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10 **UNITED STATES DISTRICT COURT**
11 **EASTERN DISTRICT OF WASHINGTON**

12 STATE OF WASHINGTON,
13 Plaintiff,
14 and
15 STATE OF OREGON,
16 Plaintiff-Intervenor,
17 v.
18 ERNEST MONIZ, Secretary of
the United States Department of
19 Energy, and the UNITED
STATES DEPARTMENT OF
20 ENERGY,
21 Defendants.
22

NO. 2:08-cv-05085-FVS

PLAINTIFF STATE OF
WASHINGTON'S
PETITION TO AMEND
CONSENT DECREE

Hearing Date Requested

Oral Argument Requested

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- DFLAW – Direct Feed Low Activity Waste Facility
- DOE – Department of Energy
- DST – Double-Shell Tank
- HFFACO – Hanford Federal Facility Agreement and Consent Order
- HLW – High Level Waste
- HWMA – Hazardous Waste Management Act (Washington State)
- RCRA – Resource Conservation and Recovery Act (federal)
- SST – Single-Shell Tank
- WAC – Washington Administrative Code
- WTP – Waste Treatment Plant

1 **I. INTRODUCTION**

2 In 2008, the State of Washington (Washington, or State) filed suit in this
3 Court to remedy missed and certain-to-be missed milestones for cleanup of the
4 Hanford Nuclear Reservation. The milestones were for the United States
5 Department of Energy (Energy) to: (1) by 2011, build and begin operating a
6 treatment plant to convert into glass Hanford’s millions of gallons of high-level
7 radioactive and hazardous tank waste, much of which is stored in aging, leak-
8 prone single-shell tanks; (2) by 2018, finish retrieving waste from all 149 of
9 those single-shell tanks; and (3) by 2028, finish treating all of the tank waste.
10 The suit sought to re-establish an enforceable legal schedule for these tasks,
11 which had come so far off track that Energy no longer held itself accountable to
12 the schedule in place.

13 In 2010, this Court entered a Consent Decree resolving the suit between
14 Washington and defendant Energy. The Consent Decree was part of a broader
15 settlement that put under this Court’s jurisdiction nearer-term deadlines to
16 finish the treatment plant and retrieve 19 single-shell tanks, while establishing
17 new, longer-term deadlines in the Hanford Federal Facility Agreement and
18 Consent Order (HFFACO, also known as the “Tri-Party Agreement”) for
19 retrieving all the remaining single-shell tanks and treating all the tank waste.
20 Even the “nearer-term” Consent Decree deadlines were a decade’s leap from
21 the previous deadlines under the HFFACO. Under the current Decree, the
22 treatment plant (known as the Waste Treatment Plant, or WTP) is to begin

1 operating in 2019 and reach full-scale “initial operations” by 2022, with the
2 19 tanks to be retrieved during the same period. The new “end dates” under the
3 HFFACO marked an even greater leap: Energy is to finish retrieving waste
4 from all single-shell tanks no later than 2040, and finish treating all of
5 Hanford’s tank waste no later than 2047. These dates were established based
6 on Energy’s modeling of the rate at which SSTs could be retrieved and waste
7 could be treated assuming the requirements of the Decree were met (i.e., that
8 the WTP would begin operating in 2019 and reach full-scale “initial operations”
9 by 2022).

10 In November 2011, less than 13 months after this Court entered the
11 Consent Decree, Energy gave notice to the State that certain unspecified
12 Consent Decree deadlines were “at risk.” After five months of argument over
13 whether the information would be subject to Federal Rule of Evidence 408,
14 Energy finally identified to the State the specific “at risk” deadlines. The
15 deadlines included both the 2019 and 2022 dates for WTP hot start and
16 achieving initial operations, as well as a number of deadlines related to the
17 portions of the WTP dedicated to “pre-treating” tank waste and converting the
18 most highly radioactive fraction of the waste into glass.

19 Over the nearly three years since, Energy abandoned all efforts to comply
20 with the remaining WTP-related deadlines in the 2010 Consent Decree. It is
21 now impossible for Energy to comply with these deadlines. During the past
22

1 three years, Energy and its WTP contractor have again proceeded without being
2 accountable to the schedule in place, without consultation with this Court, and
3 with almost no consultation with the State, to define a new approach for
4 completing and operating the WTP. This approach will add yet another decade
5 or more of projected delay to the WTP. In the meantime, without an operating
6 WTP, Energy cannot continue retrieving waste from the SSTs unless, as
7 mitigation, additional new, compliant storage capacity is built. This means that
8 without such mitigation, the benefit of the bargain the State was promised under
9 the 2010 Consent Decree—which included putting Energy on course to retrieve
10 all 149 SSTs by no later than 2040—is lost.

11 By early 2014, Energy had still not presented the State with a proposal to
12 amend the Consent Decree, despite having given notice of missed deadlines
13 more than two years earlier. On March 31, 2014, pursuant to Consent Decree
14 Sections VII.G and X.C, the State provided Energy with the State’s own
15 proposal to amend the Decree. Energy rejected the State’s amendment proposal
16 on April 18, 2014. On April 25, 2014, under the terms of Consent Decree
17 Section IX.A, the State triggered a 40-day dispute resolution period over
18 Energy’s rejection. Upon motion of the parties, this Court extended the dispute
19 resolution period twice to September 5, 2014. The State and Energy were
20 unable to resolve their dispute during this extended dispute resolution period.

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1 Pursuant to Federal Rule of Civil Procedure 60(b)(5) and Section IX.B of
2 the Consent Decree, the State now petitions the Court to resolve the amendment
3 dispute between the State and Energy. The State requests that the Court adopt
4 into the Decree three main elements of the State's March 31 proposal. The first
5 element is a new schedule for completing construction of the WTP and bringing
6 the WTP into initial operation. The State's proposed schedule adopts the same
7 basic phased approach for completing construction and start-up of the WTP
8 advanced by Energy in a September 2013 framework document. The proposed
9 schedule is realistic and achievable, but with sufficient specificity to foster
10 accountability and timely identify future schedule risk issues.

11 The second element consists of two actions to mitigate for Energy's WTP
12 delays. These actions are to: (1) continue retrieving waste from non-compliant
13 SSTs while start-up of the WTP is delayed; and (2) construct additional
14 compliant tank storage capacity to allow these retrievals to move forward even
15 without a fully operating WTP. These actions are necessary to maintain the
16 same benefit of the bargain afforded by the 2010 Decree with respect to tank
17 retrievals, despite the WTP delays. Completing the SST retrieval mission on
18 the current HFFACO schedule is more essential than ever. Even under the
19 current schedule, some SSTs may be nearly a century old by the time they are
20 retrieved, as compared to their intended 20-30 year design life. Since the 2010
21 Decree was entered, there is evidence that at least one, and possibly more, SSTs
22

1 are actively leaking. The likelihood of further deterioration and leakage in the
2 SST system will only increase with time.

3 Finally, the third element consists of additional Consent Decree terms to
4 ensure greater accountability and enforceability in the Decree in light of the
5 circumstances leading to the current state of non-compliance. These terms are
6 to: (1) provide quarterly progress reports to the State and the Court; (2) provide
7 a recovery plan, with a schedule, to the State and the Court, upon Energy
8 identifying any future schedule risk(s); and (3) provide to the State and the
9 Court an annual report identifying for each of the upcoming seven federal fiscal
10 years, the funding needed to achieve compliance with all court-ordered
11 requirements. These terms are necessary to help avoid a repeat of the current
12 situation.

13 Under Consent Decree Section IX.B, this petition is timely brought
14 within 30 days of the conclusion of the extended dispute resolution period.

15 **II. BACKGROUND**

16 **A. Hanford's Tank Waste Mission**

17 From 1944 to 1989, the federal government produced approximately two-
18 thirds of the nation's weapons-useable plutonium at Hanford. Declaration of
19 Suzanne Dahl-Crumpler (Dahl Decl.) ¶ 13. This activity generated highly
20
21
22

1 radioactive and chemically hazardous waste as a byproduct. Dahl Decl. ¶¶ 11-
2 13. Today there are approximately 56 million gallons of this legacy waste
3 remaining at Hanford.¹ Dahl Decl. ¶ 14.

4 Throughout Hanford’s production period, and still to this day, the federal
5 government has lacked the capability to treat this waste into a form safe for
6 ultimate disposal. Dahl Decl. ¶¶ 21-23. As a result, the waste—which is now
7 in various forms of liquid, sludge, and “saltcake”—continues to be stored in
8 177 temporary underground holding tanks at the center of the Hanford site.
9 Dahl Decl. ¶¶ 14-15. Hanford’s tank waste mission centers on retrieving this
10 waste from its temporary storage and treating it for ultimate disposal. Dahl
11 Decl. ¶¶ 20-22.

12 **1. Tank Waste Storage**

13 Most of Hanford’s tanks—149 out of the 177—are “single-shell tanks”
14 (SSTs) that consist of a single welded carbon steel liner (the tank), encased
15 within a concrete shell for structural support. Declaration of Jeffery Lyon
16

17 ¹ The hazardous waste portion of this mixture is subject to regulation
18 under Washington’s Hazardous Waste Management Act, chapter 70.105 RCW,
19 through authorization under the federal Resource Conservation and Recovery
20 Act (RCRA). *See Washington v. Moniz*, 558 F.3d 1036, 1038 (9th Cir. 2009)
21 (discussing Washington’s federal authorization to implement the HWMA in
22 lieu of RCRA).

1 (Lyon Decl.) ¶¶ 7-8. The oldest were built in 1944. The newest was built in
2 1964. The tanks range in capacity from approximately 55,000 gallons to over
3 1 million gallons. Lyon Decl. ¶ 8. Today, the SSTs still hold approximately
4 29 million gallons of waste, much of which is of a sludge-like consistency.
5 Lyon Decl. ¶ 7. Most of the easily pumped liquid waste has been removed from
6 the SSTs so that much of the remaining waste is composed of sludges and
7 solids. Any one SST, however, may still hold tens of thousands of gallons of
8 liquid in interstitial space within the sludges. Lyon Decl. ¶ 16.

9 Under normal conditions, each SST was expected to only operate for an
10 approximately 20 to 30-year “design life.” The older tanks, however, have now
11 been storing waste for some 70 years (40 to 50 years beyond their design lives)
12 and even the newest tanks have now been storing waste for 50 years (20 to
13 30 years beyond their design lives). Further, most SSTs have not operated
14 under “normal” conditions. Instead, they have been subjected to severe
15 operating conditions due to factors such as caustic waste composition and
16 extreme heat generated by tank contents. Lyon Decl. ¶ 9. Not surprisingly,
17 waste has already escaped to the environment from nearly half of the SSTs (67
18 out of 149). Among these, at least 25 SSTs have reported breaches in the sides
19 or bottoms of their carbon steel liners. This has caused tank waste to leak
20 directly to the surrounding soil. There is insufficient information on which to
21 project by how much or at what rate any given SST will further deteriorate over
22

1 a specific period. However, it is indisputable that the likelihood of further
2 deterioration and leakage will increase with time. Lyon Decl. ¶ 10.

3 Present estimates are that approximately one million gallons of tank
4 waste have been released to the environment from the SSTs. This waste
5 includes hazardous waste constituents such as chromium, numerous other heavy
6 metals, and volatile organic compounds, all of which are harmful to human
7 health or the environment. In addition, the tank waste contains highly
8 radioactive, long-lived radionuclides that, once released, will persist in the
9 environment for tens of thousands of years.² Lyon Decl. ¶ 11. Despite
10 Energy's initial assurances that any leakage would remain in soil beneath the
11 tanks, in November 1997, Energy confirmed that contamination from the tanks
12 had reached groundwater more than 200 feet below the surface. This
13 groundwater eventually discharges to the Columbia River, which is about five
14 to eight miles from the location of the tank farms. Lyon Decl. ¶ 12.

15 In regulatory terms, none of the SSTs meet applicable requirements for
16 hazardous waste storage tanks under the federal Resource Conservation and
17 Recovery Act (RCRA) and Washington's Hazardous Waste Management Act

18 _____
19 ² Although these radionuclides are not "solid waste" under RCRA and are
20 not regulated by the State, see 42 U.S.C. § 6903(27); *United States v. Manning*,
21 527 F.3d 828, 832-33 (9th Cir. 2008), they are inextricably bound in the same
22 waste mixture as the hazardous constituents subject to State regulation.

1 (HWMA). Specifically, the SSTs lack structural integrity; they lack secondary
2 containment; and they lack leak detection as required by 40 C.F.R.
3 § 265.193(a)(3), (b), and (c) (incorporated by reference in WAC 173-303-
4 400(3)³). Lyon Decl. ¶ 13. Further, all 149 SSTs have been identified to the
5 State as “unfit for use” through an engineering assessment conducted by
6 Energy. Lyon Decl. ¶ 14, Ex. 4. This unfit-for-use determination triggers a
7 legal obligation on Energy’s part under RCRA and the HWMA to
8 “immediately” remove the tank from service; to, within “24 hours . . . or, if the
9 owner or operator demonstrates that it is not possible, at the earliest practicable
10 time,” remove as much waste as is necessary to prevent release to the
11 environment; and to “close” the tank system pursuant to state hazardous waste
12 management standards if the system is not upgraded or repaired to meet
13 minimum standards. Lyon Decl. ¶ 15. *See* 40 C.F.R. § 265.196(a), (b).

14 The remaining 28 Hanford tanks are newer, approximately one million
15 gallon capacity “double-shell tanks” (DSTs) intended by Energy to provide
16 compliant storage. Lyon Decl. ¶ 19. These tanks are constructed of two welded

17 _____
18 ³ For simplicity, all succeeding citations to federal C.F.R. hazardous
19 waste tank system requirements as incorporated into Washington’s Dangerous
20 Waste Regulations will simply be to the C.F.R. In all cases, the federal
21 requirements are incorporated into state regulation through WAC 173-303-
22 400(3).

1 steel liners (tanks), one of which is enclosed within the other to provide
2 “secondary containment” in the event of a leak from the primary tank. Both
3 tanks are enclosed within exterior concrete for structural support. Lyon Decl.
4 ¶ 20. As further explained below, one DST—Tank AY-102—has recently
5 developed a leak and must be removed from service. Lyon Decl. ¶ 21.

6 Hanford’s DSTs are currently storing nearly 27 million gallons of waste.
7 Lyon Decl. ¶ 7. There is only limited available DST space to allow for the
8 further transfer of waste from the SST system, as well as the transfer of waste
9 out of DST Tank AY-102. Without the construction of more DSTs or the
10 availability of treatment capacity for Hanford’s tank waste, no further
11 significant transfer of waste can occur into the DST system from the aging and
12 unfit SSTs. Lyon Decl. ¶ 24.

13 **2. Tank Waste Treatment**

14 Independent of the “safe storage” requirements that require SST closure,
15 all of Hanford’s tank waste is “land disposal restricted” under RCRA and the
16 HWMA. Dahl Decl. ¶ 18. Such waste must be treated to specified standards
17 before it can be disposed of. *Id.* Significant to this matter, such waste also
18 cannot be stored for any longer than is necessary to accumulate “such
19 quantities . . . as are necessary to facilitate proper recovery, treatment or
20 disposal.” 42 U.S.C. § 6924(j); 40 C.F.R. § 268.50 (incorporated by reference
21 in WAC 173-303-140(2)(b)); *see also Washington v. Moniz*, 558 F.3d 1036,
22

1 1038-40 (9th Cir. 2009). This “storage prohibition” is aimed at preventing the
2 indefinite accumulation of waste in lieu of treatment. *Moniz*, 558 F.3d at 1040.
3 As a result, even when stored in the DSTs, Hanford’s tank waste is being stored
4 in violation of the storage prohibition and must be treated to land disposal
5 restriction standards.

6 As indicated above, there is still no treatment capacity for Hanford’s tank
7 waste. Since at least 1989, Energy’s plan has been to build a Waste Treatment
8 Plant (WTP) to “vitrify” the waste into glass logs. Dahl Decl. ¶ 21. In the
9 simplest terms, the WTP will consist of four major components—the
10 Pretreatment Facility, the Low Activity Waste Vitrification Facility, the High
11 Level Waste Vitrification Facility, and the Analytical Laboratory—together with
12 supporting facilities.⁴ Dahl Decl. ¶ 24. The Pretreatment Facility will separate
13 incoming tank waste into two fractions: a low-activity waste fraction and a high-
14 level waste fraction. Dahl Decl. ¶ 25. Each waste stream will then be routed to a
15 respective vitrification facility (Low Activity Waste Facility or High Level Waste
16 Facility) for immobilization. Dahl Decl. ¶ 25-27. After the waste is treated, the
17 WTP will produce two output streams. Dahl Decl. ¶ 29. The bulk of the
18 chemicals and some of the radioactive elements will be captured in the

19 _____
20 ⁴ These facilities are often referred to by the following acronyms:
21 Pretreatment Facility (PT or PTF); Low Activity Waste Facility (LAW); High
22 Level Waste Facility (HLW); and Analytical Laboratory (LAB).

1 low-activity fraction (10 percent of the radioactivity and 90 percent of the
2 volume) and vitrified as Immobilized Low Activity Waste. Dahl Decl. ¶ 29.
3 This waste will be disposed of on the Hanford site at the Integrated Disposal
4 Facility. *Id.* The remaining high-level radioactive fraction (90 percent of the
5 radionuclides and 10 percent of the volume) will be vitrified as Immobilized
6 High Level Waste. Dahl Decl. ¶ 30. This waste will presumptively be disposed
7 of at a national deep geologic repository, currently designated by Congress to be
8 located at Yucca Mountain, Nevada. *See In re Aiken Cnty.*, 725 F.3d 255 (D.C.
9 Cir. 2013).

10 In addition to allowing Energy to address its storage prohibition
11 violation, the WTP has also been Energy’s primary solution for removing waste
12 from the SST system, thus allowing it to be closed. Dahl Decl. ¶ 21-22. Energy
13 has expected that over time, waste fed through the WTP from the DST system
14 will free up DST capacity, which in turn will allow for the continued transfer of
15 waste retrieved from the SSTs to the DSTs. Dahl Decl. ¶ 21. Under this
16 strategy, the WTP is the lynchpin for completing the Hanford tank waste
17 mission. Dahl Decl. ¶ 22. To this point, the WTP has been viewed as vital to
18 both treating tank waste in satisfaction of RCRA/HWMA treatment standards
19 and creating the “throughput” necessary to allow SSTs to continue being
20 retrieved. Dahl Decl. ¶ 22.

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1 **B. History of Actions Under the Hanford Federal Facility Agreement**
2 **and Consent Order**

3 In order to address Hanford’s numerous compliance issues, the State, the
4 Environmental Protection Agency, and Energy entered into the HFFACO in
5 1989. Hedges Decl. ¶ 9. Among other things, the HFFACO is a compliance
6 order issued pursuant to RCRA and HWMA. HFFACO Article I *available at*
7 <http://www.hanford.gov/?page=81>. The HFFACO establishes numerous
8 milestones (schedules and associated regulatory requirements) for cleanup of the
9 Hanford site and for bringing Hanford facilities into compliance with applicable
10 environmental requirements. Hedges Decl. ¶ 9.

11 The milestones established in the original 1989 HFFACO included
12 milestones to address the treatment and prolonged storage of high-level tank
13 waste. Under these milestones, Energy was to have completed the treatment of
14 all tank waste by 2028. Energy was also to have completed the “retrieval” of
15 waste from all 149 SSTs by 2018, with the benchmark for retrieval set at the
16 equivalent of 99 percent of capacity of each SST. Hedges Decl. ¶ 10, Ex. 1. This
17 action was to allow for closure of the unfit-for-use SST system by 2024. Finally,
18 to mitigate the near-term risk posed by continued SST storage, the HFFACO
19 (and later, a consent decree) required Energy to “interim stabilize” certain SSTs
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1 prior to full-scale retrieval by removing “pumpable liquids” from the tanks and
2 transferring those liquids to the DSTs.⁵ Hedges Decl. ¶ 10.

3 In order to support SST waste retrievals and complete tank waste
4 treatment, Energy committed in 1989 to build a pilot WTP that would begin
5 treating tank waste by 1999. Dahl Decl. ¶ 31. Five years later (1994), on the
6 promise that the vitrification strategy would be expanded beyond a pilot to
7 include all of Hanford’s tank waste, this start date was renegotiated and
8 extended to 2004. Dahl Decl. ¶ 32. Just two years after this renegotiation
9 (1996), Energy adopted a “privatization” concept for building and operating the

11 ⁵ As indicated earlier, interim stabilization does not mean that all liquids
12 have been removed from the SSTs, or that the risk of further leaks from the SSTs
13 to the environment has been eliminated. Rather, it means that Energy has left no
14 more than 50,000 gallons of interstitial liquids and no more than 5,000 gallons of
15 readily pumpable (supernatant) liquids in a subject tank. While the SST waste
16 volume is now mostly made up of sludge (and some solids), any one SST may
17 still hold tens of thousands of gallons of liquid occupying interstitial space within
18 the sludge. Lyon Decl. ¶ 16. In 1999, Washington and Energy resolved a
19 threatened lawsuit over Energy’s failure to meet the HFFACO interim
20 stabilization milestones by entering into a consent decree. *Washington v. U.S.*
21 *Dep’t of Energy*, CT-99-5076-EFS (E.D. Wash, 1999). Energy completed the
22 requirements of this decree in 2010 and the decree was dismissed in 2011.

1 vitrification complex. Accommodating this change, the State agreed to extend
2 the milestone for starting full-scale WTP operations to 2008. Dahl Decl. ¶ 33.

3 In 2000, after Energy abandoned its privatization plan, the State agreed to
4 yet another request from Energy to extend the WTP milestones. This time, the
5 start date for full-scale WTP operations was extended to 2011.⁶ Dahl Decl.
6 ¶ 34.

7 Construction on the WTP began in July 2002. Dahl Decl. ¶ 35. The
8 project was beset with problems almost from the start. *Id.* As concluded by
9 numerous federal studies and reports, the majority of factors contributing to
10 these problems were within Energy's control: poor project management; poor
11 contractor oversight; failure to plan for, and then promptly address, seismic
12 issues identified as early as 2002; and failure to recognize and resolve key
13 technical issues, which particularly affected the Pretreatment and High Level
14 Waste Facilities. Dahl Decl. ¶¶ 35-36; *see also* Dahl Decl. ¶¶ 38, Ex. 1; 39,
15 Ex. 2; 53, Ex. 11; 54, Ex. 12; 75, Ex. 20; 76, Ex. 21; 80, Ex. 24; 84, Ex. 27.⁷

16
17 ⁶ In addition, in 2003, the State agreed to allow Energy to move forward
18 with testing alternative waste form technologies to supplement Waste
19 Treatment Plant capacity, as a possible alternative to constructing a second low-
20 activity waste vitrification facility.

21 ⁷ The Declaration of Suzanne Dahl presents a detailed overview of
22 Energy's project management, contractor oversight, and technical issue

1 These key technical issues included the potential for hydrogen gas to build to
2 explosive levels in vessels and piping, as well as a series of interrelated issues
3 related to waste mixing vessels in both facilities. Dahl Decl. ¶ 35.

4 Because of the highly radioactive nature of the waste involved, the
5 mixing vessels were designed to be located in “black cell” rooms that will never
6 be accessed after the facility begins operating. Dahl Decl. ¶ 63, Ex. 19 at App.
7 C. As a result, once operations begin, it will be impossible to perform any
8 maintenance or repair of the vessels during the 40-year design life of the WTP.
9 *Id.* As early as 2002, Energy and its WTP contractor, Bechtel National, Inc.
10 (Bechtel), were warned that their design did not provide an adequate margin of
11 safety for the wear and tear (erosion) and corrosion that will occur in the mixing
12 vessels during the WTP’s lifespan. Dahl Decl. ¶¶ 66, Ex. 15, Table 1 at 5-8; 75,
13 Ex. 20 at 2; 76, Ex. 21 at 1. In addition, while the vessels were designed to use
14 “pulse jets” to maintain mixing instead of moving parts that will wear out, the
15 design adequacy of the pulse jets was questioned in light of some of the waste
16 characteristics (which include non-Newtonian fluids). Dahl Decl. ¶ 67, Ex. 15
17 at 12-14. Between 2002 and 2009, Energy took some steps to respond to these
18 issues, but its efforts were never sufficient to eliminate questions stemming

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20
21 resolution failures, both pre- and post-2010 Consent Decree. *See generally,*
22 Dahl Decl. ¶¶ 31-90.

1 from the initial design shortcomings since full scale testing was never done.
2 Dahl Decl. ¶¶ 66-73, Exs. 15, 19, 24.

3 As a result of Energy's actions and inaction, the WTP project soon fell
4 years behind schedule and billions of dollars over budget. Dahl Decl. ¶¶ 23, 35,
5 36. By 2006, it was clear Energy would be unable to meet any of its HFFACO
6 WTP construction or tank waste treatment milestones.

7 On the retrieval side, despite the HFFACO requirement to complete all
8 SST waste retrievals by 2018, Energy did not complete its first tank retrieval
9 until 2003. Three years later, Energy missed its first major HFFACO retrieval
10 milestone, which was to complete retrieval of the grouping of SSTs that make up
11 the "C-Farm." See ECF No. 1 ¶ 33. By the 2006 milestone date, Energy had
12 retrieved only two of the 16 SSTs in the grouping.

13 In short, by 2006 it was clear Energy would be unable to meet any of its
14 pending tank waste treatment, retrieval, or closure milestones under the
15 HFFACO. From 2006 to 2008, the State negotiated with Energy and the
16 Department of Justice over a prospective new tank waste mission schedule.
17 This negotiation did not result in an agreement. Hedges Decl. ¶ 12.

18 **C. 2008 Lawsuit and 2010 Settlement**

19 In November 2008, the State filed suit over Energy's missed and certain
20 to be missed HFFACO WTP construction, tank waste treatment, SST retrieval,
21 and SST closure milestones. Hedges Decl. ¶ 13. Among other things, the
22

1 State’s complaint alleged that Energy had not: (1) immediately removed
2 leaking and/or unfit-for-use SSTs from service as required by 40 C.F.R.
3 § 265.196; (2) within 24 hours after detection of a leak or, if removal within
4 24 hours is not possible, at the earliest practicable time, removed as much of the
5 waste from the SSTs as is necessary to prevent further release of hazardous
6 waste to the environment, as required under 40 C.F.R. § 265.196(b)(1); and
7 (3) closed the leaking and/or unfit-for-use tank system as required under
8 40 C.F.R. § 265.196(e)(1), in lieu of providing secondary containment and
9 repair to the SSTs. It also alleged that Energy was storing land disposal
10 restricted waste in violation of the storage prohibition under 40 C.F.R. § 268.50
11 (incorporated by reference in WAC 173-303-140(2)(b)). ECF No. 1 ¶ 21.

12 In August 2009, the parties agreed to a proposed settlement package that
13 included new compliance schedules for satisfying the legal requirements
14 outlined in the State’s suit. The package was split between two legal
15 instruments—part of it in a judicial consent decree, and part of it in
16 amendments to the HFFACO—which were submitted for concurrent public
17 comment. Hedges Decl. ¶ 14. The Consent Decree (which was entered by this
18 Court in November 2010) defined new milestones for WTP construction and
19 “hot start” (to be completed by the end of 2019), WTP initial operations (to be
20 attained by the end of 2022), and 19 SST retrievals (to be completed by the end
21 of 2022). The 19 SST retrievals in the Decree were negotiated based on
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1 Energy’s modeling as to how many retrievals it could accomplish before the
2 WTP came on-line (filling remaining available DST capacity). Hedges Decl.
3 ¶ 15.

4 Among other things, the HFFACO amendments (which were executed
5 concurrent with Decree entry) established a schedule for further SST retrievals
6 beyond the Decree, a new “end date” milestone for completing all SST retrievals,
7 and a new “end date” milestone for completing all tank waste treatment.
8 Specifically, all SST retrievals were to be completed no later than the end of
9 2040 and all tank waste treatment was to be completed no later than the end of
10 2047. Hedges Decl. ¶ 16. These “end dates” were negotiated based on Energy’s
11 modeling of the rate at which SST retrievals could be maintained and tank waste
12 could be treated after the WTP came on-line. Hedges Decl. ¶ 17, Ex. 2 at 4-5, 6.
13 This link between the 2010 Consent Decree schedule and the 2010 amended
14 HFFACO schedules was recognized in a joint State-Energy responsiveness
15 summary to public comment:

16 Recognizing that getting the WTP constructed and operational is an
17 integral part of the entire tank waste mission, the Parties selected a
18 settlement approach that maintained the connection between WTP
19 construction and operation and SST retrievals and requires: (1) that
20 USDOE remains on schedule to meet the new SST retrieval
21 schedule; (2) that USDOE remains on schedule to meet the new
22 WTP construction and operation schedule; and (3) contingency
measures to address various risks including tank integrity.

The State determined that it could agree to the schedule and pace of
SST retrievals *given its expectations that USDOE will remain on*

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track to meet the SST retrieval and WTP construction and operation schedule and there will be no new or increased risk of tank failure.

Hedges Decl., Ex. 2 at 5 (emphasis added).

In tandem with establishing new “end date” milestones, Ecology and Energy agreed to an ongoing “System Plan” process to model and evaluate how the retrieval and tank waste treatment missions could be conducted more efficiently (and ideally, more quickly than the “no later than” end dates). Hedges Decl. ¶¶ 18, 19. Periodic future negotiations were scheduled around specific System Plan runs. Hedges Decl. ¶ 19. In addition, the System Plan was to identify and include contingency measures that anticipated (among other matters) the possibility of further WTP construction delays, insufficient DST space to support continued retrievals on schedule, and SST integrity issues. Hedges Decl. ¶ 20, Ex. 3 at D-26 to D-27. According to the settlement language, these contingency measures “should include . . . providing new, compliant tanks with sufficient capacity and in sufficient time to complete retrievals under this agreement [i.e., no later than 2040]” Hedges Decl. ¶ 21, Ex. 3 at D-27; *see also* Hedges Decl., Ex. 2 at 5. Thus, building additional DST capacity was contemplated as a response to potential further WTP delays, insufficient DST capacity, and SST integrity issues.

1 **D. Events Since Entry of 2010 Decree**

2 **1. Notices of Consent Decree Requirements “at Risk”; Limited**
3 **Information Provided to State; Energy Appears to Have**
4 **Already Decided to Move on New Path That Will Not Comply**
5 **With Consent Decree**

6 In November 2011, just 13 months after the Consent Decree became
7 effective, Energy (through the Department of Justice) gave Washington notice
8 that one or more of the Decree milestones was “at risk.” Declaration of Andrew
9 Fitz (Fitz Decl.), Ex. 1. Between November 2011 and May 2012, the State
10 repeatedly asked for details regarding the specific requirements at risk, the
11 reasons why Energy believed the deadlines were at risk, and Energy’s efforts to
12 address these developments. *See* Fitz Decl., Exs. 2, 3, 4, 5. Energy refused to
13 provide the information unless the State agreed the information would be
14 received subject to Federal Rule of Evidence 408.⁸ *See* Fitz Decl., Ex. 4.

15 On May 4, 2012, after taking an “agree to disagree” approach to the
16 applicability of Federal Rule of Evidence 408, the two sides met in-person.
17 Energy officials orally confirmed they believed ten Consent Decree milestones
18 were at risk, virtually all upcoming milestones for completing construction and

19 ⁸Washington maintains that a meeting scheduled for the purpose of Energy
20 providing to the State the factual and technical reasons for determining it has a
21 serious schedule risk is a meeting concerning Energy’s compliance with an order
22 of the Court, and as such is not governed by Federal Rule of Evidence 408. Fitz
 Decl., Exs. 4, 5.

1 achieving operations of High Level Waste Facility, Pretreatment Facility, and full
2 WTP (A-1, A-2, A-3, A-4, A-13, A-14, A-15, A-16, A-17, and A-19). Hedges
3 Decl. ¶ 28. Energy represented that no other milestones were at risk, including
4 those related to retrievals. *See* Fitz Decl., Ex. 6. Both at and following this
5 meeting, Washington expressed concern with Energy’s approach to the situation,
6 including Energy’s failure to provide specific details to the State.

7 Energy explained that its schedule risk determination was related at least
8 in part to technical issues associated with pulse-jet mixers, erosion and
9 corrosion in Pretreatment Facility vessels, and documented safety analysis.
10 Hedges Decl. ¶ 28. In addition to blaming these technical issues, Energy
11 officials, in 2012 and in 2013, also indicated that funding was having and would
12 likely in the future have some impact on Energy’s ability to comply with
13 Consent Decree requirements. Hedges Decl. ¶ 29. When describing the role of
14 past funding shortfalls and projected future funding constraints on Energy’s
15 ability to comply, Energy has not provided detailed budget information on the
16 individual facilities in order to provide a clear distinction between the relative
17 roles of funding and technical issues in delays. *Id.*

18 The State questioned Energy’s February 2012 direction to its contractor,
19 Bechtel, to develop a new Waste Treatment Plant baseline that assumed
20 (1) annual funding caps and (2) that resolution of technical issues related to the
21 Pretreatment and High Level Waste Facilities was only possible if the schedule
22

1 for those facilities was extended. Hedges Decl. ¶ 27. This meant that as early as
2 February 2012, Energy was planning not to meet or comply with certain Consent
3 Decree requirements, despite having sought no concurrence from the State or
4 approval from the Court.

5 Following the May 4 meeting, Washington officials asked that Energy take
6 several actions by June 13, 2012, including providing details regarding “other
7 information” giving rise to the schedule risk (to which Energy officials vaguely
8 alluded during the May 4 meeting) and committing to secure the State’s
9 concurrence before making future requests of its contractors that implicated
10 Consent Decree compliance. The State also asked Energy to direct Bechtel to
11 prepare an alternative baseline that did not assume funding limitations and was
12 designed to meet, or come as close as possible to meeting, all Consent Decree
13 requirements. Hedges Decl. ¶ 30.

14 This last request was based on the State’s understanding of the Consent
15 Decree’s “good cause” requirement for schedule amendment. Under the
16 Decree, “good cause” exists when the Decree schedule cannot be met due to
17 circumstances and events unanticipated in the development of the schedule, or
18 circumstances anticipated in the development of the schedule, but which have a
19 greater impact on the schedule than predicted or assumed at the time of the
20 schedule. Consent Decree § VII.D.1. “Good cause” does not exist if Energy
21 can nonetheless meet the existing schedule by responding with reasonable
22

1 diligence to such circumstances or events. *Id.* “Good cause” also does not exist
2 if Energy could have met the existing schedule if it had responded with
3 reasonable diligence to the circumstance(s) and event(s) when they occurred.
4 *Id.* State officials have repeatedly advised Energy that the Consent Decree
5 allowed schedule changes only upon a showing of “good cause.” Fitz Decl.,
6 Exs. 3, 6, 9, 14. In the State’s view, “reasonable diligence” requires Energy to
7 do everything in its power to implement and meet all requirements of the
8 Decree, including proactively addressing technical concerns and aggressively
9 pursuing funding from Congress, internal Energy sources, and any other federal
10 sources. *See, e.g.*, Fitz Decl., Ex. 2.

11 By letter dated June 22, 2012, Energy declined the State’s June 13
12 requests. Fitz Decl., Ex. 8.

13 **2. August 2012: State Threatens Formal Action**

14 In light of Energy’s response, Washington Governor Christine Gregoire
15 and Washington Attorney General Rob McKenna wrote Energy Secretary
16 Stephen Chu. *See* Fitz Decl., Ex. 9; Hedges Decl. ¶ 30. The letter reiterated
17 Washington’s requests and informed Energy that the State was considering
18 triggering dispute resolution under the Consent Decree. Hedges Decl. ¶ 30. The
19 letter further provided:

20 DOE . . . appears to have already decided it will not comply with
21 the Consent Decree based upon self-imposed limitations of
22 (1) annual funding caps and (2) a judgment that resolution of
technical issues related to the PTF and HLW is only possible if the

1 schedule for those facilities is extended. It has done so without
2 evaluating whether maintaining compliance remains technically
3 possible, and, if such an evaluation shows that meeting all Consent
4 Decree requirements is not technically possible, without evaluating
5 scenarios geared to still come as close as possible to meeting the
6 current schedule.

7 Fitz Decl., Ex. 9 at 1.

8 In mid-September 2012, Secretary Chu contacted Governor Gregoire and
9 committed to become personally involved in the situation. The Secretary
10 indicated that over the next few months, he would devote substantial personal
11 time and would bring together a panel of noted experts to assist Energy in
12 addressing WTP technical issues. Hedges Decl. ¶ 32. He invited State
13 participation in this process. State officials determined that the Secretary's
14 commitments would suffice as a response to the State's August 29, 2012, letter.⁹
15 Fitz Decl., Ex. 10; Hedges Decl. ¶ 32. State officials expected the effort to be
16 completed in early 2013. See Fitz Decl., Ex. 11; Hedges Decl. ¶ 33. State
17 officials expected that upon conclusion of the effort, Energy would propose a
18 new schedule for construction and operation of the WTP.

19 On January 14, 2013, Secretary Chu sent a letter to Governor Gregoire
20 summarizing the status of the expert panel's efforts and indicating that he had
21 reorganized the local Energy office "to implement the solutions identified
22 _____

⁹ This did not mean the State was foregoing any of its legal options or
remedies. Rather, it meant that the State would defer making any decisions about
pursuing formal remedies while the Secretary's process was underway.

1 through this expert review process.” Secretary Chu described work on some of
2 the technical issues as being sufficient to allow Energy to move forward, while
3 more work and testing remained for other issues. Secretary Chu did not identify
4 an expected conclusion date for any of this work, nor did he identify when
5 Energy might propose a new schedule for WTP construction. Hedges Decl. ¶ 34,
6 Ex. 8.

7 Shortly after this letter, Secretary Chu announced he would be leaving
8 office. Hedges Decl. ¶ 35, Ex. 9. In March 2013, the State asked that prior to
9 Secretary Chu’s departure, Energy provide a schedule for completing review of
10 all technical issues associated with WTP design. Hedges Decl. ¶ 35, Ex. 10. No
11 schedule was forthcoming. In May 2013, the State informed Energy that it
12 considered any “brainstorming” phase of work to be over and that it expected to
13 receive in the very near future a proposal for resolving technical issues and
14 meeting WTP obligations. Hedges Decl. ¶ 35, Ex. 11. When incoming
15 Secretary Ernest Moniz visited Washington State in June 2013, he committed to
16 Governor Inslee that he would provide a plan for moving forward by the end of
17 summer. Hedges Decl. ¶ 36, Ex. 12.

18 In September 2013, Energy provided its Draft Hanford Tank Waste
19 Retrieval, Treatment, and Disposition Framework document to Washington.
20 Hedges Decl. ¶ 37, Ex. 13. The Framework document described a three-phased
21 start-up of the WTP. Construction and start-up of the Low Activity Waste
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1 Facility would occur during phase 1; construction and start-up of the High Level
2 Waste Facility would occur during phase 2; and start-up of the Pretreatment
3 Facility would occur during phase 3. Hedges Decl. ¶ 37, Ex. 13 at 4–5. Beyond
4 describing these phases in a conceptual manner, the document provided little
5 detail, contained no schedule for any of the phases, and did not in any way
6 address SST retrievals. *Id.* The document’s cover letter expressly stated that
7 “the enclosed Framework is not a proposal to amend the Consent Decree.”
8 Hedges Decl. ¶ 37, Ex. 14.

9 State officials met with Energy representatives three times between
10 September and December 2013. Hedges Decl. ¶ 39. The September and October
11 meetings focused on the draft Framework document and the December meeting
12 was designated as the Three-Year Review meeting called for by the Consent
13 Decree, Section VI. Hedges Decl. ¶ 39; *see* Consent Decree § VI. State officials
14 repeatedly asked Energy and Department of Justice representatives for proposals
15 for changes to Consent Decree requirements with justifications for such changes
16 and for a description of how such proposed changes would impact other
17 requirements. Hedges Decl. ¶ 40. Between September 2013 and March 2014,
18 Energy did not provide a proposal to change Consent Decree requirements with
19 justifications for such changes nor did Energy describe how a new schedule
20 would impact other requirements like completing waste treatment and retrieval
21 obligations in the HFFACO. Hedges Decl. ¶ 40.

22

1 Meanwhile, following Energy’s November 2011 “at risk” notice, Energy
2 gave the State three more notices that Decree milestones were at risk (June 6,
3 2013, October 8, 2013, and September 22, 2014). Fitz Decl. ¶¶ 14, 15, 17, Exs.
4 12, 13, 15. The June 2013 notice identified one Low Activity Waste Facility
5 construction milestone at risk and the October 2013 notice labelled all the
6 remaining Low Activity Waste Facility milestones as at risk. The June 2013 and
7 September 2014 notices identified SST retrieval milestones at risk, indicating
8 that Energy would not complete retrieval of four of ten SSTs required to be
9 completed by September 30, 2014. *See id.* Combined, these four notices mean
10 that 14 of the 16 pending Consent Decree deadlines are at risk, with two past
11 deadlines missed and not yet completed as of the date of this Petition. Hedges
12 Decl. ¶ 41.

13 **3. New Tank Issues**

14 In addition to Energy’s “at risk” notifications, there have been at least
15 two other significant developments since the entry of the 2010 Decree. First, in
16 October 2012, Energy disclosed that DST Tank AY-102 has a leak between its
17 inner and outer shells. This means that one of Hanford’s 28 DSTs must now be
18 taken out of service. Second, in February 2013, Energy disclosed that as many
19 as six SSTs appeared to be actively leaking waste. As of the date of this
20 Petition, Energy now considers one of these SSTs (Tank T-111) to be actively
21 leaking.
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1 **a) DST AY-102 Out of Service Due to Internal Leak**

2 Double-Shell Tank AY-102 was constructed in 1968 as one of Hanford’s
3 first DSTs. It has a capacity of one million gallons and currently contains about
4 800,000 gallons of hazardous and radioactive sludge and liquid waste. In its
5 River Protection Project System Plan, Rev. 6, Energy identified this waste to be
6 the first low-activity and high-level waste feeds for the Waste Treatment Plant
7 hot commissioning. However, in fall of 2012, Energy notified the State of a
8 leak from the underside of AY-102’s primary tank into its secondary
9 containment. Continued monitoring indicates the leak is growing. There is at
10 least a risk of ultimate breach to the environment. As identified by the Defense
11 Nuclear Facilities Safety Board, there is also a risk, that the leaked material
12 could eventually clog ventilation channels underneath the tank, a matter of
13 concern because of the high heat generated by the waste. Lyon Decl. ¶ 21.

14 Washington’s Dangerous Waste Regulations require that the tank and its
15 secondary containment be removed from service, emptied of waste, inspected to
16 determine if it’s repairable, and closed if it is not repairable. 40 C.F.R.
17 § 265.196. Energy is now subject to a settlement agreement with the State to
18 carry out these tasks. Although Energy has not yet made a determination that
19 the tank cannot be repaired, it is presumed that this will be the conclusion after
20 the tank is emptied and inspected. As a consequence, Hanford’s total DST
21 capacity has been reduced by one million gallons. Lyon Decl. ¶ 22.

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1 **b) At Least One SST Identified With Active Leak to**
2 **Surrounding Soils**

3 In December 2012, Energy informally reported to the State that it was
4 investigating a possible leak from Tank T-111. Tank T-111 was built between
5 1943-44 and was put into service in 1945. It contains 447,000 gallons of
6 sludge, with an interstitial liquid volume of 38,000 gallons (approximately
7 8.5 percent by volume liquid). It was classified as an “assumed leaker” in 1979
8 and was interim stabilized in 1995. On February 15, 2013, Energy provided
9 official notice that the waste level in Tank T-111 has decreased, indicating a
10 possible release of tank liquid to surrounding soils. Energy has indicated that
11 the current rate of loss of liquids from the tank could be in the range of 150 to
12 300 gallons over the course of a year. A specific cause of the liquid level
13 decrease in Tank T-111 has not been determined. Lyon Decl. ¶ 17.

14 A week after the Tank T-111 leak was announced, it was announced that
15 five more SSTs appeared to be leaking. Although Energy has since declared
16 that none of the five are leaking, the State does not consider the evidence
17 conclusive for one of the five, due to monitoring data and an unusual and not
18 well-documented waste surface profile. Lyon Decl. ¶ 18.

19 **III. REASONS FOR THE STATE’S REQUEST FOR RELIEF**

20 Reluctantly, the State recognizes that Energy is so far off track on WTP
21 construction that it is impossible to recover and comply with the current
22 schedules under the Decree. Rather than seeking to sanction Energy, the State

1 believes it is in the better long-term interest of Hanford’s tank waste mission to
2 instead seek amendment of the Decree to impose a new, realistic, but
3 achievable, schedule for completing construction of the WTP and bringing the
4 WTP into initial operation; impose requirements to continue retrieving waste
5 from non-compliant SSTs while the WTP is delayed (together with constructing
6 sufficient storage capacity to facilitate these retrievals); and add terms to the
7 Consent Decree to ensure greater accountability and enforceability in light of
8 the circumstances leading to the current state of noncompliance.

9 Two overriding concerns have shaped the State’s proposal. First, events
10 since the Consent Decree was entered demonstrate that the Decree requires
11 more specificity, accountability, and enforceability to avoid a repeat of the
12 current situation. These terms should be reflected in the framework of the
13 amended schedule itself, as well as in other provisions of the Decree. Second,
14 to maintain the level of substantive relief provided by the 2010 Decree (i.e.,
15 preserve the “benefit of the bargain”), any Decree amendment should include
16 sufficient mitigation for the WTP delay to keep the tank waste retrieval mission
17 on track despite the delay. This mitigation is for Energy to retrieve additional
18 waste from SSTs and construct additional DST capacity to facilitate that
19 retrieval.

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1 **A. The Events Since the Consent Decree Was Entered Demonstrate**
2 **That the Decree Requires More Specificity, Accountability, and**
3 **Enforceability**

4 **1. Energy’s WTP Problems Have Continued Since Entry of the**
5 **2010 Consent Decree**

6 The events since 2010 demonstrate a continuation of the problematic
7 WTP project management patterns demonstrated by Energy prior to entry of the
8 Decree. Once again, numerous federal studies and reports since the Decree was
9 lodged and entered outline a persistent lack of institutional awareness of, or
10 competence toward, project management issues (including contractor review),
11 technical details, and safety design concerns, as well as a lack of consistent
12 affirmative action toward addressing schedule risks. There is a mountain of
13 information on the topic.¹⁰ However, the situation was succinctly summarized
14 by one report that concluded: “By just about any definition, DOE’s WTP
15 project at Hanford has not been a well-planned, well-managed, or well-executed
16 major capital construction project.” Dahl Decl. ¶ 43, Ex. 5.

17 Perhaps most significant to the WTP schedule, Energy has still not
18 resolved issues concerning mixing vessels and piping in the Pretreatment and
19 High Level Waste Facilities; namely, erosion and corrosion in the vessels and
20 related piping, as well as the design adequacy of pulse-jet mixers in the vessels,
21 despite being repeatedly informed of the issues and associated risks by the

22 ¹⁰ Again, a more detailed overview of Energy’s ten-plus years of WTP
failures is provided in the Declaration of Suzanne Dahl, ¶¶ 31-90.

1 Defense Nuclear Facility Safety Board, and the Government Accountability
2 Office. Dahl Decl. ¶¶ 54-61, 70-73, 86. After years of re-designs based on
3 analyses/calculations and small-scale testing with stimulants that were not
4 representative of Hanford tank waste, Energy finally realized in 2012 that it had
5 to go back to square one to do full-scale testing of a mock vessel, then proceed
6 with design. Full scale testing of the actual WTP vessels prior to installation,
7 however, became cost and schedule prohibitive. Dahl Decl. ¶¶ 66-72. Instead,
8 in March 2014, Energy arrived at a new approach: (1) build a characterization
9 and preconditioning facility to pretreat the waste before it goes to the
10 Pretreatment Facility; and (2) use smaller, standard designed and sized vessels,
11 which would be tested at full scale. Dahl Decl. ¶ 73, Ex. 19.

12 In another example, a critical disconnect has continued between the
13 engineering design of the project—particularly as related to the High Level
14 Waste and Pretreatment Facilities—and the “safety basis” review of that design,
15 which confirms it complies with Energy’s own nuclear safety standards. This
16 disconnect, together with confusion over and inconsistency in applying the
17 standards to be used for the safety basis review, has led to outright project
18 dysfunction. Although these issues have been present for years, the extent of
19 impact the issues have had on the viability of the project was neither
20 appreciated nor corrected by Energy. This contributed to Energy halting
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1 construction on both facilities in 2012, with construction yet to resume. One
2 report summarized the situation as follows:

3 The information from multiple sources, . . . point to safety culture
4 issues with personnel who are directly involved in the design and
5 engineering functions and the nuclear safety basis analysis and
6 review functions. . . . As examples: there are inconsistencies
7 between contractual documents (e.g., safety basis review
8 procedures) and regulatory requirements; and DOE-STD-3009 was
9 not consistently applied over the years, so part of the existing
10 safety basis documents and some aspects of the design may not
11 comply with DOE-STD-3009 and 10 CFR 830, impacting the
12 ability to gain approval of the final [Documented Safety Analysis].
13 In addition, [Preliminary Documented Safety Analyses, or PDSAs]
14 are out of date, and various reviews have highlighted significant
15 deficiencies in PDSAs and safety basis processes in general. . . .

16 The above factors and other conditions . . . have contributed to a
17 situation where there is often severe tension and frequent
18 animosity within and between personnel with nuclear safety design
19 and safety basis responsibilities. . . . With the factors described
20 above, neither [engineering design nor safety basis] organization
21 has performed their responsibilities effectively; technical questions
22 and differing opinions have not been effectively resolved because
the requirements are conflicting or not commonly understood, the
procedures do not match the requirements, the previous analyses
(e.g., PDSAs) are not reliable, and the safety basis organization is
understaffed

Most of the above factors have been in place for ten years.
However, until the past few years, it appears that safety basis
documents were often not reviewed by the [safety basis]
organization and ORP against the requirements of DOE-STD-
3009. . . . The situation has become increasingly worse as the
WTP design has progressed, the PDSA has become further out of
date, and the delays in safety reviews of design and engineering
documents have become longer. . . .

*[M]ost of the contributing factors listed above result from actions
or inactions at higher levels of ORP, DOE-WTP, and BNI
management. ORP, DOE-WTP, and BNI management has not*

1 *achieved timely resolution of important issues, including those*
2 *discussed above; in some cases, issues have remained unresolved*
3 *for about ten years.*

3 Dahl Decl. ¶ 42, Ex. 4 at vii-viii (emphasis added).

4 In a further example, it became apparent that Energy and its contractor
5 had failed to document compliance with quality assurance standards for the
6 “black cell” mixing vessels in the High Level Waste and Pretreatment
7 Facilities—the same vessels subject to ongoing erosion and corrosion concerns.

8 Again, Energy had earlier failed to appreciate or correct the problem:

9 The Office of Inspector General received allegations concerning
10 aspects of the quality assurance program at the Department of
11 Energy’s \$12.2 billion Waste Treatment and Immobilization Plant
12 (WTP) project in Hanford, Washington. . . .

12 In brief, it was alleged that quality assurance records for the
13 critically important “black cell” waste processing vessels were not
14 traceable to work performed. . . .

14 *Our review substantiated the allegation. In short, we found that*
15 *the Department had procured and installed vessels in WTP that did*
16 *not always meet quality assurance and/or contract*
17 *requirements. . . . The importance of black cells and hard-to-reach*
18 *components cannot be overstated. Premature failure of these*
19 *components could potentially impact safety, contaminate large*
20 *portions of a multi-billion dollar facility and interrupt waste*
21 *processing for an unknown period of time. . . .*

18 The matters discussed in this report come at a time when concerns
19 about safety at WTP have been raised and the Department is
20 working to ensure a proactive safety culture at WTP. . . . While
21 these actions are encouraging, *we are concerned that the prior*
22 *reviews performed by Bechtel and the Department failed to fully*
23 *identify the extent of the problems with the missing or incomplete*

1 *quality assurance documents, and that weaknesses in oversight*
2 *still exist.*

3 Dahl Decl. ¶ 45, Ex. 6 at Summary Memorandum 1-3 (emphasis added).¹¹

4 In yet another example, Energy has continued to demonstrate a tendency
5 to push back near-term work and planning; what in colloquial terms can be
6 called “kicking the can down the road.” Prophetically, a 2011 report warned
7 that this practice sets the stage for future delays of even greater magnitude and
8 cost:

9 With respect to schedule performance, the Committee found that
10 between January and July 2011, nearly 7% of the remaining to-go
11 schedule activities (1,260 activities out of 18,620 activities) were
12 moved out to later dates. . . .

13 The [C]ommittee has a concern about this practice of moving out
14 of the near-term window (3-6 months) work that cannot or will not
15 be accomplished, namely, that a “bow-wave” of work will begin to
16 accumulate in the remaining period of performance. *When this*
17 *bow wave of work can no longer be moved to a later period, the*
18 *amount of critical and near-critical activities rise, [and] the risk*
19 *that these activities cannot be accomplished on schedule and on*

20 ¹¹ Similar audit findings were made in 2013 with respect to Bechtel’s
21 broader design control documentation, with the audit alleging that the problems
22 had “led to the creation of major design vulnerabilities.” *See* Dahl Decl. ¶ 46,
 Ex. 7 at 2-3. The audit further concluded: “Although management reported
 that it had resolved the specific issues discussed in these reports, our most
 recent work demonstrates that additional attention to quality assurance is
 necessary.” *Id.* at 3.

1 *budget will also rise due to trade stacking, craft labor availability,*
2 *and greater impacts associated with material or engineering holds.*

3 Dahl Decl. ¶ 41, Ex. 3 at 48 (emphasis added).

4 **2. The Events Since Entry of the 2010 Consent Decree Show Gaps**
5 **in the Decree's Terms**

6 This situation, together with the manner in which Energy has interacted
7 with the State and responded under the Consent Decree, has exposed four gaps
8 in the Decree's terms. First, structurally, the 2010 Consent Decree afforded
9 Energy considerable leeway in how it satisfied the Decree's requirements. For
10 instance, rather than including detailed interim milestones by which to measure
11 progress, Energy prevailed upon the State to accept fewer, more general
12 milestones in order to allow Energy greater flexibility in delivering the ultimate
13 results required under the Decree. Thus, Appendix A to the Decree includes
14 only 19 milestones for the entire WTP project (compared to the more than
15 18,600 schedule activities cited above), with only four rather general
16 construction milestones in the span of eight years for the technically challenged
17 Pretreatment Facility:

- 18 • Complete Structural Steel Erection Below Elevation 56' in PT Facility
19 (12/31/2009)
- 20 • Complete Elevation 98' Concrete Floor Slab Placements in PT
21 Facility (12/31/2014)
- 22 • Complete Installation of Pretreatment Feed Separation Vessels FEP-
SEP-00001A/1B (12/31/2015)
- PT Facility Construction Substantially Complete (12/31/2017)

Consent Decree, Appendix A, Milestones A-18, A-19, A-13, A-14.

1 Similarly, the Decree defined only three general construction milestones
2 in the span of six years for the technically challenged High Level Waste
3 Facility:

- 4 • Complete Construction of Structural Steel to Elevation 14' in HLW
5 Facility (12/31/2010)
- 6 • Complete Construction of Structural Steel to Elevation 37' in HLW
7 Facility (12/31/2012)
- 8 • HLW Facility Construction Substantially Complete (12/31/2016)

9 Consent Decree, Appendix A, Milestones A-20, A-21, A-2.

10 The State accommodated Energy's request for these limited and general
11 milestones based on the State's underlying assumption that, faced with having
12 to comply with a court order, Energy would be motivated to correct past WTP
13 project management difficulties and make every effort to comply with the
14 Decree's mandate to create a functioning WTP. In retrospect, these milestones
15 were too limited in number, too general, and too separated in time to ensure that
16 the Decree effectively shapes Energy's approach to the WTP and measures
17 Energy's progress before any slips become too great. This is particularly
18 important as the parties move forward, since both the State and Energy agree
19 that a "phased" approach to completing the WTP is appropriate in which the
20 Low Activity Waste Facility is constructed and begins operating ahead of the
21 other WTP facilities. Energy has been criticized in its development of the
22 phased approach for not developing a sufficiently detailed analysis of all the

1 actions and costs incumbent with the approach. *See* Dahl Decl. ¶ 93, Ex. 32 at
2 2-5.

3 Second, the 2010 Consent Decree contains no reporting requirements to
4 the Court. Instead, it contains requirements to provide the State with a written
5 monthly “summary report,” *see* Decree § IV.C.2, and more comprehensive
6 semi-annual reports, *see* Decree § IV.C.1, both of which are to document
7 Energy’s progress and compliance status under the Decree.

8 In theory, these reports should be a key accountability measure under the
9 Decree, obliging Energy to keep the State timely informed of its progress. In
10 practice, these reports failed to provide the State with timely notice of Energy’s
11 WTP schedule problems. Indeed, in the months leading up to Energy’s
12 November 2011 notice of “at risk” milestones, Energy’s quarterly reports gave
13 no indication of looming long-term schedule issues. *See* Hedges Decl. ¶ 25,
14 Ex. 5.

15 Further confounding the utility of these reports, Energy and the
16 Department of Justice have insisted on characterizing communications
17 concerning milestones “at risk,” and describing the steps Energy might take to
18 avoid missing Decree deadlines, as “settlement” communications subject to
19 Federal Rule of Evidence 408. In the case of Energy’s November 2011 notice,
20 this led to more than five months of delay before Energy even met with the State
21 to identify the specific Decree milestones at issue, as well as discuss its actions in
22

1 response to the circumstances. Once Energy itself determined it was going to
2 miss Decree milestones, it effectively set off on its own course without involving
3 the State or the Court. As the State wrote to Energy in April 2012, before the
4 parties finally met to discuss Energy’s November 2011 notice:

5 State officials are seriously troubled by the fact that more than four
6 months have passed and yet DOE has failed to describe to the state
7 the information that leads DOE to believe certain requirements of
8 the Decree may be at risk of being missed, and the steps that DOE is
9 taking to avoid missing Decree deadlines. Equally as troubling are
the numerous public statements by DOE officials and their
contractors suggesting to us that DOE may be proceeding forward
as if [DOE] is not bound by the court’s Decree and is able to
unilaterally establish a new set of requirements and schedule.

10 Fitz Decl., Ex. 5.

11 Third, the last point above highlights an additional “accountability” gap
12 in the 2010 Decree. The Decree contains no express requirement to, as soon as
13 schedule risks are identified, create and submit for Court approval a recovery
14 plan to maintain compliance with, or come as close as possible to maintaining
15 compliance with, those requirements of the Consent Decree that are at risk.

16 As indicated above, since receiving initial notice in 2011, the State has
17 consistently maintained that the “good cause” provisions for amending the
18 Decree require Energy to do everything within its power to meet the legal
19 obligations in the Consent Decree by exercising reasonable diligence to identify
20 and respond to technical issues, performing effective project management,
21 exercising strong oversight of its contractors, and seeking sufficient funds or
22

1 reprogramming funds to meet its obligations. In May 2012, after learning
2 Energy had tasked its contractor with creating a new WTP baseline with
3 presumed delays and budget limitations, the State sent Energy a letter asking it
4 to have its contractor develop an alternate “unconstrained” baseline intended to
5 maintain as closely as possible compliance with the Decree. Fitz Decl., Ex. 6.
6 Energy declined the State’s request. Fitz Decl., Ex. 8.

7 By September 2013, the State had still not received any submission from
8 Energy concerning how it proposed to move forward with the WTP project,
9 despite Energy taking action on its own, outside the Decree, to move forward in
10 a new direction. By the time Energy submitted its draft “Framework
11 Document” to Ecology, Energy had already substantially committed to this new
12 direction by giving its contractor direction to proceed with planning for Direct
13 Feed Low Activity Waste. Hedges Decl. ¶ 38. For two-and-one-half years
14 after Energy first notified the State that it could not likely meet the current
15 court-ordered schedule, the State waited for Energy to engage it and the Court
16 with how it plans to rectify its noncompliance. Without an express requirement
17 for such engagement, however, Energy effectively defined a new direction
18 without State and Court approval.

19 Fourth, Energy has cited funding issues (both past restrictions and
20 projected future shortfalls) as part of the reason it cannot meet Consent Decree
21 requirements. Hedges Decl. ¶¶ 27, 29. The State believes included in the
22

1 Consent Decree obligation to exercise reasonable diligence is an obligation on
2 Energy's part to do everything within its power to seek sufficient funds
3 (through appropriation requests and through reprogramming funds from other
4 sources) to comply with Consent Decree obligations. *See, e.g.,* Fitz Decl.,
5 Ex. 2. Yet, when describing how funding may impact its ability to meet court-
6 imposed deadlines, Energy has provided unclear and unspecific information.
7 Hedges Decl. ¶ 29. This means the State is unable to assess the role of funding
8 and whether the situation is within or beyond Energy's control. In order for the
9 State and the Court to be able to evaluate this issue in the future, Energy should
10 be required to periodically show the Court and the State what it views as a
11 compliant budget. Thus, the State's requested relief seeks an annual report to
12 the Court wherein Energy will describe upcoming funding needs for meeting all
13 requirements in the Consent Decree.

14 **B. The Consent Decree Must Include Mitigation for WTP Delays in**
15 **Order to Maintain the Benefit of the Bargain Provided by the 2010**
16 **Decree**

17 As indicated above, the balance struck in the parties' 2010 settlement was
18 to: (1) place requirements in the Consent Decree specifying that the WTP
19 would be operational by 2022, with 19 SSTs retrieved by the same date; and
20 (2) commit new dates for all remaining tank waste mission tasks—which
21 include retrieving waste from all remaining SSTs and completing the treatment
22 of all tank waste—to the HFFACO. The HFFACO milestones for these tasks,

1 | however, were based on the key premise that Energy would comply with the
2 | Consent Decree. In particular, having the WTP achieve “initial operations” by
3 | 2022 was a key basis for completing all SST retrievals by no later than
4 | December 31, 2040, and completing all tank waste treatment by no later than
5 | December 31, 2047. At the time the 2010 settlement was executed, the Parties
6 | indicated that the pace of retrievals would reach “about 6-7 tanks per year by the
7 | early 2020s” based on the expectation that the WTP would achieve “initial
8 | operations” status by 2022. Lyon Decl. ¶ 31.

9 | Without mitigation, the current and future delays in achieving full WTP
10 | operations will set back the SST retrieval and tank waste treatment missions.
11 | Due to limited current available capacity in the DST system (recently reduced
12 | one million gallons due to the leak in DST Tank AY-102), Energy cannot
13 | maintain retrievals under the current retrieval compliance schedule. Lyon Decl.
14 | ¶¶ 23-34. At the same time, completing the SST retrieval mission on the
15 | current HFFACO schedule is more essential than ever. As Energy itself has
16 | concluded, the long-term leak integrity of any SST “cannot be proven.” Lyon
17 | Decl. ¶ 10, Ex. 3. It is indisputable, however, that the likelihood of further
18 | deterioration and leakage will only increase as time passes. Lyon Decl. ¶ 10. In
19 | the past two years, there is evidence of at least one newly active leaking SST
20 | (Tank T-111), with the possibility that more SSTs may be also actively leaking.
21 | Lyon Decl. ¶¶ 17-18. Delays in waste retrieval today will only make further
22 |

1 retrieval more difficult, costly, and risky due to changes in the waste forms
2 within the tanks, as well as the increased possibility that tanks may leak during
3 the process of retrieval. Lyon Decl. ¶ 10.

4 To mitigate for Energy’s WTP delays and keep the waste retrieval
5 mission on track, the Decree should include requirements to retrieve additional
6 waste from SSTs. However, no further significant transfer of waste can occur
7 without first either reducing the volume of waste currently in the DST system
8 through treatment, or by increasing the storage capacity of the DST system by
9 building more DSTs. Lyon Decl. ¶¶ 24, 30. Because even under the State’s
10 proposed schedule, the WTP will not reach full-scale “initial operations” until
11 2031, the Decree should also include requirements to build additional DST
12 capacity.

13 **IV. REQUEST FOR RELIEF**

14 **A. Amendment Process Under the Consent Decree**

15 Generally, the schedules in the Consent Decree may only be amended if:
16 (1) a request for amendment is timely; and (2) good cause exists for the
17 amendment. Section X.C of the Decree, however, provides that:

18 Notwithstanding any other provision of this Decree, the State
19 reserves the right to (1) seek amendment of this Decree, if
20 previously unknown information is received, or previously
21 undetected conditions are discovered, and these previously
22 unknown conditions or information together with any other
relevant information indicates that the work to be performed and

1 schedule under this Decree are not protective of human health or
2 the environment

3 Consent Decree § X.C.

4 Here, Energy’s failure to comply with the schedule for constructing and
5 achieving initial operations of the WTP; the magnitude of Energy’s continuing
6 pattern of project management difficulties; the fact that a DST now must be
7 taken out of service (thus further diminishing available capacity in the DST
8 system); and evidence that at least one SST is actively leaking, together
9 constitute “previously unknown information . . . or previously undetected
10 conditions” that indicate that the present schedule and terms of the Decree “are
11 not protective of human health or the environment.”

12 Consent Decree Section VII sets out the process for amending the
13 Decree. In short, the party proposing an amendment must provide the proposal
14 in writing to the other party. Consent Decree § VII.A.1. The receiving party
15 then has 10 working days to notify the proposing party whether or not the
16 amendment is acceptable. *Id.* If the receiving party determines that the
17 amendment is not acceptable, it must notify the proposing party in writing of its
18 reasons for disagreement. In that event, the proposing party may invoke the
19 Decree’s dispute resolution process. Consent Decree § VII.A.3.

20 The Decree’s dispute resolution process requires that the parties
21 “endeavor to settle [the dispute] by good faith negotiations among themselves.”
22 Consent Decree § IX.A. If the parties cannot resolve the issue “within a

1 reasonable time, not to exceed forty (40) calendar days from the date of the
2 written demand for good faith negotiations,” then either party may seek
3 appropriate relief from the Court pursuant to Consent Decree Section IX.B. *Id.*

4 That Section provides:

5 If the dispute is not resolved within 40 days from the date of the
6 written demand for good faith negotiations of the dispute, either
7 party may petition the Court for relief. A petition seeking
8 appropriate relief from the Court shall be filed within thirty (30)
9 calendar days of the end of the 40-day period provided for in
10 Section IX-A. The Court shall resolve any such disputes under a
11 de novo standard of review.

12 Consent Decree § IX.B.

13 Here, the State submitted its amendment proposal to Energy on
14 March 31, 2014. On April 18, 2014, Energy timely rejected the State’s
15 amendment.¹² On April 25, 2014, the State triggered the 40-day dispute
16 resolution period, which was twice extended by this Court. Despite both parties
17 working in good faith, the State and Energy were unable to resolve their dispute
18 during this extended dispute resolution period. This petition is timely brought
19 within 30 days of the conclusion of the extended dispute resolution period.

20 ¹² Upon mutual agreement, and as allowed by Consent Decree Section
21 VII.A.4, the parties extended the 10-day timeline for responding to an
22 amendment proposal.

1 **B. Legal Standard for Consent Decree Amendment**

2 Courts have authority to enforce and modify consent decrees. A court
3 “may interpret and enforce a decree to the extent authorized either by the decree
4 or by the related order.” *Pigford v. Veneman*, 292 F.3d 918, 923 (D.D.C. 2002).
5 Courts also have the inherent authority to modify a decree entered by an order
6 of the court. This authority is codified in Federal Rule of Civil Procedure
7 60(b). *Bellevue Manor Assocs. v. United States*, 165 F.3d 1249, 1252 (9th Cir.
8 1999).

9 Under Federal Rule of Civil Procedure 60(b)(5), a party to a consent
10 decree may obtain relief from a court when it “is no longer equitable” that the
11 judgment should have prospective application. Fed. R. Civ. P. 60(b)(5). It is
12 within the court’s discretion to grant or deny relief under Rule 60(b). *Lasky v.*
13 *Continental Products Corp.*, 804 F.2d 250, 256 (3d Cir. 1986).

14 To obtain modification under Federal Rule of Civil Procedure 60(b)(5), a
15 moving party must satisfy the initial burden of establishing a significant change
16 in circumstances that warrant modification, *Rufo v. Inmates of Suffolk Cnty.*
17 *Jail*, 502 U.S. 367, 383 (1992), and do so by a preponderance of the evidence.
18 *Democratic Nat’l Comm. v. Republican Nat’l Comm.*, 673 F.3d 192, 202 (3d
19 Cir. 2012). The proposed modification must also be “suitably tailored to the
20 changed circumstances.” *Bellevue Manor Assocs.*, 165 F.3d at 1255 (adopting
21 the *Rufo* standard for modifications under Rule 60(b)(5)). In determining
22 whether modification to a decree is so tailored, the court should consider

1 whether the modification “resolve[s] the problems created by the change in
2 circumstances,” but “should do no more.” *Rufo*, 502 U.S. at 391. Courts have
3 held that a modification is suitably tailored when the decree is modified “no
4 more than was necessary to approximate the positions the parties would have
5 occupied had the [noncomplying party] lived up to their obligations under the
6 Consent Decree” *Thompson v. United States HUD*, 404 F.3d 821, 832 (4th Cir.
7 2005).

8 Factual changes in circumstances, such as unexpected noncompliance by
9 one of the parties to a consent decree, can serve as a basis for modification. In
10 *Thompson v. United States HUD*, the Fourth Circuit found that the district court
11 did not abuse its discretion by finding that the moving party did not anticipate
12 the magnitude of a party's failure to comply with the terms of the consent
13 decree. *Thompson*, 404 F.3d at 828; *see also David C. v. Leavitt*, 242 F.3d
14 1206, 1213 (10th Cir. 2001). The Fourth Circuit additionally found that the
15 district court did not abuse its discretion when it concluded that the
16 noncompliance amounted to a significant change in circumstances warranting
17 modification of the decree. *Thompson*, 404 F.3d at 828. As outlined in pages
18 21 through 31, *supra*, in this case there is both significant noncompliance with
19 terms of the Decree and significant new circumstances that have arisen since
20 the Decree was entered.

21
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1 The State requests that the Court resolve the State’s dispute with Energy
2 by adopting as terms into the Consent Decree those portions of the State’s
3 proposal identified below. Under the terms of Section X.C of the Decree, the
4 State has proposed an amendment that: (1) addresses Energy’s current
5 noncompliance through a new schedule for completing the WTP that is realistic
6 and achievable, with sufficient specificity to foster accountability and timely
7 identify schedule issues; (2) to maintain the same level of substantive relief
8 (benefit of the bargain) afforded by the 2010 Decree, includes the requirements
9 that Energy continue retrieving waste from non-compliant SSTs while the WTP
10 is delayed, as well as construct additional compliant tank storage capacity to
11 facilitate this retrieval; and (3) includes terms to ensure greater accountability
12 and enforceability in the Decree, in light of the circumstances that led to
13 Energy’s current state of noncompliance. As framed below, the State’s
14 amendment “resolve[s] the problems created by the change in circumstances”
15 and “[does] no more.” *See Rufo*, 502 U.S. at 391. The terms below are suitably
16 tailored to do “no more than was necessary to approximate the positions the
17 parties would have occupied had the [noncomplying party] lived up to their
18 obligations under the Consent Decree.” *See Thompson*, 404 F.3d at 832. Put
19 another way, the terms preserve the benefit of the bargain of the 2010 Decree.
20 As such, the terms should be adopted into the Decree by the Court.

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1 **C. Portions of the State’s March 31, 2014 Amendment Proposal That**
2 **Should be Adopted Into the Consent Decree**

3 Based on the above, the State respectfully requests that the Court make
4 the following amendments to the Consent Decree. All of the requested
5 amendments either directly reflect terms of the State’s March 31, 2014,
6 amendment proposal to Energy, or reflect a lesser scope of relief that is
7 subsumed within the terms of the State’s March 31 amendment proposal.

8 **1. New WTP Schedule**

9 Revised Exhibit A provides a detailed schedule for all portions of the
10 WTP, including new facilities and processes necessary to carry out the
11 “phased” approach to completing construction and start-up of the WTP. *See*
12 Proposed Order, Revised Exhibit A. Revised Exhibit A replaces the current
13 Appendix A in the 2010 Consent Decree. All of the facilities and processes
14 identified in Revised Exhibit A must be constructed and brought to full
15 operation in order for WTP to treat Hanford’s tank waste.

16 The State developed Revised Exhibit A recognizing that delays in the
17 current Consent Decree schedule are unavoidable. The State seeks to replace
18 the current Appendix A with a schedule that is aggressive, but technically
19 possible. Still, the resulting changes are significant. For the Low Activity
20 Waste Facility (which does not present significant unresolved technical issues),
21 the delay in hot start would be three years from the current 2019 deadline for
22 hot start of the entire WTP, with a two-year delay in achieving full-scale initial

1 operations. The delays for the other major facilities are longer: for the High
2 Level Waste Facility, hot start is delayed seven years and operations is delayed
3 five years. Finally, for the Pretreatment Facility and the full WTP, hot start is
4 delayed ten years and initial operations are delayed nine years. The attached
5 Declaration of Suzanne Dahl provides a detailed description of the assumptions
6 and rationale behind the proposed schedule. *See* Dahl Decl. ¶¶ 94-139.

7 **2. Continued SST Retrievals**

8 Exhibit D is a new exhibit to the Consent Decree that, during the period
9 of extended WTP delay (2022-2031 under Revised Exhibit A), provides
10 requirements and deadlines for Energy to continue retrieving waste from SSTs.
11 *See* Proposed Order, Exhibit D. Following the standard of doing “no more than
12 [is] necessary to approximate the positions the parties would have occupied had
13 the [noncomplying party] lived up to their obligations under the decree,”
14 *Thompson*, 404 F.3d at 832, Exhibit D requires Energy to retrieve waste from
15 the SSTs at a pace on track to meet the HFFACO’s “no later than 2040”
16 deadline, just as if Energy had complied with the Decree’s terms to begin
17 operating the WTP in 2019 and reach full-scale “initial operations” in 2022.

18 After the retrievals remaining under the current Consent Decree,
19 Appendix B, are completed no later than September 30, 2022 (and retrieval of
20 Tank 241-A103 is completed under HFFACO milestone M-045-15 by the same
21 date), there should be approximately 27 million gallons of waste remaining in
22

1 the SST system, with 18 years and three months left before the HFFACO’s
2 deadline to complete all SST retrievals. Lyon Decl. ¶ 23. Assuming a roughly
3 equal measure of SST waste is retrieved each year, this means Energy must
4 remove at least 13 million gallons of waste by September 30, 2031 (the date
5 proposed in Revised Exhibit A for achieving full WTP “initial operations”) in
6 order to remain on pace to meet the HFFACO deadline. *Id.* Exhibit D is based
7 on this assumption, requiring Energy to reduce the total volume of waste in the
8 SSTs to no more than 14 million gallons by September 30, 2031, with
9 intermediate pacing requirements. *See* Proposed Order, Exhibit D.

10 As matters now stand, no further significant transfer of waste can occur
11 without first either reducing the volume of waste in the DST system through
12 treatment, or increasing the storage capacity of the DST system by building
13 more DSTs. Lyon Decl. ¶¶ 24. The State has evaluated Energy’s projected
14 DST waste volume in 2022 (approximately 24 million gallons), the amount of
15 DST space projected to be available to be filled by more SST waste in 2022
16 (approximately 4.8 million gallons), the amount of additional DST capacity
17 projected to be created by operation of Direct Feed Low Activity Waste Facility
18 operation between 2024 (the start of Direct Feed Low Activity Waste Facility
19 “initial operations”) and 2031 (approximately 11.9 million gallons), the amount
20 of waste needing to be retrieved from SSTs during the 2022-2031 period under
21 Exhibit D (approximately 13 million gallons), and the factor by which the
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1 amount of SST waste “grows” during retrieval due to the introduction of liquid
2 to support retrieval, followed by some reduction of that volume through
3 evaporation processes (a factor of 2.23, which means that retrieving 13 million
4 gallons of SST waste results in a net increase in the volume of waste needing
5 storage to approximately 29 million gallons). *See* Lyon Decl. ¶¶ 24-30, 33-38.
6 If this is viewed in terms of balancing two sides of a ledger, the State concludes
7 that while 16.7 million gallons of available DST space can be projected during
8 the period from 2022-2031 (approximately 4.8 million gallons of starting space
9 plus approximately 11.9 gallons of space created through DFLAW operation),
10 there will be approximately 29 million gallons of SST waste needing storage in
11 the DST system during the same period. This results in a net DST space deficit
12 of approximately 12 million gallons during the period. Lyon Decl. ¶ 37.

13 This 12 million gallon space deficit must be addressed for Energy to be
14 able to reduce the total volume of waste in the SSTs to no more than 14 million
15 gallons by September 30, 2031. The clearest way to address the deficit is to
16 build additional DST capacity. Exhibit D thus requires Energy to add DST
17 capacity in a phased manner. Under the schedule, Energy must design,
18 construct, and bring into operation four million gallons of new DST capacity by
19 2022. *See* Proposed Order, Exhibit D, milestones D-4 through D-9. To address
20 the remaining eight million gallons of space deficit, the State has designed
21 Exhibit D to provide Energy the flexibility of showing in two phases that it can
22

1 create DST space or otherwise accommodate the volume of SST waste coming
2 into the DST system through means other than constructing additional DST
3 capacity, with the default of building additional DST capacity if this showing
4 cannot be made. See Proposed Order, Exhibit D, milestones D-10 through
5 D-14.

6 **3. Additional Accountability Measures**

7 As described in pages 31 through 41, *supra*, the events since the 2010
8 Consent Decree was entered demonstrate a need for more specificity,
9 accountability, and enforceability in the Decree. Some of these measures are
10 reflected in the new WTP schedule in Revised Exhibit A, which provides more
11 detailed and comprehensive project deadlines than the 2010 Decree. However,
12 the need for further accountability measures is shown by the manner in which
13 Energy's WTP project came off the rails within 13 months of the Consent
14 Decree's entry. Energy provided no clue of the magnitude of pending schedule
15 issues in its reporting under the 2010 Decree. Prolonged gaps in Energy's
16 communication with the State followed. When Energy did communicate with
17 the State, it came with argument over whether the communications would be
18 subject to Federal Rule of Evidence 408 and with few details provided
19 (including with respect to the significance of funding issues in delay). The
20 State waited some two-and-one-half years after Energy's initial "at risk" notice
21 and invited Energy to propose a Consent Decree amendment addressing the
22

1 situation, without response. In the meantime, Energy effectively set off on its
2 own course without involving the State or the Court. In the end, the State
3 finally had to initiate its own amendment proposal, which is now before the
4 Court.

5 The State's Proposed Order includes amendment to three terms of the
6 2010 Consent Decree to address these circumstances. The first is a requirement
7 to submit quarterly status reports to both the State and the Court, with
8 requirements to provide a planning report for the upcoming quarter, address
9 project successes and failures over the past quarter, disclose any emerging
10 technical issues, describe any procurement issues, and track progress toward
11 Consent Decree milestone compliance. *See Proposed Order.*

12 The second is a proposed new Section IV.E to the Consent Decree. This
13 section requires Energy to timely inform the State and the Court of a milestone
14 "at risk" situation and calls for Energy to, in conjunction with any milestone "at
15 risk" notification, timely inform the State and the Court of Energy's plan for
16 addressing the situation, together with a proposed schedule of recovery actions.

17 *Id.*

18 Finally, the third measure is a proposed new Section VIII.B to the
19 Consent Decree. This section requires Energy to annually by March 1, disclose
20 to the State and the Court the total funding needed to achieve compliance with
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1 all requirements of the Consent Decree for each of the upcoming seven federal
2 fiscal years.

3 These terms are necessary to help avoid yet another repeat of the current
4 situation. Together, the terms ensure greater accountability and enforceability
5 in the Decree in light of the circumstances leading to the current state of
6 noncompliance.

7 **V. CONCLUSION**

8 Based on the foregoing, the State respectfully requests that the Court
9 adopt into the Consent Decree the elements of the State's March 31, 2014
10 amendment proposal described above.

11 DATED this 3rd day of October, 2014.

12 ROBERT W. FERGUSON
13 Attorney General

14 *s/ Andrew A. Fitz*

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1 **PROOF OF SERVICE**

2 I certify that I electronically filed the foregoing document with the Clerk
3 of the U.S. District Court using the CM/ECF system which will send
4 notification of such filing to all parties of record as follows:

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14
15 DATED this 3rd day of October, 2014.

16 *s/ Andrew A. Fitz*
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10 **UNITED STATES DISTRICT COURT**
11 **EASTERN DISTRICT OF WASHINGTON**

12 STATE OF WASHINGTON,
13 Plaintiff,
14 and
15 STATE OF OREGON,
16 Plaintiff-Intervenor,
17 v.
18 ERNEST MONIZ, Secretary of
the United States Department of
19 Energy, and the UNITED
STATES DEPARTMENT OF
20 ENERGY,
21 Defendants.
22

NO. 2:08-cv-05085-FVS
[PROPOSED] ORDER
AMENDING CONSENT
DECREE

1 This matter came before the Court on the State of Washington's Petition
2 to Amend Consent Decree, filed with this Court on October 3, 2014. The Court
3 considered the pleadings filed, and considered also all the materials filed
4 regarding this petition. Based on the argument of counsel and the evidence
5 presented, and having found good cause to grant the State of Washington's
6 Petition to Amend Consent Decree, now, therefore, IT IS HEREBY
7 ORDERED:

8 **ORDER**

9 1. The attached Exhibit A hereby replaces Appendix A. This new
10 Exhibit A is an enforceable part of the Court's Order.

11 2. The attached Exhibit D hereby becomes a new enforceable part of
12 the Court's Order.

13 3. The text of the main Consent Decree is hereby amended as
14 follows:

15 **The following provision is added to Consent Decree and designated**
16 **as Section IV.C.4:**

17 4. Quarterly Status Reports to the Court

18 a. Every three months, provide to Washington and to the Court
19 a written report that includes each of the following sections:
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(1) Planning Report Section for Upcoming Quarter. List all tasks that Energy intends to accomplish in the upcoming quarter. For each listed task, describe and explain:

(i) Its location within, and relation to progress on, the overall work plan, including how other tasks within the work plan depend on its completion;

(ii) Its relation to other tasks planned for the quarter; and

(iii) Its contribution to the attainment of the milestones listed in Exhibits A, B, and D of this Consent Decree.

(2) Success and Failure Report Section for Past Quarter. Address each task listed in the preceding quarter’s planning report by indicating and accounting for work planned and accomplished and work planned but not accomplished. For each task listed in the previous quarter’s planning report, indicate whether the task was accomplished. For each task that was not accomplished, explain:

(i) Why it was not accomplished;

(ii) How the failure to accomplish such work affects, or has the potential to affect, attainment of any

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milestones to which the work was intended to directly contribute;

(iii) How the failure to accomplish such work affects or has the potential to affect, attainment of any milestones other than those to which the work was intended to directly contribute;

(iv) How the potential effect on attainment of milestones will be addressed and recovered from within the upcoming quarter; and

(v) If the potential effect on attainment of milestones cannot be addressed in the upcoming quarter, in which quarter it will be addressed.

(3) Emerging Technical Issues Report Section. Describe any technical issue that emerged in the past quarter, or whose likelihood of occurring has increased during the past quarter, and that has the potential to cause delay and affect attainment of milestones. For each such issue, explain how it will be addressed.

(4) Procurement Issues Report Section. Describe any procurement issue that emerged in the past quarter, or whose likelihood of occurring has increased during the past quarter, and has the potential

1 to cause delay and affect attainment of milestones. For each such issue,
2 explain how it will be addressed.

3 (5) Milestone Tracking Report Section. Report on
4 compliance with the milestones in Exhibits A, B, and D that came due
5 during the quarter. For any milestone that Energy has failed to meet,
6 explain:

- 7 (i) How such failure is likely to affect compliance
8 with future milestones;
- 9 (ii) How Energy plans to mitigate such effect; and
- 10 (iii) When the missed milestone will be met.

11 For all remaining milestones that have not yet come due in Exhibits A, B,
12 and D state whether Energy is on track to meet those milestones. For any
13 milestone that Energy has information that indicates to Energy that it
14 may not be able to meet a milestone, explain:

- 15 (iv) The information that suggests the milestone is
16 at risk;
- 17 (v) How Energy is responding to such information;
18 and
- 19 (vi) If Energy projects it will miss the milestone
20 deadline, when Energy projects it will be able to meet the
21 missed milestone.

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1 b. Washington may file comments with the Court within forty-
2 five (45) days of receiving the quarterly report. Such comments may include a
3 request that Energy clarify or provide further information regarding the contents
4 of the quarterly report, or provide further information within the scope of the
5 quarterly report.

6 c. Upon Washington's request, Energy will provide to
7 Washington copies of written directives given by Energy to contractors for
8 work required under Exhibits A, B, and D.

9 **The following provision is added to Consent Decree as an**
10 **amendment and designated as new Section IV.E:**

11 **E. Detailed Process That Applies if Energy Identifies There is a Risk**
12 **That Any Deadline in Exhibits A, B, or D is at Risk of Not Being Met**

13 A new subsection will be added to the Consent Decree and labeled as
14 IV.E. This new provision will require the following:

15 1. Within fourteen (14) days of Energy receiving information that
16 indicates to Energy that it may not be able to meet a milestone in Exhibits A, B,
17 D, E, and F, Energy will notify Washington and the Court of the specific
18 milestone at risk. This may be in conjunction with the quarterly status report,
19 depending on the timing of the next report. In conjunction with such notice,
20 Energy will also describe with a detailed explanation, for each specific
21 milestone at risk: (a) the cause of the risk, and (b) Energy's efforts to address
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1 the risk to remain on schedule or come as close as possible to remaining on
2 schedule.

3 2. No more than forty-five (45) days after any notification of a
4 schedule risk associated with a specific milestone, or at such other time as
5 established by the Court, Energy will submit to Washington and the Court a
6 recovery plan for addressing the milestone. The recovery plan will address the
7 necessary administrative, procedural, technical, and operational actions required
8 to maintain compliance with, or come as close as possible to maintaining
9 compliance with, the Consent Decree requirements that are at risk and any other
10 Consent Decree requirements that might be affected by the requirements at risk
11 (collectively “recovery actions”). The plan will provide, in the form of a
12 request for schedule amendment that meets all requirements of Section VII of
13 the Consent Decree, a proposed schedule for recovery actions. The proposed
14 schedule will include milestones for recovery actions with completion dates.

15 **The following provision is added to Consent Decree as an**
16 **amendment and designated as a new subsection, labeled as VIII.B. (The**
17 **existing paragraph under the Consent Decree section VIII will be relabeled**
18 **as section VIII.A.):**

19 **B. “Funding Needed” Reports to the Court.**

20 Annually by March 1, Energy will provide to Washington and the Court
21 a seven-year “funding needed” report. The “funding needed” report will
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identify, for each of the upcoming seven federal fiscal years, the total funding needed to achieve compliance with all requirements of the Court’s order. The level of detail supporting each of the total annual figures will show the funding needed by milestone and will identify the specific fiscal year in which specified funding amounts are needed in order to timely meet each Court requirement.

Dated this ____ day of _____, 2015.

FRED VAN SICKLE
United States District Judge

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

	Waste Treatment Plant (WTP) Milestones	Date
	Waste Treatment Plant as a whole	
A-1	Complete hot start for the WTP as a whole	9/30/2029
A-2	Achieve initial plant operations for the WTP as a whole	9/30/2031
	Effluent Treatment Facility (ETF)/Liquid Effluent Retention Facility (LERF)	
A-3	Submit permit modification request necessary for redesign, upgrades, and operations to support volumes of waste types expected at EFT/LERF	9/30/2016
A-4	Submit to Ecology and Court for approval construction-specific milestones (based on level 4 deliverables or equivalent). Once approved, the milestones will be incorporated into this exhibit and become enforceable under this Decree	9/30/2016
A-5	Construction upgrades substantially complete	9/30/2019
A-6	Operational Readiness Review complete	9/30/2020
A-7	Cold commissioning start	9/30/2020
A-8	Cold commissioning complete	1/31/2022
A-9	Hot commissioning start	1/31/2022
A-10	Hot commissioning complete and begin operations	7/31/2022
	Secondary Waste (SW)	
A-11	Technical approach and Project Execution Plan for treating solids to meet criteria stated in the Tank Closure and Waste Management EIS (list criteria and waste acceptance criteria for IDF)	9/30/2015

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

A-12	Submit permit modification request necessary for any ancillary facilities or capabilities to support treatment of secondary waste	9/30/2016
A-13	Construction upgrades substantially complete	9/30/2019
A-14	Operational Readiness Review complete	9/30/2020
A-15	Cold commissioning start	9/30/2020
A-16	Start operations	1/31/2022
	Direct Feed Low Activity Waste (DFLAW)	
A-17	Submit to Ecology and Court for approval a technical approach and schedule for technical issue resolution by the date specified in milestone A-18 below of each technical issue. Once approved, the approach and schedule will be incorporated into this Exhibit and become enforceable under this Decree	1/31/2015
A-18	Resolution of all technical issues discovered during the LAW Design and Operability Review	1/31/2016
A-19	Complete Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment System to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms and to ETF/LERF	9/30/2015
A-20	Submit permit modification request necessary for redesign as a result of LAW Design and Operability Review and DFLAW approach	1/31/2016
A-21	Submit to Ecology and Court for approval semi-annual construction-specific milestones (based on level 4 deliverables or equivalent). Construction milestones for BOF, LAB, and DFLAW shall be included in this one submittal. Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	1/31/2016

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

A-22	Construction substantially complete	9/30/2019
A-23	Operational Readiness Review complete	9/30/2020
A-24	Cold commissioning start	9/30/2020
A-25	Cold commissioning complete	1/31/2022
A-26	Hot commissioning start	1/31/2022
A-27	Hot commissioning complete and start LAW operations	7/31/2022
A-28	DFLAW achieves initial plant operations rate of at least 21 metric tons of glass per day (MTG/d) as defined in the 2010 Decree	7/31/2024
	Effluent Management Facility (EMF), required to support DFLAW processing	
A-29	Submit preliminary conceptual design and Project Execution Plan for EMF facility. This will contain construction-specific milestones. Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	6/30//2015
A-30	Submit permit modification request necessary for EMF facility to support DFLAW	1/31/2016
A-31	Construction substantially complete	9/30/2019
A-32	Operational Readiness Review complete	9/30/2020
A-33	Cold commissioning start	9/30/2020
A-34	Cold commissioning complete	1/31/2022
A-35	Hot commissioning start	1/31/2022
A-36	Hot commissioning complete and start of EMF operations	7/31/2022

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

	Low Activity Waste Pretreatment System (LAWPS), required to support DFLAW processing	
A-37	Submit permit application necessary for design and construction of LAWPS	1/31/2016
A-38	Provide Project Execution Plan for LAWPS facility. This will contain construction-specific milestones. Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	9/30/2015
A-39	Construction substantially complete	6/30/2020
A-40	Operational Readiness Review complete	6/30/2021
A-41	Cold commissioning start	6/30/2021
A-42	Cold commissioning complete	1/31/2022
A-43	Hot commissioning start	1/31/2022
A-44	Hot commissioning complete and start LAWPS operations	7/31/2022
A-45	Achieve LAWPS operations sufficient to feed DFLAW plant initial operations rate of at least 21 metric tons of glass per day (MTG/d) as defined in the 2010 Decree	7/31/2024
	Laboratory (LAB)	
A-46	LAB construction substantially complete as defined in 2010 Decree	6/30/2015
A-47	LAB construction complete to support DFLAW and LAWPS operations	12/31/2018
A-48	Complete methods validation for components to support operating DFLAW and associated facilities (including but not limited to EMF and LAWPS)	3/31/2019

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

A-49	Operational Readiness Review complete for components to support DFLAW	12/31/2019
A-50	Start operations of LAB for components to support DFLAW	9/30/2020
A-51	Complete methods validation for components to support HLW and PTF	6/30/2023
A-52	Start operations of LAB for components to support HLW and PTF	9/30/2024
	Balance of Facilities (BOF)	
A-53	Submit permit modification request and new design to support DFLAW and associated facilities	9/30/2017
A-54	Complete construction and start-up of all BOF activities to support DFLAW and associated facilities	1/30/2020
A-55	Complete construction and startup of all BOF activities to support HLW and PTF	1/30/2024
	Integrated Disposal Facility (IDF)	
A-56	Permit modification to add Secondary Waste (SW) with waste acceptance criteria informed by the Tank Closure and Waste Management EIS	9/30/2016
A-57	Complete Performance Assessment and Risk Budget Tool to include Immobilized LAW and secondary waste associated with treating tank waste	9/30/2016
A-58	IDF operational	6/30/2021

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

	High Level Waste Facility (HLW)	
A-59	Submit to Ecology and Court for approval a technical approach and schedule for resolution by the date specified in milestone A-60 below of each technical issue. Once approved, the approach and schedule will be incorporated into this Exhibit and become enforceable under this Decree	3/31/2015
A-60	Resolution of all technical issues as currently defined or discovered during technical evaluations (such as the HLW Design and Operability Review)	9/30/2016
A-61	Complete Mass Balance Flow from Tank Farms to TWCS to HLW Vitrification facility, from HLW Vitrification offgas to Recycle to Tank Farms and to 242 Evaporator and/or ETF/LERF	6/30/2017
A-62	Submit permit modification necessary for redesign as a result of technical issues resolution	9/30/2017
A-63	Submit to Ecology and Court for approval semi-annual construction-specific milestones (based on level 4 deliverables or equivalent). Once approved, the milestones will be incorporated into this Exhibit and enforceable under this Decree	9/30/2018
A-64	Construction substantially complete	9/30/2023
A-65	Operational Readiness Review complete	9/30/2024
A-66	Cold commissioning start	9/30/2024
A-67	Cold commissioning complete	9/30/2025
A-68	Hot commissioning start	9/30/2025
A-69	Hot commissioning complete and start HLW operations	9/30/2026

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

A-70	Achieve operations at a throughput associated with DFHLW	12/31/2027
	Tank Waste Characterization Facility (TWCS)	
A-71	Permit application necessary for design, construction, and operation of TWCS (80% design completion)	9/30/2017
A-72	Submit to Ecology and Court for approval a Project Execution Plan and semi-annual construction-specific milestones (based on level 4 deliverables or equivalent). Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	9/30/2015
A-73	Construction substantially complete	9/30/2023
A-74	Operational Readiness Review Complete	9/30/2024
A-75	Cold commissioning start	9/30/2024
A-76	Hot commissioning start	9/30/2025
A-77	Hot commissioning complete and start TWCS operations	9/30/2026
A-78	Achieve sufficient TWCS operations to support DFHLW	12/31/2027
	Interim Immobilized HLW Storage (IIHLW)	
A-79	Permit application necessary for design, construction, and operation of IIHLW storage (80% design completion)	9/30/2018
A-80	Submit to Ecology and Court for approval a Project Execution Plan and semi-annual construction-specific milestones (based on level 4 deliverables or equivalent). Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	9/30/2018

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

A-81	Construction substantially complete	9/30/2023
A-82	Operational Readiness Review complete	9/30/2024
A-83	Start IIHLW storage operations	3/31/2025
	Pretreatment Facility (PTF)	
A-84	Submit to Ecology and Court for approval a technical approach and schedule for resolution by the date specified in milestone A-85 below of each technical issue. Once approved, the approach and schedule will be incorporated into this Exhibit and become enforceable under this Decree	9/30/2015
A-85	Resolution of all technical issues as currently defined or discovered during technical evaluations (such as PTF Design and Operability Review)	9/30/2018
A-86	Permit submittal necessary for redesign as a result of PTF Design and Operability Review (80% design completion)	9/30/2019
A-87	Submit to Ecology and Court for approval semi-annual construction-specific milestones (based on level 4 deliverables or equivalent). Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	9/30/2020
A-88	Construction substantially complete	9/30/2027
A-89	Operational Readiness Review complete	9/30/2028
A-90	Cold commissioning start	9/30/2028
A-91	Hot commissioning complete and start operating PTF	9/30/2029
A-92	Achieve initial PTF operations	9/30/2031

**Proposed Order on Washington's Petition to Amend Consent Decree
Revised Exhibit A – WTP Requirements and Schedule**

	Supplemental Vitrification Treatment System for LAW	
A-93	Permit application necessary for design, construction, and operation of Supplemental Treatment System (80% design completion)	9/30/2021
A-94	Submit to Ecology and Court for approval semi-annual construction-specific milestones (based on level 4 deliverables or equivalent). Once approved, the milestones will be incorporated into this Exhibit and become enforceable under this Decree	9/30/2021
A-95	Construction substantially complete	9/30/2030
A-96	Operation Readiness Review Complete	9/30/2031
A-97	Cold commissioning start	9/30/2031
A-98	Hot commissioning complete and begin operations	3/30/2032
A-99	Achieve initial Supplemental Vitrification Treatment System operations	9/30/2032

**Proposed Order on Washington's Petition to Amend Consent Decree
Exhibit D - SST Retrieval Requirements and Schedule**

	Single Shell Tank (SST) Retrieval Requirements and Schedule Milestones	Date
	SST Retrieval Pace Requirements	
D-1	Complete SST retrievals so that the remaining SST waste volume is reduced to not more than 23 million gallons by tank waste volume* *Per milestone B-4, by 9/30/2022 retrieval will have been completed for 27 of 149 SSTs; assumed remaining volume of tank waste to be retrieved as of 9/30/2022 is approximately 27 million gallons of tank waste.	9/30/2025
D-2	Complete SST retrievals so that the remaining SST waste volume is reduced to not more than 18 million gallons by tank waste volume	9/30/2028
D-3	Complete SST retrievals so that the remaining SST waste volume is reduced to not more than 14 million gallons by tank waste volume	9/30/2031
	Design, construct, and put into operation new DST capacity of 4 million gallons	
D-4	Detailed task list and schedule to State and Court identifying how Energy will comply with requirement to design, construct, and operate 4 million gallons of new DST capacity	1/31/2016
D-5	Permit application filed with 80 percent design	9/30/2016
D-6	Design complete	6/30/2017
D-7	Construction begins	6/30/2018

**Proposed Order on Washington's Petition to Amend Consent Decree
Exhibit D - SST Retrieval Requirements and Schedule**

D-8	Construction completed of 4 million gallons new DST capacity	9/30/2021
D-9	4 million gallons new DST capacity in operation	9/30/2022
	Develop plan and implement actions to complete SST retrievals so that the remaining SST waste volume is reduced to not more than 14 million gallons by tank waste volume by 2031	
D-10	Submit a plan to State and Court describing how Energy will meet the requirements to reduce tank waste volume to not more than 18 million gallons by 9/30/2028 and not more than 14 million gallons by 9/30/2031. The plan should identify proposed milestones including proposed deadlines for taking the actions necessary to meet these requirements. By 11/30/2018, the State should either concur in Energy's proposed plan or reject Energy's proposed plan. If the State concurs in Energy's proposed plan, the parties shall submit to the Court by 2/28/2019, a joint motion to amend the Consent Decree asking the Court to add new milestones that will ensure the actions contemplated by the plan are taken. If the State does not concur in Energy's proposed plan, either party may petition the Court to resolve the dispute pursuant to Section IX.B of the Decree, without the need to exhaust the requirements of Section IX.A; provided that nothing herein prohibits the parties from agreeing to follow the requirements of Section IX.A.	9/30/2018
D-11	Energy's proposed plan approved by this date or Energy will be required to construct 4 million gallons new DST capacity to be operational by 9/30/2024.	7/1/2019

**Proposed Order on Washington's Petition to Amend Consent Decree
Exhibit D - SST Retrieval Requirements and Schedule**

D-12	<p>Submit a revised plan to State and Court describing how Energy will meet the requirement to reduce tank waste volume to not more than 14 million gallons by 9/30/2031. The plan should identify proposed milestones including proposed deadlines for taking the actions necessary to meet these requirements. By 11/30/2020, the State should either concur in Energy's proposed plan or reject Energy's proposed plan. If the State concurs in Energy's proposed plan, the parties shall submit to the Court by 2/28/2021, a joint motion to amend the Consent Decree asking the Court to add new milestones that will ensure the actions contemplated by the plan are taken. If the State does not concur in Energy's proposed plan, either party may petition the Court to resolve the dispute pursuant to Section IX.B of the Decree, without the need to exhaust the requirements of Section IX.A; provided that nothing herein prohibits the parties from agreeing to follow the requirements of Section IX.A.</p>	9/30/2020
D-13	<p>Energy's proposed plan approved by this date or Energy will be required to construct 4 million gallons new DST capacity to be operational by 9/30/2028.</p>	7/1/2021

**Proposed Order on Washington's Petition to Amend Consent Decree
Exhibit D - SST Retrieval Requirements and Schedule**

D-14	<p>Milestones to be determined after 7/1/2021 to ensure Energy will meet the requirement to reduce tank waste volume to no more than 14 million gallons by 9/30/2031. By 8/31/2021, either party should identify proposed milestones including proposed deadlines for taking the actions necessary to meet the requirement to reduce tank waste volume to no more than 14 million gallons by 9/30/2031. If the parties have not reached agreement on new requirements and deadlines by 10/31/2021, either party may petition the Court to resolve the dispute pursuant to Section IX.B of the Decree, without the need to exhaust the requirements of Section IX.A; provided that nothing herein prohibits the parties from agreeing to follow the requirements of Section IX.A.</p>	<p style="text-align: center;">New milestones determined by 12/31/2021; milestones to span 2021-2031</p>
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