value for sulfolane. [Ex. 159] EPA derived a chronic provisional reference dose of oral ingestion of sulfolane of .001 mg/kg-day. [Ex. 159 at 38] This was converted to a regional screening level of 16 ppb.

147. Flint Hills, through its contractor ARCADIS, prepared and submitted to DEC a draft human health risk assessment dated May of 2012. The draft provided alternative groundwater cleanup levels for sulfolane, ranging from 14 µg/L to 362 µg/L (14 ppb to 362 ppb ). [Ex. 7735, p. 1-2, Decision of Commissioner Hartig]

148. In 2013, DEC rested its determination on detections posing a threat and the lack of understanding about the compound: “The discovery of sulfolane in 300 drinking water wells downgradient of the refinery poses a threat to many existing and future private drinking water wells located within the footprint of the plume. The lack of a full understanding of the fate, transport and degradation mechanism of sulfolane in the aquifer is a limitation for decisions related to remediation and cleanup of the site.” Ex. 148D, at 2. The Department expressed a similar rationale in 2014. Ex. 148E, at 2-3.

149. On November 27, 2013, DEC conditionally approved Flint Hills’ Revised Draft Final Human Health Risk Assessment with a 14 ppb cleanup level relying on the reference dose in EPA’s provisional peer-reviewed toxicity value. [Ex. 7125 at 5; Tr. 877:18-22 (Wu)]

150. After considering the Human Health and Risk Assessment submitted by Flint Hills, DEC sent Flint Hills a letter stating: “DEC finds that the groundwater alternative cleanup level for sulfolane . . . of 14 µg/L . . . is protective of human health, safety and welfare, and of the environment.” Ex. 7735, at 2 (quoting Nov. 27, 2013 letter from DEC to Flint Hills). “The letter . . . further directed Flint Hills to finalize the HHRA in accord with DEC’s decision.” Ex. 7735, at 2.

151. Flint Hills administratively appealed DEC’s decision to set a 14 ppb cleanup level.

152. In the appeal Commissioner Hartig decided that “it appears the Division mistakenly believed it was limited to considering just the PPRTV for sulfolane toxicity under the relevant regulations and the 2000 Manual.” Ex. 7735, at 8. This conclusion appeared under the heading of Commissioner Hartig’s decision that concluded that the DEC staff decision “misapplied applicable regulations and standards to the extent it believed itself limited to considering only the PPRTV toxicity analysis in determining a sulfolane groundwater cleanup level under 18 AAC 75.345(b)(2).” Ex. 7735, at 8.

153. Commissioner Hartig vacated and remanded the decision setting a cleanup level of 14 ppb to DEC’s staff. [Ex. 7735] Commissioner Hartig ruled that staff (the Spill Prevention and Response (SPAR) division) may have mistakenly believed that the only decision it could make was to approve a final cleanup level of 14 micrograms per liter based on the EPA’s PPRTV: “to the extent the SPAR division’s reasoning is apparent, it appears the Division mistakenly believed it was limited to considering just the PPRTV for sulfolane toxicity under the relevant regulation and the 2000 manual.” The Commissioner instructed the division that it “may accept and approve all or any portion of the PPRTV, but it must explain its rationale and reasoning for approval or disapproval in the record.” The Commissioner also noted that the division was not prohibited “from approving the use of professionally peer-reviewed documents besides the PPRTV as a source for toxicity criteria.” [Ex. 7735, p. 8-9] In the remand, Commissioner Hartig did not make any determination as to whether 14 ppb should or should not be the applicable cleanup level. [Tr. 244:10-12, 308:15-309:18 (Hartig;) Ex. 7163, at 1]

154. In 2014, DEC consulted with a panel of experts—the Toxicology Excellence for Risk Assessment (TERA) panel.

155. When DEC decided to hire the TERA panel, it told the public in a press release “[a] report summarizing the panel’s recommendations will be submitted to DEC and considered as part of the decision on a cleanup level for sulfolane. DEC’s decision on a cleanup level is expected by the end of 2014.” Ex. 7163, at 1.

156. “The [TERA] panel recommended a “reference dose of .01 milligrams per kilogram per day,” which translates to 362 ppm of sulfolane. (362  $\mu\text{g/L}$ ) [Tr. 931:4-10 (Wu)

157. After this report was released, the EPA advised DEC not to take action on the TERA report and instead to wait until the National Toxicology program studies were completed.

The EPA letter stated:

Given the uncertainty that exists regarding the toxicity values associated with sulfolane, and the high number of residents who potentially face direct exposure to the chemical in their drinking water, the EPA strongly encourages DEC to wait until the NTP studies are completed before setting a sulfolane cleanup level for groundwater. The NTP studies are expected to provide a clearer picture of the risks associated with sulfolane exposure. [Ex. 192, EPA letter dated April 20, 2015]

158. DEC has followed EPA’s recommendation and has not set a cleanup level for sulfolane. [Tr. 967:9-15 (Wu); Ryan Depo. (Mar. 2016) 273:7-13, 274:16-275:1 (submitted Tr. 3736:1-3737:3)]

*c) Plume Findings*

159. The plume of sulfolane in the aquifer is 2 miles wide, 3.5 miles long, and over 300 feet deep. [Tr. 1230:21-23, 1471:13-1472:2 (Davis)]

160. According to the State's Project Manager, Jim Fish, a preponderance of the well monitoring data indicates there are two lobes of the plume that are increasing in concentration. [Tr. 2650:25-2651:7 (Fish)]

161. Flint Hills' expert Dr. Andy Davis and EPA's contractor Booz Allen take the position that the sulfolane plume continues to migrate. [Tr. 1471:10-1472:2 (Davis)]

162. Ms. Rebecca Andresen, employed with Flint Hills' contractor ARCADIS, has also concluded that, although parts may be stable, the plume is continuing to migrate. [Tr. 1472:7-18 (Davis); Tr. 3267:11-18 (Andresen)]

163. University of Alaska Fairbanks professor Dr. Mary Beth Leigh was contacted by DEC to research key natural attenuation mechanisms for the sulfolane plume. [Tr. 583:6-11, 585:4-7 (Leigh)] DEC contacted Dr. Leigh because of her expertise in the field of biodegradation of environmental contaminants. [Tr. 583: 12-16 (Leigh)]

164. Dr. Leigh researched sulfolane biodegradation and specifically focused on the North Pole Refinery contaminated site. [Tr. 582:24-583:5 (Leigh)] Dr. Leigh's research sought to determine the biodegradation potential of microorganisms indigenous to the plume area, environmental limitations on biodegradation, and, through a combination of laboratory experiments and field observations, to determine whether biodegradation is appreciably occurring within the sulfolane plume. [Tr. 585:21-588:17, 590:9-15 (Leigh)] Dr. Leigh also sought to determine the

potential for sulfolane biodegradation to produce toxic intermediates or metabolites. [Tr. 588:18-20 (Leigh)]

165. Dr. Leigh identified one bacteria species native to the plume area that was capable of biodegrading sulfolane. [Tr. 606:1-11 (Leigh)] This species was present in about 70 percent of the 180 groundwater samples Dr. Leigh examined. [Tr. 606: 19-607:7 (Leigh)]

166. Dr. Leigh determined that at a sulfolane concentration of 500 ppb, there are sufficient nutrients in the groundwater for sulfolane degradation, but at higher concentrations of sulfolane (Dr. Leigh tested up to 100 ppm sulfolane) additional nutrients were needed for biodegradation. [Tr. 608:19-609:15 (Leigh)]

167. In the presence of oxygen, Dr. Leigh found that indigenous bacteria were able to biodegrade sulfolane in laboratory experiments quite rapidly, within 13 to 14 days. [Tr. 611:12-17 (Leigh)] However, in the absence of oxygen, Dr. Leigh found no signs of biodegradation even after over three years and in various experimental conditions. [Tr. 611: 18-612:7 (Leigh)]

168. In ambient aquifer conditions dissolved oxygen levels are quite low. [Tr. 629: 13-21 (Leigh)] Aerobic conditions are commonly deemed to exist above 2 ppm dissolved oxygen. [Tr. 685:15-20, 686:11-14, 695:13-15 (Leigh)] Although some sampling locations have exceeded 2 ppm dissolved oxygen at points in time, “the vast majority are quite low” and below what would be considered aerobic conditions. [Tr. 695:1-12 (Leigh)]

169. Dr. Leigh concluded that “the degradation of sulfolane is unlikely to occur under ambient aquifer conditions.” [Tr. 629:15-17 (Leigh)] Although dissolved oxygen conditions are variable in the plume, the dissolved oxygen

levels are “insufficient to support appreciable degradation of sulfolane.” [Tr. 655:16-20 (Leigh)]

170. Dr. Leigh concluded, to a reasonable degree of scientific certainty, that “sulfolane biodegradation is not occurring to any appreciable extent” and is “not reducing the size of the plume in any substantial way.” [Tr. 631:10-19, 635:20-24 (Leigh)] Dr. Leigh reached this conclusion through multiple lines of evidence. She stated:

[O]ne line of evidence is just the sheer enormity of the plume. It is 3.5 miles long, 2 miles wide, and 300 feet deep in some points. It's enormous; and when biodegradation is actively occurring, you don't get plumes of that size because the contaminant is broken down before it can be transported that far away. [Tr. 631:20-25-632:1-2]

In addition she noted that bacteria need oxygen to break down sulfolane and the prevalent dissolved oxygen levels in the aquifer are too low to support aerobic biodegradation. [Tr. 631:20-634:25 (Leigh)]

171. Were biodegradation occurring at the rates Dr. Leigh measured in aerated lab experiments, the plume should not be more than 30 feet from the source. [Tr. 647:1-15 (Leigh)] She added that if there were less than ideal but still appreciable biodegradation, the plume could have traveled a few hundred feet. But more than three miles “is nonappreciable degradation.” [Tr. 658:23]

172. Air sparging consists of drilling wells and injecting oxygen into the subsurface. [Tr. 633:4-7 (Leigh)]

173. Dr. Leigh commented on the effectiveness of air sparging as a way of removing sulfolane from groundwater. She testified that it was effective in a small pilot experiment conducted at the refinery site where the wells had been deployed “every 20 feet or so.” [Tr. 642]

However, “to imagine doing this for an area the size of this plume is, I think kind of absurd.” It would involve creating a forest of PVC pipes throughout the City of North Pole, throughout private property, and then operating noisy air pumps to keep the air injected in those areas. [Tr. 643]

174. Dr. Leigh testified that the sulfolane plume will be present “for an extremely long time.” [Tr. 647:22 (Leigh)] She stated:

So, the processes that will underlie its disappearance from the area eventually will be totally physical chemical processes. So, really just dilution—dilution and dispersion over time. It will just spread the contaminant out over a larger area and dilute it to concentrations, but in the absence of appreciable biodegradation, it’s not going to disappear, and at the rate the plumes moving—the rate the groundwater moves, it’s going to take an extremely long time to move that through the whole area. [Tr. 647:24-648:10 (Leigh)]

175. The court finds that Dr. Leigh’s testimony is credible.

176. Because the plume is not subject to appreciable biodegradation, its attenuation will occur only through dilution and dispersion, which “will just spread the contaminant out over a larger area and dilute it.” [Tr. 647:21-648:5 (Leigh)] It will take a long but indeterminate time to dilute and disperse.

177. Dilution and dispersion do not eliminate the mass of sulfolane; rather, they spread it out over a larger area. [Tr. 597:8-10 (Leigh)]

178. Flint Hills’ contractor, ARCADIS, likewise saw no evidence that microbes were consuming sulfolane in the plume. [Tr. 3186:4-9 (Andresen)]

***d) Releases at NPR***

179. Williams' refinery operations resulted in substantial releases of hazardous substances during its NPR tenure, resulting from its operation of the wastewater treatment system, direct spills at the property, and its process management.

180. Williams mismanaged its wastewater treatment system during its NPR tenure, resulting in numerous releases of contaminants, as significant volumes of contaminated wastewater were directed to sumps and lagoons that had fallen into disrepair with holes and severe corrosion.

181. The NPR's wastewater treatment system evolved in the years after sulfolane was first introduced at the refinery in 1985, but began with an oil-water separator (Tank 192) as well as a solitary, single-lined lagoon (Lagoon B), which was supposed to be removed from service and replaced with two other treatment lagoons (Lagoons A and C). [Tr. 1008:20-1010:23 (Davis); *see also* Tr. 1012:05-1013:18 (Davis) (describing the implementation of CTX boxes, air strippers, and additional tanks during the latter part of Williams' tenure)]

182. Throughout its tenure, Williams used its wastewater treatment system to manage sulfolane-contaminated water from its refining and processing units, and also used it as a repository for other contaminated wastewater at the Refinery. [See, e.g., Tr. 2392:06-2393:09 (Hook); Tr. 1896:02-1897:01 (Guinn); Tr. 1947:07-1949:21 (Mead) (daily maintenance liquids would be drained to the sumps)] For example, sumps were located throughout the NPR, which would collect water and pump it directly into the wastewater treatment stream. [See, e.g., Tr. 1083:20-1085:09, 1107:05-11 (Davis)]

183. Waste process water containing sulfolane from salt towers would be sent to the sumps and into the wastewater system during the Williams' era. [Tr. 1978:2-1979:04 (Mead)] In 2000, it was reported that 25 to 75 gallons of naphtha salt dryer water containing 35 to 55 million parts-per-billion of sulfolane were drained into the sump each shift. [Tr. 1975:23-1976:15, 1978:18-1979:2 (Mead); Ex. 2144]

184. Williams would also routinely use the sumps to clean up and wash away spills at the NPR. [Tr. 2392:06-2393:09 (Hook)]

185. Williams also sprayed PFAS-containing fire-fighting foam directly into the sumps during its tenure, which was intentionally pumped into the wastewater stream. [Tr. 2334:04-2335:18, 2345:15-2346:09, 2368:02-2369:09 (Newcomer)]

186. The biggest systematic source of sulfolane in the wastewater system during Williams' era were the annual maintenance events of the extraction unit called "turnarounds." [Tr. 1869:15-1871:17 (Guinn) ("biggest systematic source"); Tr. 1896:02-14 (Guinn) (washing turnaround wastewater into sumps was "business as historically usual")]

187. During such "turnarounds," extraction unit equipment would be disassembled and washed, removing excess sulfolane that remained in or was coated on the equipment during processing. [Tr. 1046:12-19 (Davis); Tr. 1869:19-1870:19 (Guinn)] The wastewater from such events would be directed to the sump system, which would in turn send the contaminated wastewater into the NPR's treatment system. [Tr. 1046:12-19 (Davis); Tr. 1869:19-1870:19 (Guinn); Tr. 1948:13-16 (Mead)]

188. Turnaround events occurred on an annual basis during Williams' tenure and led to extremely high concentrations of sulfolane ("slugs") being loaded into the wastewater system every year. [Tr. 1046:8-11 (Davis); Tr. 2444:15-20 (Newcomer) (annual event); *see also* Tr. 1871:08-13 (Guinn) (yearly event in 2001, 2002, and 2003); Ex. 2144] 189. The active lagoons (Lagoons A and C) were unable to handle the resulting concentrations of sulfolane in the system to comply with the discharge limits established for sulfolane influent into the City of North Pole public sewer, 100 ppm. [See, e.g., Tr. 2428:15-22 (Hook)]

190. Williams would use Lagoon B, which had been previously "decommissioned" and removed from service in 1989, to store substantial volumes of oily wastewater with very high concentrations of sulfolane. [Tr. 1029:8-21 (Davis); Ex. 2337 at 7; Tr. 1864:07-18 (Guinn); Tr. 1900:22-1903:04 (Guinn); Tr. 1956:10-13 (Mead) (no limit to amounts that could be put into Lagoon B); Tr. 1971-73 (Mead); Ex. 2144; Ex. 76] When there were extremely high levels of sulfolane in the active lagoons, the wastewater would be transferred to Lagoon B for damage control. [See Tr. 1867:13-18 (Guinn); Tr. 1953:18-22, 1956:10-13, 1959:17-1960:03, 1969:05-1970:04 (Mead); Tr. 2428: 15-22 (Hook)]

191. Williams personnel testified that until 2004, Lagoon B was never empty. [Tr.1867:25-1868:02 (Guinn); 1890:07-09 (Guinn); *see also* Tr. 1043:25-1044:2; 1044:14-1045:21 (Davis) (Lagoon B was used throughout the 1990s); Ex. 2498, Ex. 2144]

192. Documentary evidence support the testimony that Lagoon B was constantly in use despite being removed from service. [See, e.g., Ex. 2837 at 9-15 (photographs throughout 1990s showing Lagoon B's continued use)] In April 2000, for example, testing was performed of

sulfolane in Lagoon B, confirming high sulfolane concentrations. [Tr. 1971:16-1973:19, 1983:01-13 (Mead)]

193. Williams' practice of directing its sulfolane-laden wastewater into its wastewater treatment system occurred despite being warned against such practices by the third-party manufacturer of sulfolane. [Tr. 1047:23-1048:18 (Davis); Ex. 2144 (Philips Chemical Co. advising Williams not to put sulfolane in its wastewater system); Tr. 1974:02-18 (Mead)]

194. In 2000, Williams documented sulfolane concentrations in Lagoon B, then nearly full, at 1,650,000 ppb. [Tr. 1049:19-25 (Davis)] This amounted to between 1,500 and 2,000 gallons of dissolved sulfolane. [Tr. 1051:1-11 (Davis)]

195. In July of 2001, the sulfolane concentrations in Lagoon B were 16,000,000 ppb. [Ex. 2592]

196. In July 2003, Williams personnel noted that Lagoon B continued to be in use. [Ex.100]

197. Despite its heavy reliance on the wastewater system and use of Lagoon B, Williams' operations permitted the systems to fall into disrepair and develop integrity issues during its tenure.

198. In 1984, EPA conducted a preliminary assessment of the refinery, and in 1985 a Phase I site investigation. [Tr. 1017:25-1018:4 (Davis)] EPA identified leaking sumps resulting in groundwater contamination. [Tr. 1021:6-10 (Davis); Ex. 2026 at 7]

199. According to the EPA's administrative order on consent, Lagoon A leaked, was repaired, and continued to leak; an overflow of Lagoon B to an adjacent gravel pit occurred in 1985; and in 1986 Williams drained Lagoon

Band found 45 holes in the liner. [Tr. 1023:22-1024:13 (Davis); Ex. 2560 at 21] These events occurred after Williams started using sulfolane at the NPR. [Tr. 1024:06-13 (Davis)]

200. Additional rips and tears in the Lagoon B liner were subsequently discovered in the 1990s. Repairs were performed by pulling the liner together and pinching it with 2-by-4 pieces of lumber. [Tr. 1031:24-1032:03; Tr. 1036:25-1037:13 (Davis); Ex. 2342; *see also* Tr. 1032: 11-17 (Davis) (noting that appropriate repairs should have involved heat-welding)]

201. Tears in the Lagoon B liner were identified to be as large as 1 foot wide. [Tr. 1033:18-1034:2 (Davis); Ex. 2342]

202. A Williams employee also discharged a firearm at a bulbous protrusion of the lagoon liner, further compromising the integrity of the liner containing large volumes of contaminated wastewater. [Tr. 1039:13-1040:08 (Davis)]

203. Lagoon B was also allowed to freeze during the winter of 2000. Williams knew that this would damage the liner. [Tr. 1052:11-1053:1 (Davis); Tr. 1053:4-7 (Davis); Ex. 2383; Ex. 2157, Ex. 2589; Tr. 1987:07-11 (Mead)]

204. The following year, in July 2001, Lagoon B was noted to once again possess substantial amount of wastewater with high concentrations of sulfolane. Sulfolane concentrations in Lagoon B were documented at 16,000,000 ppb. [Tr. 1058:4-15 (Davis); Ex. 2592] Williams continued to use Lagoon B to store wastewater with high concentrations of sulfolane throughout that year. [Tr. 1058:17-1061:2 (Davis); Ex. 2288]

205. Despite possessing general concerns about Lagoon B's liner integrity between 2001 and 2003, Williams

never investigated Lagoon B's liner for damage. [Tr. 1877:20-22, 1879:04-24 (Guinn)]

206. Corroded sumps were also a source of hazardous substance releases.

207. Sump 02/04-02, a sump located near the extraction unit, was found to have leaked throughout Williams' tenure. [Tr. 1088:4-1089:3 (Davis); Tr. 1963:14-1967:05 (Mead)]

208. Initially the sumps were constructed of concrete. They cracked because they were allowed to freeze. [Ex. 141, p. 93] They also leaked for other reasons. [Tr. 1088:14-18 (Davis)] Williams retrofitted the sumps with steel plates from 1984 to 1986. [Tr. 1088:18-19 (Davis)]

209. Sumps were nevertheless known to be leaking in the 1990s. [Tr. 1091:10-12 (Davis)] At that time, there was a plan to hydrostatically test the sumps every three years, but there is no evidence that was ever done. [Tr. 1091:12-17 (Davis)]

210. In 1991, sump 02/04-02 ("242") had a sulfolane concentration of 5,384,000 ppb. [Tr. 1092:11-23 (Davis); Ex. 2276] The nearby sump 4-3 had a sulfolane concentration "off the scale." [Tr. 1093:2-11 (Davis); Ex. 2276]

211. A 1997 inspection identified that the bottom 6 to 8 inches of sump 242 had heavy corrosion with metal loss. [Tr. 1094:5-21 (Davis); Ex. 2549] The sump was drained, but water kept filling from leaks in the sump floor and wall, indicating that the sump was below the groundwater table. [Tr. 1095:3-22 (Davis); Ex. 2549] The inspection results indicate that sump 242 had been leaking directly to the groundwater. [Tr. 1088:20-21 (Davis)]

212. In 1998, records indicate that the sump had a sulfolane concentration at 453,300 parts per million, about 45.33 percent sulfolane. [Tr. 1097:9-21 (Davis); Ex. 2276]

213. Sump 908 was also known to have heavy corrosion in 1990s, despite being a “major source of sulfolane” in the wastewater system. [Ex. 68; Ex. 2548; Tr. 1125:23-1129:12 (Davis)]

214. Refinery lab notes contained in notebooks indicate that in 1996, sulfolane concentrations were discovered in refinery products in groundwater from monitoring (or “sentry”) wells at the NPR and down-gradient of the extraction unit. [See Tr. 1121:18-1123:08 (Davis); Ex. 2276] Those samples indicated that sulfolane existed in the groundwater at significant concentrations, up to and potentially exceeding 2.7 million parts-per-billion. [Tr. 1121:18-1123:13 (Davis); Ex. 2276 at 372-377; *see also* Ex. 2836 at 23 (noting that sulfolane “sinks”); Tr. 3641:21-23 (Johnson) (tendency of sulfolane to mass transfer and get into water)] Despite these discoveries, the sulfolane contamination was not reported to a regulatory authority. [See Tr. 1125:18-21 (Davis)]

215. The evidence indicates that Williams’ business practice during most of its NPR operations prioritized profits over compliance and environmental stewardship. [See, e.g., Ex. 6050; Ex. 99]

216. In 2002, for example, Williams’ President, who was also TWC’s Chief Operating Officer, described a deficient culture, and one in which employees were “reluctant to report spills or injuries (for fear of being disciplined or from fear of negatively impacting ‘the numbers’).” [Tr. 1100:04-13 (Davis); Tr. 2452:01-2453:23 (Newcomer); Ex. 6050]

217. The “numbers” corresponded to an incentive structure that Williams implemented at the NPR, which was based upon a framework that provided employees bonuses based on the business’s performance. [Tr. 2243:19-22 (Lasater); *see also* Tr. 2512:04-06 (Roos) (describing that the NPR culture before FHR took over had previously been “a very production, you know, profitability-driven culture”)]

218. Williams’ organizational structure also prevented its environmental personnel—*i.e.*, those with the most knowledge of how its treatment system worked—from having operational control over the system, resulting in a misalignment of responsibilities. [*See, e.g.*, Tr. 1860:06-19 (Guinn) (stating that the people with knowledge of how the system worked did not have operational control, and that “the responsibilities were . . . not properly distributed.”)]

219. Reflecting the foregoing misalignment and the business’s focus on metrics over stewardship, Williams personnel noted in 2003 that some refinery supervisors considered the wastewater system at the NPR to be “a very low priority” because “it does not make money.” [Ex. 99; *see also* Tr. 1861:19-1862:13 (Guinn)]

220. Williams personnel noted concern in 2003 that, during Williams’ tenure, the company was in potential violation of federal statutes concerning the deposit of refinery chemicals in the lagoon system. [Tr. 1846:19-1851:11, 1852:12-1853:14 (Guinn); Ex. 99] Guinn estimated Williams was in non-compliance anywhere from 18-31 percent of the time between 1999 and 2003, and potentially subject to criminal charges. [*Id.*; Tr. 1854:07-1855:17 (Guinn)]

221. In addition to releases caused by mismanagement of its wastewater treatment system, Williams also had spills of pure and heavily concentrated sulfolane during its tenure at the NPR. [Tr. 2389:06-09 (Hook) (recalling pure sulfolane spills to the ground); Tr. 2458: 17-23 (Newcomer) (pure sulfolane spilled); *see also, e.g.*, Ex. 39 (spill notice reports)]

222. For example, in April 2002, a spill of 800 gallons of naphtha wash water at the NPR contained 66% sulfolane, equating to roughly 550-600 gallons of sulfolane. [Tr. 505:24-506:2 (DeRuyter); Ex. 39 at 12; Tr. 1910:12-1914:23 (Guinn); Ex. 93; Ex. 88)

223. Historical reports further indicate that Williams’ “reported” spills did not accurately reflect the volumes of contaminants released during its tenure. For example, a 1988 report indicated that more than 275,000 gallons of product was recovered at the NPR, which was significantly more than the 160,000 gallons that were reported to be spilled. [Tr. 2418: 14-2419:22 (Hook); Ex. 2576 at 37; *see also* Ex. 2560 at 22)]

224. It was not until 2002 that Williams began pursuing changes to reduce the amount of sulfolane in its wastewater. [Tr. 1013:09-18 (Davis); Tr. 1888:08-14, 1893:22-1895:23, 1896:15-1898:06, 1900:07-21 (Guinn); Tr. 1988:04-10 (Mead)]

225. For example, Williams implemented a formal turnaround procedure in 2002 that changed the way personnel handled sulfolane-laden wastewater-storing it in railcars rather than washing it down the sumps. [Tr. 1098:01-10 (Davis); Ex. 2180; Tr. 1893:22-1895:23 (Guinn)] After the 2002 turnaround, Williams shipped approximately a dozen railcars of sulfolane hazardous waste to its

hazardous waste contractor for hazardous waste treatment at a cost of \$250,000. [Tr. 1893:22-1895:23 (Guinn); 1896:15-1897:08 (Guinn)]

226. Sulfolane concentrations in Lagoon B also decreased in 2003 with the installation of Tanks 195 and 196, which segregated sulfolane-laden wastewater prior to entry into the treatment system. [Tr. 1061:20-24, 1063:3-11 (Davis); Tr. 1897:09-23 (Guinn); Ex. 2555]

227. Residual sulfolane data in gasoline products produced at the NPR during Williams' tenure also indicates that the refinery used much greater quantities of sulfolane prior to 2002 than were used after 2002. [Tr. 1003:24-1004:20, 1005:15-22 (Davis)]

228. By September 2003, sulfolane was non-detect in Lagoon B. [Tr. 1063:12-14 (Davis); Tr. 1930:22-25 (Guinn); Ex. 2555]

229. Williams' conduct during and after its operations at the Refinery exhibits a lack of cooperation with government regarding the contamination at issue.

230. Williams did not report the discovery of sulfolane in the groundwater samples taken in 1996 to regulatory authorities. [See Tr. 1125:18-21 (Davis)] The failure to report the 1996 discovery exhibited a lack of cooperation with government.

231. On November 29, 2000, the Department of Natural Resources attended a meeting with Williams and DEC to discuss DEC's concerns over the adequacy of Williams' refinery spill prevention activities. [Tr. 514:16-516:15 (DeRuyter)] Among other things, Williams' ongoing preparation of a facility-wide characterization and corrective action plan was discussed. [Tr. 516:16-517:12 (DeRuyter)] Williams had been working with DEC and EPA on the plan. [Tr. 516:16-517:12 (DeRuyter); Ex. 42] At no time

during this, or other correspondence, did Williams disclose the sulfolane contamination to Alaska regulators.

232. It was not until Williams sought to change its culture in 2001 that sulfolane contamination was reported. [See, e.g., Ex. 6050; Tr. 2452:22-2453:23 (Newcomer)] It was during this period that Shannon & Wilson was conducting additional site characterization work pursuant to the 1999 Work Plan that sulfolane was again detected in groundwater monitoring wells at the NPR. [Ex. 42; Tr. 2956:03-2957:14 (Lindstrom); Ex. 2236 at 4, 31]

233. When DEC was notified that sulfolane was discovered in a well sample, DEC directed Williams to perform further sampling in an effort to locate the source of the contamination. [Tr. 2394:10-18 (Hook), Ex. 3687 at 4]

*e) Williams' Ownership*

234. Williams owned and operated the NPR and owned and controlled sulfolane, PFAS, and petroleum products when they were released without permits into the environment and groundwater.<sup>12</sup>

235. Williams owned and operated the NPR from its inception in the 1970s until April 1, 2004. [Tr. 2373:20-2374:1 (Newcomer)] Sulfolane was introduced in 1985. [Tr. 1001:14-16 (Davis)]

236. Williams released sulfolane through its leaking operational and wastewater systems. Sulfolane entered the groundwater through six main source areas. [Tr. 1005:15-22 (Davis)] The two most significant were Lagoon B and sump 02/04-02 in the crude unit No. 2 extraction unit area. [Tr. 1005:15-22 (Davis); Tr. 3301:4-18 (Goulding)]

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<sup>12</sup> See Williams' Reply to Flint Hills' Counterclaim at ¶15, Case No. 4FA-14-01544 CI (Jul 12, 2016); TWC's Reply to Flint Hills' Counterclaim at ¶15, Case No. 4FA-14-01544 CI (Jul. 12, 2016).

Other source areas were the crude unit No. 1 wash area with sump 901; the sump 908 area from the desalting unit; the south gravel pit; and the southwest former wash area. [Tr. 1006:6-20 (Davis)]

237. Williams also spilled pure sulfolane and material containing sulfolane. [See, e.g., Tr. 2387:25-2388:24, 2389:6-9, 2458:8-23 (Hook)]

238. In addition, until 1987, the refinery's oily wastewater was used to water the roads; after 1985 this would have contained sulfolane. [Tr. 1009: 13-19 (Davis)]

239. Williams also spilled petroleum products. Between 1977 and 1987 alone Williams notified EPA that it leaked or spilled 160,000 gallons of petroleum products; Williams had also reported that during that time, its wells had recovered over 275,000 gallons of spilled product. [Tr. 2418:14-2419:22 (Hook)]

240. Williams released PFAS by spilling aqueous film-forming foams and by depositing the foams in its leaky wastewater system. [See, e.g., Tr. 2331:12-2332:10, 2333:22-2334:5, 2335:11-18 (Lasater); Tr. 2340:9-12, 2369:1-9, 2371:3-8, 2340:13-16, 2340:17-19, 2342:21-2343:6 (Newcomer)]

241. Williams' releases of sulfolane—including direct spills and leaks of sulfolane, wastewater containing sulfolane, and products containing sulfolane—were unpermitted.

242. Williams' spills of product and leaks of oily wastes were unpermitted.

243. Williams testified through a Civil Rule 30(b)(6) deposition that the term “unpermitted release” means “something that—that—it gets into the environment that it—that is not done in—in—in a way that’s intended. It’s

not in accordance with the permits of the—of the facility . . . . So, if something is—is released outside of the bounds of—of a permit, in my mind that would be an unpermitted release.” [Tr. 2363:17-2364:5 (Newcomer)]

244. Williams also agreed that the “key rule” and the “regulatory requirement of running a refinery” “is not to have any release to air, water, or soil without a permit to do so from a regulatory agency.” [Tr. 2364:16-2365:1 (Newcomer)]

245. Williams was required to report when it spilled wastewater containing sulfolane. [Tr. 574:3-7 (DeRuyter)]

246. Surface spills and subsurface releases of sulfolane or wastewater containing sulfolane or oil containing sulfolane are unpermitted releases. [Tr. 222:20-23, 223:11-224:9 (Hartig)] Disposal of liquid or solid waste to land or water in the state requires a permit. [Tr. 223:11-224:9 (Hartig); AS 46.03.100] No permit is available for discharge of oil containing sulfolane through leaky sumps and wastewater lagoons. [Tr. 223:11-224:17 (Hartig)] During the eleven years Commissioner Hartig headed DEC, it did not issue a permit to a refinery to release oily wastewater from leaky sumps or leaky wastewater lagoons. [Tr. 224: 10-17 (Hartig)]

247. Releases of gasoline containing sulfolane onto the land at the refinery without a permit authorizing it would be an unpermitted release. [Tr. 228:6-12 (Hartig)]

248. Default groundwater cleanup levels listed on 18 AAC 75.345(b), Table C, are not an authorization to pollute up to the cleanup level. [Tr. 238:16-23 (Hartig)] The contaminated sites program within the Division of Spill Prevention and Response does not have authority to issue permits to pollute or to discharge liquid or solid waste. [Tr. 175:22-176:2, 226:4-227:1 (Hartig)]

249. Williams testified that “an MSDS sheet [material safety data sheet] will talk about the proper disposal of the material.” [Tr. 2345:22-24 (Newcomer)] The safety data sheet for sulfolane, developed by Chevron Phillips, noted that sulfolane may meet the criteria of a hazardous waste under RCRA or state or local law and that it should not be disposed of into sewers or allowed to contaminate ponds, waterways, or ditches. [Tr. 784:12-13, 793:17-794:18 (Wu)]

250. Former Williams employee David Guinn testified Williams was not permitted to put hazardous waste into its lagoons and that Williams was not entitled to spill sulfolane on the soil and leave it there. [Tr. 1828:22-1831:8, 1850:24-1851:4, 1922:22-1923:2 (Guinn)]

251. Williams’ releases of PFAS were also unpermitted.

252. Starting in 1991, Williams used 3M brand aqueous film-forming foams (AFFF) at the refinery for fire training and prevention. From 1991 through 2000, the 3M brand foams were the only ones at the refinery. [Tr. 2331:12-2332:10, 2340:9-12 (Newcomer)] Williams admits that the 3M-brand AFFF it used contained PFAS. [Tr. 2340:13-19 (Newcomer)]

253. Williams used AFFF about once a year in a fire-training exercise in the refinery’s fire-training area. [Tr. 2332:22-2333:3 (Newcomer)] Williams also conducted a fire-training exercise at the aromatics extraction unit. [Tr. 2354:13-22 (Newcomer)]

254. It was also a common practice for Williams to blanket sumps with AFFF when it was conducting “hot work.” [Tr. 2333:22-2334:5 (Newcomer)]

255. From the sumps, AFFF would have drained into the sump collection system and then into the wastewater

system. [Tr. 2335:11-18 (Newcomer)] Remnants from fire-training exercises were also collected in a sump, pumped into a wastewater tank, and then routed to the refinery's wastewater system. [Tr. 2368:2-15 (Newcomer)]

256. Williams admits that releases of AFFF through holes in Lagoon B or holes in the sumps would be unintentional releases by Williams. [Tr. 2369:1-9, 2371:3-8 (Newcomer)] Williams testified that if PFAS leaked from its wastewater that could be characterized as a release. [Tr. 2344:15-25 (Newcomer)]

257. Williams admits that there was an unintended release of "two gallons or two tenths of a gallon" of PFAS-containing AFFF that it "listed as a reportable spill." [Tr. 2342:21-2343:6 (Newcomer)]

258. Williams agreed that it was not allowed to dump AFFF on the ground or put it in the groundwater. [Tr. 2345:15-2346:9 (Newcomer)]

*f) Flint Hills' Ownership*

259. Upon taking over operations at the NPR, Flint Hills implemented practices that improved the wastewater system, recovery well network, and reporting procedures, all of which provided elevated care measures and reduced the potential for chemical releases to occur.

260. For example, Flint Hills re-organized responsibilities among NPR personnel so that refinery operations and environmental systems were under the same umbrella of responsibility. [Tr. 2524:15-2525:11 (Roos)] Flint Hills also improved the groundwater recovery system by implementing 24-hours-per-day/7-days-a-week oversight at the NPR (an improvement over the prior weekday oversight, which was limited to business hours during Williams' tenure). [*Id.*]

261. The incentive structure under Flint Hills' management was changed to a performance-based standard, which accounted for environmental performance and safety, not profit-performance or business profitability. [Tr. 2243:19-2244:04 (Lasater); *see also* Tr. 2511:23-2512:14 (Roos)]

262. While the sulfolane problem in the wastewater was, according to Williams' personnel, already under control by the time Flint Hills took over the refinery, Flint Hills nevertheless discontinued the practice of using the sumps to collect sulfolane contaminated process water at the NPR. [Tr. 1836:20-1818:24, 1931:3-25 (Guinn); Tr. 2516:18-2517:12 (Roos)]

263. Flint Hills also permanently removed Lagoon B from on-going use and operation. After Flint Hills purchased the refinery, Lagoon B was used only two times—once in 2004 and once in 2006—both of which were temporary. [Tr. 1014:7-10, 1065:16-1068:22 (Davis)] In September 2006, Lagoon B was drained completely, cleaned, and has remained empty since. [Tr. 1014:11-12, 1069:23-25 (Davis)]

264. Flint Hills also reduced the frequency of turnaround events during its tenure, having conducted them in 2006 and 2010 rather than on a yearly basis. [Tr. 1104:1-22 (Davis)] During those turnarounds, Flint Hills did not use the sumps, but instead used railcars to store sulfolane. [*Id.*]

265. Flint Hills' business practice at the NPR further prioritized environmental compliance and required reporting of all spills. [Tr. 2206:01-15 (Lasater); Tr. 2522: 19-23 (Roos); Tr. 1142:06-1143:08 (Davis)]

266. In an effort to better understand the conditions at the refinery, Flint Hills also installed additional monitoring wells in 2005 and 2008. [Tr. 2251: 15-18 (Lasater) (2005 wells); Tr. 3655:20-3656:03 (Johnson) (same); Tr. 2526: 17-2527:01 (Roos) (same); Tr. 1496:02-1497:06 (Hilarides) (2008 wells)] Flint Hills also repaired existing recovery systems after taking over the NPR, and installed additional recovery wells. [See Tr. 2526:17-2527:01 (Roos)]

267. Flint Hills also improved the groundwater recovery system between 2011 and 2013, installing additional monitoring and recovery wells, and increasing the groundwater extraction volume. [See, e.g., Tr. 1551:19-1552:05, 1554:01-15 (Hilarides)]

268. The operational improvements and increased handling practices exhibited an enhanced degree of care by Flint Hills at the NPR as compared to Williams' historical operations and practices.

269. Flint Hills' conduct before and after the discovery of offsite sulfolane contamination reflects an effort to cooperate and coordinate with government with regard to the contamination at issue.

270. Upon taking over the NPR in 2004, Flint Hills met with regulators and sought to establish open lines of communication during its operations. [Tr. 2246:16-2247:20 (Lasater); Ex. 3029; *see also* Tr. 2248: 16-2249:05 (Lasater)]

271. Flint Hills was responsive to DEC's requests in the summer of 2004 to locate the sources of sulfolane contamination at the NPR. [See, e.g., Tr. 2251:05-18, 2300:06-2301:07, 2303:22-2304:20 (Lasater); Tr. 2518:25-2520:08 (Roos)]

272. At the time Flint Hills took over the NPR, the parties believed that the remediation and recovery well

systems were maintaining hydraulic control at the NPR - *i.e.*, that the remediation systems were containing all groundwater contamination and preventing it from migrating past the well network within the NPR's property boundaries. [Tr. 2224:17-2225:06, 2310:11-22 (Lasater); *see also* Tr. 2425-26 (Hook) (Williams' belief was sulfolane was contained onsite); Tr. 2489-91 (Newcomer) (same)]

273. Shannon & Wilson, a third-party environmental consultant during Williams' tenure, reaffirmed the belief that the sulfolane contamination was under hydraulic control when they met with Flint Hills in September 2004. [Ex. 3032 at 14; Tr. 2318:12-2320:01] While noting that "groundwater represents potential off-site contaminant migration medium," Shannon & Wilson nevertheless reassured Flint Hills that there was "no offsite migration due to groundwater pumping" and "no risk to potential downgradient receptors." [Ex. 3032 at 14-15]

274. In October 2004, DEC sent Flint Hills a letter following up on an earlier meeting and directing Flint Hills to determine the source of the sulfolane contamination at the NPR. [Ex. 3036] At the time the letter was received, Flint Hills had already begun a source investigation, having sampled wells for sulfolane in September 2004. [See, *e.g.*, Ex. 3030 at 8]

275. Flint Hills continued to operate the remediation systems as it investigated the sulfolane's origin. [Tr. 2302:14-19 (Lasater)]

276. Flint Hills also interviewed onsite personnel regarding historical sulfolane releases, and continued to engage Shannon & Wilson and others for additional information and to conduct the source investigation. As already noted, Flint Hills also installed additional wells in

2005. [Tr. 2300:06-2301:07, 2303:22-2304:20 (Lasater); Tr. 3655:20-3656:03 (Johnson)]

277. At the time DEC sent Flint Hills its October 2004 letter, DEC internally estimated it would take Flint Hills approximately four more years—until the fall of 2008—before Flint Hills would begin to be able to “infer the source areas” of the onsite contamination. [Ex. 6078] 278. In late 2006, Jon Lindstrom of Shannon & Wilson recommended that Flint Hills install one or two additional monitoring wells “to serve as sentry wells to confirm that sulfolane [was] not leaving the property.” [Ex. 3210 at 11]

279. Flint Hills did not install additional monitoring wells until after it sought an independent, comprehensive environmental site review from Barr Consulting, a third-party consultant. [Tr. 1488:23-1489:14, 1490:07-1491:13 (Hilarides); Ex. 2836] That review was intended to identify any data gaps and further evaluate all environmental site conditions at the NPR, not just sulfolane. [*Id.*] Barr Consulting began its “cold-eye” review in 2007 and into 2008. [*Id.*]

280. Jon Lindstrom of Shannon & Wilson testified that he believed Flint Hills’ decision to seek a second opinion from Barr Consulting was a “reasonable and prudent” thing for Flint Hills to do at the time. [Tr. 2963:03-10 (Lindstrom)] But the court believes that the delay in installing sentry wells is an area where Flint Hills failed to cooperate as well as it should have.

281. In a 2009 email, Lindstrom wrote, “the sulfolane and benzene issues the refinery now faces might have been averted had the actions we recommended been taken.” [Ex. 3085]

282. Lindstrom testified that his “intent was to say had the monitoring wells been installed, we would have caught

contamination—the evidence of the contamination leaving the site earlier, presumably, than we did.” [Tr. 2947:23-2948:10 (Lindstrom)] “If that had been done,” Dr. Lindstrom “imagine[s] we would have undergone a series of several more rounds of monitoring well installations and further discussions with the Department of Environmental Conservation and presumably some efforts taken to try and cleanup the contamination in the water, to the extent that was possible.” [Tr. 2948:11-20 (Lindstrom)]

283. During Barr Consulting’s comprehensive site review, the scope and extent of the NPR’s sulfolane contamination was under investigation, and, while it was known to have extended beyond the monitoring network onsite, it was unknown that it had migrated offsite. [Tr. 1494:03-13, Tr. 1624:06-24, 1628:01-11 (Hilarides)]

284. After analyzing additional information in the summer of 2008, Barr Consulting recommended installation of additional down-gradient monitoring wells closer to the property boundary at the NPR. [Tr. 1495:01-16, 1496:02-1497:01 (Hilarides)] Eight wells were installed in four well nests in September and October 2008. [*Id.*]

285. Flint Hills kept DEC officials informed throughout Barr’s review and during the well installation process. [See, e.g., Tr. 1501:25-1502:08, 1504:17-20, 1505:02-1506:11, 1760:07-1762:21 (Hilarides) (identifying correspondence and interactions with DEC informing it of the new detections, which included telephone calls, meetings, letters, reports, etc.); *see also* Ex. 2340]

286. Sulfolane was not detected in six of the new wells—two of which were along the road near the northern boundary. [Tr. 1498:11-1499:02, 1500:24-1501:02 (Hilarides)] Sulfolane was, however, detected in one nest, MW-148. [Tr. 1498:11-1499:02 (Hilarides)] The MW-148 nest

detection prompted further communications, investigations, and meetings with regulatory officials in 2008 and 2009 to determine next steps. [Tr. 1505:02-1506:02 (Hilarides)]

287. Those meetings culminated in a request to the City of North Pole for permission to install additional monitoring wells beyond the NPR's property boundary. [See, e.g., Tr. 1506:03-11 (Hilarides)] Three new wells were drilled on City and School District property.

288. In October 2009, sulfolane was detected in these wells. [Tr. 1506:12-1507:23, 1619:17-22 (Hilarides)]

***g) Dr. Andy Davis***

289. Dr. Andy Davis, Flint Hills' expert in the field of fate and transport, hydrogeology, groundwater modeling, and allocation, is an environmental consultant with Geomega in Boulder, Colorado. [Tr. 991:23-992:3, 996:22-25 (Davis)]

290. Dr. Davis's experience includes analyzing over twenty large contaminant plumes in the last 35 years, running approximately 30 groundwater models, working on about 20 allocation projects, and writing numerous peer-reviewed papers on technical allocations and groundwater modelling. [Tr. 995:24-996:20 (Davis); *see also* Ex. 6288 (Davis CV)]

291. Dr. Davis was hired in connection with the North Pole sulfolane plume in 2010. [Tr. 992:12-15 (Davis)]

292. Throughout his work on the project, Dr. Davis reviewed a large body of data and documents with the objective of determining the sources of sulfolane on the property. [Tr. 993:23-994:1 (Davis)] Dr. Davis also conducted sampling and surveying at the North Pole site, re-

covered bore logs, reviewed refinery documents and depositions, met and interviewed multiple individuals and refinery staff at the property, and also analyzed a significant amount of data, collaborating with Barr Consulting, Arcadis, Shannon & Wilson, and Jane Paris's firm. [Tr. 994:11-995:19 (Davis)] Dr. Davis met with and corresponded with DEC officials for more than eight or nine years. [Tr. 994:21-25 (Davis)] Dr. Davis also worked with Yuri Shur and David Barnes on permafrost and referred to the work of Dr. Mary Beth Leigh. [Tr. 995: 1-6 (Davis)]

293. Dr. Davis also participated in the Technical Project Team (TPT) meetings in the 2012-2013 timeframe. [Tr. 995:20-23 (Davis)]

294. Dr. Davis's analysis identified six main areas at the refinery as the source for the sulfolane contamination affecting the City of North Pole. [Tr. 1005: 15-22 (Davis)]

295. The two most significant source areas were Lagoon B and Sump 02/04-02 in the crude unit No. 2 extraction unit area. [Tr. 1005:15-22 (Davis); *see also* Tr. 3301:04-18 (Goulding)] Other source areas were the crude unit No. 1 wash area with sump 901; the sump 908 area from the desalting unit; the south gravel pit; and the southwest former wash area. [Tr. 1006:6-20 (Davis)]

296. The water table is the intersection between the unsaturated, or vadose, zone and the saturated zone. The water table goes up and down with seasons. [Tr. 1016:7-19 (Davis)] For example, sulfolane would move down through tears in Lagoon B's liner and through the vadose zone into the groundwater. Once in the groundwater, it would migrate downgradient with the flow direction. Some of the sulfolane would get stuck in the vadose zone, and as the groundwater table oscillates it would pick up sulfolane from the vadose zone. This causes seasonal

pulses of sulfolane into the groundwater over time. [Tr. 1017:4-17 (Davis)]

297. Dr. Davis provided comprehensive and generally credible testimony regarding the history and status of the sulfolane plume affecting the North Pole groundwater aquifer.

298. In conjunction with his work at the North Pole site, Dr. Davis also provided a number of alternative allocations for purposes of the present dispute, which include (a) a comprehensive groundwater model developed by utilizing a vast amount of data, inputs, and considerations, (b) a separate allocation based on respective mass discharges from two prominent source areas, and (c) another allocation based on the parties' respective spill histories.

299. Dr. Davis developed a groundwater model with the objective of trying to understand how the sulfolane plume evolved and what would happen to it in the future. [Tr. 994:3-6 (Davis); Ex. 6296 (Davis Simulation Model)]

300. Groundwater models are reasonably relied upon by experts in the field and by regulatory authorities. [Tr. 1217: 8-11 (Davis)] The Davis model was a product of reliable principles and methods. [Tr. 1217: 12-14 (Davis)]

301. The Davis model is based on a comprehensive set of inputs and considerations, incorporating 1.2 million nodes and 44 layers. [Tr. 1158: 18-05 (Davis)] The model utilizes a substantial amount of data across 3,000 unique locations with various groundwater elevation data, well locations, surface water stations, and more. [Tr. 1159:04-1160:25 (Davis); *see also* Tr. 1153:05-1154:03 (Davis) (addressing boundary conditions)] For example, information from over 800 wells—including private wells—were used and input into the model, along with bore log information

that provided various geological information across different areas. [Tr. 1159:04-1160:25 (Davis)] The model also incorporates data from USGS locations along the Tanana and Chena Rivers containing water level data, stage and flow information. [Id.] Permafrost information has also been incorporated from aerial and ground electromagnetic surveys conducted for purposes of Dr. Davis's analysis. [Id.; Tr. 1167:21-1168:09, 1172:19-1173:21 (Davis)] The model also incorporated pumping data for onsite and offsite wells, as well as precipitation and temperature data from over 50,000 historical records. [Id.]

302. The model also incorporates data from NPR files, including well data, to identify mass loading and timing of historical sulfolane releases. [Tr. 1205:12-1210:24 (Davis)]

303. The Davis model is considered a "transient" model, which, unlike a "steady state" model, accounts for variability across multiple points and time. [Tr. 1557:12-1159:03 (Davis) (describing a transient model and why the simplicity of a steady-state model would not make sense); *see also* Tr. 1188:01-19 (Davis) (stating that using the same hydraulic conductivity across a model's cell would be disastrous in the North Pole aquifer given its heterogeneous geologic composition)]

304. The North Pole aquifer is a complex, heterogeneous aquifer composed of various materials and fine grain sediments, including silts, sands, gravels, and permafrost—each of which impact groundwater flow differently. [Tr. 1162:08-1166:18, 1167:02-18, 1180:08-1181:06 (Davis)] The Davis model incorporates data to account for groundwater flow and conductivity across the heterogeneous composition. [Id; *see also* Tr. 1169:06-19, 1170:20-1171:02, 1173:22-1175:05 (Davis) (addressing permafrost and the presence of approximately two-thirds of the sulfolane con-

tamination above the permafrost layer with one-third existing below); Tr. 1178:24-1181:16, 1182:16-1188:08 (Davis) (describing “K values” and impact of the heterogeneous layers on flow rate and direction)]

305. The Davis model assumes that sulfolane biodegradation is not occurring in the North Pole aquifer. [Tr. 631:10-632:02, 635:20-24 (Leigh); Tr. 1178:17-20 (Davis); *see also* Tr. 1175:23-1178:20 (Davis) (recognizing that the absence of oxygen and cold temperatures prevent and otherwise inhibit biodegradation)]

306. The Davis Model accounts for dual porosity and dead-end pore space, in which molecules of sulfolane become temporarily trapped or retained in areas of the subsurface. [Tr. 1192:25-1196:08 (Davis)] The effect of dual porosity and dead-end pore space is further evident in sulfolane concentrations appearing in soil and groundwater samples taken from areas of the refinery that were no longer in use and in samples after the refinery was shut down in 2014. [*See, e.g.*, Tr. 1079:22-1080:01, 1081:05-14 (Davis); *see also* Tr. 3557:22-14 (Goulding) (“mass is stuck up in what we call the vadose zone, the unsaturated zone soil”)]

307. The Davis model determined that up to 96.6% of the current mass that exists in the sulfolane plume today originated from Williams’ operations, while as little as 3.4% is estimated to have come from releases during Flint Hills’ tenure. [Tr. 1224:01-03 (Davis)]

308. Davis conceded that the amount of sulfolane leaving the site increased after Flint Hills turned off the pump and treat system in July 2017. [Tr. 1410:1-16 (Davis)]

309. Dr. Davis’s model provided four separate allocations based on various considerations relevant to the present dispute.

310. Under Dr. Davis's first model scenario ("Scenario No. 1"), the entire onsite and offsite sulfolane plume that existed on April 1, 2004 was allocated to Williams. [Tr. 1221:25-1224:03 (Davis)] After 2004, Scenario No. 1 then attributed 96% of the sulfolane from Lagoon B to Williams (based on historical averages), along with the sulfolane from the southwest wash area and south gravel pit since those source areas were used exclusively by Williams. [Id.] Flint Hills was allocated 4% of the sulfolane from Lagoon B (based on maximum historical averages), along with the sulfolane from crude unit wash area, sump 908, and crude unit two-extraction areas. [Id.]

311. According to Scenario No. 1, 96.6% of the sulfolane contamination in the present plume was allocated to Williams, whereas 3.4% was allocated to Flint Hills. [Tr. 1224:01-03 (Davis)]

312. Under Dr. Davis's second model scenario ("Scenario No. 2"), Williams was allocated the entire sulfolane plume that existed on April 1, 2004 (onsite and offsite), while Flint Hills was allocated all sulfolane after 2004. [Tr. 1224:04-20 (Davis)]

313. According to Scenario No. 2, 90.4% of the sulfolane contamination in the present plume was allocated to Williams, whereas 9.6% was allocated to Flint Hills. [Tr. 1224:04-20 (Davis)]

314. Under Dr. Davis's third model scenario ("Scenario No. 3"), Williams was allocated only the offsite sulfolane plume that existed on April 1, 2004, whereas Flint Hills was allocated all onsite sulfolane that existed on April 1, 2004 as well as all sulfolane contamination that occurred after 2004. [Tr. 1224:21-1225:09 (Davis)]

315. According to Scenario No. 3, 82.7% of the sulfolane contamination in the present plume was allocated

to Williams, whereas 17.3% was allocated to Flint Hills. [Tr. 1224:13-17 (Davis)]

316. Under Dr. Davis's fourth model scenario ("Scenario No. 4"), Williams was allocated the sulfolane plume that existed outside of the well contours identified in the Sales Agreement's Disclosure Schedule (the "Hook Table"), along with the post-2004 sources from Scenario 1. [Tr. 1225:18-1226:24 (Davis)] Conversely, Flint Hills was allocated the entire plume within the "Hook Table" from the Sales Agreement, along with the post-2004 sources from Scenario 1. [*Id.*]

317. According to Scenario No. 4, 92.5% of the sulfolane contamination in the present plume was allocated to Williams, whereas 7.5% was allocated to Flint Hills. [Tr. 1226:22-24 (Davis)]

318. Dr. Davis provided two separate allocations based, not on his model but, solely on the sulfolane mass discharges that were observed in monitoring wells near two of the primary source areas at the NPR. [See, e.g., Tr. 1014:21-24, Tr. 1143:16-1148:16 (Davis)]

319. Monitoring well 110 ("MW-110") was installed in 2001, for example, and is immediately down-gradient of Lagoon B. [Tr. 1143:23-25, 1015:3-14, 1079:9-11 (Davis)] Sulfolane concentrations between 2001 and 2002 in MW-110 were around 8,000 ppb, with decreasing trends in the following years despite seasonal upward ticks. [Tr. 1079:16-1080:1 (Davis)] MW-110 did, however, have an anomalous reading in 2004 which Dr. Davis attributes to a likely recording error. [Tr. 1080:2-12 (Davis)]

320. Monitoring well 138 ("MW-138") is another well that possessed sulfolane detections, which is located in the immediate vicinity of the extraction unit, along with a number of sentry ("S") wells. [Tr. 1144:01-03, 1115:14-

1116:01, 1121:08-17 (Davis)] Sulfolane readings in S-wells near the extraction in 1996 ranged from 250,000 ppb to 2.7 million ppb. [Tr. 1122:02-24 (Davis)]

321. Because MW-110 and MW-138 were constructed in 2001, they did not possess data going back to the beginning of sulfolane's use at the refinery. Dr. Davis thus utilized average data across the years in which sampling data existed during the parties' respective tenures, and multiplied those averages by Williams' 19 years of sulfolane-related operations and by Flint Hills' 10 years of operations to determine the parties' relative mass discharges.

322. Dr. Davis provided two alternative allocations based on the average concentrations of sulfolane in MW-110 and MW-138—one without the anomalous 2004 reading from MW-110 and one including the anomalous reading. [Tr. 1143:16-1148:16 (Davis)]

323. Excluding the anomalous 2004 data point in MW-110, Dr. Davis determined that, 91% of the combined mass discharges can be attributed to Williams' operations, with 9% allocated to Flint Hills. [Tr. 1147:17-20 (Davis)]

324. Including the anomalous 2004 data point in MW-110, Dr. Davis determined that, 87% of the combined mass discharges can be attributed to Williams' operations, with 13% allocated to Flint Hills. [Tr. 1148:03-16 (Davis)]

325. Dr. Davis's mass discharge allocations were unrebutted at trial.

326. Dr. Davis reviewed and evaluated the spill histories and reports from the historical operations at the NPR as part of his analysis and allocations. [Tr. 1137:12-1140:22 (Davis) (describing extensive excel work file produced by Williams listing historical reported spills); Exs. 6784-6789; *but see* Tr. 1141:09-15 (Davis) (spills were less significant compared to the other sources of releases)]

327. Dr. Davis excluded spills in which the quantities spilled were reported as fully recovered. He also excluded spills which would have been unlikely to contain sulfolane. [Tr. 1139:11-16, 1141:09-25(Davis)]

328. Compiling the reported spill record data, Dr. Davis determined that Williams only recovered 27 percent of its reported spills, leaving 73 percent unrecovered. [Tr. 1142:20-24 (Davis)] Conversely, the recovery rate during Flint Hills' tenure was 96%, with only 4% left unrecovered. [Tr. 1142:25-1143:04 (Davis)]

329. Although spills were a less important source of sulfolane contamination compared to other source areas at the refinery, an allocation based on the parties' respective unrecovered spills would amount to an allocation of 81% to Williams for unrecovered spills, and 19% to Flint Hills. [Tr. 1143:05-15 (Davis)]

330. Dr. Davis's spill recovery allocations were unrebutted at trial.

331. Dr. Davis's mass discharge analysis, considered in conjunction with unrecovered spills, resulted in a total mass discharge allocation of 90 percent Williams, 10 percent Flint Hills. [Tr. 1149:21-1150:03 (Davis)] This 90:10 allocation is also consistent with the preponderance of the evidence. The evidence shows nearly constant releases of high concentrations of sulfolane during much of Williams' tenure. There was no remotely similar showing for Flint Hills' time operating NPR. Further, the fact that the plume was about as large on April 1, 2004, before Flint Hills began operations, as it is now lends persuasive support to a 90:10 allocation. The court accepts an approximate 90/10 split as reflecting the total sulfolane discharged during the respective tenures of Williams and Flint Hills.

332. The court notes that Dr. Davis' quantitative approach is consistent with the allocation achieved by his model. But the court accepts the 90:10 allocation based on Dr. Davis' quantitative approach and the preponderance of the evidence concerning sulfolane releases by both refiners. The court is not persuaded that the complex below-ground environment of the area has been simulated with sufficient accuracy by any of the models presented in this case to yield wholly credible results.

333. The purpose of Davis' transient model is to provide hindcasting and forecasting of sulfolane in the offsite plume. To build a truly predictive model, one must utilize data inputs and variables with an incredibly high level of accuracy. [Tr. 3884:24-3886:9 (Lilly)] The court does not fully credit either Davis' or Goulding's model, but finds that Davis' model is more detailed and carefully crafted and thus more likely to be useful than Goulding's model. Ex. 6300(d), at 131-184; Ex. 7985.

334. The court concludes that the movement of sulfolane in the groundwater is not uniform and subject to many variables. Accurately modelling it may be impossible.

***h) Sulfolane Toxicity***

335. Toxicologist Stephanie Buss testified that sulfolane is a hazardous substance. After she affirmatively answered that sulfolane is a hazardous substance she was asked: "Tell me every single fact that you can point me to that would indicate that sulfolane is and presents an imminent and substantial danger to the public health and welfare today." [Buss Depo. 274] Ms. Buss then went on at some length to describe numerous toxicology studies supportive of her opinion—the Huntington Life Sciences, Zhu, Brown, Andersen, OECD reproductive studies.

[Buss Depo. 274-280, 284] In forming her opinion, Buss acknowledged that there were gaps in the studies, such as the absence of any long-term toxicity studies. [Buss Depo. 289]

336. Buss testified that neither she nor the Department of Health and Social Services knew the actual concentrations of sulfolane people in North Pole were exposed to. [Buss Depo. 288]

337. Buss testified that as a toxicologist, the advice that she would give to North Pole residents about whether or not they should consume sulfolane-contaminated groundwater was “I would recommend using sulfolane-free water.” [Buss Depo. 313]

338. Dr. Ted Shin-Yeh Wu testified to the toxicity studies that support his determination that sulfolane is a hazardous substance.

339. Dr. Wu is an DEC risk assessor. [Tr. 707:16-18 (Wu)] Dr. Wu holds a master’s degree in environmental toxicology and a Ph.D. in environmental chemistry. [Tr. 704:5-10 (Wu)]

340. A risk assessor looks “at chemical stressors in the environment and the potential adverse effects to biological systems.” [Tr. 707:18-21 (Wu)] The first step in environmental risk assessment is hazard identification—looking at the potential adverse effect from a chemical. [Tr. 708:19-23 (Wu)] Absent clinical information on human exposure or epidemiological information, hazard identification looks to peer-reviewed literature, namely, controlled dose/response studies on animals. [Tr.709:10-710:4 (Wu)]

341. Animal studies were reviewed by the federal Agency for Toxic Substances and Disease Registry in deriving screening levels for sulfolane. [Tr. 758:12-767:13 (Wu); Ex. 143]

342. “[A] screening level is not a cleanup level.” [Tr. 1647:1-4 (Hilarides)] “[T]he regional screening level[] is a level that would require you to look into it further. It, in and of itself, is not a cleanup level.” [Tr. 2608:23-2609:2 (Fish)]

343. A 1977 study (Andersen study) investigated the effect of sulfolane inhalation. [Tr. 719:23-720:13 (Wu)] Squirrel monkeys, rats, guinea pigs, and dogs were tested. [Tr. 720: 15-16 (Wu)] The study observed that squirrel monkeys suffered continuous convulsions and vomiting, followed by death. [Tr. 722:3-14 (Wu)] Guinea pigs and rats experienced decreases in white blood cell counts. [Tr. 722:6-7 (Wu)] The study also observed hemorrhagic pulmonary inflammation in the lungs. [Tr. 722:7-9 (Wu)] Dogs became fiercely aggressive. [Tr. 722: 19-21 (Wu)] The squirrel monkeys were the most susceptible to sulfolane exposure, and there is a concern “that humans can be more susceptible than monkeys.” [Tr. 723:16-18, 724:19-24 (Wu)]

344. A 1987 study (Zhu study) exposed rats and guinea pigs to sulfolane in their drinking water. [Tr. 727: 15-22 (Wu)] Longer term exposures resulted in reduced white blood cell counts. [Tr. 728: 1-5 (Wu)] Sulfolane exposure also resulted in increased absorption of fetuses and deformation of embryos, including sternum and rib abnormalities. [Tr. 728:8-19, 731:4-21 (Wu)] And sulfolane exposure had adverse effects on the liver and kidneys, with guinea pigs being more sensitive than rats. [Tr. 730:16-731:3 (Wu)] The study also reported lethal doses to 50 percent of the population (LD50), doses at which half the population of the test species died. [Tr. 729:9-15 (Wu)]

345. A 2001 report prepared for the Canadian Association of Petroleum Producers and Komex International Limited identified adverse effects of sulfolane exposure to

plants, earthworms, and several aquatic species. [Tr. 742:1-745:24 (Wu)]

346. A 2001 study by Huntington Life Sciences exposed rats to sulfolane in their drinking water. [Tr. 746:6-18, 747:2-3 (Wu)] Although none of the animals died in the study, the researchers found decreased white blood cell counts, with a more pronounced effect on females. [Tr. 747:9-16 (Wu)]

347. A 2004 initial assessment report published by the United Nations Environment Programme concluded sulfolane possesses properties indicating a hazard for human health, namely, reproductive and developmental toxicity. [Tr. 736:3-12 (Wu); Ex. 234 at 6] The report noted there are uncertainties associated with sulfolane, making it a candidate for further work, but there are also concerns associated with adverse effects to human health. [Tr. 736:1-12 (Wu)]

348. The United Nations Environment Programme report identified two studies where sulfolane was dosed to rats. [Tr. 737:16-738:3, 740:4-5 (Wu)] One study observed reduction in activity locomotion; decreased food consumption and bodyweight gain; and blood chemistry changes associated with liver, kidney, and spleen systems. [Tr. 738:6-739: 12 (Wu)] The other study observed adverse reproductive effects, including decreased estrus cases, lost pups during lactation, and increased stillbirths. [Tr. 740:7-741:15 (Wu)]

349. A 2019 study published in the journal *Toxics* observed adverse effects of sulfolane exposure to zebra fish at concentrations similar to those found in contaminated groundwater and creeks at other sites. [Tr. 749:3-751:9 (Wu)] At increasing sulfolane concentrations, the researchers observed decreased survival, decreased yolk-

sac utilization, decreased growth, decreased eye volume, increased yolk-sac edema, increased pericardial edema, increased hemorrhage, increased spinal malformation, increased rates of uninflated swim bladders, and a decreased response to touch stimuli. [Tr. 751:15-20, 752:3-754:25 (Wu)] Dr. Wu concluded this shows “sulfolane is a hazardous substance.” [Tr. 754:23-25]

350. University of Alaska Fairbanks professor Dr. Mary Beth Leigh performed a standard test known as the Microtox assay to assess the toxicity of sulfolane. [Tr. 612:8-16 (Leigh)] Using the assay, Dr. Leigh exposed bioluminescent bacteria to sulfolane and determined that sulfolane inhibited their bioluminescence, indicating that sulfolane was toxic to the bacteria. [Tr. 614:7-11 (Leigh)] Dr. Leigh testified that the test is “used as a screening tool to provide an early warning sign that something would be toxic because it does demonstrate that it has the capacity to harm biological organisms.” [Tr. 614:15-19 (Leigh)] Although this test does not allow the experimenter to infer what kinds of effects sulfolane could have on a mammal or a human, the test indicates that sulfolane can create cell stress. [Tr. 614:21-615:9 (Leigh)]

351. Sulfolane has also been documented to be harmful or toxic to microbes in the refinery’s wastewater system. [See Tr. 1102:20-1103:06 (Davis); Tr. 1864:07-14 (Guinn); Tr. 2428: 15-18 (Hook)] In the refinery’s wastewater system, concentrations of sulfolane over 400 mg/L became more toxic to the bacteria in the wastewater lagoons. [Tr. 1102:20-1103:06 (Davis)] Williams used Lagoon B to hold wastewater with high amounts of sulfolane to avoid harm to the biological processes in Lagoons A and C. [Tr. 1864:07-14 (Guinn)]

352. In 2010, at DEC’s request, the Agency for Toxic Substances and Disease Registry (ATSDR) prepared a

health consultation on sulfolane. [Tr. 755:23-756:14 (Wu); Ex. 143]

353. ATSDR reviewed lethal dose studies, which identified concentrations at which half a population of the test species died as well as nonlethal effects. [Tr. 758:16-763:5 (Wu)] Concomitant nonlethal effects included mice and rats assuming a hunched, retreating posture with front limbs braced wide and tail erect, hyperactivity, increased responsiveness to auditory stipulation, rapid respirations, tonic-clonic convulsions, hypothermia, reduced white blood cell counts, and developmental effects and genotoxicity. [Tr. 758:16-763:5 (Wu); Ex. 143, at 7-12]

354. ATSDR also reviewed subchronic studies—those running approximately two weeks to one year—which observed death, respiratory effects, hematological effects, hepatic effects, lymphoreticular effects, neurological effects, developmental effects, and reproductive effects. [Tr. 763:20-764:22 (Wu); Ex. 143 at 14-15]

355. ATSDR also described computer modelling performed on sulfolane that is used to predict toxicities based on chemical structure. [Tr. 765:18-20 (Wu)] This showed negative results for cancer, positive results for developmental toxicity potential, positive results to bacteria for mutagenesis potential, and positive results for ocular irritancy, and it identified an estimated lethal dose for rats. [Tr. 766:5-15 (Wu)]

356. ATSDR concluded that “[s]ulfolane is acutely toxic at relatively high doses (over 200 mg/kg) in species tested.” [Ex. 143 at 17] “While the acute toxicity of sulfolane has been characterized in a number of species, a paucity of data exists on the longer term effects of sulfolane.” [Ex. 143 at 17; *see also* Tr. 765:9-11 (Wu)]

357. ATSDR recommended health-based levels for sulfolane in drinking water-25 µg/L for infants, 40 µg/L for children, and 87.5 µg/L for adults. [Tr. 767:19-769:2 (Wu)] In 2011, ATSDR updated the levels, reducing the infant level to 20 µg/L (20 ppb). [Tr. 769:6-12 (Wu)]

358. In 2010, the State of Alaska, Department of Health and Social Services (DHSS) prepared a “companion guide” to ATSDR’s health consultation. [Ex. 7392] Although this guide stated DHSS did not expect residents to get sick because the sulfolane they might consume is a lower dose than that in animal studies, DHSS stated “it can’t be certain, given the lack of chronic toxicity information” and recommended “a permanent move to a sulfolane-free water source.” [Ex. 7392<sup>13</sup>] A 2012 DHSS health consultation reiterated DHSS’s conclusion that it did not expect residents to experience negative health effects but that it could not say so with certainty and recommended residents continue to use alternative, sulfolane-free water for drinking and eating, for providing water to pets, and gardening. [Ex. 7397 at 23-25] The accuracy of DHSS’s expectation that residents would not become ill from the sulfolane in the groundwater is uncertain. [See Ryan Depo. (Jan. 2016) 48:17-49:11 (offered at Tr. 3736); Buss Depo. 67:2-68:18, 71:1, 71:10-17, 73:1-5, 73:9-11, 74:1-13, 16-76:12 (offered at Tr. 3924) (data gaps raise question whether statement is accurate today)] And it is unknown what concentrations of sulfolane North Pole residents may have been exposed to prior to 2009 (products in the groundwater at the refinery in 1996 had sulfolane up to

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<sup>13</sup> Although an apparent 2019 version of this companion guide was presented at trial, testimony demonstrated that it was a draft that was never published. [Tr. 2149:11-20 (Paris)]

2.7 million ppb). [Tr. 364:8-19; Tr.1121: 18-1123: 13 (Davis); Ex. 2276 at 372-77]

359. Because the North Pole population is relatively small, it is hard to determine what health problems suffered by residents could be attributable to sulfolane. [Tr. 347:23-348: 12, 393:9-394:8 (Hartig)]

360. Material safety data sheets (MSDS) may be reviewed during the hazard identification step of a risk assessment. [Tr. 787:1-8 (Wu)] Dr. Wu testified that an MSDS for sulfolane, prepared by its manufacturer, Chevron Phillips, identified potential reproductive toxicity effects and acute oral toxicity. [Tr. 784:12-13, 788:23-24, 789:4-6]

361. Williams had also prepared an emergency medical care protocol for sulfolane, dated 2002. [Tr. 794:24-795:2 (Wu); Ex. 95] Williams identified a “Life threat: Cardiac arrhythmias, respiratory failure, pulmonary edema, paralysis, brain damage, liver damage, lung tissue and stomach tissue damage.” [Tr. 795:10-16 (Wu); Ex. 95 at 1]

362. Williams identified effects to the central nervous system: headaches, drowsiness, dizziness, weakness, muscular tremors, seizures, psychoorganic syndrome of solvents, visual auditory disturbance, and depression. [Tr. 796:8-11 (Wu); Ex. 95 at 1]

363. Williams identified respiratory effects: cough, respiratory failure, pulmonary edema, hoarseness, tissue consolidation. [Tr. 796:14-15 (Wu); Ex. 95 a 1]

364. Williams identified cardiovascular effects: tachyarrhythmia, which with severe exposure may progress to cardiac arrest. [Tr. 796: 18-21 (Wu); Ex. 95 at 1]

365. Williams identified gastrointestinal effects: nausea, vomiting, stomach pain, excessive salivation, and diarrhea with blood. [Tr. 796:22-797:2 (Wu); Ex. 95 at 2]

366. “[R]eference dose’ means the concentration of a hazardous substance via daily exposure through a specified exposure route for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious noncarcinogenic effects over the period of exposure.” Ex. 8161, at 18; AAC 75.990(102) (“Definitions”).

367. An oral reference dose is a toxicity value for non-cancer effects. [Tr. 770:5-8 (Wu)] It is “the threshold number that you don’t want to exceed per day consuming sulfolane.” [Tr. 771:14-15 (Wu)]

368. ATSDR came up with a sulfolane reference dose of 0.002 mg/kg-day. [Tr. 771:11-13 (Wu)]

369. EPA’s provisional peer-reviewed toxicity value (PPRTV) has proposed a reference dose of 0.001 mg/kg-day. [Tr. 772:22-14 (Wu); Ex. 159]

370. The EPA’s PPRTV values are prioritized by DEC as “tier 2” values behind only the EPA’s IRIS (Integrated Risk Information System) values, which are considered “tier 1.” All other health assessment values are considered to be “tier 3,” below the PPRTV tier. [Tr. 776:18-777:18 (Wu)]

371. All PPRTV assessments receive internal review by a standing panel of National Center for Environmental Assessment scientists and an independent external peer review by three scientific experts. [Tr. 774:18-24 (Wu); Ex. 159 at 5]

372. The Thompson reference dose assumes a lower toxicity of sulfolane, and the PPRTV assumes a higher toxicity. [Tr. 777:19-778:4 (Wu)]

373. Thompson, et al. has proposed a reference dose of 0.01 mg/kg-day [Tr. 772:25-773:1 (Wu)]

374. In developing a cleanup level from a reference dose, DEC's risk assessment procedures manual would require the use of the PPRTV over other reference doses from peer reviewed literature. [Tr. 776:18-777:18 (Wu)]

375. One may use toxicity values among chemicals to determine which is more or less toxic. Dr. Wu testified that is what is meant by a semi-quantitative comparison. [Tr. 779 (Wu)] More than half of the chemicals that DEC has determined to be hazardous substances, with cleanup levels on 18 AAC 75.345(b) Table C, have reference doses equal to or higher than .01 mg/kg-day, meaning that on a semi-quantitative basis sulfolane is more toxic than those chemicals even using the tier 3 Thompson reference dose. [Tr. 780:22-781:25 (Wu); *see also* Ex.8107 at 47-51]

*i) Sulfolane is a Hazardous Substance*

376. A chemical is hazardous by its nature, by its chemical makeup, and its impact on human health. [O'Connell Depo. 24:1-7 (submitted at Tr. 3924)]

377. Whether a substance is hazardous does not turn on site-specific concentrations or concentrations left in the environment after years of dilution. DEC contractor Stephanie Buss testified that the concentration of sulfolane is independent from the question as to whether sulfolane is a "hazardous substance." [Russ Depo. 81:4-7, 81:11-19 (submitted at Tr. 3924); *see also* O'Connell Depo.

155:2-7 (explaining a chemical is hazardous of its own accord based on its physical properties; there is no need for the State to make a determination)]

378. The facts at trial, including those describing the chemical and toxicological properties of sulfolane, demonstrate that sulfolane is a hazardous substance.

379. Williams has admitted that sulfolane is a hazardous substance. The State pleaded at paragraph 54 of its complaint, “Sulfolane is a hazardous substance within the meaning of AS 46.03.745, AS 46.09.900, AS 46.03.826, and 18 AAC 75.990.” In response Williams pleaded: “WAPI admits the allegations contained in ¶ 54 of the State’s Complaint, but WAPI denies that DEC considered sulfolane to be a hazardous substance under any statute or regulation at any time during WAPI’s ownership and operation of the North Pole Refinery even after WAPI disclosed to DEC that sulfolane was in the groundwater underlying the property that the State owned.<sup>14</sup>” Williams later amended its answer to assert that sulfolane’s hazardous substance status is a “legal conclusion to which no response is required<sup>15</sup>.” Williams’ first answer constitutes an evidentiary admission that sulfolane is a hazardous substance.<sup>16</sup>

380. On September 9, 2019 the parties entered into a stipulation. In subparagraph 8 of the stipulation all parties agreed that “Flint Hills is a liable landowner and operator under AS 46.03.822(a) for sulfolane releases.” This

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<sup>14</sup> Williams’ Ans. to the State’s Compl. ¶ 54, Apr. 30, 2014.

<sup>15</sup> Williams’ Am. Ans. to the State’s Compl. ¶ 54, Feb. 29, 2016.

<sup>16</sup> *Brigman v. State*, 64 P.3d 152, 166-67 (Alaska App. 2003) (“Courts often admit superseded or withdrawn pleadings in civil and criminal cases on the theory that they constitute evidentiary admissions.”).

is an evidentiary admission by all parties, including Williams, that sulfolane is a hazardous substance. Flint Hills could not be liable under AS 46.03.822(a) for sulfolane releases if sulfolane were not a hazardous substance. If sulfolane is a hazardous substance when released by Flint Hills, it is a hazardous substance when released by Williams.

381. Williams and DEC's Emergency Spill Response Program considered surface spills of sulfolane, petroleum containing sulfolane, and oil waste containing sulfolane to be reportable hazardous substance releases subject to DEC's spill notification and cleanup requirements. [Tr. 509:14-511:19, 547:5-548:17 (DeRuyter); Tr. 1921:19-1922:16 (Guinn); Ex.39] For example, Williams reported an uncontained spill of light kerosene extraction containing 90 percent sulfolane on December 19, 2000, as a hazardous substance release and indicated to DEC that recovered spill material would be labeled and handled as a hazardous waste. [Tr. 502:24-503:24 (DeRuyter); Ex. 19 at 10] On April 29, 2002, Williams reported a spill of 800 gallons of naphtha wash water containing 66 percent sulfolane as a reportable hazardous substance release. [Tr. 505:24-506:5 (DeRuyter)]

382. David Guinn, Williams' former environmental engineer with responsibilities for hazardous waste management and spill response and reporting testified that if there is a spill of naphtha containing sulfolane, "the naphtha portion of this would have been treated as an oil spill. The sulfolane portion would have been treated as a hazardous substance spill." [Tr. 1828:22-1831:21; 1922:13-16]

383. Williams listed sulfolane on its hazardous chemical inventory under the federal Community Right to Know Act due to sulfolane's acute and chronic health hazards. [Tr. 518:5-520:10 (DeRuyter); Ex. 71 at 1; Ex. 6407]

384. Mr. Guinn also testified, when asked if when he worked for Williams sulfolane was considered a regulated contaminant, that sulfolane was a hazardous substance, and so “if it was spilled, it had to be reported . . .” [Tr. 1934:20-1935:14]

A. DEC Determined that Sulfolane is a Hazardous Substance

385. DEC’s determination that sulfolane is a hazardous substance is illustrated by its decisions to obtain funding from the Oil and Hazardous Substance Release Response Account.<sup>17</sup>

386. Larry Hartig served as the commissioner of the Alaska Department of Environmental Conservation from February 2007 until December 3, 2018. [Tr. 164:19-23 (Hartig)] Mr. Hartig testified to his decision to access the Oil and Hazardous Substance Release Response Account.<sup>17</sup> [Tr. 186:4-206:15; Ex. 148A-E] Prior to accessing the fund, Commissioner Hartig was briefed and provided the opportunity to ask questions regarding the sulfolane contamination at issue. [Tr. 170:21-171:03, 185:20-186:03 (Hartig)]

387. The commissioner has the responsibility for determining when to access the response fund under AS 46.08. [Tr. 166:18-24 (Hartig)]

388. The fund is composed of two accounts, the response account and a prevention account.<sup>18</sup> [Tr. 169:4-7 (Hartig); AS 46.08.010(a)]

389. The response account may be accessed by the commissioner to investigate and evaluate the release or

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<sup>17</sup> AS 46.08.010(a)(2).

<sup>18</sup> AS 46.08.010(a).

threatened release of oil or a hazardous substance, and to contain, clean up and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare or to the environment.<sup>19</sup> [Tr. 169:12-21 (Hartig)]

390. The finding the commissioner must make under AS 46.08.040 to access the response account is whether the release of oil or a hazardous substance poses an imminent and substantial threat to public health or welfare, or to the environment. [Tr. 385:1-12 (Hartig); AS 46.08.040(a)(1)(A)] DEC interprets “imminent and substantial threat” to have the same meaning as “imminent and substantial danger.”<sup>20</sup> [Tr. 385:6-12 (Hartig)]

391. Commissioner Hartig accessed the response account several times to address the sulfolane contamination. [Tr. 185: 14-18 (Hartig); Ex. 148A; Ex. 148B; Ex. 148C; Ex. 1480; Ex. 148E] In so doing, Commissioner Hartig determined the contamination posed an imminent and substantial threat. [Tr. 185:14-186:3, 187:10-188:1 (Hartig); Ex. 148A] Information relied upon for the determination included discovery of sulfolane in drinking water wells beyond the refinery, the apparent duration of the exposure through drinking water for years if not decades, the size of the plume, and contamination of public and private wells. [Tr. 188:5-18, 188:23-189:21 (Hartig); Ex. 148A]

392. At the time he first accessed the response account in February 2010, Commissioner Hartig was highly con-

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<sup>19</sup> AS 46.08.040(a)(1)(A); AS 46.08.045.

<sup>20</sup> Compare AS 46.03.040(a)(1)(A), with AS 46.08.900(6).

cerned about the sulfolane contamination in drinking water. [Tr. 192:5-21 (Hartig)] The SPAR division had a serious concern over the number people that have been exposed, the length of time they have been exposed and the lack of any human studies or chronic animal studies. [Tr. 192:5-21 (Hartig)]

393. In October 2010, Commissioner Hartig accessed the response account a second time. [Tr. 195:13-197:23 (Hartig); Ex. 148B] The plume was larger and deeper than previously understood. [Tr. 196:2-22 (Hartig)] More private wells were identified as contaminated and more needed to be sampled. [Tr. 197:3-15 (Hartig)] Individuals may have been exposed for decades. [Tr. 19:16-23 (Hartig)]

394. Commissioner Hartig accessed the response account a third time in October 2011. [Tr. 199:14-200:18 (Hartig); Ex. 148C] Approximately 200 private drinking water wells had been identified as contaminated with sulfolane, along with four Class B public wells, and the City of North Pole's primary water supply wells; additional wells needed to be tested. [Tr. 392:4-25 (Hartig)]

395. Commissioner Hartig accessed the response account again in February 2013. [Tr. 201:6-203:9 (Hartig)] Additional work was needed to further characterize the releases and to investigate the refinery's wastewater system. [Tr. 201:21-202:9 (Hartig); Ex. 148D] There was also the need to fully understand the fate, transportation, and degradation mechanism of the sulfolane and whether it naturally degrades. [Tr. 202:24-203:9 (Hartig)] That information would provide needed information to predict sulfolane concentrations down gradient and for modeling the plume. [Tr. 203:4-9 (Hartig); Ex. 148D]

396. Commissioner Hartig's deputy commissioner, Lynn Kent, accessed the response account again in June 2014. [Tr. 203:22-206:7 (Hartig); Ex.148E]

**B. Public Health, Welfare, and the Environment**

397. Sulfolane presents a reasonable medical concern as to public health.

398. Dr. Wu concluded: "at a minimum, we can see reduced white blood cell counts. At a maximum, we could potentially see death." [Tr. 808:1-7 (Wu)]

399. Those concerns are serious in nature—for example, a reduced white blood cell count could make it harder for individuals to fight off diseases. [Tr. 808:8-14 (Wu)]

400. The medical concerns posed by sulfolane exposure are present when sulfolane is released into the environment. [Tr. 809:1-20 (Wu)]

401. Dr. Wu noted that "sulfolane is mobile in groundwater" and would enter drinking water wells. [Tr. 809:22-810:6]

402. Documented concentrations of sulfolane released from the refinery are at levels that have adverse effects based on levels dosed in animal studies. [Tr. 809:11-13, 810:1-6 (Wu)]

403. Sulfolane also has effects on public welfare.

404. Clean water is critically important to the City of North Pole. [Tr. 450:9-22 (Ward)] Within a 3-mile radius of the former North Pole Refinery, more than 7,000 people rely on the groundwater for domestic and commercial water needs. [Ex. 14 at 9] As Williams itself recognized in its 1988 Oil Spill Contingency Plan, the groundwater aquifer is both a sensitive environmental zone and an area of

public concern because the North Pole Refinery was located up gradient of the City of North Pole and its potable water wells. [Ex. 141 at 15] The sulfolane groundwater contamination now extends to half of the City's land area. [Tr. 439:25-440:2 (Ward)]

405. Former-Commissioner Hartig testified to DEC's policy to conserve and protect natural resources and the environment and control pollution in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well-being.<sup>21</sup> [Tr. 219:19-220:12 (Hartig)] Former Commissioner Hartig interprets this policy to include not only supporting safety from physical harm, but also ensuring a sense that one's drinking water is safe. [Tr. 219:19-220:12 (Hartig)] Public welfare includes economic well-being.<sup>22</sup>

406. The sulfolane plume generated concerns about gardening, impacts on construction and future development, impact on home prices and ability to sell homes. [Tr. 221:3-222:10 (Hartig)]

407. For real estate transactions within the sulfolane plume there is now a mandatory pollution disclosure. [Tr. 455:5-17 (Ward)]

408. Property values within the sulfolane plume dropped when the news of the sulfolane contamination came to light in 2009-10. [Tr. 456:15-20 (Ward)]

409. DEC contractor Stephanie Buss spoke with citizens who felt they had gotten sick from sulfolane exposure. [Buss Depo. 47: 1-9 (submitted at Tr. 3924)]

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<sup>21</sup> AS 46.03.010.

<sup>22</sup> *Id.*

410. Former North Pole mayor Bryce Ward testified that public welfare means looking out for the welfare of the community, including both current and future impacts to the residents. [Tr. 447:21-448:2]

411. The sulfolane contamination created challenges for the City of North Pole. [Tr. 444:6-16 (Ward)]

412. Concern for exposure to residents and future residents prompted the City to pass an ordinance to protect City residents from drinking sulfolane-contaminated groundwater. [Tr. 451:1-453:19 (Ward); Ex. 219 at 54]

413. Residents were very concerned about the impacts of the sulfolane groundwater contamination on their health, as well as the health of their families and their pets. [Tr. 445:6-13; 459:9-14 (Ward)] People were upset or frustrated with the contamination. [Tr. 448:6-14 (Ward)] Residents were concerned about not knowing how long they had been consuming contaminated groundwater. [Tr. 448: 15-21 (Ward)] People expressed worry about the impact of the plume of contamination on property values and their ability to sell their homes. [Tr. 442: 15-20, 448:3-14 (Ward)]

414. The City of North Pole actively engages in economic development efforts. [Tr. 440:13-441:4, 442:21-443:16 (Ward)] The contamination became a factor in community development efforts. [Tr. 450:9-22, 453:5-19 (Ward)] Clean water is a key component to the desire to live in the area. [Tr. 450:9-22 (Ward)] The sulfolane contamination impeded development. [Tr. 450:9-22, 447:4-20 (Ward)] Some developers expressed that they would rather develop in an area where there was not the risk of groundwater contamination. [Tr. 447:4-20 (Ward)]

415. Sulfolane presents an imminent and substantial danger to public health. [See, e.g., Tr. 809:14-810:6 (Wu); Buss Depo. 271:13-19, 274:9-23, 275:1-276:9]

416. Sulfolane presents an imminent and substantial danger to public welfare.

417. Sulfolane presents an imminent and substantial danger to fish, animals, vegetation, or part of the natural habitat in which they are found. [See, e.g., Tr. 810:8-19 (Wu)]

C. Sulfolane was Released with Oil Waste

418. Sulfolane is a hazardous substance.

419. Sulfolane, and sulfolane-laden wastewater, is a petroleum related byproduct.<sup>23</sup>

420. Sulfolane was also released as a constituent of Williams' oil spills.

421. The gasoline Williams produced at the refinery contained sulfolane. [Tr. 1978:2-4; 1978: 18-22 (Mead); Ex. 6300 at 8; Tr. 1004:11-20 (Davis)] Williams had numerous spills of gasoline containing sulfolane at the refinery. [Tr. 513:23-514:10; 528:4-6 (DeRuyter); Ex. 32; Ex. 103 at 11-17] The sulfolane content in gasoline produced by NPR ranged from 24 to 868 ppm (868,000 ppb) between 1992 and 2004. (Flint Hills' concentrations were lower, ranging between 2 ppm and 55.5 ppm.) [Oasis Report, p. 13, Ex. 2520]

422. Williams released sulfolane mixed with other petroleum products. For example, in 2002, Williams spilled 800 gallons of a naphtha/sulfolane mixture that was 66 percent sulfolane. [Tr. 522:1-22 (DeRuyter); *see also* Ex.

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<sup>23</sup> AS 46.03.826(7).

39 at 12-13] Some contaminated soil was removed but pipes and infrastructure prevented access for complete cleanup. [Tr. 522:9-523:5 (DeRuyter); Tr. 1919:17-1920:14 (Guinn)]

423. Williams also reported its oily wastewater spills as oil spills. [Tr. 527:2-6; 527:13-25 (DeRuyter); Ex. 103 at 148, 151]

424. Sulfolane is a hazardous waste having the characteristics identified under the Solid Waste Disposal Act, or RCRA.

425. Sulfolane is not a “listed waste” under RCRA. *See* 40 C.F.R. §§ 261.31-33.

426. Williams managed spills of pure sulfolane as RCRA hazardous waste. [Ex. 39 at 26]

427. Williams disposed of petroleum-sulfolane mixture spill cleanup materials as a RCRA hazardous waste. [Tr. 508:15-509:13; 510:8-511:3; 547:5-548:17 (DeRuyter); Ex. 39 at 7, 18, 26]

428. EPA has treated sulfolane as a hazardous waste in a RCRA § 3008(h) order relating to a Chevron Phillips refinery in Puerto Rico. [Tr. 2636:20-23, 2637:21-2641:20 (Fish); Ex. 216] EPA set a sulfolane groundwater remediation goal of 16 ppb for the Puerto Rico refinery site. [Tr. 2640:1-14 (Fish); Ex. 216 at 7]

#### D. Sulfolane is Pollution

429. Sulfolane is pollution as defined in AS 46.03.900(20).<sup>24</sup> [See Tr. 233:20-234:5 (Hartig); Tr. 814:22-

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<sup>24</sup> AS 46.03.900(20) (“[P]ollution” means the contamination or altering of waters, land, or subsurface land of the state in a manner which creates a nuisance or makes waters, land, or subsurface land unclean,

24 (Wu); Tr. 458:11-459:14 (Ward) (strongly against allowing family to drink sulfolane-contaminated water); Tr. 4024:13-21 (Newcomer) (stating that it was reasonable for the DPR to hook up to city water if its water was contaminated); Tr. 4116:17-22 (Gebbia) (recognizing that residents prefer to drink water with no sulfolane in it); Tr. 3732:09-18 (Woods) (agreeing that water with sulfolane in it is of a lower quality than water without sulfolane)]

430. Sulfolane makes the water, land, or subsurface land of the state unclean. [Tr. 812:9-22 (Wu)]

431. Sulfolane makes the water, land, or subsurface land of the state impure. [Tr. 812:23-813:6 (Wu)]

432. Sulfolane makes the water, land, or subsurface land of the state unfit so that they are actually or potentially harmful or detrimental or injurious to public health. [Tr. 813:7-14 (Wu)]

433. Sulfolane makes the water, land, or subsurface land of the state unfit so that they are actually or potentially harmful or detrimental or injurious to public welfare. [Tr. 813: 15-24 (Wu)]

434. Sulfolane makes the water, land, or subsurface land of the state unfit so that they are actually or potentially harmful or detrimental or injurious to domestic use. [Tr. 813:25-814:11 (Wu)]

435. Sulfolane makes the water, land, or subsurface land of the state unfit so that they are actually or potentially harmful or detrimental or injurious to livestock, wild

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or noxious, or impure, or unfit so that they are actually or potentially harmful or detrimental or injurious to public health, safety, or welfare, to domestic, commercial, industrial, or recreational use, or to livestock, wild animals, bird, fish, or other aquatic life.”).

animals, birds, fish, or other aquatic life. [Tr. 814:12-21 (Wu)]

436. For all of the reasons that support finding sulfolane to be a hazardous substance and otherwise pollution, the off-refinery sulfolane contamination in the North Pole drinking water aquifer has also created a nuisance.

437. The presence of sulfolane injures or degrades the groundwater.

438. Sulfolane contamination lowers the quality, purity, and desirability of the water. Water that is contaminated with sulfolane is of lower quality and less desirable than groundwater that is not contaminated. [Tr. 222:11-16, 447:4-14 (Hartig); Tr. 3732:9-14 (Woods); Tr. 4116:17-22 (Gebbia)]

439. Based on all of the toxicity information and his experience as a risk assessor, Dr. Wu has concluded that when it is released into the groundwater, sulfolane injures or degrades the groundwater. [Tr. 815:1-8 (Wu)] Dr. Wu emphasized that sulfolane is mobile in the groundwater. [Tr. 815:7-8 (Wu)]

440. As a toxicologist, DEC contractor Stephanie Buss recommends drinking sulfolane-free water. [Buss Depo. 313:14-23]

***j) Williams' Response to Contamination***

**A. On Site**

441. When sulfolane in the groundwater of the refinery was first reported to DFC in 2001, the NPR received its drinking water from the City of North Pole's public utilities. [See Tr. 4024:3-21 (Newcomer); Ex. 2139 at 29] As such, groundwater from the NPR was not being used as a drinking water source by the NPR. [Id.]

442. After only a period of months of weekly sampling—during which Williams was unable to locate the sources of the sulfolane contamination—Williams requested in the spring of 2002 that it be allowed to reduce the frequency of its groundwater sampling to twice a year. [See, e.g., Ex. 3687 at 3]

443. DEC indicated that Williams could reduce its sampling if its findings were redundant and did not point to a specific source area. [Ex. 3687 at 1]

444. By July 2002, however, Williams not only reduced its sampling, but altogether ceased testing for the sulfolane sources on the refinery property. [Ex. 3210 at 3; Tr. 2959:03-07 (Lindstrom)]

445. Williams' cessation of sampling exhibited a lack of cooperation and failure to comply with DEC requirements, as it prematurely stopped the investigation prior to determining the source of sulfolane releases. [Ex. 3210 at 3; Tr. 2630:03-08 (Fish)]

446. At the same time it ceased sampling, Williams' efforts to sell the property began. [Tr. 2460:03-12 (Newcomer); Wright Depo. at 23:07-20 (offered at Tr. 4128)]

### **B. Offsite**

447. Williams' conduct after sulfolane was discovered offsite of the NPR in 2009 exhibits an on-going failure to cooperate with government.

448. In May 2010, DEC notified Williams that it was a party responsible for the sulfolane contamination discovered in the groundwater beyond the NPR property, stating that Williams "remains liable for all releases of hazardous substances that occurred prior to and during their ownership of the NPR." [Ex. 140; Tr. 1775:24-1777:04 (Napoli-Fultz)]

449. Williams did not, however become involved in remediation efforts that included the characterization of the contaminant plume, the provision of alternative water, or the public outreach at the time. [Tr. 185:7-10 (Hartig); Tr. 448:22-450:06 (Mayor Ward) (stating that he is not aware of any efforts by Williams to date to address the contamination)]

450. Since 2009, Williams has never undertaken any work at the site. [Tr. 2631: 12-22 (Fish)]

451. Williams has not performed a site-specific risk assessment or proposed a cleanup level. [Tr. 2631:23-2632:15 (Fish); Tr. 2776:5-11 (Keenan)] Williams also did not participate in the adjudicatory hearing request when various cleanup levels were under review. [Tr. 2632:16-20 (Fish)]

452. Williams never participated in or commented upon the feasibility studies prepared by Flint Hills throughout the administrative process. [Tr. 2633:4-17 (Fish); Tr. 2631:6-11 (Fish); *see also* Ex. 171 (Dec. 23, 2013 Letter to Williams)]

453. Williams' recalcitrance has been contrary to DEC mandates. In 2013, DEC warned Williams that it would need to be prepared to accept the results of the process in the event it failed to participate. [Ex. 2703; Tr. 4111:8-4113:3 (Gebbia)] Nevertheless, Williams failed to undertake any of the requested steps by the State. [Tr. 4113:4-12 (Gebbia), Ex. 2703] In a letter to Williams, DEC informed Williams that the extent of cleanup would depend on a feasibility study being prepared by Flint Hills. DEC recommended that Williams participate in the feasibility study process or develop its own independent feasibility study under DEC's direction. DEC instructed Williams to

“undertake a thorough review of the existing site characterization information” and “identify any potential off-site data gaps critical to the completion of an off-site cleanup plan.” Next, DEC directed Williams to “propose treatability studies for off-site areas of elevated dissolved sulfolane.” [Ex. 2703] Third, Williams was instructed to submit historical information to DEC regarding the types of petroleum products produced at the refinery; where sumps, piping, or containment lines were located; and, identify storage locations and use locations of products containing perfluorinated compounds during Williams’ and its predecessors’ ownership. [Ex. 2703] Lastly, DEC requested “a status report on Williams’ progress on the groundwater model that Williams proposed in October 2013.” [Ex.2703]

454. Despite Mr. Gebbia testifying that Williams “actively cooperated” with DEC in remediation efforts, the evidence shows that Williams:

- Never provided alternative water to those impacted by sulfolane contamination;
- Never installed bulk water tanks for those impacted by sulfolane contamination;
- Never installed or maintained point of entry systems for those impacted by sulfolane contamination;
- Never constructed new wells for the City of North Pole;
- Never attended or participated in public meetings in the City of North Pole to talk with impacted residents;

- Never opened a groundwater office and published a telephone number so that impacted residents could ask questions or voice concerns;
- Never submitted onsite or offsite characterization reports to DEC;
- Never submitted onsite or offsite feasibility reports to DEC;
- Never submitted a human health risk assessment to DEC;
- Never paid DEC for response costs.

[Tr. 4092:23-4097:23 (Gebbia); *see also* Tr. 3629:06-3630:10 (Johnson); Tr. 1542:13-14, 1514:12-13, 1546:09-11, 1549:18-20, 1553:22-23, 1556:02-03, 1557:13-15; 1559:4-5, 1560:23-24, 1564:4-5, 1565:25-1566:01, 1567:12-14, 1569:05-06, 1572:08-09 (Hilarides) (identifying FHRA's response costs that Williams' avoided)]

455. While Williams once offered to reimburse DEC for costs devoted to certain modeling efforts with the technical project team ("TPT"), it made no such payments. [Tr. 1779:23-1780:01 (Napoli-Fultz); Tr. 4081:05-17 (Gebbia)]

456. Similarly, while Williams once agreed to undertake a transient groundwater model as part of the TPT, no such model was ever submitted by Williams to DEC. [Tr. 4106:18-4107:05 (Gebbia)] Nothing was ever submitted to DEC or provided to assist in on-going remediation efforts, despite Williams' claim that nearly a year of work and approximately \$700,000 was spent on modeling efforts. [Tr. 4105:12-4107:5 (Gebbia)]

457. Williams claims that the failure to produce the model was due to the fact that the State sued it. [Tr. 4107:1-5 (Gebbia)] Williams' position is in contrast to Flint

Hills' conduct. Flint Hills continued to work with DEC on a groundwater model after the State's lawsuit was initiated, even though Flint Hills was also a named Defendant in the State's suit. [Tr. 4107:12-20 (Gebbia)]

458. The extent of Williams' participation was limited to sending personnel on its behalf to TPT meetings between 2010 and 2013. [Tr. 2631:01-04 (Fish) (Williams only attended TPT meetings); Tr. 3622:16-3623:02 (Johnson)]

459. When certain personnel attended TPT meetings on Williams' behalf, however, their participation was limited and expressly restricted by TWC. [Ex. 6465 (restricting representative from participating in discussions concerning modeling, monitoring, and remediation); Tr. 3893:13-3895:22 (Lilly)]

***k) Flint Hills' Response to Offsite Contamination***

460. After the October 2009 offsite detections, a series of events occurred in quick succession that involved Flint Hills going out into the community, personally knocking on doors, getting permission from citizens to test their private wells, and immediately providing people with alternative water. [Tr. 1506:18-1507:23 (Hilarides); Tr. 449:11-13 (Mayor Ward)]

461. Flint Hills' early provision of alternative water was important to the Department being able to work with the public and the local officials. [Tr. 182:21-183:7 (Hartig)] The severity of past exposure was unknown but the provision of safe drinking water allowed for a discussion with the public as to what the future options might be. [Tr. 183:7-14 (Hartig)]

462. At the same time Flint Hills was knocking on doors, it also coordinated with regulatory officials for a plan to identify and address the nature and extent of the

contamination. [Tr. 183:15-25 (Hartig); Tr. 1507:07-15, 1509:06-23 (Hilarides); *see also* Tr. 1509:01-05 (Hilarides) (initially thought dealing with leading edge of small problem before discovering it was tail end of massive issue)]

463. DEC directed Flint Hills and Williams to undertake a number of directives targeted at addressing the sulfolane contamination. For example, DEC directives required the parties to provide a site characterization and corrective action plan. [See, e.g., Ex. 140; Ex. 2123] Directives also included submitting a work plan for DEC approval with an aggressive schedule for task completion, submitting a site-specific evaluation for threats to health, safety, and the environment, providing an interim removal plan, and provide corresponding reports pursuant to regulatory requirements, and continue providing alternative water to citizens, among others. [See, e.g., Ex. 2123 at 2]

464. Flint Hills continued to coordinate with government after the State of Alaska filed suit in 2014. [See Tr. 4107:12-20 (Gebbia)]

465. Flint Hills also continued to coordinate with the City and State and incur mounting response costs, despite Williams' non-participation in remediation activities and costs, and despite Williams' claim that any damages it could be liable to pay were limited even though it acknowledged contamination occurred during its tenure. [See, e.g., Tr. 3629:06-3634:01 (Johnson)]

466. Flint Hills' work with the City and State to address the sulfolane contamination and protect North Pole residents, includes:

- Immediate sulfolane testing of citizens' wells [See, e.g., Tr. 1506:18-1507:23 (Hilarides)];

- Participation in community meetings and creation of a water office for citizens to visit for information and to have concerns addressed [*See, e.g.*, Tr. 449:13-22 (Mayor Ward)];
- Comprehensive investigations of the sulfolane plume and sources [*See, e.g.*, Tr. 1540:16-1542:09 (Hilarides)];
- Installation of hundreds of additional monitoring wells at and beyond the NPR property, along with ongoing monitoring of those wells [*See, e.g.*, Tr. 1161:01-1162:01 (Davis); Tr. 1557:20-1558:25, 1559:15-1560:19 (Hilarides)];
- Upgraded remediation systems at the NPR [*See, e.g.*, Tr. 1551:13-1553:18, 1561:13-22, 1563:23-25 (Hilarides)];
- Installation of new City Wells located outside plume [*See, e.g.*, Tr. 449:01-10 (Mayor Ward); Tr. 1542:17-1544:08 (Hilarides)];
- Evaluations of potential remedial measures [*See, e.g.*, Tr. 1564:12-1565:20, 1569:09-1570:08 (Hilarides)]
- Soil excavations [*See, e.g.*, Tr. 1566:09-1567:08, 1567:22-1569:04 (Hilarides)]
- Hydrologist inspection, study, and analysis to identify plume dimensions, origins, and future distribution [*See, e.g.*, Tr. 1541:16-1542:09 (Arcadis); Tr. 1201:06-1202:02, 1204:08-15 (Davis) (Geomega modelling collaboration)];
- Extensive work and coordination with the Technical Project Team and subgroups to evaluate remediation options [*See, e.g.*, Tr. 595:05-14 (Leigh); Tr. 1556:11-17 (Hilarides); Ex. 132];

- Coordination of extensive toxicological analysis [*See, e.g.*, Ex. 7125 at 5; Tr. 877:03-22 (Wu)];
- Provision of clean water at the option of landowners and businesses, including bottled water, tank water, and installation of filtration systems [*See, e.g.*, Tr. 1546:16-1549:12 (Hilarides); Ex. 2123 at 2; Tr. 3701:04-3702:15 (Woods)]; and
- Construction of a piped water system, originally estimated to cost \$100 million, to extend the City of North Pole's utilities and ensure clean water for residents. [*See, e.g.*, Tr. 1570:16-1571:02, 1572:14-1574:09 (Hilarides); Tr. 3724:25-3725:23 (Woods)]

467. Flint Hills' efforts to comply with DEC directives to address the contamination at issue has required it to incur substantial response costs to date. [*See* Tr. 1584:17-1586:03 (Hilarides); Ex. 6557 (cost summary table) see also Tr. 1510:18-1511:08 (Hilarides) (recognizing agency authority to issue directives and necessity for compliance)]

468. A large majority of sulfolane contamination, the court estimates approximately 90%, came from releases that occurred during Williams' operations and tenure at the NPR. [*See, supra*, paragraph 87] [Tr. 2524-25]

469. As of March 31, 2004, the sulfolane released during Williams' operations had already migrated far beyond the contours of the contamination identified in the Sale Agreement's Disclosure Schedule. [*See* Tr. 1224:21-1225:10, 1226:10-24 (Davis) (determining that 82.7% to 92.5% of the current plume was, in 2004, already beyond the well contours identified in the Sales Agreement); Tr. 3556:22-3557:13 (Goulding); Tr. 3645:22-3646:05 (Johnson)] Williams' expert, Goulding, agreed that as of the date of transfer, a sulfolane plume of about the current 3

1/2 by 2 mile size was already offsite. [Tr. 3556-3557 (Goulding)]

470. Due to the scope and extent of releases that occurred during Williams operations at the NPR, the contours of the sulfolane plume that exist today would be nearly the same if no further releases occurred after March 31, 2004. [Tr. 1219:02-08, 1221:13-17 (Davis); Ex. 6296 (Davis Simulation Model); *see also* Tr. 3557:09-13 (Goulding agreed that size of plume in 2004 mirrored the size today.)]

471. The sulfolane mass that was released during Williams' tenure is now, however, commingled with the releases that occurred during Flint Hills tenure at the NPR. [Tr. 1221:03-09 (Davis); Tr. 3559 (Goulding) Sulfolane in the ground slowly seeps out.] There is no scientific way to determine which molecules came from Flint Hills and which from Williams because they are intermingled. [*Id.*]

***1) The State as landowner is without fault***

472. During Williams' tenure, the State of Alaska, Department of Natural Resources (ADNR) owned the land underlying the refinery. [Stipulated Fact]

473. During the majority of Williams' ownership and operation of the NPR, it leased the land underlying the NPR from the State of Alaska, Department of Natural Resources (ADNR). [Stipulated Fact] On March 25, 2004, Williams received title to the property. Ex. 3516, 9-10; Ex. 3732, at 1; Ex. 3740, at 1-5, Tr. 3980:23-24 (Newcomer)

474. No persuasive evidence was presented at trial to support an equitable allocation under AS 46.03.8220) to ADNR of any amount on the basis of its landowner status.

The State as landowner was not responsible for the release or spread of sulfolane or PF AS or at fault in any way.

475. The evidence at trial related to ADNR indicated that the agency was concerned with Williams' spill prevention activities. In November 2000, ADNR attended a meeting with Williams and DEC and discussed DEC's concerns over the adequacy of Williams' refinery spill prevention activities. [Tr. 514:16-516:15 (DeRuyter)] They also discussed Williams' ongoing preparation of a facility-wide characterization and corrective action plan. [Tr. 516:16-517:12 (DeRuyter)] DNR expressed concern that Williams could be in default of their lease because of their spills. [Tr. 516: 10-15 (DeRuyter); Ex. 55]

476. When DNR sold the land underlying the NPR to Williams, it was ADNR's understanding that Williams had been containing all of the contamination within the NPR property boundaries. [Ex. 2065 at 10 ("It has not been demonstrated that any offsite migration of contaminants has occurred."); *see also id.* at 12]

***m) PFAS is a Hazardous Substance***

477. The compounds encompassed by the acronym PFAS, perfluorooctane sulfonate or perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) are chemicals with default cleanup levels in 18 AAC 75.341(c), Table B1, and 18 AAC 75.345(b), Table C. [Tr.815:11-816:2 (Wu)]

478. In 2016, EPA issued a health effects support document and drinking water health advisory for PFOS. [Tr. 818:10-16 (Wu)] EPA identified numerous adverse effects to monkeys, rats, and mice. [Tr. 818:10-16 (Wu)] PFOS is associated with effects on survival, body weight, serum

glucose levels, mating behaviors, liver toxicity, cholesterol, hepatic steatosis, developmental neurotoxicity, and immune systems. [Tr. 818:18-819:2 (Wu)] PFOS is also associated with cancers. [Tr. 818:24-25 (Wu)] Human epidemiological data have shown associations with high cholesterol, thyroid disease, immunosuppression, reproductive and developmental parameters including reduced fertility and fecundity, and bladder, colon, and prostate cancer (although there are inconsistencies in the literature). [Tr. 819:4-13 (Wu)]

479. In 2016, EPA also issued a health effects support document and drinking water health advisory for PFOA. [Tr. 820:10-821:4 (Wu)] EPA identified numerous associated with PFOA including developmental effects, liver toxicity, kidney toxicity, immunity effects, and cancer effects. [Tr. 821:5-12 (Wu)] Cancers associated with PFOA exposure include liver, testicular, and pancreatic cancers. [Tr. 821:13-16 (Wu)]

480. EPA has developed a health advisory level for PFOS of 70 parts per trillion (ppt) based on an endpoint of reduced birth weights. [Tr. 819:16-19, 826:17-18 (Wu)]

481. EPA has developed a health advisory level for PFOA of 70 ppt. [Tr. 826: 12-18 (Wu)]

482. The Agency for Toxic Substances and Disease Registry (ATSDR) has released a draft toxicity document on PFOA and PFOS. [Tr. 827:6-11 (Wu)]

483. ATSDR identified health effects associated with PFOS including reproductive effects, liver effects, and immunological effects. [Tr. 828: 1-3 (Wu)]

484. ATSDR identified health effects associated with PFOA including liver effects, developmental effects, immunological effects, and cancer effects. [Tr. 828:4-8 (Wu)]

485. ATSDR developed minimum risk levels for PFOA at  $3 \times 10^{-6}$  mg/kg-day and for PFOS at  $2 \times 10^{-6}$  mg/kg-day. [Tr. 828: 11-17 (Wu)]

486. In a 1999 MSDS for AFFF fire-fighting foam, manufacturer 3M identified as ingredients perfluorooc-tane sulfonate salts and residual organic fluorochemicals. [Tr. 829:25: 830: 17 (Wu)] PFOS and PFOA are part of the class of chemicals known as organic fluorochemicals. [Tr. 831:24-832:8 (Wu)]

487. When released into the environment, PFOS and PFOA present reasonable, serious medical concerns that are present at the time they are released into the environment. [Tr. 836:11-841:13 (Wu)]

488. PFOS and PFOA are hazardous substances. [Tr. 819:22-24, 828:21-22, 836:11-841:13 (Wu)]

#### **A. PFAS Contamination**

489. The PF AS contamination at the NPR occurred during Williams' operations and from Williams' use of products containing PFAS during its NPR tenure. [Tr. 2331:12-2332:10 (Newcomer)]

490. At the NPR, Williams used an aqueous fire-fighting foam ("AFFF") manufactured by 3M that contained PFAS. [Tr. 2331:12-2332:10 (Newcomer)] In fire-fighting drills, Williams' personnel would conduct exercises during which personnel would spray PFAS containing AFFF onto the ground in the fire drill area. [Tr. 2332:11-2333:14, 2333:22-2334:05 (Newcomer)] Remnants of the foam would be directed to the sumps and processed through the wastewater system at the NPR. [Tr. 2368:02-15 (Newcomer)] Williams also sprayed the PFAS containing foam directly into the sumps at the Refinery. [Tr. 2333:22-2335:18 (Newcomer)]

491. Williams used the 3M-branded AFFF at the NPR until at least 2001. [Tr.2340:09-19 (Newcomer)]

492. Williams' use of the 3M-branded AFFF at the NPR, and its failure to properly manage and maintain its wastewater and lagoon system during its operational history, resulted in unpermitted PFAS releases to the soil and groundwater during Williams' tenure.

493. No evidence that PFAS-related products were used or PFAS releases occurred during Flint Hills' tenure at the NPR was presented.

494. Flint Hills took action to remediate onsite PFAS-type compounds when it removed soil from the fire training area in 2015. [Tr. 1567:16-1568:11; Ex. 6301, at 17]

495. After excavation, Flint Hills left between 1500 and 6000 ppb of PFAS compounds in the soil at the fire training area. Ex. 8209, at 12.

#### **B. Indemnity for PFAS Contamination**

496. In 2013, PFAS contamination was discovered at the NPR. [Ex. 2815 at 3-4] Flint Hills sent a letter to Williams and TWC on December 18, 2013, providing notice of the PFAS contamination, and seeking to be held harmless under the ASPA. [Tr. 1512:24-1514:21 (Hilarides); Ex. 2815]

497. The evidence indicates that the sole purchaser and user of PFC-containing products at the NPR was Williams. [Ex. 2815 at 4] Williams used a fire-fighting foam containing PFAS-chemicals during its tenure that 3M manufactured. [Tr. 2331:12-2332:10, 2332:11-2333:14, 2333:22-2334:05, 2340:09-19 (Williams 30(b)(6) (Newcomer)] PFAS are a type of PFC. [Tr. 1514:22-25 (Hilarides)]

498. The PFAS contamination meets the definition of an Environmental Condition within the ASPA.

499. The 2013 notice was provided to Williams and TWC by Flint Hills with reasonable promptness after the PFAS contamination was discovered at the NPR.

500. Williams' PFAS contamination was not identified within the Disclosure Schedule of the ASPA between Williams and Flint Hills, nor was the PFAS contamination known at the time. [See Ex. 3000 at 130] Because Williams' PFAS contamination was not assumed by Flint Hills under the ASPA, Williams retained any and all liability for it.

501. Neither Williams nor TWC held Flint Hills harmless or provided the requested indemnity for the PFAS-related contamination it caused. [Tr. 1516:03-12 (Hilarides)]

502. Flint Hills also provided Williams and TWC notice of the State's claims in 2014, seeking indemnification from Williams for the State's related damages. [Tr. 1515:01-11(Hilarides); Ex. 6258]

503. The 2014 notice was provided by Flint Hills with reasonable promptness after the claim was initiated.

504. Neither Williams nor TWC held Flint Hills harmless or provided the requested indemnity for the State's claims. [Tr. 1516:03-12 (Hilarides)]

***n) Response Costs***

505. Williams and TWC have the ability to pay the past costs the State and Flint Hills seek from them. [Tr. 1999:20-2000:04; McDonald Depo. at 28]

506. Williams and TWC also have the ability to pay future remedial costs. [Tr. 1999:20-2000:04; McDonald Depo. at 28]

507. Lisette Olivia Napoli-Fultz testified to the State's response costs related to the North Pole Refinery Contaminated Site. [See Tr. 1766:9-1824:16]

508. Ms. Napoli-Fultz is an accountant and administrative operations manager for the Division of Spill Prevention and Response. [Tr. 1766:15-1767:10 (Napoli-Fultz)]

509. Ms. Napoli-Fultz manages the Response Fund Administration Program. The Oil and Hazardous Substance Release Prevention and Response Fund was created by the legislature to provide a readily available source of funds for the Department's spill prevention and response activities. [Tr. 1767:11-1768:20 (Napoli-Fultz)]

510. When DEC spends response fund monies it is required to recover those expenditures. [Tr. 1769:13-15 (Napoli-Fultz)]

511. Recoverable costs must be reasonably attributable to the release. [Tr. 1770:9-14 (Napoli-Fultz)]

512. Ms. Napoli-Fultz assures audits are conducted on existing and historical invoices to ensure proper draft billing processes occur on a monthly basis. [Tr. 1771:20-24 (Napoli-Fultz)]

513. DEC advised Williams by letter on May 17, 2010, that Williams remained liable for the contamination at the North Pole Refinery as a responsible party. [Tr. 1775:24-1777:1 (Napoli-Fultz); Ex. 140]

514. DEC advised Williams by letter on December 23, 2013, that it would receive bills that it should pay. DEC bills are due upon receipt. [Tr. 1777:12-1778:14 (Napoli-

Fultz); Ex. 171] Interest accrues beginning on the 61st day of non-payment. [Tr. 1778:24-25 (Napoli-Fultz)]

515. Williams has not paid any of the DEC cost recovery invoices. Ms. Napoli-Fultz reviewed over 3500 pages of DEC invoices sent to Williams. [Tr. 1779:23-1781:11 (Napoli-Fultz); Ex. 172A]

516. Ms. Napoli-Fultz prepared a summary of the invoices which is a fair and accurate summary of the more than 3500 pages of invoices. She excluded costs relating to oversite of off refinery PFAS. [Tr. 1781:19-1782:23 (Napoli-Fultz); Ex. 224]

517. The total outstanding amount owed by Williams is \$3,619,804.95; and with interest the total is \$4,054,588.91. [Tr. 1782:24-1783:15 (Napoli-Fultz)]

518. All invoices to Williams were reviewed and determined to be reasonably attributable to the site. [Tr. 1798:3-10 (Napoli-Fultz)]

519. The state regulations allow responsible parties to challenge cost recovery invoices through an administrative process—Williams never raised any challenges to DEC's cost recovery invoices. [Tr. 1823: 11-21 (Napoli-Fultz)]

520. The State has placed \$20 million in escrow for the piped water system expansion. [Tr. 1575:19-23 (Hilarides)]

521. As of August 31, 2019, the escrow disbursements for the State's benefit are \$11,599,681.33. [Tr. 1575:19-23 (Hilarides)]

522. Efforts by the State and Flint Hills to provide alternative water in the form of a piped water expansion project are reasonable and not arbitrary or capricious.

523. A piped utility water is a common strategy at large-scale contaminated sites to provide a permanent long-term clean water solution to impacted residents. [Tr. 2643:22-2644:5 (Fish)]

524. DEC North Pole refinery project manager Jim Fish testified that the piped water extension was the best long term permanent solution. [Tr. 2644 (Fish)] The court agrees.

525. Extension of the City's piped water utility system provided a permanent and sure solution to a long term problem. [Tr. 428:2-430: 12 (Hartig)] Building out a piped water system provides somewhat the functional equivalent of having a clean water source that the public had before the sulfolane contamination. [Tr. 430:3-12 (Hartig)] The piped water is more sustainable and protective than other alternative water solutions. [Tr. 428:2-21 (Hartig); Tr. 2643: 15-2644: 18 (Fish)] There is a concern people will use their contaminated well water if they run low on bottled water. [Tr. 428:2-21 (Hartig)]

526. The City of North Pole has also concurred with and has partnered in the expansion of the piped water system. [Tr. 490:17-21 (Ward)] Mayor Ward understood the plume was continuing to migrate at the time the settlement for piped water was reached. [Tr. 493: 13-18 (Ward); *see also* Tr. 493:4-12 (Ms. Andresen concluding plume continues to migrate)]

527. Flint Hills implemented a multi-layer internal process to identify, manage, and track work performed and response costs incurred pursuant to DEC directives for the contamination at issue. [See, e.g., Tr. 1524:13-1527:12 (Hilarides)] Flint Hills' internal process and tracking system was used to provide a complete record to describe why work was done, what authorizations were

obtained to do that work, and what was spent, from implementation through payment. [Tr. 1526:10-14 (Hilarides)]

528. More specifically, once Flint Hills received directives from DEC, Flint Hills' environmental project managers would review the mandate(s) and evaluate the work necessary to accomplish the task, thereafter preparing a "project execution plan" or "PEP." [Tr. 1524:18-1525:06 (Hilarides); *see, e.g.*, Ex. 2123 (Mar. 2010 DEC letter with directives)] PEPs were internal business reports that would provide such things as general background information, what the directive was asking for, the scope of work that was needed for compliance, along with an estimated cost for the required work. [*Id*; *see also* Tr. 1536:15-22, Tr. 1530:19-1531:25 (Hilarides) (project manager were responsible for drafting PFPs); Ex. 2984 (PEP Project "H"), Ex. 6663 (PEP Project "G")] The PEP would then be reviewed internally for approval. [Tr. 1525:07-12 (Hilarides)]

529. PEPs were assigned a letter-designation for the category of work to be performed (*e.g.*, "A," "B," "C," etc.). [Tr. 1526:15-1527:01 (Hilarides); *see also* Ex. 2984, Ex. 6663]

530. Once a PEP was approved, a second layer of authorization, called an "authorization for expenditure" or "AFE," was necessary before work could be initiated. [Tr. 1525:17-1526:14 (Hilarides)] The AFE was the official approval document within Flint Hills' work order management system, called Maximo. [*Id.*] Managers were required to approve work specific AFEs as part of the PEP process before work orders could be initiated. [*Id.*; Tr. 1538:09-18 (Hilarides)]

531. AFEs were assigned a nine-digit work-identification number within the Maximo system. [Tr. 1527:07-12 (Hilarides); *see also* Ex. 6368 (AFE related to PEP “H”)]

532. PEPs, AFEs, invoices, and the associated response costs were managed and maintained as part of Flint Hills’ tracking system. [Tr. 1526:05-14, Tr. 1518:04-12, 1520:22-24 (Hilarides)]

533. Flint Hills summarized the voluminous information within its management and accounting systems for each AFE, and compiled a series of tables by AFE “ID” (using the last four digits of the AFE’s work-ID), which the Court received into evidence under Alaska Rule of Evidence 1006. [Tr. 1517:07-1518:20 (Hilarides); Exs. 6509-6530, 6557]

534. Trial Exhibit 6557, along with Trial Exhibits 6509 to 6530, provide a comprehensive summary of the response costs Flint Hills incurred related to the contamination at issue, including individual cost items by third-party contractors, invoice IDs, dates, and payment amounts to which those costs relate. As identified in the foregoing summaries, Flint Hills’ total response costs as of August 31, 2019, amount to \$138,320,690. [See Ex. 6557; Tr. 1584:17- 1585:04 (Hilarides)]

535. All costs identified in Trial Exhibits 6509 to 6530 were incurred pursuant to DEC directives issued after 2009 to address the contamination at issue. [See, e.g., 1584:17-1585:04 (Hilarides)] The response costs identified by Flint Hills in the foregoing exhibits do not include any costs incurred before the 2009 discovery of offsite sulfolane contamination, nor do they include costs unrelated to the sulfolane and PFAS contamination at issue, internal Flint Hills’ costs, or legal fees. [Tr. 1539:02-17, 1567:18-

1569:06 (Hilarides); *see also, e.g.*, Ex. 2984 at 4, Ex. 6663 at 3]

536. Flint Hills' response efforts and costs were reasonable and necessary to comply with DEC's directives and respond to the contamination at issue. [See, *e.g.*, 1510:18-1511:08 (Hilarides) (directives compel responses); *see also* Tr. 1585:08-1586:03 (Hilarides)]

537. Flint Hills' response costs by PEP are as follows:

- **PEP Project A:** AFE ID 4813 (\$7,877,012)
- **PEP Project B:** AFE ID 4659 (\$4,391,963)
- **PEP Project C:** AFE ID 4845 (\$2,181,017)
- **PEP Project D:** AFE ID 4337, 4405, 6266 (\$27,667,284)
- **PEP Project E:** AFE ID 4025, 5176 (\$4,533,369)
- **PEP Project F:** AFE ID 3150, 4630 (\$561,210)
- **PEP Project G:** AFE ID 4836 (\$6,127,799)
- **PEP Project H:** AFE ID 5100 (\$4,245,628)
- **PEP Project J:** AFE ID 7406 (\$6,144,607)
- **PEP Project K:** AFE ID 0495, 6064, 606 (\$14,998,508)
- **PEP Project L:** AFE ID 9305 (\$10,121,729)
- **PEP Project M:** AFE ID 4823 (\$3,398,661)
- **PEP Project N:** AFE ID 4822 (\$1,173,674)
- **PEP Project O:** AFE ID 4210 (\$519,756)
- **PEP Project P:** AFE ID 6994, Escrow 6994 (\$44,378,473)

[Ex. 6557; Tr. 1540:02-1542:14 (“A”), 1542:17-1544:13 (“B”), 1544:16-1546:11 (“C”), 1546:14-1549:20 (“D”), 1551:13-1553:23 (“E”), 1554:01-1556:03 (“F”), 1556:09-1557:15 (“G”), 1557:20-1559:05 (“H”), 1559:09-1560:24 (“J”), 1561:03-1564:05 (“K”), 1564:09-1566:01 (“L”), 1566:06-1567:14 (“M”), 1567:18-1569:06 (“N”), 1569:09-1570:11 (“O”), 1570:16-1572:13 (“P”) (Hilarides)]

538. Testimony by Williams’ experts supported the reasonableness of some aspects of Flint Hills’ response efforts. [See, e.g., Tr. 3702:02-12 (Woods) (“I think it was very reasonable to provide an interim solution in the form of bottled water . . .”), 3724:25-3725:23 (Woods) (Stantec design of piped water system “is reasonable”); Tr. 3058:07-15 (Desvouges) (provision of alternative water is appropriate)]

539. To the extent Williams disputes the reasonableness of the piped water system, such dispute is targeted at the State’s decision for the system as a remedy, not the actual costs incurred to construct it. [See, e.g., Tr. 3724:25-3725:23 (Woods)] Howard Woods, Williams’ expert on the piped water system, expressed no criticisms for the actual construction costs of the North Pole piped water system. [Id.] Mr. Woods instead opined that the design was “reasonable, given the location.” [Tr. 3725:18-23 (Woods)]

540. The efforts implemented by the State and Flint Hills throughout the construction phase of the piped water system, and the cost-savings obtained to reduce the total cost of the project, further support the reasonableness of the piped water system. [Tr. 1575:24-1584:12 (Hilarides) (describing the design of the piped water system, the bidding process to construct the distribution system, the bidding to connect homes to the system, the efforts to keep the project on schedule, and cost savings through advance planning and risk-sharing efforts)]

541. Flint Hills estimates that it must spend over \$13 million to complete the piped water system project pursuant to the Offsite Sulfolane Potable Water Plan, dated February 2, 2017. [Tr. 1572:18-1573:06, 1586:08-19 (Hilarides)]

542. Flint Hills' past response costs were incurred as a result of DEC directives issued after 2009, when sulfolane was discovered in the groundwater beyond the refinery property. [Tr. 1539:05-17, 1584:17-1585:04 (Hilarides)] Flint Hills' response costs include costs from efforts on the refinery property as well as costs from efforts off the refinery property. [Tr. 1586:23-1588:08 (Hilarides)]

543. Flint Hills presented evidence distinguishing those costs that were offsite from those that were onsite. [Tr. 1586:23-1588:08 (Hilarides)]

544. AFE IDs 4210, 4337, 4405, 4659, 4813, 4836, 4845, 5100, 6266, 6994, and escrow 6994 were identified as costs incurred offsite of the refinery property. [Tr. 1587:01-14 (Hilarides)] The total past offsite response costs, through August 31, 2019, is \$97,388,932. [*Id.*]

545. AFE IDs 0495, 3150, 4025, 4630, 4822, 4823, 5176, 6064, 6065, 7406, and 9805 were identified as response costs that occurred on the refinery property. [Tr. 1587:15-1588:08 (Hilarides)] The total past response costs for onsite efforts for the foregoing TDs is \$40,931,758. [*Id.*]

546. Costs for purely offsite efforts as distinct from those that included onsite efforts were distinguishable due to the nature of the work performed and the method by which Flint Hills developed, organized, and maintained their PEPs and AFEs. [Tr. 1629: 12-20 (Hilarides)] However, if a category possessed costs that were potentially performed onsite at the refinery, that entire category of costs were designated by Flint Hills as an "onsite" cost in

a good faith effort to segregate costs geographically. [Tr. 1633:06-1634:02 (Hilarides) (if there was any uncertainty, Flint Hills erred on the side of categorizing the amounts as “onsite” efforts)]

*o) Settlement Agreement*

547. On February 6, 2017, the State, City of North Pole, and Flint Hills Resources Alaska (“Settling Parties”) entered into a settlement agreement to “dismiss any claims they have currently pending against [each] other . . . and release each other.” Ex. 7985, at 9. In this agreement, the Parties agreed to “work to design and construct the piped water distribution system” and “a Revised On-site Cleanup Plan . . . which includes . . . a discontinuation of the groundwater pump and treat system, a point of compliance for COCs at the refinery property boundary, and a revised on-site sulfolane performance standard (400 ppb).” Ex. 7985, at 3, 12.

548. The Settling Parties agreed that “[i]n the event that the Sulfolane Plume migrates beyond the Project Area . . . , and if the sulfolane level in the private drinking water well outside the Project Area exceeds EPA’s sulfolane tap water Regional Screen Level (“RSL”) (currently 20 ppb), the Parties agree that Impacted landowners shall be provided an alternative water solution of, either bottled water, a treatment system or bulk tank water . . . . The RSL shall be the relevant standard until such time as DEC establishes a groundwater level for sulfolane under its regulations.” Ex. 7985, at 6.

*p) Asset Sale and Purchase Agreement (ASPA)*

549. Williams’ efforts to sell the NPR began in the summer of 2002, when Williams and TWC began to encounter financial and debt-related issues. [Tr. 2460:03-2461:15 (Newcomer)] Williams was unable to progress in

talks with an interested buyer, however, until 2003 when it further engaged Flint Hills in negotiations. [Tr. 2465:20-2466:05 (Newcomer); Tr. 2219:09-10 (Lasater)]

550. Williams initially sought to convey the NPR in a stock deal. Disinterested in a stock acquisition, Flint Hills instead pursued an asset purchase agreement from Williams. [Tr. 2210:04-20 (Lasater); Tr. 2474:09-24, 3999: 15-4000:05 (Newcomer); Ex. 3000]

551. Unlike a stock-acquisition that conveys all assets and all liabilities to an acquiring company, an asset purchase agreement conveys only certain assets and certain liabilities to a buyer, with the seller retaining the remainder. [See, e.g., Tr. 2210:24-2211:05 (Lasater)]

552. Negotiations ensued throughout 2003, during which time the parties agreed to the asset purchase framework and an “our watch/your watch” concept, in which Williams retained responsibility for things caused during Williams’ NPR operations (*i.e.*, “before the Effective Time”) and Flint Hills would have responsibility for things caused during Flint Hills’ operations (*i.e.*, “after the Effective Time”), with limited, express exceptions. [Tr. 2229:12-2230:06 (Lasater); Tr. 2487:14-2488:08 (Newcomer); Ex. 3000]

553. Williams and Flint Hills ultimately executed the ASPA on November 17, 2003, which became effective at 11:59PM on March 31, 2004 (*i.e.*, the “Effective Time”). [Stipulated Fact; Ex. 3000]

554. Reflecting the limited transfer of assets and liabilities intended by the parties, the ASPA stated that Flint Hills assumed only those assets and liabilities that were expressly identified in the ASPA, while Williams retained the remainder:

**§2.3. Liabilities.** Except as otherwise expressly stated in this Agreement, Seller shall retain, and shall pay and discharge, all Liabilities to the extent relating to or arising out of the use, ownership or operation of the Assets prior to the Effective Time. Notwithstanding anything to the contrary contained herein, Buyer shall not assume, or in any way be liable or responsible, for any Liabilities of Seller (whether accrued or contingent or due or not due) which are not expressly stated in this Agreement. . . .

[Ex. 3000 at 19 (internal p. 18)]

555. The ASPA went on to provide a non-exhaustive, exemplary list of Williams’ “retained” liabilities, which included:

- Property losses or damages that arose from or related to Williams’ tenure and operations. §2.3(e)(vi);
- Personal injuries, bodily injury, sickness or disease that arose from or related to Williams’ NPR tenure and operations. §2.3(e)(v); and
- Failures by Seller to comply with any Legal Requirement prior to the effective time. §2.3(e)(viii);
- and other examples.

[Ex. 3000 at 19-20]

556. Under §2.3(e)(xvii), Williams also “retained” responsibility for all “Environmental Liabilities that arose from or related to Williams’ NPR tenure and operations,” *except for* those matters expressly assumed by Flint Hills in the ASPA’s “Disclosure Schedule” (*i.e.*, “Schedule 10.2(a)(iv)”). [Ex. 3000 at 20]

557. “Environmental Liabilities” were broadly defined in the ASPA and were not party-specific. [See Ex. 3000 at 8]

558. As expressed in the ASPA, Williams retained all environmental liability for the contamination it caused, *except* for those matters that were specifically described and expressly assumed by Flint Hills within the ASPA’s Disclosure Schedule. [Ex. 3000 at 19]

559. The Disclosure Schedule identified the particular “Known Environmental Matters” that Flint Hills agreed to assume under the ASPA. [Ex. 3000 at 130]

560. At the time the parties were negotiating the ASPA, a remediation system of recovery wells was operating at the Refinery by regulatory mandate. Those wells operated to restrict the migration and remove known groundwater contamination caused by Williams’ operations at the Refinery. [See, *e.g.*, Tr. 2234:07-14 (Lasater)]

561. In light of the “our watch/your watch” concept to liability, the parties acknowledged that the remediation systems would continue to incur ongoing, required future costs “after the Effective Time” to address the contamination caused by Williams at the NPR. Flint Hills agreed to assume the costs to keep those systems running, along with the costs of cleanup, monitoring and corrective actions with respect to disclosed, and specifically identified areas of contamination under the Disclosure Schedule. [Tr. 2233:25-2234:23 (Lasater); Tr. 2484:20-2485:16 (Newcomer); *see also* Tr. 2235:22-2236:06, 2321:03-2323:07 (Lasater)]

562. Williams concedes that a “our watch/your watch” concept of liability existed between Williams and Flint Hills. “My recollection is that we agreed to a your

watch/our watch principle . . . that had a carve-out, an exception, if you will, for known contamination, which we opened up all our records—. . . all our studies, all of the disclosures we had made to the State of Alaska, and allowed his team to come in and conduct due diligence in and around.” [Wright Depo. 84:15-25.]

563. Mr. Newcomer’s “understanding and what [he thought] it says is that those things that were—that were put onto the disclosure schedule as the known environmental conditions of the—of the facility or the assets at that point in time, any changes in regulations with regard to those things would . . . not be indemnified by Williams.” [Tr. 3945:23-3946:10 (Newcomer)]

564. Consistent with the parties’ intentions, part (A) of the Disclosure Schedule identified the “Known Environmental Matters” to be:

Any and all costs of clean-up, monitoring, corrective actions and compliance with regulations incurred after the Effective Time with respect to contamination specifically identified in the referenced figures, tables and text described below.

[Ex. 3000 at 130; *see also* Tr. 2236:07-2238:02 (Lasater) and Ex. 3154 (exchange of Disclosure Schedule drafts in the weeks preceding the ASPA’s execution)]

565. Part (A) of the Disclosure Schedule further identified the specific, contamination that was “existing [and] known” to be “at” the refinery property, stating:

Buyer [Flint Hills] has agreed to assume full responsibility for all existing, known contamination at the Real Property specifically identified in the referenced figures, tables, and text described below . . .

[Ex. 3000 at 130]<sup>25</sup>

566. The Disclosure Schedule did not identify contamination that was not “at” the refinery property—i.e., outside the Real Property’s boundaries. [Ex. 3000 at 130; *see also* Tr. 4004:18-4005:12 (Newcomer); Tr. 4017:22-4018:04 (Newcomer) (stating that the Disclosure Schedule “doesn’t talk about offsite at all.”); Tr. 2328:11-20 (Lasater) (Disclosure Schedule refers to onsite contamination)]

567. There is no dispute among Williams and Flint Hills that contamination that was offsite as of the “Effective Time” remained Williams’ responsibility. [Tr. 2234:24-2235:09 (Lasater); Tr. 2496:01-2497:20 (Newcomer) (testifying that “those things that Williams caused, if Williams caused prior to the effective time, and it was shown that it was offsite at that time, that we [Williams] would be responsible for that portion of what that was at that time”); *see also* Tr. 2498:12-2500:04 (Newcomer) (testifying that molecules already offsite at the time of sale remained Williams’ responsibility)].

568. Flint Hills thus did not assume liability for Williams’ contamination that was not “at” the NPR as of 11:59 PM on March 31, 2004. Instead, liability for any and all “offsite” contamination at that time remained with Williams. [Tr. 2234:24-2235:19 (Lasater); Tr. 2484:20-2485:16 (Newcomer); Tr. 4004:11-4005:12 (Newcomer)]

569. The Disclosure Schedule also did not identify sulfolane contamination in the soil. [Tr. 4018:14-16 (Newcomer)] But in the court’s view, the schedule consented to

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<sup>25</sup> The Sales Agreement defined “Real Property” to mean “all real property and interests in real property owned by Seller and constituting an Asset or leased by Seller . . . .” [Ex. 3000 at 14]

should be construed to include sulfolane in the soil because it is unlikely that the parties intended to distinguish between soil and groundwater sulfolane contamination. As a practical matter, there could be very little groundwater contamination unless there was also soil contamination.

570. With regard to the specifically identified contamination “known” to be “at” the NPR, the Disclosure Schedule listed particular reports and data tables, acknowledging that:

Although the [tables] described below contain data . . . at discrete locations and times, Buyer [Flint Hills] understands that the data is representative of site conditions and can be used to support reasonable conclusions about present contaminant concentrations at the locations sampled and contaminant contours outside those locations. [Ex. 3000 at 130; *see also* Tr. 2233:19-2234:23 (Lasater) (describing the parties’ intent that the data and tables were meant to identify representative site conditions at the Refinery)]

571. A “Sulfolane Data” table from “Kathleen McCollum [Hook]” was identified within the Disclosure Schedule. Williams provided Flint Hills the sulfolane data table late in contract negotiations, attaching a data table to a September 18, 2003 email from Kathleen McCollum Hook. [Tr. 2225:17-2227:04 (Lasater) and Ex. 2812 (Sulfolane Data Table), Ex. 3668 (same); Tr. 2409:08-12 (Hook) and Tr. 2434:19-20 (Dep. Ex. 21 prev. admitted as Exs. 2812 and 3668); *see also* Tr. 2258:05-15 and Tr. 2283:05-07 (Lasater) (describing the sulfolane table as the only information on sulfolane made available)]

572. The Sulfolane Data Table identified specific monitoring wells on the NPR property with and without sulfolane detections in 2001. [Ex. 2812; Ex. 3000; Tr. 2501:15-2502:04 (Newcomer) (testifying that the table showed “Williams’ understanding of the extent of the sulfolane contamination on the property.”); Tr. 2276:14-21 (Lasater) (stating that the understanding was that data was “representative of site conditions”)]

573. At the time, Williams and Flint Hills both believed the sulfolane groundwater contamination was contained at the NPR property. [See, e.g., Tr. 2416:04-2417:03 (Hook); Tr. 2489:22-2491:23 (Newcomer); Tr. 2223:20-2225:06 (Lasater)] Williams’ and Flint Hills’ belief was premised, in part, upon the recovery well system maintaining “hydraulic control” throughout the *NPR*—i.e., capturing and containing the groundwater contamination known to exist at the NPR. [See, e.g., Tr. 2425:03-2426:10 (Hook); Tr. 2489:22-2491:12 (Newcomer); Tr. 2223:20-2225:06 (Lasater); *see also* Ex. 2137 at 70 (URS Report identifying, *inter alia*, no offsite impacts or potential); Ex. 2065 at 10]

574. Flint Hills was told “that there was sulfolane present in the groundwater [at MW 101 and 101 A] based on testing in the range of anywhere from 4 to 7 parts per million, which would equate to 4,000 to 7,000 parts per billion . . . as of the time they signed the contract.” [Tr. 3967:2-19 (Newcomer)]

575. It was reasonable to conclude at the time of the agreement’s execution that the sulfolane contamination existed beyond the contours of what was disclosed. But both parties reasonably, but mistakenly, believed that no sulfolane contamination extended off the refinery property.

576. Further reflecting the framework of the parties' agreement and their "our watch/your watch" concept to liabilities, Williams and Flint Hills agreed to hold each other harmless and indemnify one another under Article X of the ASPA for damage each incurred from the other's respective liabilities. [Ex. 3000 at 54, Article X]

577. To the extent Flint Hills incurred potential liability or damage from Williams' "retained" liabilities, §10.2(a) of the ASPA contained Williams' obligation to defend and hold Flint Hills harmless, and also reimburse it for damages incurred. [Ex. 3000 at 55] Likewise, to the extent Williams incurred potential liability or damage from Flint Hills' liabilities, §10.2(b) contained Flint Hills' obligations to Williams. [Ex. 3000 at 56]

578. With regard to the matters in dispute, Williams agreed to indemnify and hold Flint Hills harmless under §10.2(a)(iv) for "any Environmental Condition" that Williams caused during its operations, including conditions both "on" the NPR property and "off" the NPR property. [Ex. 3000 at 55-56]

579. For sake of reference, the ASPA broadly defines an "Environmental Condition" as "any condition existing on, at or originating from, each property included within the Assets which constitutes, (a) a Release on, at or from such property of any Hazardous Material or (b) a violation of any applicable Environmental Laws or any Environmental Permits." [Ex. 3000 at 7]<sup>26</sup> An "Environmental Condition" was not defined to be party-specific. [*Id.*]

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<sup>26</sup> "Hazardous Material" is defined in the ASPA to include a panoply of chemicals, materials, and substances, including a "hazardous substance," "toxic chemical," "toxic substance," "contaminant," "chemi-

580. Williams was obligated to hold Flint Hills harmless and indemnify Flint Hills for “onsite” Environmental Conditions that Williams retained responsibility under §10.2(a)(iv)(A) of the ASPA. Flint Hills would be held harmless for:

(A) any Environmental Condition existing prior to the Effective Time, at, on or under or arising, emanating, or flowing from any of the Assets, or from the property underlying the Real Property, whether known or unknown as of the Effective Time, including any loss, property damage, natural resource damage, injury to, or death of any third-party arising therefrom, but excluding (i) any and all costs of cleanup, monitoring, corrective actions and compliance with regulations incurred after the Effective Time with respect to the matters set forth [in the Disclosure Schedule] . . . .

[Ex. 3000 at 55 (emphasis added)]

581. Under the foregoing provision, an exception existed which exempted Williams from indemnifying Flint Hills for the costs of cleanup, monitoring, corrective actions and compliance with regulations related to the specific “onsite” matters set forth in the Disclosure Schedule—*i.e.*, the limited matters that had been transferred to Flint Hills. [*Id.*; *see also* Tr.2233:25-2234:14 (Lasater) (recognizing Flint Hills agreed to assume the ongoing remediation system costs); Tr. 2484:20-2485:24 (Newcomer) (same); *see also* Tr. 2321:24-2323:07 (Lasater) and Ex.

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cal,” and “pollutant,” “as such terms are defined in any of the Environmental Laws, and related substances, [among others.]” [Ex. 3000 at 10]

6064 at 2 (early negotiations reflecting assumption of on-going costs to keep systems running)]

582. Whereas Williams' indemnity obligations to Flint Hills for "onsite" conditions existed in sub-clause (A) of §10.2(a)(iv), Williams' obligation to Flint Hills for "offsite" Environmental Conditions is expressed in sub-clause (B) of that section. [Ex. 3000 at 56; *see also* Mar. 12, 2018 Order at \*7 (distinguishing between the contractual provisions addressing indemnity for onsite conditions and the indemnity provision for offsite conditions)]

583. Within sub-clause (B), Williams broadly agreed to indemnify and hold Flint Hills harmless for Environmental Conditions not located on the NPR as of March 31, 2004:

(B) loss, property damage, natural resource damage, injury to, or death of any third-party arising out of or related to any Environmental Condition to the extent (i) not located on the Assets or the property underlying the Real Property and (ii) existing prior to the Effective Time.

[Ex. 3000 at 56 (emphasis added)]

584. No exception or exclusion existed in sub-clause (B) as it did in sub-clause (A), because no "offsite" Environmental Condition was ever transferred to Flint Hills. [Ex. 3000 at 56; *see* Tr. 2234:24-2235:19 (Lasater); Tr. 2496:10-2497:20 (Newcomer)]

585. Further reflecting the joint "my watch/your watch" concept for liabilities, the parties' cross-indemnity provisions included language clarifying their obligations to be limited to *their own* causes and contributions of Environmental Conditions, excluding reimbursement and exempting each from holding the other harmless for contributions or conditions caused by the other's conduct.

For example, the preamble for §10.2(a)(iv) exempted Williams' from holding Flint Hills harmless for "Damages [that] are caused or contributed to by [Flint Hills'] operations, actions or omissions *after* the Effective Time," whereas the preamble to §10.2(b)(v) exempted Flint Hills from holding Williams harmless for "Damages [that] are caused or contributed to by [Williams'] operations, actions or omissions *before* the Effective Time[.]" [Ex. 3000 at 55, 57 (emphasis added)]

586. In sum, the language of the ASPA reflects Williams' and Flint Hills' joint intent that each would remain responsible for those liabilities caused or created during their respective operational tenures, with two exceptions: (1) a limited exception for those "Environmental Matters" set forth in the Disclosure Schedule (Schedule 10.2(a)(iv)), and (2) damages caused or contributed to by the other.

587. Flint Hills concedes that it "likely contributed some sulfolane during the years we operated the extraction unit, yes." [Tr. 1750: 18-20 (Hilarides)]

588. In the event one party incurred damage from the other's liability, the ASPA further required the parties to follow a specified procedure before one party could be reimbursed from the other. [Ex. 3000 at 57, §10.3] That procedure included notice provisions, provisions regarding the treatment of insurance proceeds, as well as specified obligation thresholds and limitations. [Id. at 57-61]

589. Section 10.3(a)(i), for example, required a party seeking indemnity to provide written notice "with reasonable promptness" to the other party regarding the claim. [Ex. 3000 at 57-58]

590. Under §10.3(b), any proceeds received from a joint environmental insurance policy would reduce a party's "Damages." Because one party's "Damages" were

required to exceed certain minimum threshold limits before they could be “indemnifiable” under §10.4(a), the net effect of receiving insurance proceeds served to delay the parties’ reimbursement obligations to one another. [Ex. 3000 at 59 (§10.3(b)); *id.* at 61, (§10.4(a)); *see also* Tr. 2291:09-2292:16 (Lasater) (stating that receipt of insurance proceeds delayed parties’ indemnity obligations); *see also* Mar. 12, 2018 Order]

591. The agreement’s provisions further accounted for one party’s failure to hold the other harmless and provide any requisite reimbursement. Under §10.3(a)(ii) and (iii), the failure of one party to indemnify the other for third party claims, gave the party seeking indemnification the “right to undertake the defense, compromise or settlement of such Third Party Claim on behalf of, at the expense of and for the account and risk of the [Indemnitor]..” [Ex. 3000 at SR-59]

592. Under §10.4(b), the ASPA capped the amount of “indemnifiable Damages” the parties were obligated to pay. Section 10.4(b) states:

Notwithstanding anything to the contrary contained in this Agreement, and except with respect to claims for breaches of the covenants and obligations in Articles II, III, VI, or IX, the maximum amount of indemnifiable Damages which may be recovered by any [Flint Hills] from [Williams] or Williams Guarantor and by [Williams] from [Flint Hills] arising out of, resulting from or incident to the matters enumerated in Section 10.2( a) or Section 10.2(b) shall be the Environmental Cap with respect to any and all Environmental Claims ....

[Ex. 3000 at 61]

593. The “Environmental Cap” was \$32,000,000 and defined to mean:

[T]he maximum amount of indemnifiable Damages which may be recovered by [Flint Hills] from [Williams] or Williams Guarantor and by [Williams] from [Flint Hills] arising out of, resulting from or incident to the matters enumerated in Section 10.2(a) or Section 10.2(b) with respect to any and all Environmental Claims.

[Ex. 3000 at 6]

594. The Environmental Cap was further defined to be an aggregate limit of payments between the parties for damages caused by Environmental Claims. [Ex. 3000 at 6-7]

595. Except for claims seeking “equitable relief,” “fraud,” or remedies under the TWC Performance “Guaranty,” the parties agreed under §10.5 that the provisions of Article X in the ASPA would be the parties’ exclusive remedy against each other, stating:

*Except for (a) any equitable relief, including injunctive relief or specific performance to which any Party hereto or Williams Guarantor may be entitled, (b) remedies available under the Williams Guaranty, and (c) fraud, the indemnification provisions of this Article X shall be the sole and exclusive remedy of each Party . . . .*

[Ex. 3000 at 61 (emphasis added)]

596. Under §11.7 of the ASPA, “[a]ny term or provision . . . that is invalid or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of

such invalidity or unenforceability without rendering invalid or unenforceable the remaining terms and provisions of this Agreement[.]” [Ex. 3000 at 63]

***q) Performance Guaranty***

597. TWC, the parent company of Williams, provided Flint Hills a separate “Performance Guaranty” in conjunction with Williams’ obligations under the ASPA, a draft of which was attached to the ASPA as Exhibit T. [Ex. 2807 and Tr. 2240: 16-2241 :03 (Lasater); *see also* Ex. 3000 at 309 (“Exhibit T”); Tr. 2241:22-2242:17 (Lasater) (intent of parental guarantee was to ensure there was adequate financial wherewithal to live up to the terms of the agreement)]

598. TWC’s performance guaranty provided an unconditional guarantee that Williams would promptly “perform” all its obligations under the ASPA. [Ex. 2807 at 1, §1]

599. The performance guaranty also guaranteed TWC would “pay on demand, any and all reasonable and necessary expenses . . . which may be paid or incurred by [Flint Hills]” in enforcing any of its rights under the ASPA or TWC Guaranty. [Ex. 2807 at 1, §2] This guaranty included, “without limitation,” reasonable attorneys’ fees. [*Id.*]

600. TWC further recognized its Guaranty was construed as a “present, continuing, absolute, unconditional, and irrevocable Guaranty of performance and payment, without regard to (a) the validity, regularity, or enforceability of the [ASPA], (b) any defense, set-off or counter-claim . . . which may at any time be available to or be asserted by Seller against Buyer, or (c) any other circumstance whatsoever . . . which constitutes . . . an equitable or legal discharge of Seller[.]” [Ex. 2807 at 2, §4]

601. TWC's performance guaranty further permitted Flint Hills to exercise "any right or remedy . . . under this Guaranty or by law (such rights and remedies being cumulative and not alternative or exclusive)" against TWC, and without first exhausting its rights against Williams or any other person or entity. [Ex. 2807 at 2, §4]

602. Flint Hills sent a letter to Williams and TWC on February 4, 2010, providing notice of the offsite contamination and seeking to be held harmless under the ASPA and performance under the Performance Guaranty. [Tr. 1511:14-23 (Hilarides); Ex. 6555]

603. Sulfolane contamination meets the definition of an Environmental Condition under the ASPA between Williams and Flint Hills. [(See Apr. 10, 2012 Order at 5, Flint Hills v. Williams Alaska Petroleum, Inc. et al., Case No. 4FA-10-01123CI ("That the sulfolane plume is an 'environmental condition' under the ASPA is established."))]

604. The February 2010 notice was provided to Williams by Flint Hills with reasonable promptness after the offsite contamination was discovered.

605. Neither Williams nor TWC held Flint Hills harmless or provided indemnity in response to the 2010 notice. [Tr. 1512:10-19 (Hilarides)]

**r) Insurance Policy**

606. A liability insurance policy was issued when Flint Hills and Williams entered the ASPA in 2004. [See Tr. 1588:17-1589:01 (Hilarides); Tr. 4020:25-4021:03 (Newcomer)]

607. Both Flint Hills and Williams were named insureds under the policy, which had a \$50 million policy limit. [See, e.g., Tr. 1591:12-14 (Hilarides); Tr. 4020:25-4021:03 (Newcomer)]

608. Since 2009, Flint Hills has received \$44,389,236.06 in proceeds under the policy to address the contamination at issue. [Tr. 1591:09-11 (Hilarides)] Williams received the remainder of the proceeds up to the policy limits. [See, e.g., Tr. 1591:15-22 (Hilarides)]

609. When the insurance company issued checks to Flint Hills under the policy, the payments issued to Flint Hills were rounded-number amounts with no additional detail or information from the insurance company. [Tr. 1589:16-22, 1590:10-22, 1648:07-13 (Hilarides) (“because we received it in such an odd way, it wasn’t possible for us to match it to anything.”); Ex. 6558]

610. The insurance proceeds Williams received under the policy were not devoted to remediation efforts, but were used to pay Williams’ litigation fees and expenses. [Tr. 4023:02-12 (Newcomer)]

611. Williams’ personnel stated that Flint Hills has the right, as a named insured, on the policy to pursue insurance reimbursement for onsite work covered by the policy. [Tr. 4022:15-20 (Newcomer)]

## CONCLUSIONS OF LAW

### **Williams is liable under AS 46.03.822 for releases of oil and hazardous substances.**

612. Under AS 46.03.822(a) the owner or the operator of a facility that releases oil or hazardous substances is “strictly liable, jointly and severally, for damages, for the costs of response, containment, removal, or remedial action incurred by the state . . . resulting from the unpermitted release of a hazardous substance.” The rationale is that the parties responsible for the releases, and not the

public, should pay for cleanup or other remedial costs associated with hazardous substance spills.<sup>27</sup> This strict liability statute includes liability for releases of oil.<sup>28</sup>

613. Strict liability under AS 46.03.822 is predicated on status, not fault. The categories of parties that are subject to strict joint and several liability—solely by their status—are set out in AS 46.03.822(a)(1)-(5). As both an operator of the facility and owner or controller of the hazardous substances released, Williams falls within AS 46.03.822(a)(1) and (2).

614. Williams owned and controlled oil, petroleum products containing sulfolane, oil waste containing sulfolane, oil refuse or waste byproducts containing sulfolane, oily wastewater containing sulfolane, pure sulfolane, and PFAS when they were released without a permit.

615. Williams was also the owner and operator of the NPR when oil, petroleum products containing sulfolane, oil waste containing sulfolane, oil refuse or waste byproducts containing sulfolane, oily wastewater containing sulfolane, pure sulfolane, and PFAS were released without a permit. The NPR is a “facility.”<sup>29</sup>

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<sup>27</sup> *Kodiak Island Borough v. Exxon Corp.*, 991 P.2d 757, 762 (Alaska 1999) citing 1989 House Journal 46-49 (Letter from Steve Cowper, Governor, to Sam Cotton, Speaker of the House, January 9, 1989).

<sup>28</sup> AS 46.03.826(5)(B), (7).

<sup>29</sup> AS 46.03.826(3)(A) (“facility” includes “a site or area at which a hazardous substance has been deposited, stored, disposed of, placed, or otherwise located.”); *see also* Decision & Order Denying the Williams Parties’ Mot. for Summ. J. 8 (Mar. 13, 2018) (“The court finds that the NPR meets the definition of facility as both an ‘onshore structure’ and an ‘enterprise.’”)

**a. Williams released hazardous substances.**

616. The court concludes that sulfolane, PFAS, as well as petroleum products and oily wastewater containing those substances, are hazardous substances within the meaning of AS 46.03.826(5).

617. For the purpose of AS 46.03.822, a hazardous substance is defined as:

- (A) an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found;
- (B) oil; or
- (C) a substance defined as a hazardous substance under 42 U.S.C.9601(14).<sup>30</sup>

**b. Williams admitted that sulfolane is a hazardous substance.**

618. Although it now argues that sulfolane is not a hazardous substance, Williams previously admitted sulfolane's status as a hazardous substance in its answer, in a stipulation, in its conduct as a refinery operator, and via witness testimony.

619. Williams admitted sulfolane is a hazardous substance in its first answer to the State's complaint. The State pleaded at paragraph 54 of its complaint, "Sulfolane is a hazardous substance within the meaning of AS 46.03.745, AS 46.09.900, AS 46.03.826, and 18 AAC

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<sup>30</sup> AS 46.03.826(5).

75.990.”<sup>31</sup> In response Williams pleaded: “WAPI admits the allegations contained in ¶ 54 of the State’s Complaint, but WAPI denies that ADEC considered sulfolane to be a hazardous substance under any statute or regulation at any time during WAPI’s ownership and operation of the North Pole Refinery even after WAPI disclosed to ADEC that sulfolane was in the groundwater underlying the property that the State owned.”<sup>32</sup> Williams later amended its answer to assert that sulfolane’s hazardous substance status is a “legal conclusion to which no response is required.”<sup>33</sup>

620. Williams’ first answer constitutes an evidentiary admission that sulfolane is a hazardous substance, notwithstanding Williams’ later failure to admit or deny the State’s pleading.<sup>34</sup>

621. Williams admitted in the stipulation of September 9, 2019 that “Flint Hills is a liable landowner and operator under AS 46.03.822(a) for sulfolane releases.”<sup>35</sup>

622. The stipulation is also an evidentiary admission. Flint Hills can only be liable under .822 for releasing sulfolane, if sulfolane is a hazardous substance. If sulfolane is a hazardous substance when released by Flint Hills, it is a hazardous substance when released by Williams.

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<sup>31</sup> State’s Compl. ¶ 54, Mar. 6, 2014.

<sup>32</sup> Williams’ Ans. to the State’s Compl. ¶ 54, Apr. 30, 2014.

<sup>33</sup> Williams’ Am. Ans. to the State’s Compl. ¶ 54, Feb. 29, 2016.

<sup>34</sup> *Brigman v. State*, 64 P.3d 152, 166-67 (Alaska App. 2003) (“Courts often admit superseded or withdrawn pleadings in civil and criminal cases on the theory that they constitute evidentiary admissions.”).

<sup>35</sup> See Finding of Fact 380.

623. During its operations at the refinery, Williams reported spills of sulfolane as hazardous substance spills. [E.g., Ex. 39] And Williams reported its inventory of sulfolane as a “hazardous material.” [E.g., Ex. 71] David Guinn, Williams’ former environmental engineer at the refinery, whose responsibilities included hazardous waste management and spill response and reporting, and who had previously worked for DEC, testified that if there is a spill of naphtha containing sulfolane, “the naphtha portion of this would have been treated as an oil spill. The sulfolane portion would have been treated as a hazardous substance spill.” [Tr. 1828:22-1831:21; 1922:13-16] When asked if when he worked for Williams sulfolane was considered a regulated contaminant, Guinn testified that sulfolane was a hazardous substance, so “if it was spilled, it had to be reported . . . .” [Tr. 1934:20-1935:14]

**c. DEC determined that sulfolane is a hazardous substance.**

624. Whether a chemical meets the definition of hazardous substance in AS 46.03.826(5)(A) involves the application of questions of danger to public health and welfare, implicating technical subject matter for which DEC’s determinations should be accorded deference.<sup>36</sup> Under a differential standard, DEC’s determination must be reasonable, supported by the record, and not an abuse of discretion.<sup>37</sup>

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<sup>36</sup> See *Native Vill. of Elim v. State*, 990 P.2d 1, 11 (Alaska 1999) (holding Board of Fisheries’ identification of fish stocks accorded “considerable deference,” noting issues “clouded by scientific uncertainty”).

<sup>37</sup> *Justice v. RMH Aero Logging, Inc.*, 42 P.3d 549, 552 (Alaska 2002).

625. Former DEC Commissioner Hartig testified to his determination to access the oil and hazardous substance release response account.<sup>38</sup> [Tr. 186:4-206:15; Ex. 148A-E] In accessing the response account, the commissioner was making a determination to use funds:

to investigate and evaluate the release or threatened release of oil or a hazardous substance, and contain, clean up, and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment.<sup>39</sup>

That response account access determination includes within it, the agency's conclusions both that sulfolane is a hazardous substance *and* that the release at issue is posing an imminent and substantial threat to public health, welfare, or the environment.

626. The reasonableness of DEC's determination is supported by the fact that DEC is not the only government entity to have identified health effects associated with sulfolane. The EPA has issued a provisional peer-reviewed toxicity value for sulfolane [Ex. 159]; the United States Department of Health and Human Services, Agency for Toxic Substances and Disease Registry has issued health advisory levels for sulfolane [Ex. 143], the International Organization for Economic Cooperation and Development has identified that sulfolane "possesses properties indicating a hazard for human health (reproductive and developmental toxicity)" [Ex. 234]; and the

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<sup>38</sup> AS 46.08.010(a)(2).

<sup>39</sup> AS 46.08.040(a)(1)(A).

National Toxicology Program has taken up long-term toxicity studies on sulfolane, the results of which EPA has recommended DEC await before setting a cleanup level for sulfolane. [Ex.192]

627. DEC's determination that sulfolane is a hazardous substance is reasonable, supported by the record, and not an abuse of discretion. It is entitled to judicial deference and it is therefore controlling in this case.

**d. Sulfolane and oil wastes containing sulfolane are hazardous substances.**

628. Hazardous substances include compounds, which when they enter the environment, present an imminent and substantial danger to the public health. The court construes this definition as requiring "a reasonable medical concern about the public health where, given the modifier 'substantial,' the nature of the harm giving rise to concern is serious and, given the modifier 'imminent,' the threat of harm must be present, although the potential impacts may never develop or may take time to develop."<sup>40</sup>

629. Williams has argued for a different standard—one that requires a showing of a "near present" danger based on today's concentrations of Williams' sulfolane in the groundwater (after 34 years of failing to prevent its spread) and that "sets a higher bar for establishing liability than the provisions related to oil and CERCLA hazardous substances."<sup>41</sup> Williams' construction finds no support in the law.

630. Alaska Statute 46.03.822 treats liability for hazardous substance releases the same regardless of whether

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<sup>40</sup> Mem. from Chambers 5, Sept. 26, 2019.

<sup>41</sup> Williams' Mot. for Dir. Verdict at 3-5.

the substance is hazardous under AS 46.03.826(5)(A) (public health and welfare), (B) (oil), or (C) (CERCLA). It is not logical to set a “higher bar for establishing liability” for substances that fall under one prong of the hazardous substance definition. In *Berg v. Popham*, while discussing arranger liability, the Alaska Supreme Court noted that the “difference between Alaska and federal law reflects our legislature’s intent to *expand* liability beyond CERCLA’s standards.”<sup>42</sup> The same can be said for AS 46.03.826(5)(A) and (B)—in expanding hazardous substances to include oil and chemicals that are not listed in CERCLA, the legislature’s intent could not have been—as Williams argues—to make the scope of liability more narrow than CERCLA; rather, capturing broader categories of chemicals in the definition evinces an intent to impose broader liability.

631. Second, there is no support in the law for Williams’ argument that whether a substance is hazardous should turn on its concentrations in the environment after decades of dilution.<sup>43</sup> Nor is there legal support for Williams’ position that sulfolane is not a hazardous substance because “sulfolane has not been proven to cause cancer” or because, Williams asserts, “[t]here is no proof at all that anyone has drank sulfolane at any dangerous level.”<sup>44</sup>

632. AS 46.03.826(5)(A) looks to the compound “when it enters” the environment; that is, the compound as it was released. Nothing in AS 46.03.826(5) indicates that the definition turns on post-release concentrations or on real-

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<sup>42</sup> *Berg v. Popham*, 113 P.3d 604, 609 (Alaska 2005) (emphasis added).

<sup>43</sup> Williams’ Mot. for Dir. Verdict at 4-5.

<sup>44</sup> *Id.* at 6-7.

ized effects to the public. A responsible party is not excused from liability for a hazardous substance release because no member of the public got sick as a result of the release or ingested clearly dangerous levels of the substance. Moreover, AS 46.03.822(a) imposes liability for “a substantial threat of an unpermitted release.” And AS 46.03.745 prohibits releases of hazardous substances in the first instance. Williams’ construction—focusing on concentrations in groundwater decades after a release—would render both the prohibition on releases and liability for threatened releases nullities.

633. Finally, throughout trial, Williams has cited the definition of “contaminated groundwater” under 18 AAC 75.990(22) (“groundwater containing a concentration of a hazardous substance that exceeds the applicable cleanup level determined under the site cleanup rules”), and Williams has argued that this definition means whether a chemical is a hazardous substance will turn on its post-release concentrations.<sup>45</sup> But the phrase “contaminated groundwater” appears only once in 18 AAC chapter 75 at the introductory language of the groundwater cleanup standards in 18 AAC 75.345(b): “Contaminated groundwater must meet (1) the cleanup levels in Table C . . . (2) an approved cleanup level . . . (3) an alternative cleanup level for a hazardous substance not listed under (1) of this subsection proposed by the responsible party and approved by the department . . . (4) an alternative cleanup level . . . set by the department . . .” Thus, the definition of “contaminated groundwater” in 18 AAC 75 serves one function: to relay that groundwater exceeding a cleanup level must be cleaned to meet a cleanup level. The defined

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<sup>45</sup> *Id.* at 4.

term serves no other purpose in the regulations and cannot be read as a limitation on the statutory definition of hazardous substance or a limitation on liability.

634. The facts at trial support finding that sulfolane presents a reasonable medical concern, the nature of which is serious, and the threat of which is present when sulfolane is released in the environment. Dr. Wu testified that for the purpose of hazard identification, risk assessors look to animal studies. [Tr. 709:25-710:1-4] The federal Agency for Toxic Substances and Disease Registry likewise looked at animal studies—including acute, lethal studies—in deriving screening levels for sulfolane. [Tr. 758-769 (Wu); Ex. 143]

635. Dr. Wu testified to Andersen's 1977 study of volatilized sulfolane, which revealed convulsions and vomiting in squirrel monkeys and dogs, along with decreased white blood cells in guinea pigs and rats. [Tr. 722:3-14] Dogs exposed to sulfolane became unusually aggressive. [Tr. 722: 19-21 (Wu)] Squirrel monkeys were the most susceptible to sulfolane, leading the researcher to raise concerns for humans. [Tr. 724:6-24 (Wu)]

636. Dr. Wu also testified to studies by Zhu that found decreased white blood cell counts in rats and guinea pigs, as well as impacts on the blood, kidney, and liver systems. [Tr. 728:1-11 Zhu also observed increased fetal absorption and deformation in fetuses. [Tr. 728:1-11 (Wu)]

637. Studies by the Japanese government likewise observed changes to blood chemistry and liver and kidney function. [Tr. 738-739 (Wu)] They also observed reproductive impacts, fewer estrus cases, pups dying in the lactation period, and increased stillbirths. [Tr. 740-74 I (Wu)]

638. Finally, the Huntingdon Life Sciences study found rats experienced a decrease in white blood cell

counts when exposed to sulfolane through drinking water. [Tr. 747 (Wu)]

639. Notably, Williams itself identified toxic effects of sulfolane exposure. Williams' own Emergency Medical Care Protocol identified a "Life Threat" including "[c]ardiac arrhythmias, respiratory failure, pulmonary edema, paralysis, brain damage, liver damage, lung tissue and stomach tissue damage." [Ex. 95] Williams also identified a host of effects to the cardiovascular, respiratory, central nervous, and gastrointestinal systems. [Ex. 95]

640. These medical concerns are reasonable and serious. At a minimum, sulfolane exposure can reduce white blood cell counts; at a maximum sulfolane exposure can cause death. [See Tr. 808:5-7 (Wu)] Sulfolane's toxicity is on par with, or even greater than, about half of the chemicals that DEC has already identified as hazardous substances. Dr. Wu testified that even using the most conservative estimate of sulfolane's toxicity (a reference dose of .01 mg/kg-day rather than the EPA's PPRTV of .001 mg/kg-day), sulfolane is more toxic than about half of the hazardous substances already identified in DEC's default groundwater cleanup level table. [Tr. 775:22-781:25; *see* Ex. 8107 at 47-51]

641. The threat of medical concerns is also present when sulfolane is released into the environment. As Dr. Wu testified, and as the properties of the plume itself verify, when sulfolane is released it is mobile in the groundwater and will travel to drinking water wells thereby completing an exposure pathway to the public. [Tr. 809:22-23 (Wu)]

642. Because sulfolane exposure presents reasonable and serious medical concerns evidenced by animal stud-

ies—and because those concerns are present when sulfolane is released into the environment—evinced by sulfolane's propensity to travel in the groundwater and into drinking water sources—sulfolane is a hazardous substance under AS 46.03.826(5)(A).

643. Moreover, to the extent that post-release concentrations in the environment are relevant at all, the facts at trial have shown that Williams' releases included pure sulfolane [Ex. 39 at 4, 10, 12, 18, 26, 28, 29, 31, 32, 34]; Williams' leaking oily sums included sulfolane readings above the instrument's scale and at 5,384,000 ppb [Tr. 1092:11-12 (Davis)]; and detections in refinery products *in the groundwater* at the refinery in 1996 were as high as 2,700,000 ppb. [Tr. 1121:8-1123:21 (Davis)] Such levels far exceed all of the current regulatory standards for sulfolane as shown in the record. *See supra*, paragraph 88. While such standards are not necessarily dispositive, they have been recognized in a RCRA context as being “relevant and useful in determining the existence of an imminent and substantial endangerment.”<sup>46</sup> By analogy, they have the same evidentiary use in this case. In the court's view they indicate persuasively that sulfolane in the concentrations released when it entered into the subsurface land and water of the State presented an imminent and substantial danger to the public health and welfare.

**e. Williams' releases threatened and harmed public welfare.**

644. Under AS 46.03.826(5)(A), impacts to “public . . . welfare” include but are not limited to impacts to “fish

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<sup>46</sup> *Interfaith Community Org. v. Honeywell Intern., Inc.*, 399 F.3d 248, 261 n.6 (3rd Cir. 2005).

animals, vegetation, or any part of the natural habitat in which they are found.”

645. Former Commissioner Hartig testified that public welfare includes the people’s “overall health and welfare,” their “economic well-being, opportunity to have a living” and “subsistence.” [Tr. 220:18-221:22]

646. Former North Pole Mayor Ward testified to the negative impact sulfolane contamination has had on the North Pole community, including the people being very upset and concerned about how much sulfolane they have been unwittingly exposed to. [Tr. 448:3-22]

647. Dr. Ted Wu testified to studies demonstrating the negative impacts of sulfolane exposure on plants, earthworms, aquatic invertebrates, and fish-including impacts on zebrafish at environmentally relevant concentrations. [Tr. 742:18-755:19]

648. Dr. Mary Beth Leigh testified that her experiments revealed sulfolane’s toxicity to *vibrio fischeri*, a bioluminescent bacterium commonly used as a screening tool for toxicity to organisms. [Tr. 612:8-615:9]

649. The evidence supports concluding that sulfolane presents an imminent and substantial danger to public welfare.

**f. Williams’ releases were “Oil” under AS 46.03.826(5)(B).**

650. Williams’ releases of oil and petroleum containing sulfolane, as well as oily wastes and wastewater containing sulfolane also meet the definition of hazardous substance under AS 46.03.826(5)(B). The court concludes that oil containing sulfolane, petroleum products containing sulfolane, oil waste or oily wastewater containing sulfolane are “oil” within the meaning of AS 46.03.826(5)(B),

AS 46.03.740, AS 46.03.826(7), AS 46.04.900(12), AS 46.08.900(7), and 18 AAC 75.990(72).

651. AS 46.03.740 prohibits the discharge of petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or a residuary product of petroleum, into or upon the waters or land of the state.

652. Under AS 46.03.826(7) “oil” is defined for purposes of AS 46.03.822 to mean:

A derivative of a liquid hydrocarbon and includes crude oil, lubricating oil, sludge, oil refuse or another petroleum-related product or by-product.

653. Apart from AS 46.03.822, the state’s costs for Williams’ discharges are recoverable under AS 46.04.010, AS 46.03.760, AS 46.08.070 and 18 AAC 75.910. AS 46.04.900(12), AS 46.08.900(7), and 18 AAC 75.990(72) define “oil” to mean:

Oil of any kind and in any form, whether crude, refined, or a petroleum byproduct, including petroleum, fuel oil, gasoline, lubricating oils, oily sludge, oil refuse, oil mixed with other wastes, crude oils, liquefied natural gas, propane, butane, or other liquid hydrocarbons regardless of specific gravity.

654. The gasoline Williams produced, and at times spilled at the refinery, contained sulfolane. Oil or petroleum products in this context includes all of its constituents. Williams’ oil wastes mixed with sulfolane constitute “oil mixed with other wastes.”

655. Additionally, the sulfolane wastewater that Williams routinely drained into its leaking sumps and lagoons

was a “petroleum-related . . . byproduct.”<sup>47</sup> Webster’s Dictionary defines “byproduct” as “something produced in a usually industrial or biological process in addition to the principal product.”<sup>48</sup> As an example of use of byproduct Webster’s states “a chemical *by-product* of the oil-refining process.”<sup>49</sup> Williams’ sulfolane-laden oily wastewater was not the principal product of its refining operations, but a byproduct. Sulfolane had no use other than the refining of petroleum. As such, Williams’ sulfolane was a petroleum-related byproduct and, for the purpose of AS 46.03.826(5)(B), it was oil.

**g. RCRA Hazardous Waste under AS 46.03.826 (5)(C)**

656. Williams’ waste sulfolane also meets the definition in AS 46.03.826(5)(C), which includes “a substance defined as a hazardous substance under 42 U.S.C. 9601(14).” That statute, a section of CERCLA, includes “any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress).”<sup>50</sup>

657. The EPA has identified sulfolane as a hazardous waste in a RCRA § 3008(h) order relating to a Chevron refinery in Puerto Rico. [Tr. 2636:20-23, 2637:21-2641:20 (Fish); Ex. 216] By its terms, RCRA § 3008(h) allows the EPA to “issue an order requiring corrective action or such

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<sup>47</sup> AS 46.03.826(7).

<sup>48</sup> Byproduct, Webster’s Online Dictionary, [webster.com/dictionary/by-product](http://webster.com/dictionary/by-product) (last visited Oct. 27, 2019).

<sup>49</sup> *Id.*

<sup>50</sup> 42 U.S.C. § 9601(14)(C).

other response measure . . . to protect human health or the environment" when "there is or has been a release of a hazardous waste into the environment."<sup>51</sup> By its characteristics identified by EPA's determination, sulfolane is a RCRA hazardous waste and thus a hazardous substance under CERCLA and AS 46.03.826(5)(C).

**h. Williams' hazardous substance releases were unpermitted.**

658. For liability to attach under AS 46.03.822(a), a release or threatened release of a hazardous substance must be unpermitted. The evidence presented at trial shows that Williams' spills of petroleum containing sulfolane, oily waste containing sulfolane, releases of pure sulfolane were unpermitted, as were the leaks from its sumps and lagoon.

659. Williams' releases of petroleum products and PFAS were likewise unpermitted.

660. As the court held on summary judgment, "unpermitted" means "without 'the authority of a valid permit issued by the department or by the Environmental Protection Agency.'"<sup>52</sup> The court explained that "[b]ecause WAPI has conceded that it did not have a permit issued by the ADEC or EPA to release sulfolane, its release of that substance was unpermitted."<sup>53</sup>

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<sup>51</sup> 42 U.S.C. § 6928(h)(1).

<sup>52</sup> Decision & Order Denying WAPI's Mot. for Summ. J. on the State's Cls.; Denying the State and City's Mot. for Partial Summ. J.; & Denying the State's Mot. For Past Resp. Costs [Mots. 43, 55], at 12, Mar 13, 2018.

<sup>53</sup> Decision & Order Denying WAPI's Mot. for Summ. J. on the State's Cls.; Denying the State and City's Mot. for Partial Summ. J.;

661. Williams' own testimony confirms that understanding of an "unpermitted" release. Williams testified (through its deposition of Civil Rule 30(b)(6) representative Randy Newcomer) that "unpermitted release" means "something that . . . gets into the environment . . . that is not done in . . . a way that's intended. It's not in accordance with the permits of the . . . facility, whether it be air permit or water permit, a discharge permit. So, if something is . . . released outside of the bounds of . . . a permit, in my mind that would be an unpermitted release." [Tr. 2363:17-2364:5 (Newcomer)]

662. Williams has argued that its releases were not "unpermitted" because "sulfolane in the groundwater was not regulated or otherwise prohibited or 'unpermitted' when Williams operated the Refinery"; "the State created a written determination that the levels of sulfolane that Williams reported to the State were permitted or allowed"; and "there is, as a matter of law, a certain amount of a hazardous substance that the law expressly permits to exist in groundwater."<sup>54</sup> These assertions are belied by both the law and the facts.

663. Aside from "controlled releases" that are "the subject of an agreement with the commissioner under AS 46.09.010(b)" (which is not applicable to any release from the refinery), the law flatly prohibits releases of hazardous substances: "a person may not cause or permit the release of a hazardous substance as defined in AS 46.09.900."<sup>55</sup>

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& Denying the State's Mot. For Past Resp. Costs [Mots. 43, 55], at 12, Mar. 13, 2018.

<sup>54</sup> Williams' Mot. for Directed Verdict at 7-8.

<sup>55</sup> AS 46.03.745.

664. The law also prohibits oil discharges: “A person may not discharge, cause to be discharged, or permit the discharge of petroleum . . . or a residuary product of petroleum . . .”<sup>56</sup>

665. The law prohibits pollution: “A person may not pollute or add to the pollution of the air, land, subsurface land, or water of the state.”<sup>57</sup>

666. Former DEC Commissioner Larry Hartig testified that spills and leaks such as those from the refinery could not have been permitted in the first place:

I don't see a way that if someone applied for a permit for those kinds of releases you described, particularly if they're untreated and particularly in an uncontrolled situation where you don't know whether it's being discharged, who might be impacted downstream, how it might affect concentration in groundwater and other waters of the state downstream and the timing of those and the concentration amount of the plumes being released, how that could have been permitted . . . I can't think of a situation of that ever happening, in my experience. [Tr. 223:21-224:9]

Commissioner Hartig went on to testify that DEC never gave a permit to a refinery to release oily wastewater from leaking sumps or leaking lagoons. [Tr. 224:10-17] Moreover, Williams' own notifications to DEC

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<sup>56</sup> AS 46.03.740.

<sup>57</sup> AS 46.03.710.

of oil and hazardous substance releases were for unpermitted releases of sulfolane and product.<sup>58</sup> [See, e.g., Ex. 39]

667. State law requires a person in charge of a facility or operation to notify the Department of a discharge or release of a hazardous substance as soon as the person has knowledge of it.<sup>59</sup> Reporting is not required for a discharge or release that is authorized by a valid permit issued by the Department.<sup>60</sup> No evidence was presented that Williams held a valid permit issued by the Department for the releases that resulted in the sulfolane groundwater contamination. Williams did not have a valid permit to discharge or release oil, petroleum containing sulfolane, oil waste containing sulfolane, pure sulfolane, or PFAS onto the land and into the subsurface groundwater.

668. The court concludes that Williams' releases of sulfolane were unpermitted, as were its spills and leaks of oily wastes and petroleum products containing sulfolane, petroleum products, and PFAS.

669. The evidence does not support Williams' assertion "that the State created a written determination that the levels of sulfolane that Williams reported to the State were permitted or allowed."<sup>61</sup> The court has previously

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<sup>58</sup> See AS 46.09.010(a) (requiring the reporting of releases of hazardous substances); 18 AAC 75.300(g) ("Reporting under this section is not required for a discharge or release (1) that is authorized by a valid permit issued by the department; or (2) that is excluded from the definition of 'release' under AS 46.03.826(9).").

<sup>59</sup> 18 AAC 75.300(a); AS 46.09.010.

<sup>60</sup> 18 AAC 75.300(g).

<sup>61</sup> Williams' Mot. for Directed Verdict at 7; *see also* Williams' Pre-trial Memo. for Oct. 2019 Trial 23-24 (Aug. 12, 2019).

ruled that the emails Williams has relied on for this assertion “do not constitute a written determination under 18 AAC 75.325, and WAPI is barred as a matter of law from asserting this defense.”<sup>62</sup> 18 AAC 75.325 is simply not a “defense” to AS 46.03.822 liability.<sup>63</sup>

670. Whether sulfolane was, during Williams’ operations, characterized as “regulated” is irrelevant to whether Williams’s releases were unpermitted. In 2002, DEC employee Doug Bauer stated, in an email, that sulfolane was not “regulated.” [Ex. 3645] But this only meant that DEC did not then regard it as a hazardous substance. The term “regulated” is ambiguous and can be used many different ways. [Tr. 294:14-5; Buss Depo. 202:2-7 (submitted at Tr. 3924)]. Former-Commissioner Hartig disagrees with Williams’ characterization of Mr. Bauer’s 2002 email. [Tr. 374:2-17 (Hartig); *see also* Ryan Depo. (Jan. 2016) 121:3-122:10 (disagreeing with statement that sulfolane was not regulated)] Sulfolane was subject to regulatory requirements even during Williams’ operations—including requirements to report and cleanup spills, monitor and sample sulfolane contamination, report inventories of sulfolane, and comply with discharge limits applicable to the use of the public sewer system. [See Tr. 366:12-369:6 (Hartig) (“regulated” means subject to government regulations, statutes, or policy documents); Tr. 1967:1-12 (Mead); Tr. 1934:20-1935:19 (Guinn); Buss Depo. 97:14-17, 97:22-98:1 (monitoring, sampling, reporting); O’Connell Depo. 159:7-13 (submitted at Tr. 3924) (state regulated

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<sup>62</sup> Order Granting State’s Mot. for Partial Summ. J. on the Pleadings on Williams’s Affirmative Defs. (Mot. 67), at 12-13 (Mar. 13, 2018).

<sup>63</sup> *See* 18 AAC 75.325(d) (governing requirements to investigate, contain, and perform a cleanup, but not discussing liability for costs and damages).

sulfolane at point it was released); Ex. 6407 at 7 (sulfolane in “Emergency and Hazardous Chemical Inventory”)]

671. Williams has contended that the fact that DEC may set groundwater cleanup levels in overseeing cleanup of a site contaminated with a hazardous substance means that “there is a level of a hazardous substance that has been ‘released’ but yet is allowed or permitted under the law.”<sup>64</sup> But cleanup levels are not discharge permits—they are not authorization to release hazardous substances. To construe cleanup levels in that manner would undermine the legislature’s prohibitions on unpermitted releases of hazardous substances, oil, and pollution. Such a construction would also encourage polluters to wait for their pollution to dilute in the environment and then, years later, assert that the release is now “permitted.”

672. The court also rejects Williams’ argument that the State’s claims are barred because the cleanup level was vacated in 2014. A cleanup standard is not a prerequisite to Williams’ liability under AS 46.03.822, AS 46.03.760, or AS 46.03.780. The court reiterates that Williams’ argument that a cleanup standard must be determined prior to imposing liability under AS 46.03.822 is completely without merit.<sup>65</sup>

### i. Divisibility

673. No evidence was presented that the harm is divisible or that costs are reasonably capable of apportionment.

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<sup>64</sup> Williams’ Mot. for Directed Verdict at 8-9.

<sup>65</sup> The total expected cost for the piped water system amounts to \$72,228,154 consisting of payments from escrow to date by the State of \$11,599,681 and \$44,378,473 from Flint Hills; an additional \$16.25 million is expected to be required to complete the project.

674. Williams failed to establish that the harm caused by the hazardous substance releases is divisible and that there is a reasonable basis for apportionment under AS 46.03.822(i). Because Williams has no valid divisibility defense, it is jointly and severally liable for the entire amount of response costs and damages.

**j. Summary**

675. The court concludes that Williams is strictly liable, jointly and severally, under AS 46.03.822(a) for releases as an owner and operator of the NPR, and because it owned and otherwise controlled the oil, petroleum products containing sulfolane, oil waste containing sulfolane, oil refuse or waste by-products containing sulfolane, oily wastewater containing sulfolane, pure sulfolane, and PFAS.

**Williams is strictly liable for the State's costs and damages and for civil assessments.**

**a. Williams is liable for costs and damages under AS 46.03.822.**

676. Based upon the testimony of Olivia Napoli-Fultz, Williams' releases caused DEC to incur unreimbursed oversight costs of \$4,054,589, including interest. [Tr. 1782:24-1783:15]

677. The State also established that, as a result of Williams' releases, it incurred costs of \$11,599,681.33 in interim funding of the expansion of the City of North Pole's piped water utility system. [Tr. 1575:19-23 (Hilarides); Ex. 6775] The State has provided 20% of the interim funding for the piped water expansion. [Tr. 1574:14-1575:9 (Hilarides)]

678. Williams has contended that the piped water system is unreasonably expensive and unnecessary. These

arguments are rejected. The evidence at trial supports the State's contention that the piped water expansion was a reasonable response to the contamination of the aquifer and that the costs of its construction were also reasonable.

679. As the court has found, the piped water system is reasonable and not arbitrary or capricious.

680. Relative to other forms of providing alternative water, the piped water expansion is reasonable. Point of entry filtration systems require care and maintenance. Bulk water tanks require refilling and are unsuitable in many locations. Bottled water requires periodic delivery and does not readily lend itself to many domestic uses.

681. Williams has refused to participate in efforts to address the water contamination it has caused. In 2013, Williams was asked to do a feasibility study of options to address the sulfolane plume or be prepared to accept the decisions of others. [Ex. 171] Williams refused to engage.

**b. Williams is liable for the cost of the piped water system as a response cost under AS 46.03.822(a), but not for restoration costs that would be duplicative.**

682. The court concludes that Williams' spills, discharges, and releases of sulfolane, and oily wastewater and petroleum products containing sulfolane, and Williams' response to the contamination violated provisions of AS 46.03, including AS 46.03.710, AS 46.03.740, AS 46.03.745 and AS 46.03.822.

683. Alaska's pollution statutes contain a number of sections prescribing civil damages.

(a) AS 46.03.760 provides for daily sums as a remedy for violations of provisions of AS 46.03. After an initial sum of not less than \$500 nor more than \$100,000 for an

initial violation, daily sums of not more than \$5,000 per day may be assessed for each day on which the violation continued. These sums: shall reflect, when applicable,

(1) reasonable compensation in the nature of liquidated damages for any adverse environmental effects caused by the violation . . .;

(2) reasonable costs incurred by the state in detection, investigation, and attempting correction of the violation;

(3) the economic savings realized by the person in not complying with a requirement for which a violation is charged. AS 46.03.760(a).

Subsection (b) of .760 states that damages under this section “may not be used for punitive purposes, and sums assessed by the court must be compensatory and remedial in nature.” Subsection (d) of .760 provides that a person who violates .740 (discharge of a residuary product of petroleum) is liable for the full amount of actual damages including direct and indirect costs associated with abatement, containment or removal of the pollutant, restoration of the environment to its former state and all incidental administrative costs. These liabilities are said to be “in addition to liability under subsection (a) of 760,” which provides for the assessment of daily sums.

(b) AS 46.03.780 provides that a person who violates a provision of AS 46.03 and injures or degrades the environment is liable for damages including “an amount equal to the sum of money required to restock injured land or waters, to replenish a damaged or degraded resource, or to otherwise restore the environment of the state to its condition before the injury.” AS 46.03.780(b).

(c) AS 46.03.822 calls for damages:

For the costs of response, containment, removal, or remedial action incurred by the state, a municipality, or village, and for the additional costs of a function or service, including administrative expenses for the incremental costs of providing the function or service, that are incurred by the state, a municipality, or village, . . . resulting from an unpermitted release of a hazardous substance or, with respect to response costs, the substantial threat of an unpermitted release of a hazardous substance.”

AS 46.03.822(a). In subsection (n) of .822, “damages” has the “meaning given in AS 46.03.824 and includes damage to persons or to public or private property, damage to the natural resources of the state or a municipality . . .”

(d) AS 46.03.824 defines damages as including but not limited to “injury to or loss of persons or property, real or personal, loss of income, loss of the means of producing income, or the loss of an economic benefit.”

(e) AS 46.03.875 provides that these remedies are cumulative:

All remedies provided by this chapter . . . are cumulative, and the securing of relief—whether injunctive, civil, or criminal, under a section of this chapter . . . does not stop the state from obtaining relief under any other section of this chapter . . .

684. Williams’ statutory violations make it liable for daily civil assessments under .760, for restoration damages under .760(d) and .780, and for response costs and natural resource damages under .822.

685. The State argues that it is entitled to cumulative remedies of daily sums assessed under .760, restoration costs as provided under .760(d) and .780(b) and damages for response costs under .822(a). To the extent that the

remedies sought by the State call for double compensation, the court rejects the State's argument.

686. The court concludes that imposing damages to return the aquifer to its natural condition *and* requiring payment for the piped water system would be an inappropriate double assessment of damages.

687. The piped water system is a permanent rather than an interim measure. In an economic usage sense it is a permanent replacement for the damaged aquifer. [Dr. Desvouges Tr. 3015-3018, 3026-27] It provides somewhat the functional equivalent of the clean water sources that the public had before the contamination. (Hartig) Tr. 430] The anticipated total costs of the piped water system are approximately \$72 million.<sup>66</sup> The total cost of restoring the aquifer to its pre-existing condition, according to witness Jane Paris, is approximately \$78 million. [Tr. 2031:5-2033:17, 2035:13-25, 2055:20-2056:4, 2067:8-13, 2127:5-8 (Paris)] Awarding both of these sums would be a double recovery in the court's view because in an economic usage sense the piped water system has substantially replaced the damaged aquifer and there is no plan to otherwise actively restore the aquifer. Although the statutory remedies for pollution are obviously intended to be broad and comprehensive, they call for full compensation not duplicative compensation, punishment, or a windfall.

688. Most of the relief sought by the State under .760 is also duplicative. Restoration costs under .760(d) are indistinguishable from restoration costs under .780(b). Daily assessments must be compensatory and remedial,

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<sup>66</sup> The total expected cost for the piped water system amounts to \$72,228,154 consisting of payments from escrow to date by the State of \$11,599,681 and \$44,378,473 from Flint Hills; an additional \$16.25 million is expected to be required to complete the project.

not punitive. They may be assessed only to cover categories of loss that are not otherwise compensated for.

689. The court has concluded that Williams is liable for the estimated costs of the piped water system, \$72,228,154, as an appropriate response cost under .822(a). Awarding an additional, similar, or greater sum for restoration of the aquifer would be duplicative in view of the fact that the piped water system and any future remedial measures that may be required replace the services provided by the aquifer. Likewise, awarding an additional, similar, or greater sum in total daily assessments designed to reflect the damage to the aquifer would be duplicative, and a windfall, and thus not in accordance with our statutory system of damages.

690. The 2019 Booz Allen Report to the EPA indicates that the plume may continue to migrate and contaminate drinking water wells that are presently uncontaminated and not served by the piped water system. As the report states:

Because of its physical and chemical properties such as high solubility and low adsorption sulfolane continues to persist and move within the off-site groundwater plume. This continuing movement will allow the plume to eventually attenuate over time and distance. However, this is not the optimal solution for a sulfolane plume, as this approach may result in potentially contaminating unaffected wells in the future. In the near term, however, it appears the NPR stakeholders have chosen this as an option, as they make arrangements to supply alternative sources of water. Monitored natural attenuation (MNA) may be a good alternative followed by treatment of CCPZs (containment and cleanup priority zones), as a last step in a long-term remedial strategy.

[Ex. 7790, Booz Allen Report, page 38] Additional funds may be needed as suggested by the Booz Allen Report to supply alternative sources of water to wells in current uncontaminated areas, or for new structures in contaminated areas. Funds for continued monitoring will certainly be required and if remedial measures beyond monitoring are also required they too must be funded.

691. All such future funds will be provided by Flint Hills under the terms of the settlement and/or by Williams in accordance with the injunctive and declaratory relief provided in the judgment in this case.

692. There is one type of damage that is a component of natural resources damage that is not addressed by the provision of alternative water supplies including the piped water system and future monitoring and remediation costs. This is the loss of the right of the public to have access to uncontaminated groundwater. Some people may prefer well water to water provided through a domestic water supply. Further, if the plume migrates to sites that will not be served by the piped water system, where other alternatives such as a filtration system are employed, a preference for uncontaminated well water becomes especially easy to understand in light of the inconveniences and limitations of such systems. The same may be said for new construction within the plume but outside of the area served by the piped water system. As the Booz Allen report states:

The City of North Pole and the State of Alaska have made efforts to provide alternative water that includes a plan to connect the majority of residents to a public water supply. However, the aquifer still needs to be restored as the public should be able to access groundwater as needed.

[Ex. 7790, Booz Allen Report, p. 35]

The right to access groundwater is limited. It is perhaps best expressed as a benefit of choice rather than necessity because most of the uses of the groundwater have been or will be replaced by the piped water system and other alternative sources of supply. This benefit is difficult to value. No witness has suggested a methodology for its valuation. Still, to use the language of AS 46.03.760(a)(1), it is an uncompensated “adverse environmental effect[] caused by the violation that it is deserving of reasonable compensation.” Since there is no precise measure of damage for this lost benefit, the liquidated damages provisions of .760 can be appropriately used. Liquidated damages are traditionally seen as a device for affording compensation for wrongs where the actual damages are imprecise or difficult to measure.<sup>67</sup>

Subsection (a)(1) directs a court when assessing civil sums to consider “the toxicity degradability and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality.” In consideration of those factors and the relatively limited nature of the uncompensated loss, the court assesses a daily sum at the statutory minimum of \$500 per day for the 18 1/2 years during which Williams as refinery operator released sulfolane into the environment. This amounts to \$3,377,500.

### **Injunctive and Declaratory Relief**

693. The State requests injunctive relief under AS 46.03.765. Under that section, the court has jurisdiction to

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<sup>67</sup> *Carr-Gottstein Properties, Ltd Partnership v. Benedict*, 72 P.3d 308, 311 (Alaska 2003).

enjoin violations of state environmental statutes and regulations.<sup>68</sup>

694. Williams' violations of AS 46.03.710, AS 46.03.740, AS 46.03.745, AS 46.04.020, AS 46.09.020 and 18 AAC 75.325-75.390 are continuing.<sup>68</sup>

695. Williams is enjoined, pursuant to AS 46.03.765 to:

- prohibit its continuing violations of AS 46.03.710, AS 46.03.740, AS 46.03.745, AS 46.04.020, AS 46.09.020 and 18 AAC 75.325-75.390; and
- comply with AS 46.03, AS 46.04, AS 46.09, and 18 AAC 75.

696. Specifically, Williams shall:

- perform the monitoring and reporting required under the current DEC approved plans including the *Revised Onsite Cleanup Plan (2017)* (“ROCP”) and the *Long-Term Monitoring Plan Update (2017)* (provided as appendix A to the ROCP);
- undertake a review of the adequacy of the plans in consultation with DEC and EPA and implement changes to the plans as directed by DEC;
- submit work plans for containment and cleanup of all remaining soil and groundwater contamination at the Site, including any characterization work needed for remediation measures or cleanup;
- otherwise comply with DEC’s site cleanup rules.

697. Williams shall also pay DEC’s future oversight costs, and perform and pay for remediation and cleanup efforts as directed by DEC.

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<sup>68</sup> Complaint at 16 ¶ 66.

698. The State also requests declaratory relief. The court concludes that Williams is strictly, jointly and severally liable for its sulfolane, PFAS, and oil releases, including liability for the State's future response costs. The court finds that Williams is a responsible party for the former North Pole refinery site. As a responsible party, Williams is jointly and severally strictly liable for the State's response costs and damages and is required to comply with 18 AAC 75 and other applicable state laws.

#### **Flint Hills' Claims Against Williams**

699. Flint Hills has asserted claims against Williams for contribution under AS 46.03.822(j) and breach of contract, and against TWC for contribution under AS 46.03.822(j) and breach of the performance guaranty. Flint Hills seeks to recover various response costs against Williams and TWC, and to compel Williams' performance under ASPA.

##### **a. AS 46.03.822(j) Liability Against Williams for Sulfolane**

700. AS 46.03.822(j) allows a party to seek "contribution" from other liable parties "during a civil action" under .822(a), or "after the issuance of a potential liability determination by the department." AS 46.03.822(j).

701. Contribution is an equitable remedy that takes into account various equitable factors. *See AS 46.03.822(j); FDIC v. Laidlaw Transit, Inc.*, 21 P.3d 344, 354-55 (Alaska 2001); *Oakley Enterprises, LLC v. NPI, LLC*, 354 P.3d 1073, 1080 (Alaska 2015).

702. In general, a contribution plaintiff must show that it has paid in excess of its equitable share among liable parties. *See, e.g., FDIC v. Laidlaw Transit, Inc.*, 21 P.3d at 355 (recognizing contribution actions arise when a

claimant “has paid more than his proportionate share of the total claim.”). An award on Flint Hills’ .822(j) claims against Williams must therefore consider whether Williams is a liable party and whether Flint Hills’s payment of past costs exceeds its fair share.

703. Parties that own or control hazardous substances, including owners and operators of facilities containing such substances, are strictly liable, jointly and severally, for damages resulting from unpermitted releases of the hazardous substance, or, with respect to response costs, the substantial threat of an unpermitted release of the hazardous substance. AS 46.03.822(a).

704. A strictly liable party is relieved of joint and several liability if that party proves (1) the harm caused by the release is divisible, and (2) there is a reasonable basis for apportionment of costs to that party. AS 46.03.822(i).

705. Whether harm is theoretically capable of apportionment “is a question of law, and is for the decision of the court in all cases.” *United States v. NCR Corp.*, 688 F.3d 833, 838 (7th Cir. 2012) (citing Restatement (Second) of Torts § 434, cmt. d). A defendant bears the burden of pleading and proof on the question of divisibility and apportionment. *Oakley Enterprises, LLC v. NPI, LLC*, 354 P.3d at 1079-80.

706. “Apportionment is improper ‘where either cause would have been sufficient in itself to bring about the result, as in the case of merging fires which burn a building.’ *NCR Corp.*, 688 F.3d at 838 (citing cmt. i); *see also U.S. v. J.B. Stringfellow*, 661 F Supp. 1053, 1060 (C.D. Cal. 1987) (stating that joint and several liability is not unusual in environmental cases “due to the synergistic effects of the commingling of different wastes.”).

707. If an .822(a) plaintiff is also a jointly-and-severally liable party, its affirmative claim for direct damages will be recast as a claim for contribution. *FDIC v. Laidlaw Transit Inc.*, 21 P.3d 344, 350 (Alaska 2001).

708. The court concludes that Williams is strictly liable, jointly and severally, under AS 46.03.822 for hazardous substance releases as an owner and operator of the NPR, and because it had control over the hazardous substances when they were released. The court further concludes that the harm caused by Williams sulfolane releases is not divisible or reasonably capable of apportionment.

709. Because Williams has no divisibility defense, it is jointly liable for the entire amount of response costs.

710. In resolving a claim for contribution among jointly liable parties under AS 46.03.822(j), the court may allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court. AS 46.03.822(j). The court has broad discretion to allocate equitable responsibility among the parties. *See, e.g., Oakly Enterprises, LLC v. NPI, LLC*, 354 P.3d 1073, 1077 (Alaska 2015); *see also Lockheed Martin Corp. v. United States*, 35 F. Supp. 3d 92, 123 (D.D.C. 2014) *aff'd* 883 F.3d 225 (D.C. Cir. 2016) (the court has “broad discretion” to decide what factors ought to be considered).

711. Although there is no single comprehensive list of facts for courts to consider, courts frequently consider the so-called “Gore” factors, which include:

- The ability of the parties to demonstrate that their contribution to a discharge, release or disposal can be distinguished;
- The amount of the substance involved;

- The degree of toxicity of the substance involved;
- The degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the substances involved;
- The degree of care exercised by the parties with respect to the substance involved, taking into account the characteristics of such substance; and
- The degree of cooperation by the parties with federal, state, or local officials to prevent any harm to the public health or environment.

*See Oakley*, 354 P.3d at 1077; *Lockheed*, 35 F. Supp. 3d at 123.

712. Courts have also applied the so-called “Torres” factors, which include:

- The extent that cleanup costs are attributable to a specific party;
- The party’s level of culpability;
- The degree to which the party benefitted from disposal of the substance;
- The party’s ability to pay its share of the cost.

*United States v. Davis*, 31 F. Supp. 2d 45, 63 (D.R.I. 1998).

713. Courts are not limited to the Gore or Torres factors. *See, e.g., Boeing Co. v. Cascade Corp.*, 207 F.3d 1177, 1187 (9th Cir. 2000) (noting trial court need not “conform[] to some predetermined list or rule,” particularly where the factors are inapposite to the facts of the case at hand); *see also Beazer E., Inc. v. Mead Corp.*, 412 F.3d 429, 446 (3d Cir. 2005) (“Courts examining [CERCLA’s] language and its history have concluded that Congress intended to

grant the district courts significant flexibility in determining equitable allocations of response costs, without requiring the courts to prioritize, much less consider, any specific factor [over others].”); *AmeriPride Servs., Inc. v. Valley Indus. Serv., Inc.*, 2012 WL 1143658, at \*6 (E.D. Cal. Apr. 4, 2012) (“None of these lists is intended to be exhaustive or exclusive, and in any given case, a court may consider several factors, a few factors, or only one determining factor . . . depending on the totality of the circumstances presented to the court.” (citation omitted)).

714. Indemnity clauses are one relevant factor for a court to consider in an equitable allocation, but they are not determinative nor are they required to be prioritized over other factors. See, e.g., *Trinity Indus., Inc. v. Greenlease Holding Co.*, 903 F.3d 333, 350-51, 361 (3rd Cir. 2017) (holding that a three-year indemnification clause between the parties did not operate to transfer all of one party’s environmental liabilities that were not expressly assumed by the other, and further holding that the lower court’s equitable allocation misapplied the *Beazer East* decision); *Beazer E.*, 412 F.3d at 446; *Lockheed*, 35 F. Supp. 3d at 142-44 (recognizing numerous indemnity provisions between the parties but giving no weight to them given their limitations, ambiguity, and insufficiency to shift the equities among the parties).

715. The Third Circuit case, *Trinity Industries, Inc. v. Greenlease Holding Co.*, 903 F.3d 333 (3rd Cir. 2017), is in some respects analogous. In *Trinity*, a former owner of a manufacturing facility (Trinity) brought CERCLA and state law environmental claims against another former

owner (Greenlease) regarding soil contamination and remediation costs.<sup>69</sup> An asset purchase agreement existed between the parties, which previously conveyed the facility from Greenlease to Trinity. That asset purchase agreement contained a “non-assumption of liabilities” clause, which stated that “[Trinity] has not assumed, and expressly denies assumption hereby of, any other liability, obligation or commitment of [Greenlease] other than as set forth above or otherwise expressly set forth herein.”<sup>70</sup> The parties further agreed to indemnify one another for a period of three years related to damages arising from the other’s operations, while also reserving certain rights and remedies for relief.<sup>71</sup> Because there was no mutual intent in *Trinity* to shift all environmental liability from one party to the other, the Third Circuit held that the indemnity provision and Greenlease’s non-mutual, subjective intent to avoid liability should not have been considered in the lower court’s allocation.<sup>72</sup>

716. Like the plaintiff in *Trinity Industries*, Flint Hills did not assume Williams’ liability for unknown or offsite contamination existing on March 31, 2004. Nor did Flint Hills waive its rights for equitable relief. *See* Ex. 3000 at 61 (§10.5).

717. In making its equitable allocation under AS 46.03.822(j), the court gives the indemnity clause in the ASPA significant weight as to Flint Hills’ assumption of responsibility for onsite sulfolane in the ground and

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<sup>69</sup> *Trinity Industries, Inc. v. Greenlease Holding Co.*, 903 F.3d 333, 341 (3rd Cir. 2017).

<sup>70</sup> *Id.* at 343.

<sup>71</sup> *Id.*

<sup>72</sup> *Id.* at 350-51.

groundwater at the time of transfer. Both parties contemplated that Flint Hills would be responsible for on-site sulfolane. The equitable allocation made in this decision applies only to off-site sulfolane.

718. The court finds that Flint Hills has paid more than its fair share for the off-site sulfolane contamination at issue and that Williams has not paid its share.

719. Williams is therefore liable to Flint Hills and the State of Alaska for its equitable share of response costs to address the sulfolane contamination.

**b. Breach of Contract Against WAPI for Sulfolane and PFAS**

720. The Sales Agreement is governed by Texas law.

721. Texas law states that, when interpreting a contract, the prime directive is to ascertain the parties' intent as expressed in the instrument. *URI, Inc. v. Kleberg County*, 543 S.W.3d 755, 757 (Tex. 2018). "Contract terms are given their plain, ordinary, and generally accepted meanings unless the contract itself shows them to be used in a technical or different sense." *Valence Operating Co. v. Dorsett*, 164 S.W.3d 656, 662 (Tex. 2005). The entire writing must be considered "in an effort to harmonize and give effect to all the provisions of the contract so that none will be rendered meaningless." *Id.*

722. Whether a contract is ambiguous is a question of law for the court to decide. *Coker v. Coker*, 650 S.W.2d 391, 394 (Tex. 1983). "Surrounding facts and circumstances can inform the meaning of language, but cannot be used to augment, alter, or contradict the terms of an unambiguous contract." *URI Inc.*, 543 S.W.3d at 757 (citing *First Bank v. Brumitt*, 519 S.W.3d 95, 110 (Tex. 2017)).

723. “If a contract is subject to two or more reasonable interpretations after applying the pertinent rules of construction, the contract is ambiguous, creating a fact issue on the parties’ intent.” *JM Davidson, Inc. v. Webster*, 128 S.W.3d 223, 229 (Tex. 2003). “Only where a contract is ambiguous may a court consider the parties’ interpretation and admit extraneous evidence to determine the true meaning of the instrument.” *URL Inc.*, 543 S.W.3d at 764-765; *see also Safeco Ins. Co. of America v. Gaubert*, 829 S.W.2d 274, 281 (Tex. App. 1992) (recognizing indemnity clauses are analyzed under the same principles as any other contract).

724. Texas law requires four elements to prove a breach of contract: (1) a valid contract, (2) plaintiffs performance, (3) defendant’s breach, and (4) resulting damages. *Wease v. Ocwen Loan Servicing, LLC*, 915 F.3d 987, 992-93 (5th Cir. 2019).

725. Three types of damages are recognized in Texas for breach of contract: expectancy interest damages (awarding a plaintiff the benefit of its bargain), restitution interest damages (compelling a defendant to disgorge benefits conferred on it by a plaintiff), and reliance interest damages (compensating a plaintiff for loss as if the contract had not been made). *See, e.g., Qaddura v. Inda-European Foods, Inc.*, 141 S.W.3d 882, 888-89 (Tex. App. 2004) (“In an appropriate case, just compensation may require an award protecting one or more of these interests.” (citing Restatement (Second) of Contracts §344 (1981)); *id.* at 889 (“The most common interest protected in breach of contract cases is the expectation, or benefit of the bargain, interest.”).

726. Applying the law to the facts in this case, the ASPA unambiguously states that Williams retained liabil-

ity for unknown and undisclosed contamination, which includes any offsite contamination that existed as of March 31, 2004. To hold otherwise would ignore the plain language of the ASPA and its Schedules, and further render the indemnity provisions under §10.2(a)(iv)(A) and (B) meaningless.

727. Pursuant to the ASPA's terms, Williams retained liability for sulfolane contamination that was (a) onsite on the NPR property as of 11:59PM on March 31, 2004 but beyond the reasonable contours of the wells identified in the Disclosure Schedule, and (b) any offsite contamination at that time. The court finds that the former is moot under the facts of this case because effectively all onsite sulfolane was within the reasonable contours of the identified wells.

728. Williams retained liability for PFAS contamination at the NPR.

729. The ASPA provides that Williams was contractually obligated to indemnify and hold Flint Hills harmless from damages arising from liabilities that Williams retained. Williams' indemnification obligations included duties of performance and payment.

730. However, Williams' obligation to indemnify Flint Hills is subject to an exception "to the extent that Damages are caused or contributed to by Buyer's operations, actions or omissions after the Effective Time." Section 10.2(a)(iv). This exception precludes contractual indemnity for sulfolane contamination because Flint Hills contributed to the sulfolane contamination.

731. Williams breached the ASPA by failing to hold Flint Hills harmless and take responsibility for its retained liability for the undisclosed PFAS contamination that existed as of March 31, 2004.

732. Flint Hills has been damaged by Williams' breach of the ASPA.

733. Williams is liable to Flint Hills for damages caused by its breach of the ASPA as to the undisclosed onsite PFAS contamination. *See also Flint Hills v. WAPI* 377 P.3d 959, 970-71 (Alaska 2016) (remanding indemnification claim without geographic limitation).

**c. Breach of Guaranty Against TWC for PFAS**

734. TWC's Performance Guaranty is also governed by Texas law.

735. TWC guaranteed Williams' performance of the ASPA, including Williams' duties to hold Flint Hills harmless and to provide Flint Hills payment for damages Flint Hills incurred arising from Williams' retained liabilities.

736. TWC breached the Performance Guaranty by refusing to compel Williams to act or otherwise perform such duties itself in order to hold Flint Hills harmless from Williams' retained liability related to undisclosed PFAS contamination that existed as of March 31, 2004.

737. TWC breached the Performance Guaranty by refusing to compel Williams to act or to otherwise provide indemnity payments from TWC to Flint Hills for undisclosed PFAS contamination that existed onsite as of March 31, 2004.

738. TWC breached the Performance Guaranty by refusing to pay Flint Hills' reasonable and necessary expenses incurred for Williams' retained liability.

739. TWC is liable to Flint Hills for breach of the Performance Guaranty.

740. The Performance Guaranty is a separate agreement between Flint Hills and TWC.

The Performance Guaranty is an express exception to the exclusivity of remedies set forth in §10.5 of the ASPA.

**Flint Hills is entitled to relief from Williams and TWC**

741. The court has previously found that Defendants Williams and TWC are liable to Flint Hills. The court now concludes that Flint Hills is entitled to recover the following amounts.

**a. Allocation of Response Costs Under .822(j)**

742. The court finds that the response costs Flint Hills seeks under AS 46.03.822(j) from sulfolane contamination beyond the NPR were reasonable and necessary to address the contamination at issue.

743. Williams is jointly and severally liable to Flint Hills for the full amount of damages Flint Hills incurred from contamination beyond the NPR. Williams has not proven the harm Williams caused is divisible, nor that a reasonable basis to apportion costs exists.

744. The court finds that, as a matter of equity and based on all the evidence, Williams is responsible for 75% of the sulfolane response costs, while Flint Hills is responsible for 25% of the costs, and the State is not responsible for any of the costs.

745. The court has found that approximately 90% of all the sulfolane released into the environment was released during Williams' tenure. But Williams should not be held responsible for the entire amount it released for two reasons. First, Flint Hills agreed in the ASPA to assume responsibility for the sulfolane in the ground and groundwater at the refinery site as of the transfer date. Second, some quantity of the sulfolane that Williams released had likely been dispersed and diluted so that it was no longer

detectible as of the discovery of off-site sulfolane in October of 2009.

746. What percentage of all the sulfolane that Williams released remained on-site as of April 1, 2004 cannot be estimated with confidence. The same is true as to the percentage that had become non-detectable as of October of 2009. But the court believes based on all of the evidence that a 30% deduction from Williams' 90% share would fairly and equitably take into account these factors. A 30% reduction in Williams' 90% share of total sulfolane released leaves Williams 63% responsible and Flint Hills 37% responsible.

747. Consideration of three additional factors indicate that Williams' share of responsibility should be increased. First, some portion of the sulfolane that would have become non-detectable as of October of 2009, made its way into drinking water wells and was used for domestic consumption before that date. Thus, rather than being irrelevant, it contributed to the ongoing public health and welfare threat triggered by the sulfolane releases, especially as to threats associated with chronic exposure.

748. Second, consideration of the degree of cooperation by the parties with the State requires a further adjustment. Flint Hills' cooperation with the State once sulfolane was discovered off-site was exemplary. It immediately took action to supply alternate water sources and to mitigate, investigate and characterize the nature of the contamination as required by the State. Ultimately, Flint Hills expended enormous amounts in these efforts. By contrast, Williams did little else than sit on the sidelines.

749. Third, the court also considers Williams' failure to report sulfolane in the groundwater to DEC to be a significant factor that requires adjustment. Williams' lab

notes indicate very significant quantities of sulfolane in hydrocarbon products in sampling wells as early as 1996. If these had been reported, it is entirely possible that the process of discovery of the sulfolane off-site could have been accelerated by about five years. Partly offsetting this, Flint Hills may also be seen as responsible for about a two year delay between October of 2006, when DEC concurred with Shannon and Wilson's recommendation to drill monitoring wells near the boundary of the property, and October of 2008, when it actually did so. This delay, however, was shorter than the delay caused by Williams. Further, Flint Hills' delay had a different moral quality as it was openly seeking a second opinion from another engineering firm whereas Williams withheld relevant information that should have been reported.

750. Considering these three factors the court believes that an upward adjustment in Williams' share of responsibility by 12 percentage points is appropriate.

751. The court does not conclude that any other factor requires adjustment. Williams complains of the fact that Flint Hills stopped remedial pumping on-site from recovery wells in 2017, and this permitted a spike in the flow of sulfolane from the site. This, however, was done with the concurrence of DEC and the court considers that it is balanced by other negative conduct by Williams. In particular, the mismanagement by Williams of its waste fluid treatment and disposal systems weigh much more heavily than the negative effects of shutting down pumps in 2017. In addition, Williams' cessation of testing for sulfolane sources on the refinery property from 2002 through April 1, 2004 is another negative factor to be balanced against Flint Hills' challenged act.

752. The court's finding that Williams should bear 75% of the costs only applies to off-site costs. It takes into account these parties' relative degree of involvement in generating the contamination. It also takes into account their relative culpability, and their relative degree of care.

753. It takes into account that Williams' releases caused a substantial offsite sulfolane plume during its operations of the NPR, which was undisputed at trial.

754. It also takes into account the ASPA and the liabilities that were expressly transferred to Flint Hills and those liabilities that were retained by Williams.

755. It also takes into account Flint Hills' history of cooperation for the contamination versus Williams' recalcitrance and refusal to assist.

756. It further reflects that Williams has benefitted from its non-cooperation.

757. The court notes and relies on Williams' ability to pay the allocated liability.

758. Flint Hills' past response costs for sulfolane contamination are \$137,147,016.<sup>73</sup> However only \$97,388,932 is for offsite contamination for which Williams bears responsibility.

#### **(1) Insurance Proceeds Prorated**

759. Insurance proceeds that Flint Hills received as a named insured under the policy provided under the ASPA must be equitably allocated to Flint Hills' response costs. The liability policy was for \$50,000,000, which was fully

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<sup>73</sup> This amount reflects Flint Hills' total response costs (\$138,320,690) less the costs incurred for the PFAS contamination under AFE ID 4822 (\$1,173,674)

paid. The amount of \$44,389,236 was paid to Flint Hills and the remainder, \$5,610,764, was paid to Williams.

760. The court notes that Williams used the proceeds it received to defray litigation costs. Flint Hills should be entitled to apply an equal sum to its litigation costs. The balance, \$38,778,472, should be allocated proportionately between onsite and off-site costs. When this is done<sup>74</sup> \$27,303,175 in insurance proceeds should be allocated to and deducted from the off-site total.

761. This results in \$70,085,757 as Flint Hills' net response cost that is subject to allocation under section 822(j). Williams is responsible for 75% of this amount, \$52,564,318 as its equitable share. Flint Hills is responsible for 25%, \$17,521,439 as its equitable share.

762. Flint Hills has paid in excess of its equitable share for contamination beyond the NPR. Williams has incurred no legally recognizable response costs and has not paid its equitable share for this contamination.

763. Judgment will be entered in favor of Flint Hills against Williams on Flint Hills' AS 46.03.822(j) claim for contribution for the amount in excess of Flint Hills' equitable share, plus prejudgment interest.

## **(2) Damages Cap Does Not Apply**

764. The parties agreed to an aggregate cap of \$32 million for indemnification payments under the ASPA. The court finds that this limit does not apply to this non-contractual equitable proceeding for several reasons. The contract does not apply to this stage of this case. We are presently conducting a statutory equitable proceeding.

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<sup>74</sup> 97,388,932/138,320,690 x 38,778,472 = 27,303,174.76.

Moreover, Flint Hills is not entitled to contractual indemnity because of the “caused or contributed to” clause of section 10.2(a)(iv) of the ASPA, and will therefore receive no contractual indemnity which could be capped. Further, to apply the \$32 million cap would be contrary to public policy. One purpose of section .822 is to require responsible parties to take active steps to remove and remediate contamination for which they are responsible. Applying a reciprocal cap would discourage a party to such an agreement from taking active steps costing more than the amount of the cap because excess costs would be unrecoverable as indemnity from the other party. It could also encourage passivity rather than activity on the part of a responsible party who might decide to remain on the sidelines, confident that its liability could not exceed cap limits.

765. Judgment will also be entered against Williams in a commensurate proportion 75%, with regard to the State of Alaska’s past sulfolane costs.

766. An equitable allocation would be inappropriate for response costs related to onsite PFAS contamination. Williams is liable for 100% of the costs under the ASPA, less pro rata insurance proceeds.

#### **b. Damages for Breach of Contract**

767. The court finds that Flint Hills has incurred damages as a result of Williams’ breach arising from its failure to indemnify and hold Flint Hills harmless for Williams’ retained liabilities under the Sales Agreement.

768. Williams is liable to Flint Hills for the damages Flint Hills incurred from PFAS contamination.

769. Williams is therefore liable to Flint Hills for 100% of the response costs for PFAS contamination, \$1,173,674,

less pro rata insurance proceeds of \$329,042<sup>75</sup> for a total of \$844,632.

770. Williams is also liable to Flint Hills for prejudgment interest.

**c. Damages for Breach of Guaranty**

771. Under the TWC Guaranty, TWC is separately liable for Williams' obligations to Flint Hills.

772. Judgment shall be entered against TWC and in favor of Flint Hills for a sum equal to the awards against Williams.

773. Flint Hill is entitled to its costs, reasonable attorneys' fees, and prejudgment interest.

**Williams' Claims Against Flint Hills**

774. Williams has asserted claims against Flint Hills for negligence, gross negligence, breach of contract and contribution under AS 46.03.822(j), and TWC has asserted claims against Flint Hills for contribution under AS 46.03.822(j).

**a. Gross Negligence & Negligence (WAPI Cross Claim Count 4 & 5)**

775. To prevail on a negligence claim, a party must first establish that a duty of care existed. *Kooley v. State*, 958 P.2d 1106, 1108 (Alaska 1998).

776. To determine whether a defendant owes a plaintiff a duty of reasonable care, the court must first determine whether a duty is imposed by statute, regulation,

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<sup>75</sup> 1,173,674/138,320,690 x 38,778,472 = 329,041.77.

contract, undertaking, the parties' pre-existing relationship, or existing case law. *GeoTek Alaska, Inc. v. Jacobs Engineering Group, Inc.*, 354 P.3d 368, 377 (Alaska 2015).

777. Promises set forth in a contract must be enforced by an action on that contract. *Alaska Pacific Assur. Co. v. Collins*, 794 P.2d 936, 946 (Alaska 1990). "Only where the duty breached is one imposed by law . . . may an action between contracting parties sound in tort." *Id.*

778. No common law duty of care exists that "permit[s] persons injured by their own conduct to compel any who failed to prevent that conduct to share the burdens of their negligence." *See Kooly*, 958 P.2d at 1108 (quoting *Schumacher v. City and Borough of Yakutat*, 946 P.2d 1255, 1257 (Alaska 1997)).

779. The court finds that Flint Hills owed no extra-contractual duty of care to Williams, nor a common law duty that would compel Flint Hills to prevent harm to Williams that Williams itself caused.

780. Because no common law duty of care exists between Flint Hills and Williams for the matters at issue, Flint Hills cannot be liable to Williams for negligence. Williams' causes of action for negligence and gross negligence are dismissed with prejudice.

**b. Breach of Contract (WAPI Cross Claim Count 1)**

781. Williams alleges Flint Hills breached the ASPA by, *inter alia*, failing to indemnify and hold Williams harmless; failing to use commercially reasonable efforts to obtain indemnification from Williams; and seeking indemnification in excess of the Environmental Cap.

782. The court finds that Williams has not established that Flint Hills breached the ASPA.

783. The court's finding takes into account that Williams has not incurred damage arising from Flint Hills' liabilities or operations, and that Flint Hills was not obligated to indemnify Williams for damages that did not arise from Flint Hills' liabilities or operations.

784. The court's finding also takes into account Williams' refusal to accept responsibility for the sulfolane releases it caused and perform its contractual obligation to indemnify Flint Hills and hold it harmless as to PFAS releases.

785. Because Williams failed to meet its burden proving that Flint Hills breached the ASPA, Williams' cause of action for breach of contract is dismissed with prejudice. But this will not preclude claims for future expenditures for on-site activities related to contaminants known to be present as of April 1, 2004.

**c. AS 46.03.822(j) Liability Against Flint Hills  
(WAPI Cross Claim Count 6)**

786. As addressed above, the court found that Williams has not paid its equitable share of costs for the contamination at issue.

787. Because Williams has not shown that it paid in excess of its equitable share for the contamination at issue, its affirmative contribution claim under AS 46.03.822(j) fails and is dismissed with prejudice. But this will not preclude a claim for future expenditures as to on-site activities related to contaminants known to be present as of April 1, 2004.

**d. AS 46.03.822(j) Liability Against Flint Hills  
(TWC Cross Claim Count 1)**

788. The State of Alaska dismissed its affirmative claim under AS 46.03.822(a) against TWC on or around December 20, 2017.

789. Because the State of Alaska dismissed its affirmative claim, TWC no longer possesses a justiciable cross claim for contribution against Flint Hills with regard to liability for the State of Alaska's damages. As such, TWC's cross claim against Flint Hills for contribution under AS 46.03.822(j) is dismissed with prejudice.

**e. Other Claims of Williams**

790. Williams has asserted various constitutional defenses and immunities. The court finds them to be without merit.

791. Williams may also have asserted other claims, counterclaims, cross-claims, or defenses not referred to in this decision. To the extent that it has done so and they have not been waived, they are denied.

**Fees, Costs, and Preparation of Judgment**

792. The court will entertain motions as to costs and attorney's fees.

793. The State shall prepare a proposed judgment in accordance with this decision.

DATED on this 3rd day of January, 2020.

/s/ Warren W. Matthews  
WARREN W. MATTHEWS  
Superior Court Judge Pro Tem

**APPENDIX D**

**SUPERIOR COURT FOR THE STATE OF ALASKA  
FOURTH JUDICIAL DISTRICT**

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No. 4FA-14-01544 CI

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STATE OF ALASKA, PLAINTIFF

v.

WILLIAMS ALASKA PETROLEUM, INC., ET AL,  
DEFENDANTS

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Filed: March 23, 2020

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**FINAL JUDGMENT**

For the reasons specified in the Court's Memorandum of Decision of January 3, 2020, the Court hereby enters Final Judgment pursuant to Alaska Civil Rule 54(b) on the Plaintiff State of Alaska's claims against Defendant Williams Alaska Petroleum, Inc., and on the cross- and counter-claims of Flint Hills Resources Alaska, LLC and Flint Hills Resources, LLC (collectively referred to as "Flint Hills") against Defendants Williams Alaska Petroleum, Inc. and The Williams Companies, Inc., and on the cross- and counter-claims of Defendants Williams Alaska Petroleum, Inc., and The Williams Companies, Inc.

The Court hereby finds that there is no just reason for delay, and directs entry of judgment pursuant to Alaska Civil Rule 54(b) as follows:

**The State of Alaska's Claims**

1. The State of Alaska is granted affirmative relief on its claims against Williams Alaska Petroleum, Inc. under Count No. 1 (Injunctive Relief), Count No. 2 (Cost Recovery), Count No. 3 (Declaratory Relief for Future Response Costs), Count No. 4 (Civil Assessments), and Count No. 5 (Natural Resource Damages and Restoration Costs).
2. The State of Alaska shall recover from and have judgment against Williams Alaska Petroleum, Inc. as follows:
  - a. Williams Alaska Petroleum, Inc. is liable to the State of Alaska for 75% of the State's unpaid oversight costs, with interest for the period through May 31, 2018: **\$3,040,942**
  - b. Williams Alaska Petroleum, Inc. is liable to the State of Alaska for 75% of the costs of the piped water system paid by the State of Alaska: **\$8,699,761**
  - c. Williams Alaska Petroleum, Inc. is liable to the State of Alaska for 75% of the State's natural resource damages: **\$2,533,125**
  - d. Williams Alaska Petroleum, Inc. is also liable to the State of Alaska for prejudgment interest on the foregoing amounts (computed at the annual rate of 5.25%), as follows:
    - i. Prejudgment Interest on 75% of the State of Alaska's unpaid oversight costs principal (\$2,714,853.71) under 2(a) above for the period

after May 31, 2018 (or for invoices where no interest was previously assessed by ADEC, the period after the invoice) through the date of judgment: **\$255,216.68**

ii. Prejudgment Interest on 75% of the State of Alaska's piped water system costs principal under 2(b) above (\$8,699,761) from the date of expenditures through the date of judgment: **\$605,433.53**

iii. Prejudgment Interest on 75% of the State of Alaska's natural resource damages principal under 2(c) above (\$2,533,125), computed from March 6, 2014, through the date of judgment: **\$804,857.09**

e. Sub-Total: **\$15,939,335.30**

f. Attorney's Fees **\$1,596,434.00**

Date Awarded: 5/19/2020

Judge: Matthews

g. Costs \_\_\_\_\_

Date Awarded: \_\_\_\_\_

Clerk: \_\_\_\_\_

h. **TOTAL JUDGMENT:** \_\_\_\_\_

i. Post-Judgment Interest Rate: 5.25%

3. The State of Alaska is further entitled to the following future recovery, injunctive relief, and declaratory relief against Williams Alaska Petroleum, Inc., as follows:

a. Williams Alaska Petroleum, Inc. is declared strictly, jointly and severally liable for sulfolane, PF AS, and oil releases, including liability for the

State's future response costs. Williams Alaska Petroleum, Inc. is declared a responsible party under AS 46.03.822 for oil and hazardous substance contamination at the former North Pole Refinery site and is subject to the requirements of 18 AAC 75 and other applicable state laws. Flint Hills is not a responsible party under AS 46.03.822 for PFAS contamination at the North Pole Refinery.

- b. The State of Alaska shall recover from and have judgment against Williams Alaska Petroleum, Inc. for 75% of the State of Alaska's future costs related to the construction of the piped water system, currently estimated to be \$3,250,000.
- c. The State of Alaska shall recover from and have judgment against Williams Alaska Petroleum, Inc. for DEC's future oversight costs.
- d. Williams Alaska Petroleum, Inc. is enjoined to perform and pay for remediation and cleanup efforts as directed by DEC with respect to sulfolane groundwater contamination beyond the former North Pole Refinery property and with respect to PFAS contamination at the Refinery property.
- e. Williams Alaska Petroleum is enjoined to:
  - i. perform monitoring and reporting of sulfolane groundwater contamination beyond the former North Pole Refinery property boundary required under Alaska Department of Environmental Conservation (DEC) approved plans;
  - ii. address PFAS soil and groundwater contamination at the Refinery property in accordance with DEC requirements, including characterization, monitoring, reporting, containment, and cleanup;

- iii. otherwise comply with DEC's site cleanup rules, including 18 AAC 75 and other applicable state laws, for sulfolane contamination beyond the Refinery property and PFAS contamination at the Refinery property.

**Flint Hills' Claims**

4. Flint Hills (Flint Hills Resources Alaska, LLC's and Flint Hills Resources, LLC) is granted affirmative relief on its claims against Williams Alaska Petroleum, Inc. pursuant to AS 46.03.822 under Cross-Claim Count No. 1 and Counter-Claim Count No. 1, and its claims for Breach of Contract under its Cross-Claim Count Nos. 3 and 4 and Counter-Claim Nos. 2 and 3.

5. Flint Hills is granted affirmative relief on its claim for Breach of Guaranty against The Williams Companies, Inc. under Cross-Count No. 7 and Counter-Claim Count No. 2.

6. Flint Hills shall recover from and have judgment against Williams Alaska Petroleum, Inc. as follows:

a. Williams Alaska Petroleum, Inc. is liable to Flint Hills for its equitable share of past off site sulfolane response costs: **\$52,564,318**

b. Williams Alaska Petroleum, Inc. is also liable to Flint Hills for prejudgment interest on the amount under 6(a) above (computed at the annual rate of 5.25%) from the date of expenditure through the date of judgment: **\$11,976,855.94**

c. Sub-Total: **\$64,541,173.94**

d. Attorney's Fees: **\$6,456,617.00**

Date Awarded: 5/14/2020

Judge: Matthews

e. Costs \_\_\_\_\_

Date Awarded: \_\_\_\_\_

Clerk: \_\_\_\_\_

f. **TOTAL JUDGMENT:** \_\_\_\_\_

g. Post-Judgment Interest Rate: 5.25%

7. Flint Hills is further entitled to an award and recovery against Williams Alaska Petroleum, Inc., as follows:

a. Williams Alaska Petroleum, Inc. shall pay 75% of Flint Hills' future costs related to the construction of the piped water system constructed in response to the sulfolane pollution, currently estimated at \$13,000,000.

b. Williams Alaska Petroleum, Inc. shall reimburse Flint Hills for 75% of all future costs of offsite sulfolane remediation that Flint Hills incurs.

c. Williams Alaska Petroleum, Inc. shall indemnify, defend, hold harmless, and reimburse Flint Hills for 100% of all future costs, expenses, claims, and damages incurred related to PFAS contamination.

8. Flint Hills shall recover from and have judgment against Williams Alaska Petroleum, Inc. and The Williams Companies, Inc., jointly and severally, as follows:

a. Williams Alaska Petroleum, Inc. and The Williams Companies, Inc. are jointly and severally liable to Flint Hills for past damages for PFAS contamination at the North Pole Refinery. These costs and damages are liabilities of Williams Alaska Petroleum, Inc. for which Williams Alaska Petroleum,

Inc. and The Williams Companies Inc. are 100% responsible pursuant to the Sales Agreement and Parental Guaranty: **\$844,632**

- b. Williams Alaska Petroleum, Inc. and The Williams Companies, Inc. are jointly and severally liable to Flint Hills for prejudgment interest on the amount under 8(a) above (computed at the annual rate of 5.25%), from the date of each expenditure through the date of judgment: **\$199,438.22**
- c. Sub-Total: **\$1,044,070.22**
- d. Attorney's Fees: **\$104,407.00**
  - Date Awarded: 5/14/2020
  - Judge: Matthews
- e. Costs \_\_\_\_\_
  - Date Awarded: \_\_\_\_\_
  - Clerk: \_\_\_\_\_
- f. **TOTAL JUDGMENT:** \_\_\_\_\_
- g. Post-Judgment Interest Rate: 5.25%

9. Flint Hills is further entitled to an award and recovery against The Williams Companies, Inc., as follows: The Williams Companies shall indemnify, defend, hold harmless, and reimburse Flint Hills for 100% of all future costs, expenses, claims, and damages incurred related to PFAS contamination.

**Williams Alaska Petroleum, Inc.'s Claims**

10. All claims of Williams Alaska Petroleum, Inc. against The State of Alaska are **DENIED** and **DISMISSED WITH PREJUDICE**.

11. All claims of Williams Alaska Petroleum, Inc. against Flint Hills are **DENIED** and **DISMISSED WITH PREJUDICE**.

**The Williams Companies, Inc.'s Claims**

12. All claims of The Williams Companies, Inc. against Flint Hills are **DENIED** and **DISMISSED WITH PREJUDICE**.

**Costs and Attorney's Fees**

13. The State of Alaska and Flint Hills may move for an award of costs and attorney's fees within 10 days after the date shown in the clerk's certificate of distribution on this final judgment as defined by Alaska Rule of Civil Procedure 58.1.

Dated this 23rd day of March, 2020.

/s/ Warren W. Matthews  
WARREN W. MATTHEWS  
Superior Court Judge Pro Tem