No. 21-404

In the Supreme Court of the United States

UNITED STATES OF AMERICA, PETITIONER

v.

STATE OF WASHINGTON, ET AL.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

JOINT APPENDIX

ELIZABETH B. PRELOGAR
Solicitor General
Department of Justice
Washington, D.C. 20530-0001
SupremeCtBriefs@usdoj.gov
(202) 514-2217

Counsel of Record
for Petitioner

NOAH GUZZO PURCELL
Office of the Attorney General
1125 Washington Street S.E.
P.O. Box 40100
Olympia, WA 98504-0100
noahp@atg.wa.gov
(360) 753-6200

Counsel of Record
for Respondents

PETITION FOR A WRIT OF CERTIORARI FILED: SEPT. 8, 2021
CERTIORARI GRANTED: JAN. 10, 2022

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UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Case No. 19-35673

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY ROBERT INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; DEFENDANTS-APPELLEES

DOCKET ENTRIES

DATE	DOCKET NUMBER	PROCEEDINGS
8/7/19	1	DOCKETED CAUSE AND ENTERED APPEARANCES OF COUNSEL. SEND MQ: Yes. The schedule is set as follows: Mediation Questionnaire due on 08/14/2019. Transcript ordered by 09/06/2019. Transcript due 10/07/2019. Appellant United States of America opening brief due 11/15/2019. Appellees Jay Robert Inslee, Joel Sacks, State of Washington and Washington State Department of Labor & Industries answering brief due 12/16/2019. Appellant's optional

DATE	DOCKET NUMBER	PROCEEDINGS
		reply brief is due 21 days after service of the answering brief. [11390273) (HH) [Entered: 08/07/2019 02:56 PM]
		* * * * *
8/13/19	4	Filed (ECF) Appellant USA Mediation Questionnaire. Date of service: 08/13/2019. [11396063] [19-35673] (Koppel, John) [Entered: 08/13/2019 02:19 PM]
		* * * * *
8/14/19	6	MEDIATION ORDER FILED: The Mediation Program of the 9th Circuit Court of Appeals facilitates settlement while appeals are pending. By 08/27/2019, counsel for all parties intending to file briefs in this matter are requested to inform the Circuit Mediator by email of their clients' views on whether the issues on appeal or the underlying dispute might be amenable to settlement presently or in the foreseeable future. This communication will be kept confidential, if requested . . . This communication should not be filed with the court . . . The existing briefing schedule remains in effect . . . [11397086]

DATE	DOCKET NUMBER	PROCEEDINGS
		(LW) [Entered: 08/14/2019 12:36 PM]
8/28/19	7	MEDIATION ORDER FILED: This case is RELEASED from the Mediation Program. The briefing schedule previously established by the court remains in effect. [11413212] (LW) [Entered 08/28/2019 10:21 AM]
11/15/19	8	Submitted (ECF) Opening Brief for review. Submitted by Appellant USA. Date of service: 11/15/2019. (11500621] (19-35673] (Koppel, John) [Entered: 11/15/2019 01:18 PM]
11/15/19	9	Submitted (ECF) excerpts of record. Submitted by Appellant USA. Date of service: 11/15/2019. (11500775] (19-35673] (Koppel, John) [Entered: 11/15/2019 02:02 PM]
11/18/19	10	Filed clerk order: The opening brief [8] and excerpts of record [9] submitted by USA are filed. No paper copies are required at this time. [11502392] (KWG) [Entered: 11/18/2019 01:20 PM]

* * * * *

DATE	DOCKET NUMBER	PROCEEDINGS
1/15/20	13	Submitted (ECF) Answering Brief for review. Submitted by Appellees Jay Robert Inslee, Joel Sacks, State of Washington and Washington State Department of Labor & Industries. Date of service: 01/15/2020. [11563343] [19-35673]—[COURT UPDATE: Attached corrected PDF of the brief. 01/22/2020 by KWG] (Sandstrom, Anastasia) [Entered: 01/15/20 12:08 PM]
1/15/20	14	Submitted (ECF) supplemental excerpts of record. Submitted by Appellees Jay Robert Inslee, Joel Sacks, State of Washington and Washington State Department of Labor & Industries. Date of service: 01/15/2020. [11563565] [19-35673] (Sandstrom, Anastasia) [Entered: 01/15/2020 01:46 PM]
1/22/20	15	Filed clerk order: The answering brief [13] submitted by Appellees is filed. The supplemental excerpts of record [14] submitted by Appellees are filed. The Court previously filed the brief [8] and excerpts of record [9] submitted by Appellant USA.

DATE	DOCKET NUMBER	PROCEEDINGS
		Within 7 days of this order, the filer of each brief is ordered to file 6 copies of that brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. The Form 18 certificate is available on the Court's website at http://www.ca9.uscourts.gov/forms/form18.pdf.
		The covers of the opening brief must be blue.
		The covers of the answering brief must be red.
		Within 7 days of this order, the filer of each set of excerpts of record is ordered to file 3 copies of that set of excerpts in paper format securely bound on the left side, with white covers.
		The paper copies shall be submitted to the principal office of the Clerk. The address for regular U.S. mail is P.O. Box 193939, San Francisco, CA 94119-3939. The address for overnight mail is 95 Seventh Street, San Francisco, CA 94103-1526. [11569730]

DATE	DOCKET NUMBER	PROCEEDINGS
		(KWG) [Entered: 01/22/2020 10:11 AM]
		* * * * *
2/5/20	21	Submitted (ECF) Reply Brief for review. Submitted by Appellant USA. Date of service: 02/05/2020. [11586423] [19-35673] (Koppel, John) [Entered: 02/05/2020 12:08 PM]
2/6/20	22	Filed clerk order: The reply brief [21] submitted by USA is filed. Within 7 days of the filing of this order, filer is ordered to file 6 copies of the brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. Cover color: gray. The paper copies shall be submitted to the principal office of the Clerk. [11587497] (KWG) [Entered: 02/06/2020 09:40 AM]
		* * * * *
3/12/20	25	Filed (ECF) Attorney Anastasia R. Sandstrom for Appellees Jay Robert Inslee, Joel Sacks, State of Washington and Washington State Department of Labor & Industries response to notice for

DATE	DOCKET NUMBER	PROCEEDINGS
		case being considered for oral argument. Date of service: 03/12/2020. [11628118] [19-35673] (Sandstrom, Anastasia) [Entered: 03/12/2020 02:32 PM]
		* * * * *
7/6/20	32	Filed Audio recording of oral argument. **Note**: Video recordings of public argument calendars are available on the Court's website, at http://www.ca9.uscourts.gov/media/ [11748222] (SB) [Entered: 07/10/2020 07:53 AM]
8/19/20	33	FILED OPINION (RICHARD R. CLIFTON, MILAN D. SMITH, JR. and JAMES DONATO) AFFIRMED. Judge: MDS Authoring. FILED AND ENTERED JUDGMENT. [11794320] (MM) [Entered: 08/19/2020 07:52 AM]
8/31/20	34	Filed (ECF) Appellees Jay Robert Inslee, Joel Sacks, State of Washington and Washington State Department of Labor & Industries bill of costs (Form 10) in the amount of $155.20 USD. Date of service: 08/31/2020

DATE	DOCKET NUMBER	PROCEEDINGS
		[11807850] [19-35673] (Sandstrom, Anastasia) [Entered: 8/31/20/ 01:01 PM]
9/21/20	35	Filed (ECF) Appellant USA Motion to extend time to file petition for rehearing until 11/02/2020. Date of service: 09/21/2020. [118304 76] [19-35673] (Koppel, John) [Entered: 09/21/2020 10:35 AM]
		* * * * *
11/2/20	37	Filed (ECF) Appellant USA petition for panel rehearing and petition for rehearing en banc (from 08/19/2020 opinion). Date of service: 11/02/2020. [11879415] [19-35673] (Koppel, John) [Entered: 11/02/2020 02:30 PM]
11/24/20	38	Filed order (RICHARD R. CLIFTON, MILAN D. SMITH, JR. and JAMES DONATO) Defendants-Appellees are ordered to file a response to Plaintiff-Appellant's petition for panel rehearing or rehearing en banc, filed with this court on November 2, 2020 (Dkt. [37]). The response shall not exceed 20 pages, and shall be filed within 21 days of the date of this order. [11905497]

DATE	DOCKET NUMBER	PROCEEDINGS
		(OC) [Entered: 11/24/2020 02:30 PM]
12/15/20	39	Filed (ECF) Appellees Jay Robert Inslee, Joel Sacks, State of Washington and Washington State Department of Labor & Industries response to Combo PFR Panel and En Banc (ECF Filing), Combo PFR Panel and En Banc (ECF Filing). Date of service: 12/15/2020. [11928775]. [19-35673] (Sandstrom, Anastasia) [Entered: 12/15/20 03:46 PM]
4/15/21	40	Filed order and amended opinion (RICHARD R. CLIFTON, MILAN D. SMITH, JR. and JAMES DONATO). The court's opinion filed August 19, 2020, and published at 971 F.3d 856 (9th Cir. 2020), is hereby amended as follows: (SEE ORDER FOR FULL TEXT). An amended opinion is filed concurrently with this order. With this amendment, the panel has unanimously voted to deny the petition for panel rehearing. (Dkt. [37]) Judge M. Smith votes to deny the petition for rehearing en banc, and Judge Clifton and Judge Donato so recommend. (Id.) The

DATE	DOCKET NUMBER	PROCEEDINGS
		full court has been advised of the petition for rehearing en banc (Id.) A judge requested a vote on whether to rehear the matter en banc. The matter failed to receive a majority of the votes of the nonrecused active judges in favor of en banc reconsideration. Fed. R. App. P. 35(f). The petition for rehearing en banc is denied. No subsequent petitions for panel rehearing or rehearing en banc shall be permitted. Judge M. Smith's concurrence with and Judge Collins's dissent from the denial of rehearing en banc are filed concurrently herewith. [12075141] (AKM) [Entered: 04/15/2021 08:59 AM]
4/23/21	41	MANDATE ISSUED. (RRC, MDS and JD) Costs taxed against Appellant in the amount of $155.20. [12084735] (QDL) [Entered: 04/23/2021 10:42 AM]
9/20/21	42	**Supreme Court Case Info** Case number: 21-404 Filed on: 09/08/2021 Cert Petition Action 1: Pending [12232805] (RR) [Entered: 09/20/2021 10:15 AM]

DATE	DOCKET NUMBER	PROCEEDINGS
1/12/22	43	**Supreme Court Case Info** Case number: 21-404 Filed on: 09/08/2021 Cert Petition Action 1: Granted, 01/10/2022 [12338718] (RR) [Entered: 01/12/2022 11:46 AM]

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON
(RICHLAND)

Docket No. 4:18-cv-05189-SAB

UNITED STATES OF AMERICA, PLAINTIFF

v.

WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES; STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES, DEFENDANTS

DOCKET ENTRIES

DATE	DOCKET NUMBER	PROCEEDINGS
12/10/18	1	COMPLAINT against Jay Inslee, Joel Sacks, State of Washington, State of Washington Department of Labor and Industries Fee Waived Filed by United States of America. (Attachments: # 1 Exhibit HB 1723, # 2 Exhibit Hanford Map, # 3 Exhibit Map of HB 1723 Areas, # 4 Civil Cover Sheet) (Healy, Christopher) (Entered: 12/10/2018)

* * * * *

DATE	DOCKET NUMBER	PROCEEDINGS
12/11/18	2	NOTICE of Appearance by Anastasia Sandstrom on behalf of All Defendants (Attorney Anastasia Sandstrom added to party Jay Inslee (pty:dft), Attorney Anastasia Sandstrom added to party Joel Sacks (pty:dft), Attorney Anastasia Sandstrom added to party State of Washington (pty:dft), Attorney Anastasia Sandstrom added to party Washington State Department of Labor and Industries (pty:dft)) (Sandstrom, Anastasia) (Entered: 12/11/2018)
12/13/18	7	Summons Issued as to Jay Inslee. (Attachments: # 1 Summons Issued as to Washington State Department of Labor and Industries, # 2 Summons Issued as to Joel Sacks, # 3 Summons Issued as to State of Washington) (LR, Case Administrator) (Entered: 12/13/2018)
1/9/19	8	ANSWER to Complaint by All Defendants. (Sandstrom, Anastasia) (Entered: 01/09/2019)
1/10/19	9	MOTION to Stay *in Light of Lapse of Appropriations* by United States of America. Motion Hearing set for **2/11/2019** Without Oral Argument before

DATE	DOCKET NUMBER	PROCEEDINGS
		Judge Stanley A Bastian. (Healy, Christopher) (Entered: 01/10/2019)
1/14/19	10	RESPONSE to Motion re 9 MOTION to Stay *in Light of Lapse of Appropriations* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 01/14/2019)
1/18/19	11	STATUS REPORT *Regarding Fed. R. Civ. Pro. 26(f) Conference* by All Defendants. (Sandstrom, Anastasia) (Entered: 01/18/2019)
1/28/19	12	MOTION to Withdraw 9 MOTION to Stay *in Light of Lapse of Appropriations, and Motion to Continue Deadline for Rule 26(f) Conference* by United States of America. Motion Hearing set for **2/27/2019** Without Oral Argument before Judge Stanley A Bastian. (Healy, Christopher) (Entered: 01/28/2019)
1/30/19	13	CERTIFICATE OF SERVICE *on all Defendants, by U.S. Marshal* filed by United States of America. (Healy, Christopher) (Entered: 01/30/2019)
1/31/19	14	SCHEDULING CONFERENCE NOTICE: A Telephonic Scheduling Conference has been

DATE	DOCKET NUMBER	PROCEEDINGS
		set for **4/18/2019** at **11:00 AM** in via Teleconference before Judge Stanley A Bastian. To participate, parties must call the Court Conference Line: 1-888-636-3807; Access: 8839796; No security code will be required. Please plan to call five minutes before the hearing. (Attachments: # 1 Consent to Magistrate) (EC, Courtroom Deputy) (Entered: 01/31/2019)
2/1/19	15	ORDER CONTINUING 26(F) CONFERENCE, withdrawing 9 Motion to Stay; and granting 12 Motion to Withdraw. Signed by Judge Stanley A Bastian. (LR, Case Administrator) (Entered: 02/01/2019)
2/6/19	16	Joint MOTION agreed briefing schedule, length of brief, stay of status report, continuance of scheduling conference re 15 Order on Motion to Stay, Order on Motion to Withdraw, 14 Scheduling Conference Notice, by All Defendants. Motion Hearing set for **2/14/2019** Without Oral Argument before Judge Stanley A Bastian. (Sandstrom, Anastasia) (Entered: 02/06/2019)

DATE	DOCKET NUMBER	PROCEEDINGS
2/12/19	17	ORDER GRANTING 16 PARTIES STIPULATED MOTION RE: SCHEDULING ORDER. Summary Judgment Motion Hearing set for **5/8/2019** Without Oral Argument before Judge Stanley A Bastian. The status conference scheduled for 4/18/2019 is STRICKEN. Signed by Judge Stanley A Bastian. (LR, Case Administrator) (Entered: 02/12/2019)
2/15/19	18	Joint MOTION to Clarify *Regarding Page Limits* by United States of America. Motion Hearing set for **2/22/2019** Without Oral Argument before Judge Stanley A Bastian. (Healy, Christopher) (Entered: 02/15/2019)
		* * * * *
3/1/19	20	MOTION for Summary Judgment by United States of America. Motion Hearing set for **5/22/2019** at **01:30 PM** in Yakima Courtroom 203 before Judge Stanley A Bastian. (Attachments: # 1 Exhibit Declaration of Christopher R. Healy, # 2 Exhibit Declaration of Gregory A. Jones, # 3 Exhibit Declaration of

DATE	DOCKET NUMBER	PROCEEDINGS
		Patricia Hicks) (Healy, Christopher) Modified to change hearing location from Richland to Yakima on 3/5/2019 (EC, Courtroom Deputy). (Entered: 03/01/2019)
3/1/19	21	STATEMENT OF *Undisputed Material* FACTS re 20 MOTION for Summary Judgment filed by United States of America. (Healy, Christopher) (Entered: 03/01/2019)
3/18/19	22	NOTICE of Appearance by Noah G Purcell on behalf of All Defendants (Attorney Noah G Purcell added to party Jay Inslee (pty:dft), Attorney Noah G Purcell added to party Joel Sacks (pty:dft), Attorney Noah G Purcell added to party State of Washington (pty:dft), Attorney Noah G Purcell added to party Washington State Department of Labor and Industries (pty:dft)) (Purcell, Noah) (Entered: 03/18/2019)
3/22/19	23	Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* by All Defendants. Motion Hearing set for **5/22/2019** at **01:30 PM** in Yakima Courtroom 203 before Judge Stanley A Bastian.

DATE	DOCKET NUMBER	PROCEEDINGS
		(Attachments: # 1 Text of Proposed Order Proposed Order) (Sandstrom, Anastasia) Modified on 5/2/2019 to change hearing location from Richland to Yakima (EC, Courtroom Deputy). (Entered: 03/22/2019)
3/22/19	24	DECLARATION by Suzanne Lisa Dahl-Crumpler in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	25	DECLARATION by Gary Franklin, MD in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	26	DECLARATION by Bruce Miller in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 03/22/2019)

DATE	DOCKET NUMBER	PROCEEDINGS
3/22/19	27	DECLARATION by James Nylander in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Attachments: # 1 Exhibit 1) (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	28	DECLARATION by Anastasia Sandstrom in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3) (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	29	DECLARATION by Anne Soiza in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	30	DECLARATION by Joyce Tsuji in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All

DATE	DOCKET NUMBER	PROCEEDINGS
		Defendants. (Attachments: # 1 Exhibit 1 (1 of 2), # 2 Exhibit 1 (2 of 2), # 3 Exhibit 2, # 4 Exhibit 3, # 5 Exhibit 4, # 6 Exhibit 5, # 7 Exhibit 6) (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	31	STATEMENT OF *Disputed* FACTS re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 03/22/2019)
3/22/19	32	STATEMENT OF *Non-Disputed* FACTS re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 03/22/2019)
		* * * * *
4/12/19	33	MEMORANDUM in Opposition re 20 MOTION for Summary Judgment, 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment and Reply* filed by United States of America. (Attachments: # 1 Exhibit Declaration of Tobin Mott, # 2 Exhibit

DATE	DOCKET NUMBER	PROCEEDINGS
		Declaration of Mark French, # 3 Exhibit Supplemental Declaration of Patricia Hicks, # 4 Statement of Disputed Facts, # 5 Reply Statement of Undisputed Facts) (Healy, Christopher) (Entered: 04/12/2019)
4/26/19	34	REPLY MEMORANDUM re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 04/26/2019)
4/26/19	35	DECLARATION by Supplemental Declaration of Anne Soiza in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 04/26/2019)
4/26/19	36	DECLARATION by Supplemental Declaration of Joyce Tsuji in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Attachments:

DATE	DOCKET NUMBER	PROCEEDINGS
		# 1 Exhibit Exhibit 1) (Sandstrom, Anastasia) (Entered: 04/26/2019)
4/26/19	37	DECLARATION by Cheryl Whalen in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 04/26/2019)
4/26/19	38	DECLARATION by Kelly Wood in Support re 23 Cross MOTION for Summary Judgment *and Response to Plaintiffs Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 04/26/2019)
4/26/19	39	STATEMENT OF *Reply re State's Undisputed* FACTS re 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by All Defendants. (Sandstrom, Anastasia) (Entered: 04/26/2019)
5/10/19	40	NOTICE by United States of America *Regarding Amendment to HB 1723* (Healy, Christopher) (Entered: 05/10/2019)

DATE	DOCKET NUMBER	PROCEEDINGS
5/22/19	41	Minute Entry for proceedings held before Judge Stanley A Bastian: Motion Hearing held on 5/22/2019 re 20 MOTION for Summary Judgment filed by United States of America, 23 Cross MOTION for Summary Judgment *and Response to Plaintiff's Motion for Summary Judgment* filed by Joel Sacks, Washington State Department of Labor and Industries, Jay Inslee, State of Washington. (Reported/ Recorded by: Kimberly Allen) (ES, Courtroom Deputy) (Entered: 05/22/2019)
6/5/19	42	NOTICE OF FILING OF OFFICIAL TRANSCRIPT of Motion Hearing. Proceedings held on May 22, 2019 in Yakima, Washington before Judge Stanley A Bastian. Page Numbers: 1-60 Parties have seven (7) business days to file with the court a Notice of Intent to Request Redaction of this transcript. If no such Notice is filed, the transcript may be made remotely electronically available to the public without redaction after 90 calendar days.

DATE	DOCKET NUMBER	PROCEEDINGS
		Transcript may be viewed at the court public terminal or purchased through the Court Reporter/ Transcriber before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER. Information regarding the policy can be found on the court website at www.waed.uscourts.gov. To purchase a copy of the transcript contact Court Reporter/ Transcriber Kimberly Allen at 509-943-8175 or Kim_Allen@waed.uscourts.gov. Redaction Request due 6/26/2019. Redacted Transcript Deadline set for 7/8/2019. Release of Transcript Restriction set for 9/3/2019. (Allen, Kim) Modified on 6/7/2019 (Allen, Kim) Modified Date of Proceedings from May 29th, 2019 to May 22nd, 2019. (Entered: 06/05/2019)
6/13/19	43	ORDER GRANTING 23 DEFENDANTS' MOTION FOR SUMMARY JUDGMENT; denying 20 Plaintiff's Motion for Summary Judgment. Case is closed.

DATE	DOCKET NUMBER	PROCEEDINGS
		Signed by Judge Stanley A Bastian. (AY, Case Administrator) (Entered: 06/13/2019)
6/13/19	44	JUDGMENT IN A CIVIL ACTION; in favor of Defendants and against Plaintiff. (AY, Case Administrator) (Entered: 06/13/2019)
8/7/19	45	LODGED NOTICE OF APPEAL *to the United States Court of Appeals for Ninth Circuit* from District Court decision as to 44 Clerk's Judgment, 43 Order on Motion for Summary Judgment, by United States of America. Filing fee $505, receipt number WAIVED. (Healy, Christopher) (Entered: 08/07/2019)
8/7/19	46	NOTICE OF APPEAL from District Court decision as to 44 Clerk's Judgment and 43 Order on Motion for Summary Judgment. cc: Court Reporter: Kimberly Allen. (SG, Case Administrator). (Entered: 08/07/2019)
8/7/19	47	9CCA Payment Notification form re 46 Notice of Appeal; Fee Waived. (SG, Case Administrator). (Entered: 08/07/2019)

DATE	DOCKET NUMBER	PROCEEDINGS
8/7/19	48	Letter from Appeal Deputy Clerk to Christopher R. Healy dated August 7, 2019. (Attachments: # 1 Notice of Appeal, # 2 Docket Sheet) (SG, Case Administrator) (Entered: 08/07/2019)
8/7/19	49	9CCA Appeal Time Schedule and Case Number: 19-35673 for 46 Notice of Appeal filed by Christopher R. Healy. Designation Due: 9/6/2019. Transcript Due: 10/7/2019. Opening Brief Due: 11/15/2019. Appellees Brief Due: 12/16/2019. Mediation Questionnaire Due: 8/14/2019. cc: Court Reporter: Kimberly Allen. (SG, Case Administrator) (Entered: 08/07/2019)
9/3/19	50	TRANSCRIPT DESIGNATION of Record on Appeal by United States of America re 46 Notice of Appeal. Date Appeal Filed: 8/7/19. Court Reporter: Kimberly Allen,. 9CCA: 19-35673. (Healy, Christopher) (Entered: 09/03/2019)
8/19/20	51	9CCA Slip Opinion: Decision of the District Court is Affirmed. 9CCA Case No. 19-35673. (SG, Case Administrator) (Entered: 08/19/2020)

DATE	DOCKET NUMBER	PROCEEDINGS
11/24/20	52	COPY OF 9CCA ORDER as to 46 Notice of Appeal filed by United States of America. 9CCA: 19-35673. (LTR, Case Administrator) (Entered: 11/24/2020)
4/15/21	53	COPY OF 9CCA ORDER AND AMENDED OPINION as to 46 Notice of Appeal filed by United States of America. 9CCA: 19-35673. (SG, Case Administrator) (Entered: 04/15/2021)
4/23/21	54	MANDATE from 9CCA as to 46 Notice of Appeal filed by United States of America. Decision of the District Court is Affirmed. 9CCA: 19-35673. (SG, Case Administrator) (Entered: 04/23/2021)
9/20/21	55	Letter from Supreme Court: The Petition for a writ of certiorari was filed on September 8, 2021 and placed on the docket September 14, 2021 as No. 20-404. 9CCA No. 19-35673. (SG, Case Administrator) (Entered: 09/20/2021)
1/12/22	56	Letter from the Supreme Court to the Ninth Circuit was received, indicating that a petition for a writ of certiorari is granted. (SG, Case Administrator) (Entered: 01/13/2022)

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. [4:18-cv-05189-SAB]

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

Filed: Dec. 10, 2018

COMPLAINT

Plaintiff the United States of America alleges as follows:

INTRODUCTION

1. The State of Washington ("State" or "Washington") has enacted a workers' compensation law, entitled "Hanford Site Employees—Occupational Disease Presumption," or Washington Substitute House Bill 1723 ("HB 1723"), attached hereto as Ex. A, that impermissibly singles out and discriminates against the Federal Government and its contractors, purports to directly regulate the Federal Government, and imposes significant burdens on the Federal Government and its contractors without imposing them on other employers in the State, all in violation

of the Supremacy Clause of the U.S. Constitution. This action seeks to enjoin implementation of this improper statute and have it declared invalid.

2. The U.S. Department of Energy ("DOE") is responsible for the remediation of the environmental legacy of the United States' production of nuclear weapons, including that of its chief plutonium production facility—the Hanford Nuclear Reservation ("Hanford") in southeast Washington, which played a critical role in the United States' national defense from World War II through the end of the Cold War. Nearly all of Hanford is owned by the Federal Government.

3. Hanford's large-scale production of critical national defense materials for the Federal Government generated a significant amount of radioactive and hazardous chemical wastes, which are now the focus of ongoing cleanup work that is unprecedented in its scale and complexity.

4. DOE's top priority in conducting its cleanup operations at Hanford is ensuring the health and safety of its federal and contractor workforce. Protecting workers includes ensuring that any worker who is injured in the course of his or her employment or who falls ill because of such employment is fully and expeditiously compensated. DOE is firmly committed to, and spends significant resources implementing, its worker safety and workers' compensation programs at Hanford. The workers' compensation program for DOE's federal contractor workforce at Hanford operates pursuant to the Washington Industrial Insurance Act ("WIIA").

5. HB 1723 interferes with these ongoing federal operations by fundamentally changing how the WIIA applies to federally owned and operated portions of Hanford but not to anywhere else in the State. Specifically, the law creates a legal presumption that past, current, and future "United States [D]epartment of [E]nergy Hanford site workers," as defined under the law, are entitled to workers' compensation benefits if they develop certain diseases or conditions without having to demonstrate, as the WIIA otherwise requires, that their conditions were more likely than not caused by their employment at Hanford.

6. The resulting heightened liability for workers' compensation, and attendant costs, that HB 1723 imposes on DOE and its contractors are not imposed on other employers elsewhere at Hanford or elsewhere in the State. This impermissible discrimination against the Federal Government and its contractors and purported direct regulation of the Federal Government violate the Supremacy Clause.

7. The United States thus brings this action against Washington, the Governor of Washington, the Washington Department of Labor and Industries ("L&I"), and the Director of L&I (collectively, "Defendants") for a judgment declaring that HB 1723 is invalid under the Supremacy Clause, and for an injunction against its enforcement.

JURISDICTION

8. This is a civil action brought by the United States under the Constitution of the United States, U.S.

Const. art. VI, cl. 2, seeking declaratory and injunctive relief under 28 U.S.C. §§ 2201 and 2201, and Federal Rules of Civil Procedure 57 and 65. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1345.

VENUE

9. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b) because Hanford is located within this District.

PARTIES

10. Plaintiff is the United States of America, suing on its own behalf and on behalf of DOE.

11. DOE is a federal executive department charged by Congress with completing the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development at Hanford.

12. Defendant Washington is a State of the United States.

13. Defendant Jay Inslee is the Governor of Washington. He is sued in his official capacity.

14. Defendant L&I is the state agency responsible for implementing the WIIA, Revised Code of Washington ("RCW") Title 51.

15. Defendant Joel Sacks is the Director of L&I. He is sued in his official capacity.

CONSTITUTIONAL AND STATUTORY BACKGROUND

The Supremacy Clause of the U.S. Constitution

16. The Supremacy Clause of the U.S. Constitution provides: "This Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." U.S. Const. art. VI, cl. 2.

17. The doctrine of intergovernmental immunity holds that "[u]nder the Supremacy Clause, 'the activities of the Federal Government are free from regulation by any state.'" *Boeing Co. v. Movassaghi*, 768 F.3d 832, 839 (9th Cir. 2014) (quoting *Mayo v. United States*, 319 US 441, 445 (1943)). A state law is invalid if it "regulate[s] the United States directly," or if it "discriminate[s] against the Federal Government or those with whom it deals," that is, if it "treats someone else better than it treats the government." *Boeing*, 768 F.3d at 839, 842.

The WIIA

18. The WIIA is the State's statutory regime for industrial insurance. It provides that a worker who sustains an injury or contracts an "occupational disease," will be compensated through the payment of certain benefits. An "occupational disease" is defined as "such disease or infection as arises naturally and proximately out of employment under the mandatory or elective adoption provisions of this title." RCW 51.08.140.

19. To be eligible to receive benefits under the WIIA, a worker generally has the burden of establishing that (1) he or she has a physical condition and (2) there is a "causal connection between" his or her physical condition and employment based on competent medical testimony which shows that the disease is probably, as opposed to possibly, caused by the employment. *Dennis v. Dep't of Labor & Indus. of State of Wash.*, 109 Wash.2d 467, 477 (Wash. 1987). A claim for an "occupational disease" is generally subject to a two-year statute of limitations. RCW 51.28.055.

20. The WIIA requires that all employers covered by the Act provide workers' compensation coverage. Employers may do so by participating in the Washington State Fund ("State Fund"), which is an insurance pool funded by employer premiums and managed and administered by L&I, or employers may do so by qualifying as a self-insurer. RCW 51.14.010; 51.14.030. A self-insured employer provides workers compensation benefits directly to its employees rather than through the State Fund. *See* RCW 51.08.173.

Workers' Compensation at Hanford

21. Federal law provides for a limited waiver of the Federal Government's intergovernmental immunity for state workers' compensation laws, such that States may enforce their workers' compensation laws against private employers working on federal land, "in the same way and to the same extent as if the premises were under the exclusive jurisdiction

of the State." 40 U.S.C. § 3172. Non-federal employees at Hanford consequently receive workers' compensation coverage through the WIIA.[1]

22. As a certified self-insurer under the WIIA, DOE provides workers' compensation coverage directly to the majority of federal contractor employees at Hanford. Specifically, pursuant to a Memorandum of Understanding between DOE and L&I ("MOU"), DOE serves as the "statutory employer" for the employees of certain Hanford contractors, including six of its current prime contractors and seven of their subcontractors. Together these contractors employ the majority of the approximately 10,000 current employees of DOE contractors at Hanford. The MOU also covers the employees of sixty-one contractors and subcontractors that previously performed work for the Federal Government at Hanford.

23. DOE thus has assumed responsibility for providing workers' compensation coverage for these contractor employees. L&I provides oversight of the self-insurance process and retains final authority as to the allowance of their workers' compensation claims. When L&I approves a claim of a contractor employee covered by the MOU, DOE pays the benefits.

24. Hanford contractors not covered by the MOU provide workers' compensation coverage to their employees either through the State Fund or as self-

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[1] Workers' compensation claims for federal employees are administered pursuant to the Federal Employees' Compensation Act ("FECA", 5 U.S.C. § 8103 *et seq.*). FECA does not cover non-federal employees at Hanford.

insurers. Because workers' compensation costs are considered "allowable" under federal acquisition regulations—which are incorporated into DOE contracts—these contractors will likely be reimbursed by DOE for such costs.

Workers' Compensation Claims Processing at Hanford

25. DOE contracts with a third-party administrator—currently Penser North America, Inc.—that manages workers' compensation claims on behalf of DOE, and pays benefits for contractors covered under the MOU.

26. Penser reviews a submitted claim, gathers relevant employment and medical information, and recommends that L&I either approve or deny the claim. L&I then issues an order approving or denying the claim. Penser administers approved claims and pays appropriate benefits consistent with the L&I order. Either the worker or DOE may contest an L&I order through the administrative appeals process, including further review by L&I and the Washington Board of Industrial Insurance Appeals, subject to judicial review in state court.

27. Since 2009, DOE has paid nearly $116 million in workers' compensation benefits to employees of Hanford contractors covered by the MOU.

HB 1723

28. HB 1723 was signed into law by Defendant Inslee on March 7, 2018, and became effective, as a matter of State law, on June 7, 2018. It has been codified at RCW 51.32.187.

29. HB 1723 amends the WIIA by creating a "prima facie presumption" for "[D]epartment of [E]nergy Hanford site workers" that certain defined illnesses are "occupational diseases" within the meaning of RCW 51.08.140. HB 1723 Sec. 1.(2)(a).

30. "United States [D]epartment of [E]nergy Hanford site workers" are defined as "any person, including a contractor or subcontractor, who was engaged in the performance of work, either directly or indirectly, for the United States, regarding projects and contracts at the Hanford nuclear site and who worked on the site at the two hundred east, two hundred west, three hundred area, environmental restoration disposal facility site, central plateau, or the river corridor locations for at least one eight-hour shift while covered under this title." HB 1723 Sec. 1.(1)(b). The vast majority of federal contractor employees at Hanford have worked, and continue to work, in these areas.[2]

31. HB 1723 facially applies to federally owned and operated portions of Hanford, specifically excluding leased land and state-owned land located within Hanford's boundaries.

32. Any covered Hanford worker—past, present, or future; living or deceased—who worked a single eight-hour shift in a covered area, and thereafter suffers from one of potentially hundreds of covered illnesses, can avail themselves of HB 1723's presumption of entitlement to workers' compensation.

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[2] A detailed map of Hanford, and a second map illustrating the areas referenced in the law, are attached as Exhibits B and C.

33. HB 1723 eliminates the two-year statute of limitations on claims contained in RCW 51.28.05 because the presumption extends to all workers' compensation claims filed after June 7, 2018, "without regard to the date of last injurious exposure or claim filing," and also "extends to an applicable . . . site worker following termination of service for the lifetime of that individual." HB 1723 Sec. 1.(5)(c), (a). "A worker or the survivor of a worker who has died as a result of one of the [covered] conditions or diseases . . . , and whose claim was denied by order of [L&I], the board of industrial insurance appeals, or a court, can file a new claim for the same exposure and contended condition or disease." HB 1723 Sec. 1.(5)(b).

34. HB 1723's covered illnesses include common and broadly defined ailments, such as "respiratory disease" and "neurological disease," as well as "[a]ny heart problems, experienced within seventy-two hours of exposure to fumes, toxic substances, or chemicals at the site;" "[c]ancer, subject to" certain limitations defined elsewhere in the law; and "[b]eryllium sensitization, and acute and chronic beryllium disease." HB 1723 Sec. 1.(3), (4).

35. The presumption in HB 1723 may be rebutted only "by clear and convincing evidence," including "use of tobacco products, physical fitness and weight, lifestyle, hereditary factors, and exposure from other employment or nonemployment activities." HB 1723 Sec. 1.(2)(b).

36. If a final decision allowing a claim for benefits under the presumption is appealed and upheld, the board

or court "shall order that all reasonable costs of appeal, including attorneys' fees and witness fees, be paid to the worker or his or her beneficiary by the opposing party." HB 1723 Sec. 1.(6)(a), (b).

Discriminatory Scope of HB 1723

37. HB 1723 discriminates on its face against the Federal Government and those with whom it deals, because the law only applies to the federally owned and operated portions of Hanford, excluding on-site areas leased to non-federal entities, and to "United States [D]epartment of [E]nergy Hanford site workers."

38. HB 1723 also discriminates against the Federal Government because it subjects DOE's contractors at Hanford to significantly heightened workers' compensation liability not imposed on any other employers in the State. DOE will bear the majority of the costs from this heightened liability, including for ailments not demonstrated to have resulted from employment at Hanford.

39. HB 1723 discriminates against the Federal Government and its contractors because other employers in the State whose workers conduct the same jobs as Hanford employees are not subject to the presumption, and because other employers that operate at Hanford, even in the areas covered by the law, are not subject to the presumption.

Direct Regulation of DOE

40. By imposing on DOE a clear-and-convincing standard of proof to overcome the presumption, HB 1723 directly regulates the Federal Government by effectively requiring DOE to cover certain ailments

under the WIIA, including those commonly occurring in the general population, whether or not those ailments were caused by employment at Hanford.

41. That burden is compounded by HB 1723's seemingly indefinite coverage period. The presumption allows any past or present Hanford worker, or the survivor of a deceased worker, to refile a claim that was previously denied.

42. HB 1723 thereby imposes significant costs on DOE and its contractors to process and manage the additional claims submitted under HB 1723.

CLAIMS FOR RELIEF

Violation of Intergovernmental Immunity

Discrimination

43. The United States incorporates by reference the allegations in Paragraphs 1 to 42.

44. HB 1723 discriminates against the Federal Government and those with whom it deals because it singles out DOE, its contractors, and the federally owned and operated portions of Hanford for a substantially more burdensome and costly workers' compensation scheme than is generally applicable to employers in the State. Specifically, HB 1723 imposes enhanced liability for workers' compensation claims, and its attendant significant compliance costs, exclusively on DOE and its contractors notwithstanding that other employers operate in the same physical areas at Hanford, and that employees throughout the State conduct many of the same jobs as those conducted in the covered areas.

45. HB 1723's discrimination violates the Federal Government's intergovernmental immunity guaranteed by the Supremacy Clause.

Violation of Intergovernmental Immunity

Direct Regulation

46. The United States incorporates by reference the allegations in Paragraphs 1 to 45.

47. HB 1723 directly regulates the Federal Government by imposing unique workers' compensation obligations on DOE not caused by employment at Hanford, and imposing their attendant significant compliance costs.

48. HB 1723's direct regulation of the Federal Government violates the intergovernmental immunity guaranteed by the Supremacy Clause.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff United States of America prays that the Court:

(a) Declare, pursuant to 28 U.S.C § 2201, that HB 1723 is invalid under the Supremacy Clause of the United States Constitution, both on its face and as applied to the Federal Government and those with whom it deals;

(b) Permanently enjoin enforcement of HB 1723 against the Federal Government and those with whom it deals, pursuant to 28 U.S.C § 2202, and Federal Rules of Civil Procedure 57 and 65;

(c) Award the Federal Government its costs of suit; and

(d) Order such other and further relief as the Court deems just and proper.

RESPECTFULLY SUBMITTED: Dec. 10, 2018

JOSEPH H. HUNT
Assistant Attorney General

JAMES J. GILLIGAN
Acting Branch Director

JACQUELINE COLEMAN SNEAD
Assistant Branch Director

/s/ CHRISTOPHER R. HEALY
CHRISTOPHER R. HEALY (DC Bar 219460)
Trial Attorney
United Stated Department of Justice
Civil Division, Federal Programs Branch
1100 L St. NW
Washington, D.C. 20005
Tel: (202) 514-8095
Fax: (202) 616-8470
E-Mail: Christopher.Healy@usdoj.gov

Attorneys for the United States of America

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON, ET AL., DEFENDANTS

DECLARATION OF GREGORY A. JONES

I, Gregory Jones, declare as follows:

1) I am currently employed by the United States Department of Energy ("DOE"), Richland Operations Office ("RL") as the Assistant Manager for Business and Financial Operations and have held this position since 2007. I am also the Chief Financial Officer for the Hanford Nuclear Reservation ("Hanford site" or "Hanford"), which includes RL and the Office of River Protection ("ORP") and have been since 2007.

2) In these roles, I oversee the RL Procurement Division, which is responsible for administering the prime contracts at Hanford, as well as the financial aspects of the Hanford workers' compensation program. I have worked as a DOE employee at either ORP or RL since 1995. Through my current position, I am familiar with the scope of contract work being performed in particular areas at the Hanford site and the Hanford workforce. I am also familiar with the types of non-federal work occurring on the Hanford site due to required in-

teraction between Hanford federal contractors, particularly the contractor responsible for infrastructure, and the entities that lease land from DOE.

3) I am providing this declaration in support of the United States' Motion for Summary Judgment. The statements herein are based on my personal knowledge, and my review and consideration of information available to me in my official capacity.

Hanford Site Geography and HB 1723

4) The United States owns and operates the Hanford site, which is located near Richland in southeastern Washington State. Hanford's large-scale production of critical defense materials, namely plutonium, for the Federal Government generated a significant amount of radioactive and hazardous chemical waste. Presently, DOE and its contractors are engaged in a massive cleanup operation unprecedented in scale and complexity to remediate the site and protect human health and the environment.

The 200 Areas and the Central Plateau

5) ORP's mission is to address and remediate the chemical and radioactive waste stored in dozens of massive underground tanks, known as "tank farms." The office is responsible for the retrieval, treatment, and disposal of this waste in a safe, efficient manner. One of its contractors is building a Waste Treatment Plant to process waste from the tank farms to facilitate permanent disposal. ORP carries out its mission in and near the 200 Areas of the site. RL is responsible for cleaning up the facilities, groundwater, and waste sites in the 200 Areas outside of the tank farms. The 200 Areas are included in the 75-square-miles of the Hanford site

known as the Central Plateau. I have attached a general map of Hanford, as well as a map that highlights areas/facilities noted in HB 1723, as Exhibits A and B respectively. The maps have been produced by DOE cartographical staff and accurately reflect the geography of the site.

The 300 Area, River Corridor, and Environmental Restoration Disposal Facility (ERDF)

6) RL's mission is to clean up the remainder of Hanford, provide necessary infrastructure, and restore land for future access and use. RL's focus for the last decade-plus has been to clean up the 220-mile River Corridor, which includes former nuclear fuel fabrication facilities in the 300 Area and nine former plutonium production reactors in the 100 Areas along the Columbia River. The cleanup of the River Corridor primarily involves treatment of groundwater, decontamination, decommissioning, and demolition of contaminated facilities, and transport of debris and soil from waste sites to ERDF. ERDF is a massive landfill between the 200 East and 200 West Areas that accepts low-level radioactive, hazardous, and mixed waste generated during remediation activities from building demolitions and solid waste burial ground excavations at Hanford.

Leased, State-Owned, and Bonneville Power Administration Land

7) Entities operating on leased land at Hanford include the US Ecology Commercial Low-Level Radioactive Waste Disposal Facility, Energy Northwest, and the Laser Interferometer Gravitational Wave Observatory ("LIGO"). The map attached as Exhibit B, titled

"HB 1723 at Hanford," identifies the locations of these entities.

8) US Ecology is a privately-owned facility that receives waste from several Western states and disposes of this radioactive waste on the Hanford site. It is located on 100 acres of DOE land leased to the State of Washington, which subleases the land to US Ecology, between the 200 East and West Areas on the Central Plateau.

9) Energy Northwest is a joint operating agency of the State of Washington that owns and operates electricity generating facilities, one of which is the Columbia Generating Station, Washington's only operational commercial nuclear power plant. The station produces nuclear energy on land leased from DOE in the River Corridor.

10) LIGO was built on land leased from DOE in the River Corridor. It is a scientific laboratory operated by Caltech and the Massachusetts Institute of Technology, with support from the National Science Foundation, devoted to the study of gravitational-wave astrophysics.

11) The only state-owned land on Hanford is a one square mile undeveloped parcel that DOE transferred to the State of Washington several decades ago. It is located in the River Corridor.

12) The Bonneville Power Administration, which is a federal power marketing administration and part of DOE, has several power substations on the Hanford Site, most of which are located in the River Corridor.

Hanford's Workforce

13) After the passage of HB 1723, I was part of a RL working group that attempted to estimate the cost of the new law on DOE. In order to estimate the financial impact of the law, the group attempted to estimate the total number of contract workers who had worked at least one eight-hour shift at the Hanford site. In my capacity as part of that working group, I reviewed a number of government-sponsored documents that measured the contract workforce populations at various periods in Hanford's history as well as more recent government documents measuring the workforce population at Hanford. I estimate, conservatively, that more than 100,000 contractor employees have worked at least one eight-hour shift at Hanford over the time of its existence.

14) A relatively small federal workforce of about 400 DOE employees manages contracts and provides oversight of work performed by the thousands of contractor employees at Hanford. Hanford contractors employ a wide array of professionals, some of whom do the clean-up work and others who do administrative and other non-hazardous work common throughout numerous industries. Among the hundreds of Hanford job types, there are radiation technicians, construction workers, security guards, office personnel, regulatory analysts, biologists, nuclear chemical operators, and janitors. Each employee is a contractor for the Federal Government, performing a federal function, on federally owned and operated land.

15) In addition to federal and contractor employees, there are also employees of the State of Washington who work at the Hanford site. The Washington State Department of Ecology is the primary state regulator of

the Hanford cleanup. Department of Ecology employees engage in inspections in buildings, waste sites, disposal facilities, and tank farms and undertake other regulatory activities throughout the areas of Hanford listed in HB 1723. These Washington State employees do not do work directly or indirectly for the United States. The U.S. Environmental Protection Agency is the other primary regulator at Hanford.

Workers' Compensation at Hanford

DOE's Programs to Support Workers

16) Workers are the backbone of DOE's cleanup mission and the Department is committed to helping those who become injured or ill from their work. DOE spends significant resources implementing its workers' compensation program at Hanford. Since 2009, DOE has paid nearly $116 million in workers' compensation benefits to employees of Hanford contractors. In addition, DOE is actively working with the Washington State Department of Labor and Industries ("L&I") and other stakeholders to identify and implement strategies for improving Hanford's workers' compensation program. DOE Hanford recently opened the Hanford Workforce Engagement Center to help current and former workers, almost all of whom were employed by federal contractors, navigate and understand the occupational health benefits available to them, including providing information to assist them with obtaining benefit payments under the Energy Employees Occupational Illness Compensation Act ("EEOICPA") program and through the former worker medical screening program. These federal programs and benefits for current and former Hanford workers, which pre-dated HB 1723, will

remain available to them regardless of the outcome of this lawsuit.

Hanford's Workers' Compensation under Washington Law

17) Since the United States acquired land in southeastern Washington for the Manhattan Project in 1943, workers employed by contractors at Hanford have been covered by the Washington Industrial Insurance Act ("WIIA"), Revised Code of Washington ("RCW") Title 51.

18) Under the WIIA, all employers must provide workers' compensation coverage by either insuring through the Washington state fund ("State Fund") administered by L&I or by self-insuring if they meet certain qualifications. RCW 51.14.010; 51.14.020.

19) Since 1999, DOE has self-insured the workers' compensation claims of selected contractors and subcontractors at Hanford and established a special insuring relationship under the authority of RCW 51.04.130. DOE and L&I entered a Memorandum of Understanding, which is updated periodically, but usually without substantive change. I have attached hereto as Exhibit C a true and correct copy of the current version of the Memorandum of Understanding between the U.S. Department of Energy Richland Operations Office and the State of Washington Department of Labor and Industries ("MOU"), (revised, effective June, 2018). The MOU explains each agency's roles and responsibilities and how the workers' compensation scheme should be applied at Hanford, specifically where it is not appropriate, practical or logical to apply Washington workers'

compensation laws, regulations, and administrative guidelines to DOE based on its status as a federal entity. The appendix to the MOU provides a list of contractors and subcontractors covered under DOE's self-insuring program, which comprises the majority of the current Hanford site workforce. The MOU also provides that DOE will cover workers' compensation benefits for 61 listed former Hanford contractors and subcontractors. MOU Attachment.

20) Most contractor employees at Hanford are covered by DOE's self-insurance, certified in the MOU. For those not covered, DOE pays workers' compensation costs either directly (when DOE is a party to the contract) or indirectly (when DOE is not a party to the contract) because such expenses are part of the cost of doing business. For example, Bechtel National, Inc. ("BNI"), the ORP contractor constructing the Waste Treatment Plant, is not covered by DOE's self-insurance, but is directly reimbursed for its workers' compensation costs under its contract with DOE. If Bechtel's workers' compensation costs increase due to the implementation ofHB 1723, DOE pays the increased costs as allowable costs. *See* BNI Contract, Insurance-Litigation and Claims (DEAR 952.231-71) and the Advance Understanding of Costs (Section J-26), *available at* https://www.hanford.gov/page.cfm/DOE-ORPPrimeContracts/BNIContract. DOE indirectly pays for the workers' compensation costs of subcontractors performing work at Hanford for one of DOE's contractors because workers' compensation costs are included in the price they charge for services. Any increases in workers' compensation costs to these federal contractors due to HB 1723 are almost certain to be passed on to DOE as reimbursable costs.

21) Through various contract provisions, DOE establishes its right to make changes to its contracts. In exchange for this right, the contractor receives compensating rights to equitable adjustments in contract costs or price and/or schedule. The contractor exercises this right through the preparation and submission of a request for equitable adjustment. Whenever particular cost requirements were not considered in the negotiation process, a determination of the cost or price could create the need for an equitable adjustment. The additional requirements imposed by HB 1723 could be considered a constructive change in circumstances that would lead one of DOE's contractors to a request for an equitable adjustment. Equitable adjustments may be requested under all contract types. *See* Federal Acquisition Regulations ("FAR") 52.243-1 – 52.243-5 (describing types of contracts). All FAR provisions provide that a contracting officer shall make an equitable adjustment in the applicable parts of the contract that may include compensation (price/cost/fee), schedule, specifications, etc., when certain contract specific requirements are met. If additional or increased costs are not allowable under current contract provisions, I expect Hanford's federal contractors will request equitable adjustments based on HB 1723.

22) To date, the Federal Government has incurred the vast majority of the costs associated with the enactment of HB 1723, and I predict that it will continue to do so in the future.

Dated [3/1/19] Respectfully Submitted,

/s/ GREGORY A. JONES

GREGORY A. JONES
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99354
(509) 372-8977

EXHIBIT C: MEMORANDUM OF UNDERSTANDING

between

THE U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

and

THE STATE OF WASHINGTON DEPARTMENT OF LABOR AND INDUSTRIES

ARTICLE I. PURPOSE

This Memorandum of Understanding (MOU) is entered into by and between the U.S. Department of Energy Richland Operations Office (DOE-RL) and the State of Washington Department of Labor and Industries (L&I) for the purposes of memorializing DOE-RL's responsibilities as a unique self-insurer under the Washington Industrial Insurance Act (Revised Code of Washington, Title 51), and, specifically RCW 51.04.130. In addition, this MOU identifies which contractors and subcontractors at the Hanford Site are covered under this program.

ARTICLE II. AUTHORITIES AND APPLICABLE LAWS AND REGULATIONS

This MOU is entered into pursuant to the authority of Sections 102(11) and 646 of the Department of Energy Organization Act of 1977, P.L. 95-91, 42 U.S.C. § 7101 *et seq.*, and RCW. 51.04.130.

Except as set forth herein, DOE-RL's administration of its workers' compensation claims shall comply with applicable laws and regulations of the State of Washington and of the United States.

ARTICLE III. INTERAGENCY COMMUNICATIONS

To provide for consistent and effective communications between L&I and DOE-RL, each agency has appointed a representative to serve as the point of contact on this MOU. Each agency agrees to notify the other in writing should the individual serving as the agency representative change.

For the State of Washington Department of Labor and Industries:

Program Manager of Self Insurance
State of Washington
Department of Labor and Industries
P.O. Box 44200
Olympia, Washington 98504-4200

For the U.S. Department of Energy, Richland Operations Office

Program Manager for Hanford Workers' Compensation
U.S. Department of Energy
Richland Operations Office
2420 Stevens Center
P.O. Box 550, MS A7-27
Richland, Washington 99352

ARTICLE IV. CONTRACTORS' COVERAGE AND IDENTIFICATION

DOE is a self-insured employer for purposes of Washington State Industrial Insurance, as provided under the Certificate of Qualification issued by L&I effective January 1, 2000. As a self-insurer, DOE-RL establishes which prime contractors and other contractors engaged in work related to the Hanford Site will comprise

the covered group, as defined under the self-insurance regulations. Contractors identified as members of the covered group shall be insured for purposes of workers' compensation under DOE-RL's self-insurance certificate. Compensation awards and benefits shall be payable only for claims of workers injured in the course of their employment, pursuant to a DOE contract, related to the Hanford Site.

All current contractors in the covered group are identified by DOE-RL in the attachment to this MOU. When DOE-RL elects to remove or add a contractor to the covered group, DOE-RL shall provide written notification to the L&I Program Manager of Self-Insurance within 10 days of the change affecting the contractor's coverage. Written notification received by L&I from DOE-RL shall serve as a modification to the attachment to this MOU.

Pursuant to RCW 51.04.130, the Certificate of Qualification and this MOU, L&I considers DOE-RL and all of its covered contractors to be one self-insured group or entity and one employer for industrial insurance purposes such that DOE-RL and each member of the self-insured group are, for industrial insurance purposes, the statutory employer of the employees of the self-insured group.

ARTICLE V. PROOF OF FUNDS AND FUND PARTICIPATION

Because DOE-RL has the ability to meet its self-insured obligations, DOE-RL shall not be required to provide a security deposit. DOE-RL will provide to L&I proof of availability of funds for the payment of benefits on an annual basis.

DOE-RL will be responsible for a pro rata share of the self-insurance administrative assessment, including direct and indirect expenses of each department division, and the board of industrial insurance appeals. However, DOE will not be assessed for portions of the administrative assessment for the University of Washington environmental research facility, Division of Occupational Safety and Health (DOSH), and Safety and Health Assessment and Research for Prevention (SHARP).

DOE-RL shall continue to participate in the Supplemental Pension Fund.

DOE-RL will not be required to participate in and may not benefit from the Second Injury Fund Assessment, the Insolvency Trust Assessment, the SI Overpayment Reimbursement Fund Assessment, or the Logger Safety Assessment.

ARTICLE VI. EFFECT OF THIS MOU

This MOU is neither a fiscal nor a funds obligation document. This MOU shall not be construed to provide a private right or cause of action for or by any person or entity. All agreements herein are subject to and will be carried out in compliance with all applicable Federal laws, regulations, and other legal requirements.

ARTICLE VII. AMENDMENT/TERMINATION AND EFFECTIVE DATE

This MOU may be amended or terminated by written agreement between L&I and DOE- RL. This MOU may be terminated unilaterally by either party upon 90 days written notice to the other party. This amended MOU shall become effective upon the later date of signature of the parties and shall remain in effect until ten

years from the date of execution, unless extended or terminated by the parties before that date. In the event of termination, the parties will work together in good faith to resolve any issues arising out of the termination, which may include adjusting the effective date of the termination by written agreement.

/s/ GAIL SPETT
GAIL SPLETT
Program Manager for
Hanford Workers
Compensation
U.S. Department of
Energy
Richland Operations
Office

Date: [6/12/18]

/s/ RANDI WARICK
RANDI WARICK
Deputy Director for
Financial Management
State of Washington
Department of Labor
and Industries

Date: [6-15-18]

HANFORD June 12, 2018 Current Covered Prime Contractors and the Covered Sub-Contractors		
NAME	COVERAGE DATES	NOTES
Battelle Memorial Institute/Pacific Northwest National Laboratory (PNNL)	1/1/00 - present	Prime/no covered subs
CH2M HILL Plateau Remediation Company (CHPRC)	10/1/08 - present	Prime/no covered subs
HPM Corporation (HPMC)	10/1/12 - present	Prime
Computer Science Corp (CSC)	10/1/12 - present	sub to HPMC
Mission Support Alliance, LLC (MSA)	8/24/09 - present	Prime
Akima Hanford Services, LLC	8/24/09 - present	sub to MSA
Akima Facilities Management	8/24/09 - present	sub to MSA
Dade Moeller & Associates Hanford Mission Support, LLC	8/24/09 - present	sub to MSA
HPM Corporation - MSA	8/24/09 - present	sub to MSA
Westech International MSA, LLC	8/24/09 - present	sub to MSA
Westech Intl	8/24/09 - present	sub to MSA
Washington River Protection Solutions, LLC (WRPS)	10/1/08 - present	Prime/no covered subs
Wastren Advantage, Inc. operating as "WAI Hanford Laboratory" (WAI-HL)	11/22/15-present	Prime/no covered subs

Historical Covered Prime and Sub Contractors		
NAME	COVERAGE DATES	NOTES
Advanced Technologies and Laboratories International, Inc. (ATL)	05/16/05-11/21/15	Prime/no covered subs
Computer Services Corp. (CSC) (Hanford Occupational Health Services)	04/01/11 - 09/30/12	Prime
HPMC	06/06/04 - 09/30/12	sub to CSC
AdvancedMed (AMH)	06/06/04 - 03/31/11	Prime
Babcock Services -PRC	10/01/08 - 09/30/13	sub to CHPRC
Babcock Services PRC, LLC	10/01/08 - 09/30/13	sub to CHPRC
EnRep, Inc.	10/01/08 - 09/30/13	sub to CHPRC
EnRep PRC, Inc.	10/01/08 - 09/30/13	sub to CHPRC
East Tennessee Materials and Energy - PRC	10/01/08 - 09/30/13	sub to CHPRC

M&EC PRC, Inc	10/01/08 - 09/30/13	sub to CHPRC
GEM Technology Intl. - PRC	10/01/08 - 09/30/13	sub to CHPRC
GEM Technology - PRC, Inc.	10/01/08 - 09/30/13	sub to CHPRC
Fluor Federal Services - PRC	10/01/08 - 09/30/13	sub to CHPRC
Cavanagh Services Group PRC, LLC	10/01/08 - 12/16/12	sub to CHPRC
Washington Closure Hanford LLC (WCH)	8/27/05 – 9/30/2016	Prime/no covered subs
Eberline Services Hanford, Inc. (ESHI)	06/14/06 – 09/30/12	sub to WCH
Integrated Logistics Services, Inc. (ILSI)	06/14/06 – 09/30/08	sub to WCH
Bechtel Hanford Inc (BHI)	Thru 08/26/05	Prime
CH2M Hill Hanford, Inc.	Thru 08/26/05	sub to BHI
Eberline Services Hanford, Inc.	Thru 08/26/05	sub to BHI
Thermo Hanford	Thru 08/26/05	sub to BHI
Hanford Crane & Rigging, LLC	8/24/2009	No coverage - MSA did not award
R. J. Lee Group Inc - MSA	08/24/09 - 09/30/14	sub to MSA
RJ Lee Group Inc - Hanford	08/24/09 - 09/30/14	sub to MSA
Pacific Architects and Engineers Incorporated (PAE)	07/19/13 - 09/30/14	sub to MSA
Abadan Hanford LLC	08/24/09 - 09/30/13	sub to MSA
CSC Hanford LLC	08/24/09 - 07/19/13	sub to MSA, Owner/ name change to Pacific Architects and Engineers Inc. (PAE)
CSC Applied Technologies	08/24/09 - 07/19/13	sub to MSA, Owner /name change to PAE
PSI-Hanford, Inc	08/24/09 - 01/11/13	sub to MSA
PSI, Inc	08/24/09 - 09/30/13	sub to MSA
Energy Solutions Federal Services of Hanford, Inc.	01/01/00 - 08/23/09	sub to FHI
Numatec Hanford Corporation	01/01/00 - 08/23/09	sub to FHI
Fluor Federal Northwest Services, Inc (FFNWS)	01/01/00 - 08/23/09	Prime - Craft Only - Affiliate to FHI (incorrectly listed as Fluor Gov Group)
Hanford Environmental Health Foundation (HEHF)	coverage ended 06/05/04	aka Hanford Occupational Health Foundation

Duratek Federal Services of Hanford, Inc.	coverage ended 10/23/06	10/23/06 Name chg to Energy Solutions Federal Services of Hanford, Inc.
Protection Technology Hanford	coverage ended 09/30/05	Day & Zimmerman, LLC dba
Babcock & Wilcox Hanford Company		Using DOE's UBI due to SIEDR requirements.
Duke Engineering & Services Hanford, Inc.		
DynCorp Tri-Cities Services, Inc.		
Fluor Daniel Northwest Services		craft workers only
Lockheed Martin Hanford Corporation		
Rust Federal Services of Hanford, Inc.		
Waste Management Hanford		
Fluor Daniel Hanford		
Westinghouse Hanford Company		
Kaiser Engineers Hanford		
J.A. Jones Construction Services Company		
Rockwell Hanford Operations		Now Boeing North America
United Nuclear Industries		aka Douglas United Nuclear Inc
UNC Nuclear Industries, Inc		
General Electric		DOE UBI
EI duPont deNemours Company		DOE UBI
All-Vitro Engineers		DOE UBI
US Testing		DOE UBI
Computer Sciences Corporation		DOE UBI
Isochem (Martin-Marietta/US Rubber)		DOE UBI
ITT Federal Support Services		DOE UBI
Atlantic Richfield Hanford Company		
Boeing Computer Services Richland, Inc.		DOE UBI
Braun Hanford Co.		
International Technology Corporation		DOE UBI

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON, ET AL., DEFENDANTS

DECLARATION OF PATRICIA HICKS

I, Patricia Ann Hicks, declare as follows:

1) I am currently employed by Penser North America, Inc. (Penser) as the Branch Manager for the Richland Office and the Workers' Compensation Coordinator for the Hanford site in Richland, Washington. I have held this position since October 2009. In this position, I am the lead providing technical, legal, investigative, and vocational support related to Hanford site workers' compensation claims. In this role, I provide expertise regarding workers' compensation claims, processes, and programs. I conduct performance reviews and audit files, and am a resource to my team to ensure that all claims are managed in compliance with applicable legal and regulatory standards, Penser's contract, and "best practice" in the industry. I was certified as a claims adjudicator for Washington Sate Workers' Compensation by Washington Department of Labor and Industries (L&I) in September of 2009. Washington Administrative Code ("WC") 206-15-360. I have worked with Washington works' compensation claims since 1993.

2) I have personal knowledge of the facts in this Declaration and I am competent to provide this testimony. I am providing this declaration in support of the United States' Motion for Summary Judgment in *United States v. Washington*, No. 4:18-cv-05189 (E.D. Wash.).

The Penser Contract

3) Penser is the current third-party administrator for the Workers' Compensation Program at the Department of Energy (DOE)'s Hanford site, which provides workers' compensation coverage and benefits to specified DOE contractor employees in accordance with the Revised Code of Washington (RCW) Title 51, the Washington Industrial Insurance Act (WIIA), the Washington Administrative Code (WAC), and all other applicable laws and regulations under Contract Number DE-EM0003393. Ture and accurate copies of the original contract, and as modified, are available at: https://www.hanford.gov/index.cfm?page=1499; https://www.hanford.gov/page.cfm/PrimeContracts/PenserConformedContract-EM0003383.

4) The period of performance for the Penser contract is October 1, 2014 - September 30, 2019. *See* Contract Sec. B.

5) Penser was the prior third party administrator for DOE under a previous contract with similar scope of work and contract terms. The prior period of performance was October 1, 2009 - September 30, 2014.

Hanford Nuclear Site Worker's Compensation Program

6) DOE is qualified as a self-insured employer, as it has met the Washington criteria required under RCW 51.14.030 and WAC 296-15-021. Under RCW 51.14.030,

a self-insured employer acts as the claims administrator, but remains subject to L&I oversight and the requirements of Washington workers' compensation laws.

7) For purposes of workers' compensation, DOE is the statutory "Employer" for the workers employed by the majority of the Hanford Site prime contractors, some subcontractors, and certain legacy contractors. RCW 51.08.070; WAC 296-15-021.

8) In its role as self-insured Employer, DOE is responsible for opening, processing, and administering claims, and for paying approved claim benefits for Hanford Site workers' compensation claims for contractors that are selected by DOE for coverage pursuant to the Memorandum of Understanding (MOU) between DOE and L&I. RCW 51.08.173.

9) Under its contract, Penser fulfills DOE's responsibilities as a self-insured Employer by providing services in the processing of workers' compensation claims (*i.e.* investigating, administering, adjusting, processing, and paying) for certain covered site contractor employees. *See* Penser Contract at Section C.1.b. Penser provides all personnel, equipment, materials, supervision, transportation, training and other resources necessary to perform these services on behalf of DOE. *Id.* at C.1.a. In other words, when a worker files a workers' compensation claim, Penser performs the work associated with processing, managing, and paying these claims on behalf of DOE in accordance with Title 51 RCW.

10) On behalf of DOE, Penser pays, with DOE funds, all costs associated with approved claims in accordance

with the L&I orders. DOE, as the self-insured Employer for specified federal contractor employees, is ultimately responsible for the sure and certain delivery of Title 51 RCW benefits to eligible ill and injured workers, and is accountable for all aspects of its workers' compensation program. WAC 296-15-310.

Claims Processing

11) The workers' compensation process begins when an individual for whom DOE is the responsible self-insured Employer files a claim with his or her employer (covered Hanford Site contractor), and Penser is notified of the existence of an industrial injury or occupational disease within the meaning of RCW Title 51.08. *See also* "Washington Claims Adjudication Guidelines", *available at* https://www.lni.wa.gov/ClaimsIns/Insurance/Selfinsure/Claims/Guidelines/Default.asp.

12) Upon receiving a claim, Penser establishes a claim file and gathers the employment, medical, and claim information necessary to make a recommendation to L&I regarding whether the claim should be allowed or denied in accordance with Title 51. This determination must be made within 60 days from the date the claim is filed, if all the requisite data are available. RCW 51.14.130. L&I may grant an interlocutory extension up to 120 days from filing to allow the compiling of claim related data when it is evident that the process of gathering sufficient information is not reasonable in the allocated timeframe. WAC 296-15-405(3).

13) Once a claim is filed, the usual process is for Penser to request medical records from the attending physician, consulting physicians and associated diagnostic materials, as well as Hanford's on-site occupational

medical provider, and additional supporting documentation from the DOE contractor and the employee. If sufficient supporting information is received, it is forwarded to L&I for claim determination within the allotted sixty (60) days.

14) Although timely requests are made, records may not arrive as anticipated. This is especially true when the records and medical providers are no longer in the area, have not retained/indexed the records or insufficient information is available to make a specific request. The older the requested information is, the more difficult it is to verify, gather and provide to L&I to within the statutory timeline. RCW 51.14.130. For example, in 2018, Penser received claims for benefits that require supporting documents dating back to 1956. Since adoption of HB 1723, Penser has experienced many difficulties obtaining necessary records for presumption claims, which are explained in more detail below.

15) To demonstrate that an employee is entitled to workers' compensation benefits, a worker generally has the burden of establishing that he or she has a diagnosed physical condition and that there is a "causal connection between" that diagnosis and his or her employment based on "competent medical testimony which shows that the disease is probably, as opposed to possibly, caused by the employment." *Dennis v. Dep't of Labor & Indus.*, 109 Wn.2d 467, 477 (1987). The Washington Claims Adjudication Guidelines include three requirements before an occupational disease can be allowed: 1) Legal Requirement—the disease must arise naturally and proximately out of employment; 2) Causal relationship—the doctor must state, on a more probable than not basis,

the disease is related to the work activities; and 3) Medical findings—the doctor must substantiate the diagnosis with objective medical findings. *See* "Washington Claims Adjudication Guidelines" Claim Validity at 13 of 35, *available at* http/www.lni.wa.gov/ClaimsIns/Files/Selfins/ClaimMgt/ClaimValidity.pdf.

16) The source of objective medical findings may include reports provided by a claimant's attending and treating physicians, as well as reports generated by independent medical examiners, to help determine if there is a preponderance of medical evidence supporting a causal link between the claimant's alleged condition and his or her employment.

17) Penser submits a recommendation to L&I whether a claim should be approved or denied consistent with the applicable legal requirements, along with the supporting claim documents Penser has received. L&I has the final administrative authority to either approve or deny all claims and issue an order accordingly.

18) Either the worker or DOE may challenge an L&I order through the administrative appeals process, including further review by L&I and the Washington Board of Industrial Insurance Appeals, subject to judicial review in state court. *See* RCW 51.52 (detailing the review and appeal process).

19) If L&I approves a claim, Penser proceeds with managing the payment of applicable benefits pursuant to L&I fee and benefit schedules. *See* "Washington Claims Adjudication Guidelines" Medical Treatment, *available at*: https.www.lni.wa.gov/ClaimsIns/Providers/Billing/FeeSched/2018/default.asp.

Claims Costs

20) There are six types of benefits that are payable under a Washington State workers' compensation claim:

(A) Medical—Injured workers are entitled to receive proper and necessary medical and surgical services directly related to the injury or disease under his or her claim. RCW 51.36.010. Treatment is limited to the accepted condition, and must be curative or rehabilitative in nature, not merely palliative. Washington Administrative Code WAC 296-20-01002. The goal of treatment is to help the worker reach maximum medical improvement.

(B) Wage loss—Salary or hourly pay, plus the reasonable value of board, fuel, housing and "other considerations" of like nature. Benefits begin when a physician certifies the worker is incapable of returning to work as a result of the occupational disease, and end when a physician agrees the worker can return to gainful employment on a reasonably continuous basis.

(C) Permanent partial disability—Compensates an injured worker for the permanent loss of function sustained because of the work-related condition.

(D) Vocational assistance—Provides services designed to enable the injured worker to become employable. RCW 51.32.095; WAC 296-19A-010. A vocational plan may be authorized for up to 2 years. Costs that may be authorized for plan services include tuition, books, supplies, equipment,

child or dependent care, and other necessary expenses. Time loss and medical benefits will continue while the worker is actively complying with a formal program of vocational rehabilitation or on-the-job training. *See* "Washington Claims Adjudication Guidelines" Vocational Rehabilitation, *available at*: https//www.lni.wa.gov/ClaimsIns/Claims/Rtw/Training/Default.asp.

(E) Pension—If a worker is certified as permanently and totally disabled before L&I closes the claim, the worker may receive a monthly pension if the medical and vocational evidence indicate that the injury or occupational disease is preventing the employee from becoming gainfully employed. RCW 51.08.160; RCW 51.32.060.

(F) Death benefits—If death results from an injury, the expenses of burial and an ongoing death benefit shall be paid to a surviving spouse and/or children. RCW 51.32.050.

21) Claim costs incurred for the 2018 calendar year alone totaled $2,428,767.00. Between 2009 and 2018, total costs incurred amounted to $115,929,426.88. Usually, DOE receives between 300 and 350 claims per year.

22) Estimating costs associated with HB 1723 claims is extremely difficult in comparison to a standard injury or occupational disease claim. The presumption claims are likely to be "complex" claims, which are those that "typically require more review and attention, due to multiple medical and/or non-medical issues affecting recovery and progress." *See* Explanation of the Complex Claim Coordination Code, *available at* https://www.

lni.wa.gov/ClaimsIns/Files/SelfIns/Pnsr/ComplexClaimCoordinationCode.pdf.

23) Claim costs are particularly difficult to calculate for cancer, beryllium disease, and neurological and respiratory diseases. Each claim is unique in terms of its medical and administrative burdens and are complicated by the specific circumstances of each claimant. Given the unpredictability of these claims, costs could easily exceed a million dollars per claim. Historically, cancer claims were filed infrequently. Since 2009, there have been five (5) or fewer claims filed for cancer conditions per year. In the last year, there have been over 50 claims for cancer conditions filed, which rely on the HB 1723 presumption.

Burdens of the HB 1723 Presumption on DOE

24) As of February 14, 2019, the third party administrator has received ninety-two (92) claims applying the HB 1723 presumption. Absent HB 1723's presumption, all ninety-two (92) claims would have been reviewed for compensability under RCW 51.08.140 and most likely recommended for denial. Currently, of the ninety-two (92) claims received, forty-six (46) claims are in process for threshold application of the presumption; thirty-one (31) have been referred to L&I with the recommendation that the claim meets the requirements of HB 1723; and ten (10) have been recommended for denial. Of the ten (10) recommended for denial, L&I has issued two (2) denial orders and eight (8) allowance orders, that is, orders granting claims. Additionally, five (5) claims have been referred to L&I for State Fund review, as it was determined that DOE 1s not the responsible self-insured Employer.

25) **Overly Inclusive as to Qualifying Conditions:** The prima facie presumption established under HB 1723 includes respiratory diseases; any heart problems experienced within seventy-two hours of exposure to fumes, toxic substances, or chemicals; cancers as listed in subsection (4); beryllium sensitization and acute and chronic beryllium disease; and neurological diseases.

26) "Respiratory disease" and "neurological disease" are not defined and thus incorporate potentially hundreds of illnesses and conditions. This incredibly broad range of covered conditions includes many symptoms and conditions which commonly occur in the general public, such as carpal tunnel, asthma, chronic bronchitis, Parkinson's disease, Alzheimer's disease, and strokes. List of Lung Diseases, American Lung Association, *available at* https://www.lung.org/lung-health-and-diseases/all-diseases.html (listing common lung diseases); Stroke NINDS Disorders, National Institute for Neurological Disease and Stroke, *available at* http://tools.aan.com/apps/disorders/index.cfm?event=database:disorder.list (listing 250 neurological ailments)

27) Additionally, these categories could be interpreted so broadly as to eliminate the requirement that a disease be established by a medical professional, and that the diagnosis be substantiated by objective medical findings. Although it is very likely that claims will be presumptively allowed where there is no demonstrated link to work at Hanford, DOE is responsible for all benefits payable under the presumptively allowed workers' compensation claim: medical, wage loss, permanent partial disability, vocational assistance, and pension and death benefits.

28) **Extremely Short 8 Hour Shift Requirement:** Under HB 1723, anyone with a qualifying disease can bring a compensable claim against Hanford, following having worked on the site for only one day.

29) **Removal of "Last Injurious Exposure:"** A worker who contracts an occupational disease may have been exposed to hazards that caused their disease through multiple employers. WAC 296-14-350 provides that responsibility for an occupational disease claim lies with the employer at risk at the time of the "last injurious exposure." The last injurious exposure rule was adopted by the Washington Supreme Court in *Weyerhaeuser Company v. Tri* to determine liability among successive insurers in occupational disease claims. *Weyerhaeuser Company v. Tri*, 117 Wn.2d 128 (1991). HB 1723 removes this requirement. *See* HB 1723 Sec. 5(c). DOE is now required to accept responsibility for a disease contracted by a worker, regardless of whether that worker had additional occupational exposures from subsequent and separate covered employers following the worker's employment at Hanford.

30) **Higher Burden of Proof to Rebut:** Typically, if an employer has medical or factual evidence to establish alternative origins or causes of a condition alleged to be covered under Title 51, that evidence can be used to challenge compensability at the time that L&I adjudicates the claim. Under HB 1723, the presumption that the illness arose naturally and proximately out of employment at Hanford may only be rebutted by clear and convincing evidence that a worker's illness was caused by lifestyle, hereditary, or other factors. *Id.* at Sec. 1(2)(b). The prima facie presumption applies a threshold not seen elsewhere in occupational disease claims.

This burden necessitates that DOE must obtain expert witnesses at a significant cost, and must search for, review and organize large volumes of medical documentation.

31) **Difficulty Obtaining Necessary Records:** The majority of claims filed to-date that apply the HB 1723 presumption are for conditions that were diagnosed quite some time ago. Obtaining medical records generated more than 10 years ago is often not possible, making it difficult to set an appropriate date of manifestation on a claim, that is, the date on which the disease manifested. Dates of manifestation are crucial in occupational disease claims, as they determine the monthly time loss benefit and permanent partial disability schedules used in calculating the worker's benefits. RCW 51.32.180; WAC 296-14-350.

32) Even when subsequent medical records confirm the diagnosis, medical records may not be available to confirm the medical and scientific criteria used to diagnose. For example, a current HB 1723 claim involves a worker who was employed by Hanford between 1957 and 1959 and passed away in 1970. The children of this worker are alleging that the worker died as a result of brain cancer causally related to the worker's employment at Hanford.

33) Hospitals are only required to retain and preserve medical records for ten years following the most recent discharge of a patient. RCW 70.41.190. Additionally, the Washington State Medical Association recommends practitioners retain medical records six years from the date of a patient's death, 21 years from the date of a minor patient's birth, or indefinitely if the practi-

tioner has reason to believe the patient was incompetent, there were problems with the patient's care, or the patient may be involved in litigation.

34) Thus, the requisite medical records needed to adjudicate this claim will be extremely difficult, if not impossible, to obtain. Determining an accurate date of manifestation for benefits schedule (time loss, wage rate, death benefit and disability) is virtually impossible.

35) To date, challenges related to obtaining medical records that are outdated, archived, or unavailable affect at least half of the claims filed under the HB 1723 presumption. Based on a limited amount of completed claim adjudications, when records are unavailable the claim will be allowed, rather than denied. It is my observation that unless the self-insured Employer can provide clear and convincing evidence to rebut the presumption, the claim will be allowed based on a worker's or his surviving beneficiary's account of events.

36) This challenge also specifically impacts information needed for DOE to rebut the presumption with clear and convincing evidence, and is compounded by the elimination of any meaningful statute of limitations for filing a HB 1723 presumption claim.

37) In addition to the challenges with obtaining medical records, requisite information required to be retained and provided to L&I on claims that are covered under the presumption is enormous, if possible at all. Records may not exist and if they do, may be located remotely, and not indexed in a way that allows them to be accessed and retrieved with reasonable effort. Employees from legacy contractors covered under the MOU may have relocated, changed names or died.

Employment scenarios, co-workers and supervisors are often unreachable, increasing challenges to confirm employment and non-employment activities.

I make this declaration under penalty of perjury, and swear and affirm that the foregoing is true and correct.

Signed this [1] date of [Mar.], [2019] in [Benton] County, Washington.

/s/ PATRICIA HICKS
PATRICIA HICKS

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON ET AL., DEFENDANTS

DECLARATION OF CHRISTOPHER R. HEALY

I, Christopher R. Healy, declare as follows:

1. I am a Trial Attorney in the Civil Division, Federal Programs Branch, of the United States Department of Justice. I am one of the counsel for the Plaintiff United States in the above-captioned case. I submit this declaration in support of the United States' Motion for Summary Judgment.

2. I am attaching to this declaration true and correct copies of the following documents: (1) "Hanford Site Employees-Occupational Disease Presumption," codified at Revised Code of Washington ("RCW") 51.32.187, attached hereto as Exhibit A, and (2) the Individual Agency Fiscal Note for the Department of Labor and Industries for HB 1723 ("Fiscal Note") prepared by the Washington State Office of Financial Management ("OFM"), attached hereto as Exhibit B.

3. I retrieved both documents from Washington State government websites on March 1, 2019.

I swear upon penalty of perjury that the foregoing is true and correct.

/s/ CHRISTOPHER R. HEALY Dated: [3/1/19]
CHRISTOPHER R. HEALY
Trial Attorney
United States Department of Justice

Exhibit B: Individual State Agency Fiscal Note

Bill Number:	Title:	Agency:
1723 S HB	Hanford/occupational disease	235-Department of Labor and Industries

* * * * *

Part II: Explanation

This bill:

- Establishes that certain diseases contracted by Hanford site workers are presumed to be occupational diseases.
- Provides definitions for "Hanford nuclear site" and "Hanford site worker"
- Establishes that the presumption will apply for the lifetime of a Hanford site worker.
- Establishes that when a worker prevails in an appeal regarding the presumption, the costs of the appeal will be paid by the opposing party.

This version differs from HB 1723 by removing the stipulation that the state fund cannot bear any of the cost of the presumption, adds language about evidence that can be used to rebut the presumption, and adds a provision for workers who have already had a claim rejected for a condition, covered by this bill, to file a new claim for that same condition.

This will take effect 90 day from sine die.

II. A—Brief Description of What the Measure Does that Has Fiscal Impact

This bill would establish that certain diseases contracted by Hanford site workers are presumed to be occupational diseases. It would also allow a worker who has already had a claim rejected for a condition covered by this bill to file a new claim for that same condition. The Department of Labor and Industries (L&I) expects an influx of new work as the result of this provision. In addition, L&I expects this bill to result in an increase in the number of new, complex claims.

The workers' compensation coverage for Hanford site workers is provided by the United States Department of Energy (DOE), which self-insures its workers' compensation liability under Title 51 RCW. L&I's analysis assumes that DOE will be responsible for all benefit-related costs arising out of this bill based on the existing memorandum of understanding establishing DOE as a self-insurer.

II. B—Cash Receipt Impact

If an employer chooses to be self-insured, they are responsible to pay for overall claim costs and a portion of administration costs of L&I's Self-Insurance Program and other costs of related support functions. The administrative assessment is an amount per dollar of claim benefit costs. If benefit costs are increased due to the change in presumptive occupational diseases, the Department of Energy-Hanford, as a self-insured employer, would be assessed by L&I for their appropriate portion of administrative costs based on the increase. Incremental costs or savings will equal the incremental revenue collected from assessments.

II. C—Expenditures

This bill increases expenditures to the Accident Account, fund 608, and the Medical Aid Account, fund 609. The expenditure calculations in this fiscal note includes the compensation and benefit changes approved in the 17-19 Biennial Budget.

The following additional resources are necessary to execute this bill:

Staffing

1.0 FTE Project Manager (WMS 1), temporary, from July 1, 2018 through June 30, 2019, to create, define, and manage the data and additional processes necessary to ensure appropriate documentation and claim service to Hanford workers and DOE.

1.7 FTE Workers' Compensation Adjudicator 4s (WCA4), permanent beginning July 1, 2018, to handle complex claim adjudication and dispute resolution on new occupational disease claims, as well as claims previously rejected and subsequently being considered under presumptive coverage. This estimate is based on the following assumptions:

- From 2001 through 2016, an average of 113 DOE claims were rejected each year.
- Using this average, L&I estimates that a total of roughly 8,136 DOE claims have been rejected since they began covering workers under Title 51 RCW in 1945 (113 per year x 72 years = 8,136). This estimate assumes the Hanford site workforce is relatively the same as today as in the past.

- Assuming a greater proportion of previously rejected claims will be refiled from the newer years, for example:
    - 50% during last 36 years (113 x 36 x .50 = **2,034**),
    - and a lesser proportion from the older years, for example, 25% during the 36 years prior (113 x 36 x .25 = **1,017**),
    - L&I would expect an influx of about 3,051 new claims filed to take advantage of presumptive coverage (2,034 + 1,017 = **3,051**).
- In addition, the bill opens up the possibility for any former contracted Hanford worker to file a claim under the presumption.
- Over the last 16 years, the number of contracted workers at Hanford has ranged from roughly 6,000 to 11,000 workers at any given time, based on worker hours reported. This does not account for staff turnover over time, as L&I has no data that would allow the department to estimate the number of individuals that have been employed at the Hanford site over the years. Therefore, for purposes of this analysis, L&I is basing assumptions on a workforce of 10,000. This is towards the high end of the reported range, but includes some allowance for staff turnover.
- Assuming an estimated 10% of the estimated 10,000 contracted workers at Hanford will now apply and file claims for the first time due to the inclusion of the presumption to areas such as neurological diseases like dementia, for example, L&I estimates another 1,000 new claims will be

filed (10% x 10,000 = **1,000**), as the result of this bill.

- As there is no data history available for these kind of claims, this could vary considerably. However, given these assumptions, L&I estimates total new claims at 4,051 (3,051 + 1,000 = **4,051**).
- L&I estimates that the majority of these would be filed in the five years after the effective date of the legislation; so it is anticipated that approximately 810 new claims each year for at least five years (4,051 ÷ 5 = **810**).
- On average, a WCA4 handles approximately 40 complex claims per month, or 480 per year. Therefore, an additional 1.7 WCA4 FTEs are needed to manage the increased work (810 ÷ 480 = 1.7).

* * * * *

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF JOYCE TSUJI

I, JOYCE TSUJI, declare under penalty of perjury under the laws of the state of Washington that the following is true and correct.

I. INTRODUCTION

1. I am over the age of 18, competent to be a witness herein, and make this declaration in that capacity. I state the following based upon my personal knowledge. I have been requested to provide expert opinions on behalf of the State of Washington regarding the unique risks to worker health and safety from potential exposures to multiple toxic substances present at the Hanford Nuclear Reservation.

A. Qualifications

2. I am a toxicologist and am employed as a Principal Scientist at Exponent, a multidisciplinary sciences and engineering firm. I completed a Ph.D. focused in

physiology and ecology with postdoctoral research related to quantitative genetics in the Department of Zoology (now Biology), University of Washington. I am a Fellow of the Academy of Toxicological Sciences and have been continuously certified in toxicology by the American Board of Toxicology since 1992. I have served on various expert scientific committees for the National Academy of Sciences (NAS)/National Research Council (NRC), Institute of Medicine (IOM), U.S. Environmental Protection Agency (EPA), and the State of Washington. My relevant past appointments for this matter include NAS/NRC's Board on Environmental Studies and Toxicology, Committee on Toxicology, NAS Spacecraft Exposure Guidelines for chemicals in air and water (sponsored by the U.S. National Aeronautics and Space Administration), NAS Submarine Escape Action Levels for airborne contaminants in disabled submarines (sponsored by the U.S. Navy), NAS Submarine Emergency and Continuous Exposure Guidance Levels for Selected Submarine Contaminants in operating submarines (sponsored by the U.S. Navy), the IOM Committee on Airborne Hazards and Open Burn Pit Registry (sponsored by the U.S. Department of Veterans Affairs), and the NAS Standing Committee on Emerging Sciences in Health Decision Making (sponsored by the U.S. National Institute of Environmental Health Sciences).

3. I currently am serving on the National Academies Health and Medicine Division Standing Committee on Medical and Epidemiological Aspects of Air Pollution on U.S. Government Employees and their Families, the NAS workshop organizing committee sponsored by the U.S. EPA on systematic review and integration of toxi-

cology and epidemiological data to support chemical assessments under EPA's Integrated Risk Information System, the primary database for toxicity factors used in risk assessment of environmental chemicals. I am also a member of the Society of Toxicology and a member of Specialty Sections on Risk Assessment, Medical Devices, and Nanotoxicology.

4. From 1987 until the present, I have worked as an environmental consultant conducting, overseeing, and reviewing human health risk assessments and exposure studies. I am familiar with exposures and health effects of volatile organic chemicals from my service on expert committees and numerous projects involving exposures and risk assessment of various types of environmental and workplace chemicals, as noted in my curriculum vitae. I have published in the peer-reviewed scientific literature on risk assessment, toxicology, biomonitoring (including mercury vapor), and exposure pathways to substances in the environment. I served as an expert for the Washington State Attorney General's Office for the case no. 4:15-cv-05086-TOR: *Hanford Challenge, United Association of Plumbers and Steamfitters Local Union, and the State of Washington, Plaintiffs, v. Ernest J. Moniz, in his official capacity as Secretary, the United States Department of Energy, and Washington River Protection Solutions, [WRPS] LLC, defendants*. In my role as an expert, I reviewed:

- Hanford site documents related to the nature of the various facilities, operations, and emissions;
- DOE Hanford Site and WRPS reports related to environmental, safety and health;

- Tank farm vapor studies and chemical inventories, concentrations, exposure and hazard characterization;
- Hanford tank farm worker health reports; exposure incident and investigation reports;
- Industrial hygiene hazard and exposure assessment plans and strategies, industrial hygiene area and personal exposure monitoring procedures and records;
- Occupational medical surveillance programs and implementing procedures, Hanford medical provider worker exposure procedures and records, workers' compensation documents, and historical worker exposures to chemicals;
- Findings and recommendations from several DOE offices, National Institute for Occupational Safety and Health (NIOSH), and other third-party health and safety inspections and audits related to Hanford and tank farm-specific vapor hazards, reported exposures;
- Declarations of Hanford workers.

B. Data and Other Sources of Information Considered

5. In addition to my education, experience, and training, I considered the materials listed in the Appendix attached at the end of this declaration, the Declarations of Suzanne Dahl-Crumpler, Bruce Miller, Anne Soiza, Gary Franklin, Patricia Hicks, and the Complaint. The records I reviewed and cited in this document contain facts and data of a type that I typically rely upon in forming opinions as a toxicologist. The facts

and data contained in these reports are of a type reasonably relied upon by other toxicologists in forming their opinions. I relied on the facts and data in these materials in forming my opinions here.

C. Limitations

6. This declaration summarizes work performed to date and presents the findings resulting from that work. The findings presented herein are made to a reasonable degree of scientific certainty. I reserve the right to supplement this declaration and to expand or modify opinions based on review of additional material.

II. SUMMARY OF CASE BACKGROUND AND OPINIONS

A. Site History Related to Health Risks

7. The Hanford site is a unique work environment for worker health risks because of the long history of operation; the variety and complexity of potential exposures to a multitude of hazardous agents, including radioactivity, beryllium, mercury, and thousands of other inorganic and organic substances; and limitations and uncertainties for assessing past and current worker exposures. Historical exposures involved plutonium production and handling of related hazardous chemicals, whereas management and treatment of residual waste chemicals continues currently. The 18 tank farms at the Hanford site contain 177 underground tanks that store 53 million gallons of concentrated waste remaining from plutonium production from 1943 to 1987 (Washington Department of Ecology 2019). In addition to radioactivity, the waste contains thousands of other organic and inorganic chemicals that comprise volatile air emis-

sions. Chemicals within the waste are continuously being produced and transformed through complex chemical and radiolytic reactions. The radioactivity further enhances chemical reactions by production of free radicals (strong oxidizers) and heat.

8. The first of the single-shelled tanks (SSTs) were built to contain waste in 1944, and a number of these tanks are known or suspected of leaking waste into the surrounding soil. Double-shelled tanks (DSTs) were built beginning in 1968. Considerable efforts have focused on containment of waste from leaking or potentially leaking tanks and transferring waste from the SSTs to the DSTs. Waste is also transferred between DSTs as needed to manage and contain the material or because of leaking of waste between the DST shell walls (Washenfelder 2014). SSTs still contain residual waste that cannot be completely pumped from the tank after waste retrieval. These tanks have a lower layer of residual interstitial liquid, covered by a layer of sludge and salt cake, over which lies a supernatant with a headspace of gases above. Similar layers also occur in DSTs. During waste retrieval, liquid from other tanks may be introduced to break up or sluice the tank layers.

9. As vapors build up in the head space of the tanks from heat and ongoing chemical reactions in the residual waste, the tanks release gases from vents. The SSTs have passive ventilation and release periodically depending on the pressure increase in the tank, whereas the DSTs have active forced ventilation on a schedule.

10. Vapor releases from these tanks have regularly resulted in noxious odors and reports of health effects in workers. Numerous reports by the Department of En-

ergy (DOE or Energy), their contractors, and the National Institute for Occupational Health and Safety (NIOSH) for the past two decades have noted worker exposures to the chemical vapors in the tanks as a health concern, assessed potential chemical hazards, and made recommendations for further assessment and actions to prevent such exposures and health risks (e.g., Brown et al. 1992; Maughan et al. 1997; DOE 1999; Stenner, et al. 2001; DOE 2004; Droppo 2004; NIOSH 2004; Burgeson et al. 2004; Mackerer 2006; Poet et al. 2006; Anderson et al. 2007; Hughey and Farler 2008; Jabara and Farler 2008; Shultz et al. 2008; Hanford Concerns Council 2008, 2010; Farler 2009; TVAT 2014). The recent independent expert review conducted in 2014 by the Tank Vapor Assessment Team (TVAT) of the Department of Energy National Laboratory, Savannah River National Laboratory was the latest comprehensive review of this issue, and made 10 overarching recommendations, each with a number of detailed recommendations to address worker health concerns. Ex. 1. A true and accurate report is attached as Exhibit 1. As noted by the TVAT Report: "The ongoing emission of tank vapors, which contain a mixture of toxic chemicals, is inconsistent with the provision of a safe and healthful workplace free from recognized hazards." Ex. 1 at 15. I agree that the frequently unpredictable emissions of tank vapors has posed a serious concern for worker safety.

11. In response to the TVAT Report, Washington River Protection Solutions (WRPS), the DOE contractor at the site that administers the worker health and safety program, released an implementation plan in 2015 to address the TVAT's recommendations (WRPS 2015). However, worker exposure incidents needing medical attention continued to occur after that time,

with approximately 60 worker exposure incidents reported to the onsite medical clinic in early 2016.

12. A review by NIOSH (2016) noted exposure assessment limitations for worker exposures to tank vapor releases and made additional recommendations for exposure assessment and control, management of the safety and health program, and assessment and communication of worker medical issues.

B. Summary of Opinions

13. I was asked to provide an assessment from a toxicological perspective on worker exposures at the Hanford Nuclear Reservation based on my previous assessment of worker hazards posed by chemicals emissions from the tank farms. A summary of my opinions is as follows:

a. Hanford tanks contain complex mixed radioactive and chemical wastes, composed of thousands of organic and inorganic chemicals; these chemicals are present in both the waste itself and in tank headspace vapors.

1) Characterization of the chemical content and concentrations of tanks is limited by the large number of tanks, mixing of wastes, and the dynamic nature within tanks involving chemical and radiolytic reactions, as well as increased releases from waste-disturbing activities. Reported ranges in concentrations therefore do not completely characterize tank headspace composition and concentrations, meaning that chemicals may be present at higher concentrations than reported.

b. Workers in and around the tank farms have been, and may continue to be, exposed to elevated levels of chemicals from the tanks.

1) Acute high-dose exposures to largely undiluted tank chemicals from venting of vapors, tank leakage, or releases during waste disturbance have resulted in worker exposure events for decades; recent reports of exposure events demonstrate that such exposures continue to occur.

2) Longer-term worker exposure incidents over several hours have also occurred.

3) Higher exposure concentrations are not well quantified and the evidence indicates that vapor concentrations can be even higher than reported in the limited data collected following these events.

c. Hanford tank farm headspace vapors contain some highly toxic chemicals, as well as other toxicants at concentrations that have been reported to cause serious health impairment from acute high-dose exposures reported in the scientific literature. These chemicals, individually and collectively, can be extremely harmful to human health.

1) Numerous site reports and the scientific literature have acknowledged the toxicity and risk of serious health effects posed by these chemicals.

2) Many of the chemicals contribute to upper and lower respiratory tract irritation and tissue injury, in addition to possible neurological effects.

3) In addition to radioactive materials, numerous chemicals present in the tanks are also classified as known or potentially to cause cancer or are of higher toxicity. Some have been associated with developmental health risks to the fetus of pregnant women.

d. Worker exposures to uncontrolled tank waste vapors have potential for causing serious, irreversible impairment.

1) Workers have (including recently) been exposed to chemical vapors at levels that require medical attention and have led to adverse health impacts.

2) While it is possible to recover from some of these health impacts with proper treatment, a subset of these health effects have not been immediately reversible, and workers have experienced permanent damage to their health.

3) Reported chemical concentrations in tank vapors for certain chemicals individually are sufficiently high to cause or contribute to serious health effects. The potential for higher chemical concentrations, lack of adequate exposure information for basing decisions on worker protection, frequent worker exposures resulting in medical attention, and the combined effect of multiple chemicals further increase the risk of serious health effects.

III. BASIS FOR OPINIONS

14. To form an opinion regarding the potential exposures and health risks alleged in this case, I followed

well-established toxicology and risk assessment principles with consideration of relevant site-specific data and the current scientific literature, including knowledge regarding the adverse effects of acute exposures to volatile chemicals as well as potential chronic or long-term consequences of such exposures. The following opinions express findings in accordance with the general steps for assessing health risks from chemical contamination of hazard identification, exposure evaluation, toxicity assessment, and risk characterization (U.S. EPA 1989).

A. Hazard Identification: Hanford Tanks Contain Thousands of Chemicals in Both Waste and Headspace Vapors

15. Tank headspace vapors have been reported to contain thousands of chemicals, whose concentrations and composition depend on dynamic conditions involving formation of chemical intermediates in the waste as enhanced by the energy from the radioactivity, as well as temperature and pressures relative to external conditions. Internal and external pressure equalization is achieved via passive or active venting of vapors from tank headspaces. A 2006 report by CH2MHill noted that 118 of the 149 SST headspaces had been sampled, and although concentrations of chemicals could vary over time depending on conditions, 95% of the chemical concentrations within a tank varied by no more than 3 times (e.g., 100 to 300 ppm) for a given chemical. *See* Ex. 2 at iii. Attached as Exhibit 2 to my declaration are true and correct copies of excerpts from the CH2MHill, *Industrial Hygiene Chemical Vapor Technical Basis* (May 2006) (Meachum 2006b). The 2006 CH2MHill report also noted that the composition and concentrations

of chemicals among tanks are generally similar, which is consistent with the mixing of waste over time. Ex. 2 at 22. Despite this overall similarity, concentrations of individual constituents are variable within and among tanks at any given time, because of the complex and dynamic processes that affect chemical composition and concentrations as described by the 2006 CH2MHill report.

16. In spite of all of the sampling, the large number of tanks and the dynamic nature of the waste/headspace vapors create considerable uncertainty regarding whether adequate characterization of chemical concentration excursions has been completed, particularly those associated with a bolus release event that might cause harm to workers. A 2004 report noted that most tanks sampled have only been sampled once, and some of the sampling methods were not able to detect certain compounds, such as small molecular weight compounds (e.g., ammonia, nitrous oxide, formaldehyde) or unidentified organic compounds. *See* Ex. 3 at 3. Attached as Exhibit 3 to my declaration is a true and correct copy of a report by Stock and Huckaby, Pacific Northwest National Laboratory (PNNL), *A Survey of Vapors in the Headspace of Single-Shell Waste Tanks* (July 2004). In summarizing maximum chemical concentrations, chemicals that could not be separated in the analytical methods or that occurred as part of mixtures, were further eliminated from consideration by this survey. Ex. 3 at 5. A review in 2008 likewise noted that not all tanks have been sampled; only 30% have been sampled more than once, and a comprehensive sampling strategy of tank headspace vapors during static and waste disturbing activities was lacking (Hanford Concerns Council 2008).

17. Much of the sampling data also does not include periods or situations in which tank chemical concentrations may be higher. Ex. 1 at 27 (TVAT 2014). For example, sampling the tank headspace during quiescent periods does not capture the concentrations that might occur just prior to a release event from increased tank pressure from chemical reactions, nor does it represent conditions during waste disturbance activities, which can greatly increase vapor concentrations (Stewart et al. 2005). Even assuming the variation in concentration reported by the 2006 CH2MHill report, 5% of the time concentrations of chemicals varied by more than 3 times (e.g., 100 to >300 ppm). Ex. 2 at 22. Thus, more extreme concentrations, although infrequent, do occur and if they are associated with conditions resulting in a release (increased tank pressure, accidental release, leakage, or waste disturbance), could result in higher worker exposures.

18. The primary types of chemicals reported from analyses of tank headspace vapors include inorganic constituents (e.g., hydrogen, nitrous oxide, ammonia, carbon monoxide, carbon dioxide, elemental mercury, and sulfur-containing compounds) and a variety of organic chemicals including alcohols; ketones; ethers; esters; aldehydes; halogenated compounds; nitriles; aliphatic, alicyclic, heterocyclic and aromatic hydrocarbons; and dimethylmercury (Stock and Huckaby 2004; Meachum 2006a,b).

19. Several DOE-sponsored studies have evaluated a short list of tank chemicals of potential concern for worker health. The goal of identifying potential chemicals of concern is to focus more detailed assessments of

exposure and health risk as well as to provide information to guide industrial hygiene sampling efforts. Burgeson et al. (2004) recommended 52 chemicals of potential concern based on: (1) a toxicological evaluation of chemicals measured in tank headspace samples, and (2) on those chemicals predicted to be present based on waste analyses. High priority chemicals recommended for the industrial hygiene program included six known human carcinogens, 18 probable carcinogens, [1] 27 chemicals that were present in tank head space samples at concentrations at least 10% of their lowest occupational exposure guideline level,[2] and dimethylmercury, a highly toxic form of mercury. CH2MHill reviewed all tank characterization data as of January 2006 and evaluated 1826 chemicals previously identified, 52 chemicals of potential concern, 1538 chemicals needing further evaluation, and 236 chemicals with low probability of exposure. Ex. 2 at 33. Based on this evaluation, CH2MHill developed a list of 48 chemicals of potential concern for worker health. Ex. 2 at 39. Finally, in 2016 WRPS listed 59 chemicals of potential concern. Attached as Exhibit 4 to my declaration is a true and correct copy of WRPS's list of *Chemicals of Potential Concern* (WRPS 2016a).

20. Although much of the sampling data is not recent and is largely from headspace samples of SSTs, the contents of SSTs were and are being pumped to DSTs, and WRPS noted in a May 2016 presentation that their

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[1] Chemicals found to cause cancer in animal studies that have no or limited evidence of cancer in humans.

[2] A screening level of 10% of a health-based limit is often used in an attempt to account for potential additive effects when multiple chemicals are present.

recent sampling data are similar to the previous sampling data. *See* Ex. 5 WRPS May 11, 2016 PowerPoint, *Tank Farm Vapors Protection Update* (headspace samples taken since fiscal year 2015 "[v]alidated that previous characterization has not changed"). As part of my review of tank waste documentation, I also have reviewed information from Energy's tank waste information systems (TWINS) database which contains Energy's data characterizing the Hanford tank wastes, including waste measurements and sampling data. Most of the available data on the TWINS database dates from 2005 and earlier.

21. I have developed a short-list of chemicals of potential concern to evaluate the potential for serious health risks (Table 1). I developed this list based on comparison of maximum reported levels of chemicals (e.g., Burgeson et al. 2004; Anderson et al. 2006; Meachum et al. 2006a,b; Hughey and Farler 2008) to short-term exposure limits and occupational exposure levels with some consideration of the number of tanks in which chemicals were detected. Following previous approaches (e.g., Burgeson et al. 2004), National Toxicology Program known human carcinogens were also initially included, and some similar chemicals within a class (e.g., nitriles).

Table 1. Summary of initial list of chemicals for further evaluation

Chemical Name	CAS RN
1,1'-Biphenyl	92-52-4
1-Butanol	71-36-3
3-Buten-2-one (methyl vinyl ketone)	78-94-4
Acetaldehyde	75-07-0
Acetonitrile	75-05-8
Ammonia	7664-41-7
Benzene	71-43-2
Butanenitrile	109-74-0
Dimethylmercury	593-74-8
Ethylamine	75-04-7
Formaldehyde	50-00-0
Mercury	7439-97-6
Methanol	67-56-1
N-Nitrosodimethylamine	62-75-9
Nitrous oxide (N2O)	10024-97-2
Propanenitrile	107-12-0

22. This assessment, of course, does not include the additive effects of the many other chemicals that are present at lower levels compared to their effect levels. The additive effects of multiple chemicals in a mixture is discussed in more detail below regarding the assessment of chemical toxicity. In brief, the combined exposure to all chemicals present in tank vapor releases contribute to the potential for health effects. Because of the multiple chemicals involved (not all of which have been characterized), chemical interactions are complex and difficult to assess.

B. Exposure Evaluation: Workers at the Tank Farms have been Exposed to Elevated Levels of Chemicals Emitted by the Tanks

23. A large number of WRPS or DOE employees or contractors work in the area of the tank farms. These workers are involved in a wide variety of activities associated with monitoring, construction, and maintenance around tanks, as well as in actively retrieving wastes and moving wastes among tanks. Workers in the tank farm area who may be exposed to vapors include chemical operators, tank farm specialists, training coordinators, pipe-fitters, general maintenance workers, administrators, electricians, safety representatives, project planners, health physics technicians, engineers, project facilitators, carpenters, and quality control inspectors. *See* Ex. 6 (NIOSH 2004) at 8. A true and correct copy of the NIOSH 2004 report *NIOSH Health Hazard Evaluation Report* (July 2004), is attached as Exhibit 6. Many workers perform their duties without personal protective equipment that would prevent exposure to chemical vapors (e.g., respiratory and full-face protec-

tion equipment). NIOSH (2004) also concluded that insufficient exposure monitoring was available to make informed decisions regarding the need for and appropriate level of personal protective equipment for workers. As noted by NIOSH (2016), location of offices for tank farm workers in temporary buildings near the tank farm also increases the potential for worker exposures.

1. Exposure pathways to tank farm vapors

24. Workers have been and continue to be at risk of exposure to tank farm vapors by various pathways or means of exposure, most notably:

a. Headspace venting through passive (SSTs) or active mechanisms (DSTs) release chemical vapors.

b. Vapors escaping underground from tanks that travel along piping and electrical conduits and collect in weather-tight electrical cabinets or other enclosed areas, thereby resulting in exposures when such areas are opened or disturbed.

c. Release of vapors from fittings, valves, risers, or other tank fixtures during maintenance or sampling activities.

d. Release of vapors from the 242-A Evaporator unit.

e. Leakage or spills of waste, and/or release of headspace vapors, during tank waste retrieval and transfer among tanks (i.e., waste disturbing activities).

25. Exposure scenarios involving various types of workers and work maintenance and operation activities at the tank farms have been described by Stenner et al. (2001) (Table 2). As presented by the various examples

in this table, workers have a number of opportunities to be exposed to elevated levels of vapors released from the tanks.

Table 2. Worker Exposure Scenarios for Tank-Farm Operations Source: Stenner et al. (2001)

Type of Work Example Activities	Personnel in Main Area of Activity	Estimates for Task		High-Risk Exposure Time (hours)
		Times/ Week	Hours/ Task	
Equipment installation (Waste-intrusive) Installation/removal of pump in waste	Health Physics and Industrial Hygiene technicians, Operations personnel, Electricians, Pipefitters, Riggers, Truck drivers	1	8	3
Saltwell pumping Line flushing	Health Physics and Industrial Hygiene technicians, Operations personnel, Pipefitters	5	12	3
Waste transfer Work around tanks, lift stations, valves	Health Physics and Industrial Hygiene technicians, Operations personnel, Pipefitters	1	8	4

Type of Work Example Activities	Personnel in Main Area of Activity	Estimates for Task		High-Risk Exposure Time (hours)
		Times/ Week	Hours/ Task	
Vapor pit reconfiguration Nozzle set up for waste transfer	Health Physics and Industrial Hygiene technicians, Operations personnel, Electricians, Pipefitters	1	8	3
Core sampling Setup/ removal of equipment in waste	Health Physics and Industrial Hygiene technicians, Pipefitters, Riggers, Electricians, Instrument technicians	3	8	2
Maintenance activities (Waste-intrusive) Removal of equipment previous installed in waste	Health Physics and Industrial Hygiene technicians, Operations personnel, Electricians, Pipefitters, Riggers, Truck drivers	1	8	4

Type of Work Example Activities	Personnel in Main Area of Activity	Estimates for Task		High-Risk Exposure Time (hours)
		Times/ Week	Hours/ Task	
Pressure tests of transfer lines Bleed off gas in lines	Health Physics and Industrial Hygiene technicians, Pipefitters, Operations personnel	1	8	4
Ventilation testing and maintenance Near tank release points	Vent and balance personnel, Health Physics and Industrial Hygiene technicians, Operations personnel	2	8	4
Tank-intrusive activities Insert equipment in tank dome	Health Physics and Industrial Hygiene technicians, Operations personnel, Electricians, Pipefitters	3	8	3
Operation routines Tank monitoring and data collection	Health Physics and Industrial Hygiene technicians, Power operators, Operations personnel	5	12	4

Notes:

Personnel listed have the highest probability of chemical exposure. Each activity would also include support personnel located farther away. Frequencies and duration of exposures are estimated and are highly variable, depending on the job and the requirements for the activity. The high-risk exposure time is the approximate time during an activity that personnel are at a higher risk for chemical exposure.

2. Reported exposure event

a. Frequency of events

26. Tank vapor problems have been ongoing for decades since at least 1977 Ex. 1 (TVAT 2014). In more recent times, the number of tank vapor exposure cases for 2001, 2002, 2003, and the first quarter of 2004, were 9, 21, 30, and 10, respectively. Ex. 6 at 9 (NIOSH 2004). Hocking (2005) reports even greater numbers of "vapor incidents" recorded in the tank farm shift log for these years (32, 26, 49, and 25, respectively). Despite investigations of these events and recommendations to prevent such exposures (e.g., DOE 2004; NIOSH 2004; DOE 2007; Hanford Concerns Council 2008), the number of exposures in recent times has shown no sign of decline. For example, 91 exposure incidents involved workers visiting the onsite medical clinic between October 1, 2008 and March 31, 2010 (Hoffman 2010). A few workers during this period experienced such exposures more than once (up to 3 times). Two separate incidents also resulted in workers being referred to a hospital. An investigation of these incidents found no clear relationship with industrial hygiene sampling results, although more symptoms were associated with waste disturbance activities such as retrieval and transferring of

waste (Hoffman 2010). However, the air monitoring conducted has been unable to characterize peak concentrations (TVAT 2014).

27. Despite the implementation of a plan in response to the TVAT Report by WRPS (2015), vapor exposure events continued to be reported. These exposures have primarily occurred during the ongoing retrieval and transfer of waste from the leaking DST 241 AY-102 to the AP tank farm. Based upon review of WRPS' publicly available data on AOP-15 ("Abnormal Operating Procedure" or vapor exposure events), in 2015, 12 exposure events occurred involving various numbers of workers at the effluent treatment facility, 242A Evaporator, and at or near tank farms SY, C, AZ, AY, and AN. In addition, another vapor exposure event was reported in 2015 that was not associated with a specific tank farm. In 2016, 14 exposure events occurred at the 200-East area, including tank farms TX, AZ, AW, AP, AN, and A as well as the 242-A Evaporator (Hanson 2016; WRPS 2016c,d).

b. Nature of exposure events

28. In most cases, reported exposures are intense and relatively brief causing workers to immediately exit the area and seek medical attention. Exposures to vapors may also involve longer durations or repeated exposures to varying concentrations, such as during waste disturbing activities, or in the case of a spill event that resulted in worker exposures and later health symptoms (DOE 2007). The accident investigation report noted that the event could have been more severe if workers had been in the immediate vicinity of the spill at the time the release happened. Workers had been present at that location just 10 minutes prior to the release (DOE

2007). Modeling by the contractor indicated a relatively brief peak exposure period; however, as noted by DOE (2007), modeling assumptions may not be correct and elevated levels may not have dissipated quickly.

3. Exposure concentrations

29. Sampling of chemical vapors at the tank farms has generally been reported to be within occupational health and safety limits for time-weighted-average exposures. *See* Ex. 1 at 17, 47 (TVAT 2014). Sampling at release events has occasionally resulted in levels exceeding short-term or long-term time-weighted-average limits. As noted in the TVAT Report, however, the sampling methods used are incapable of capturing the peak exposures associated with bolus releases that have resulted in the need for medical attention by workers, and sampling often was conducted some time after the exposure event. *See* Ex. 1 at 17 (TVAT 2014). Actual exposure can thus greatly exceed the reported concentrations. As a result, I concur with the TVAT Report's conclusions that reports of worker exposures being within occupational exposure limits are unreliable for assessing potential health risks to workers, and are insufficient to assure worker safety. *See* Ex. 1 at 17.

30. The TVAT's findings were also consistent with those of other expert panels regarding the site evidence (DOE 2004; 2007; Hanford Concerns Council 2008, 2010; NIOSH 2004, 2016). Energy's Office of Independent Oversight and Performance Assurance (OA) organized a team of 23 experts to investigate worker vapor exposures at the site in 2004, noting "Some of the vapors produce unpleasant odors and can cause such reactions as coughing and skin irritation; at higher concentrations, some of the vapors are hazardous to human health" and

"Although most recorded worker exposures have been low, records from direct-reading instruments (DRIs) and personal sampling indicate that some work activities may result in significant vapor exposure potential to workers" (DOE 2004). This panel also noted, "personal sampling data is too limited to conclude that the exposure of all workers is below regulatory thresholds for all chemicals to which they might be exposed" and that there are "uncertainties in the detection of some chemicals, or inconsistencies in the collection and recording of the data."

31. The NIOSH (2004) *Health Hazard Evaluation* of the Hanford tank farm stated "Exposure data for individual workers are limited in quantity and quality and are not kept in an easily-accessible data base. Exposure monitoring often is initiated hours after an accidental release has been identified. This limits the utility of these data to determine the true exposure potential and may not adequately characterize employee exposures." Similar comments were made by DOE (2007). NIOSH (2016) likewise described the limitations of sampling and evaluation of exposure events, stating "The absence of detectable levels of known chemicals does not mean that no exposure has occurred." NIOSH (2016) also observed that more evaluation could be conducted of the data collected and that the past recommendations of the Hanford Concerns Council were still valid, which called for more extensive efforts to analyze the available data to better understand the nature of worker exposures.

32. Limited monitoring of high exposure events using direct reading instruments for specific agents have

documented high airborne concentrations from releases. TVAT (2014) noted an exposure event in 2014 in which a direct reading instrument for ammonia was "pegged", implying the concentration was over the upper limit of the instrument (likely event reported on March 25, 2014 in which ammonia was $\geq$100 ppm; WRPS 2014). A similar such measurement occurred on May 2, 2016 during maintenance on a core sampling platform previously used to sample tank risers (WPRS 2016d). Workers at the release location experienced overpowering odors and immediate symptoms. A hand-held instrument in the work area recorded ammonia levels that exceeded the instrument's upper limit of 99 ppm. Ammonia levels were undetectable in the work area within ten minutes after the event.

33. Communications between WRPS and Energy's industrial hygienist also acknowledge that high bolus exposures to workers occur. An email on July 14, 2015, acknowledge the potential for ammonia concentrations near 100 ppm (Urie 2015). Based on the event noted by TVAT in 2014 and the event on May 2, 2016, ammonia levels can be in excess of 100 ppm, although the instruments were unable to document the extend of exceedance above this level.

C. Toxicity Screening of Chemicals Within Headspace Vapors

34. The primary immediate adverse effects induced by bolus exposures to the chemicals measured in tank headspaces are eye and respiratory tract irritation and potential damage, as well as neurological effects, such as dizziness, headache, nausea, and other central nervous system effects, some of which may linger after the event.

35. Specifically, ammonia has been measured in a number of tanks at levels that would on its own cause offensive odors, irritation, and potentially more severe effects. Other chemicals with maximum levels that may also individually cause odor and irritation effects include n-nitrosodimethylamine, n-butanol, and 2-buten-3-one (methyl vinyl ketone). Those chemicals most likely to contribute to neurological effects include propanenitrile, nitrous oxide, n-butanol, and potentially elemental and dimethylmercury. The collective effects of the entire mixture of chemicals should also be evaluated for its combined toxicity, given the unique situation for the tank farms in which potential exposures to a large number of chemicals may occur.

1. Toxicological principles and health effect limits related to acute exposures to volatile chemicals

a. Effects of concentration, time, and chemical properties on toxicity

36. The toxicity of airborne chemicals is typically related to the concentration and duration of exposure, resulting in greater toxicity as concentration and/or duration of exposure increase. At sufficiently high concentrations, even brief exposures can cause serious harm to exposed individuals. Effects produced by brief exposures to a chemical, if not excessively high, sometimes may be reversible with proper treatment and recovery. However, with longer exposure durations or repeated exposures, less recovery is possible. Additionally, chemicals with high water solubility and chemical reactivity, such as ammonia, alcohol, or aldehydes, dissolve readily into mucous membranes and thus can cause immediate effects on these tissues (Jegal and Kim 2016). The toxicity of these chemical are thus less time-

dependent, consistent with the harmful effects that occur from acute bolus exposures. Highly soluble and chemically reactive vapors primarily affect the eyes and upper respiratory tract (e.g., nose, throat), whereas less soluble chemicals such as nitrogen dioxide would affect the deeper lung (Jegal and Kim 2016). As the airborne concentration increases, however, even more soluble chemicals are not effectively scrubbed by the upper respiratory tract, resulting in effects along the entire respiratory tract.

37. For substances causing central nervous system toxicity, potentially leading to neurological problems, rapid uptake into the bloodstream and the brain facilitates greater toxicity with dose. Mercury vapor and dimethylmercury both are highly fat soluble and rapidly cross biological membranes (Berlin, et al. 2015). A number of organic chemicals also cause central nervous system effects at higher concentrations (e.g., hydrocarbons; McCoy 2008a).

b. Persistent or irreversible effects of acute exposure

38. Acute exposures to tank vapors, if sufficiently high or repeated, can lead to more serious effects that are not immediately reversible. For example, irritant gases (e.g., ammonia) or mixtures of gases have been associated with damage to the air-exchange sacs in the lungs (aveoli), potentially resulting in pneumonitis, pulmonary edema, bronchitis and bronchiolitis, and leading to long-term sequelae including irritant-induced asthma and pulmonary fibrosis (Akira and Sugnuma 2014; Jegal and Kim 2016). Damage to the neuroepithelium of the nose resulting in impairment of the sense of smell (e.g.,

partial or full anosmia [loss of sense of smell] or dysosmia [distortion of sense of smell]) is a recognized occupational hazard of many airborne chemicals including ammonia (Doty 1979, 2015; Prudhomme et al. 1998; Harkema et al. 2006). Health and safety consequences from olfactory dysfunction have been underappreciated (Doty and Hastings 2001; Doty 2015). Nevertheless, a diminished sense of chemical odors can increase potential chemical exposures in the workplace, as well as risks of hazards from everyday incidents such as cooking, fires, ingestion of spoiled food, and natural gas leaks (Santos et al. 2004; Doty 2015).

39. Clear central nervous system effects are readily identified at high chemical exposure levels, and can lead to neurological problems. At lower exposure levels, however, such effects are more subtle and difficult to distinguish as related to the exposure, and may include effects such as inability to concentrate, memory loss, sleep disturbance, headaches, anxiety, weakness, and apathy (Bolla 1991).

c. Individual differences in susceptibility

40. Individuals may vary in their susceptibility to the effects of airborne chemical exposures. At lower concentrations, nuisance odor effects may be related to differences in odor detection or tolerance. At higher exposures causing direct effects on tissues, individual responses are likely to be less variable. Effects of absorbed chemicals may vary among individuals through differences in chemical metabolism by organs such as the liver or individual variability in pharmacokinetic and pharmacodynamic efficiency. Toxicity of chemicals such as alcohols (e.g., n-butanol) that are affected by metabolic enzymes in respiratory tissue, however, can

show differences in sensitivity among individuals (Pohl and Scinicariello 2011). Metabolism of alcohols to aldehydes which are more reactive and damaging to tissues contributes to the combined toxicity of aldehydes (e.g., formaldehyde) in tank vapors, particularly for individuals who are less able to further metabolize and reduce levels of aldehydes in their respiratory tissues (NRC 2009).

41. Older workers may be more susceptible than younger workers as reported for potential lung injury from ammonia exposures (Erskine et al. 1993). Asthmatics would be expected to be more sensitive to lower respiratory tract irritants. Individuals may differ in susceptibility to the central nervous system effects of chemicals, although such differences for acute effects have not been as well studied. Although workers are considered to be healthier than the general population, and Hanford workers receive health physicals prior to being cleared for work, individuals may still differ in susceptibility. Worker exposure limits are stated to protect nearly all workers, but not all (ACGIH 2016). Pregnant women may also represent a susceptible population because effects on the developing fetus may result from relatively brief exposure during gestation. Although pregnant women may be excluded from some duties, those in the early stages of pregnancy may not know they are pregnant.

d. Acute toxicity limits

42. Short-term limits that provide useful benchmarks for assessing bolus tank vapor exposures include short-term workplace limits such as ceiling limits (peak exposure allowed in the workplace) or the National Institute for Occupational Safety and Health's (NIOSH's)

limit of Immediately Dangerous to Life or Health. In addition, for chemicals lacking a ceiling limit, according to TVAT (2014), a ceiling limit may be derived by multiplying the 8-hour time-weighted-average exposure limit value for a chemical by five. TVAT (2014) based this derivation on the statement of the American Conference of Governmental and Industrial Hygienists (ACGIH) that under no circumstance should exposures in the workplace exceed a level of 5 times the time-weighted-average limit.

43. In consideration of the relative severity of effects from acute exposures, protective action criteria summarized by DOE (2016) were also considered (protective action criteria are acute guideline levels intended to assess exposure to the general public from chemical releases). The three tiers of these levels include: (1) mild, transient health effects; (2) irreversible or serious health effects that could impair the ability to take protective action; and (3) life-threatening health effects. Some of these levels are based on acute exposure guideline levels (AEGLs) (U.S. EPA 2016). In such cases, we focused on those based on the shortest exposure time (10 minutes). Chemicals without acute exposure guideline levels have temporary acute limits set by the DOE and are based on 60-minute exposures. Although workers are considered less susceptible than the general public, these limits are useful benchmarks for assessing potential acute effects for more sensitive workers. Several of the chemicals with immediate direct acting effects are also expected to be more dependent on concentration than on exposure time.

2. Ammonia

44. Ammonia forms a colorless gas that is detectable at an odor threshold as low as 5 ppm, with a penetrating odor at 53 ppm (NRC 2008). It is very soluble in water and forms the highly alkaline (high pH) and corrosive compound, ammonium hydroxide (and heat), in the presence of moisture, such as the surface of the eye or the respiratory tract lining. As a result, ammonia is readily absorbed producing immediate effects when it contacts the eyes, mouth, nose, and respiratory tract (NRC 2008). Sufficiently high doses cause immediate effects, including severe irritation, resulting in airway inflammation, and potentially damage to exposed tissues at the site of absorption. Much of inhaled ammonia is absorbed by the upper respiratory tract, where effects are localized to the nose and throat. At higher concentrations, above 500 ppm to around 1000 ppm, more ammonia will reach the lower respiratory tract. Case studies of people exposed to ammonia indicate that very high concentrations result in pulmonary edema and can be permanently damaging to the lungs (including bronchiectasis, persistent air-flow obstruction, and bronchiolitis obliterans) or lethal and that the severity of effects depends on concentration and time (ATSDR 2004; Garcia 2008; NRC 2008; Akira and Suganuma 2014). Case studies from accidental exposures do not typically provide adequate information about exposure concentrations; however, ATSDR (2004) notes that brief exposures to concentrations from 5000-10,000 ppm or 30-minute exposures to concentrations of 2500-4500 ppm can be fatal to humans. By comparison, concentrations as high as 1000 to 2500 ppm have been reported in tank headspace (Burgeson, et al. 2004; Meachum, et al. 2006a).

45. The primary effect experienced at low to moderate ammonia concentrations is irritation of the upper respiratory tract and other moist surfaces, including the eyes, nose, and mouth. Various controlled human studies have reported mild eye and upper respiratory irritation following brief exposures to ammonia concentrations at around 30 ppm (it affects some individuals, during exercise, at levels as low as 5 to 25 ppm), with moderate effects beginning around 50 ppm, and intense to unbearable irritation and tissue inflammation and injury occurring at concentrations of approximately 100 ppm and above (ATSDR 2004, 2014; Sundblad et al. 2004; NRC 2008). Tolerance to non-disabling concentrations of ammonia may develop with repeated or prolonged exposure (ATSDR 2004), which could result in longer exposure durations and/or higher exposures as people develop tolerance to immediate effects from low concentrations.

46. In some cases, irreversible and/or disabling lower respiratory effects have been reported in people chronically or repeatedly exposed to relatively low levels of ammonia ($\leq$50 ppm), including reduced respiratory function, bronchiolitis/bronchitis, asthma, obstructive and restrictive lung disease, and pulmonary fibrosis (ATSDR 2004, 2014). However, similar to the situation at the Hanford site, exposure concentrations averaged over time would not reflect short-term peak excursions in concentrations and co-exposures to other chemicals may have been involved.

3. N-Butanol

47. N-Butanol is a colorless, flammable liquid at room temperature with a strong, noxious odor detectable as low as 0.17 ppm (U.S. EPA 2011). Both irritant

and central nervous system effects have been reported in controlled human exposure studies with n-butanol (U.S. EPA 2011). N-Butanol is 5-10 times more potent in inducing central nervous system effects than ethanol (James 2008). Workplace exposures have also been reported to result in hearing loss (with concurrent noise), vertigo, dermatitis, and other systemic effects (NIOSH 1992; U.S. EPA 2011). Although these exposures also included the presence of other solvents, such a situation is similar to that resulting from tank vapors.

4. 3-Buten-2-one (methyl vinyl ketone)

48. Methyl vinyl ketone is a colorless to yellow liquid at room temperature that has a pungent odor detectable at 0.2 ppm (U.S. EPA 2008). Although there are few studies available evaluating the effects of methyl vinyl ketone in humans, studies in several animal species demonstrate that it is highly irritating to the upper respiratory tract and eyes (Morgan et al. 2000; U.S. EPA 2008). Because it acts as a direct irritant on mucous membranes, the irritant and tissue damaging properties in laboratory animals are considered relevant for humans. Nasal lesions occurred in both rats and mice at $\geq$1 ppm, and lung necrosis in rats at $\geq$4 ppm.

5. Mercury

49. Mercury exists in tank waste and vapors in elemental and organic forms and is continuously undergoing transformation between these major forms. The forms noted in sampling data are usually mercury (assumed to be elemental or vapor) and sometimes dimethylmercury, primarily in exhaust data from vents of DSTs for compliance with air permitting (SSTs do not require air permits). Because DST exhaust is derived

from more than one tank, concentrations emitted by a single tank can be higher. In addition, no explanation is provided on whether the available sampling data that report "mercury" concentrations represent total mercury forms (including dimethylmercury) or only elemental mercury.

50. Mercury vapor has low solubility and reactivity in water and thus passes through the upper respiratory tract without causing irritation. As a result, mercury exposure may go undetected until acute injury to the lower respiratory system and/or systemic exposure has occurred (Jegal and Kim 2016; U.S. EPA 2010). Exposures to airborne mercury have occurred in both occupational and residential scenarios at high enough doses to cause serious health effects ranging from chemical pneumonitis to neurological effects (Jegal and Kim 2016). Acute exposure to elemental mercury has been associated with effects on the central nervous system, cough, difficulty breathing, and chest tightness, corrosive bronchitis, and pneumonitis (U.S. EPA 2010). Mercury vapor is well absorbed into the brain following inhalation exposure (Berlin, et al. 2015).

51. Dimethylmercury is a colorless liquid with a weak, sweet odor and is readily absorbed by inhalation or skin contact (OSHA 2016). Its high vapor pressure results in rapid evaporation and inhalation hazards. Dimethylmercury in spilled waste would also be well absorbed through the skin. Very little information is available specifically about the relationship between dose and toxic response from dimethylmercury exposure; although evidence indicates it is extremely toxic even after a single exposure, based on a case study of a researcher who died of mercury poisoning several

months after spilling one to several drops of dimethylmercury on the back of a latex gloved hand despite immediate removal of the gloves (Blayney, et al. 1991; OSHA 2016). Organic mercury exposures during pregnancy are also a concern for neurodevelopmental effects (Berlin, et al. 2015).

52. Although the reported concentrations of dimethylmercury in DST tank exhaust vapors would likely result in a much lower dose than absorption of a drop of the pure compound, the high toxicity, rapid absorption, delay in effects, and uncertainty regarding exposure concentrations indicate great caution should be exercised in preventing exposures to this compound.

6. Nitrous oxide

53. Nitrous oxide is a colorless gas with a mild, slightly sweet odor and taste. It is not irritating to the respiratory system (NLM 2011), but depresses the central nervous sysem and is an anesthetic commonly used in hospital and dental operating rooms (NIOSH 1994). Over exposure to nitrous oxide acutely in the workplace is reported to cause drowsiness, euphoria, and unconsciousness; impair mental performance, vision, hearing, and motor skills; and with sufficient exposure, result in permanent mental deficits (NIOSH 1994, 2014; NLM 2011). Repeated or chronic exposure can also affect neurological and reproductive function and harm the liver, kidney, and blood system (NIOSH 1994, 2014; OSHA 2000; NLM 2011).

7. N-Nitrosodimethylamine

54. N-Nitrosodimethylamine is a yellow, liquid at room temperature with little to no odor, and is one of the most reactive and toxic of the nitrosamine compounds

(U.S. EPA 1976; ATSDR 1989). In addition to affecting tissues at the point of contact, n-nitrosodimethylamine targets the liver as the primary organ affected by inhalation exposure to high concentrations (ATSDR 1989). Case studies have identified severe liver toxicity in workers exposed to unknown concentrations for as little as two weeks. Additional symptoms included abdominal cramping and pain, nausea, dizziness, vomiting, jaundice, yellow ascites (fluid accumulation in the abdominal cavity), liver cirrhosis, enlarged liver and spleen, and death. Exposure also resulted in bronchial and tracheal hemorrhaging in at least one person, indicating this chemical's direct effect in causing respiratory tissue damage. The more reactive nitrosamine compounds, such as n-nitrosodimethylamine, are reported to cause irritation of eyes, lungs, and skin, and with higher exposures, hemorrhagic destructive lesions at the point of contact (U.S. EPA 1976). These effects are consistent with hemorrhagic necrosis of the liver in rats and dogs with acute exposure (ATSDR 1989). N-nitrosodimethylamine is also considered an inhalation carcinogen based on increased incidence of liver, kidney, and lung tumors in rodents exposed to n-nitrosodimethylamine for 17-24 months. TVAT (2014) notes that the acute toxicity of n-nitrosodimethylamine has been underappreciated and less studied because of its genotoxicity (toxicity to genetic material) and potent liver carcinogenicity in animals. Ex. 1 at 135.

8. Propanenitrile

55. Propanenitrile (proprionitrile) forms a colorless gas at ambient temperatures, is described as having a pleasant, sweet odor, and can cause irritation and burning of the eyes and skin (NRC 2014). Case studies have

reported central nervous system effects in workers exposed to propanenitrile (NRC 2014). For example, Scolnick, et al. (1993) reported a concentration of 34.4 ppm propanenitrile in the workspace air after two chemical plant workers were overcome and taken to the hospital. One worker was disoriented after two hours in the work area and a second worker was found unconscious after seven hours. Additional symptoms included nausea, lethargy, headaches, dizziness, confusion, seizures, and chronic occurrence of severe headaches. Both men were treated for cyanide poisoning from metabolism of propanenitrile to cyanide in the body. Symptoms, including headaches and dizziness, lingered for several weeks in one of the men. Studies in rodents support a mechanism of action consistent with cyanide toxicity, including signs of difficulty breathing, disorientation, lethargy, tremors, and convulsions.

9. Toxicity of mixtures

56. The chemicals described above, as well as the many other chemicals present in tank vapor (e.g., aldehydes, Langford 2008, McCoy 2008b; hydrocarbons, McCoy 2008a), may also act in combination to produce even greater effects, particularly if they produce the same types of effects individually and/or produce those effects by the same mechanism of action biologically. A number of the chemicals of concern are respiratory irritants that act on the mucous membranes of the eyes or respiratory epithelial tissue to produce progressively disabling effects with increasing concentration and duration of exposure (e.g., ammonia, methyl vinyl ketone). Chemicals are also more likely to have additive or greater than additive (i.e., synergistic) effects if some of the chemicals are present at sufficiently high levels to

cause toxic effects. In such cases, the body is already compromised, and damage to the respiratory tract can be exacerbated by exposure to other chemicals acting on this endpoint even though the chemicals do not have similar mechanisms of action. In other words, even if some of the individual chemicals are present in levels that, by themselves, would not cause harm or not cause serious harm, their additive effects could contribute to adverse impacts and/or serious harm. As noted in the TVAT Report, "Of course NDMA [n-nitrosodimethylamine] is but one compound among what is almost certainly scores of potentially acutely irritating compounds extant in the tank head space, vents and subsequent sporadic ground level plume exposures." Ex. 1 at 134. The cumulative effect of such irritants can lead to greater tissue damage and more serious health consequences.

57. Similarly, other chemicals of concern are central nervous system toxicants (e.g., propanenitrile, nitrous oxide) with effects that progress from headache and dizziness to confusion, disorientation, and more serious effects at higher concentrations and/or exposure duration. The effects of such chemicals are also likely to be additive or potentially more than additive once some chemicals are at levels causing effects.

58. It is standard regulatory practice to consider risks from chemicals producing similar effects (e.g., irritation) or to the same organ system (e.g., respiratory system) as additive (EPA 1989; Yu et al. 2010; SCHER et al. 2011).

D. Risk Characterization: Tank Exposures Can Cause Health Effects and Pose Risks of Serious Irreversible Impairment

1. Health effects from acute exposure to key chemicals

59. Reported maximum concentrations of ammonia, n-butanol, methyl vinyl ketone, nitrous oxide, n-nitrosodimethylamine, and propanenitrile in tank headspaces exceed various limits indicative of potential acute health effects and risk of permanent impairment (Table 3). With the exception of ammonia and nitrous oxide, most of these chemicals contribute to both irritation and central nervous system effects, depending on the concentration. Although the short-term limits may incorporate a health-protective bias because of uncertainties, these limits are considered applicable for making risk management decisions to prevent serious health effects.

60. The chemical with the most acute toxicology data, ammonia, has a maximum concentration that would clearly cause serious health effects even with brief exposures. At such an exposure level, effects would occur immediately, involve the whole respiratory tract, and would likely produce respiratory tract injury leading to irreversible effects that have been noted for this chemical. Direct reading instruments have documented ammonia levels during vapor exposure events that exceed their upper limits for measurement (i.e., 100 ppm). Maximum concentrations of n-nitrosodimethylamine and propanenitrile also exceed the second-tier level of the EPA acute exposure guideline levels or DOE protective action criteria, indicating that serious, potentially irreversible, eye and respiratory effects are possible from tank vapor exposures. TVAT (2014) emphasized

the ability of the highly reactive n-nitrosodimethylamine to "produce hemorrhagic destructive lesions at the site of contact" and cautioned that even at 30% of the levels measured at the vent exit of some tanks (>1100 ug/m^3 or >0.36 ppm) this compound could be "highly irritating even under very brief exposures." Ex. 1 at 133.

61. N-Butanol and methyl vinyl ketone exceeded their occupational ceiling limits and would contribute to these direct acute effects. Nitrous oxide would have less contribution to irritation and direct tissue injury but could contribute to central nervous system depression, along with the many other chemicals with these toxic neurological effects (e.g., hydrocarbons).

Table 3. Comparison of maximum vapor concentrations to short-term limits

Chemical	Maximum tank vapor concentration (ppmv)[1]		Short-term occupational limit[2] (ppmv)		Acute Effect[3]	Short-Term Limits[4]		
						Reversible PAC-1 (ppm)	Serious PAC-2 (ppm)	Life-threatening PAC-3 (ppm)
Ammonia	1042, 2498	[5]	**125**	(T)	I	**30A**	**220A**	2,700A
			300	(I)				
N-Butanol	58.3		100	(T)	I, N	60	800	8000
			50	(C)				
3-buten-2-one (methyl vinyl ketone)	1.2		**0.2**	(C)	I, N	**0.17A**	1.5A	3.1A
Dimethylmercury (mg/m^3)	0.0007	[6]	0.05	(T)	I, N	0.034	0.046	2.3
			0.04	(C)				
			10	(I)				
Elemental Mercury (mg/m^3)	0.456	[7]	**0.125**	(T)	I, N	**0.15**	3.1A	16A
			10	(I)				

Chemical	Maximum tank vapor concentration (ppmv)[1]		Short-term occupational limit[2] (ppmv)		Acute Effect[3]	Short-Term Limits[4] Reversible PAC-1 (ppm)	Serious PAC-2 (ppm)	Life-threatening PAC-3 (ppm)
Nitrous Oxide (N_2O)	1099, 4700	[5]	**250**	(T)	N	**910**	10,000	20,000
N-Nitrosodimethylamine	0.082, 0.36	[8]	**0.0015**	(T)	I, N	**0.027**	**0.3**	3.3
Propanenitrile (Propionitrile)	5.3		30	(T)	I, N	NR[9]	**3.7A**	11A

Bolded text indicates that the concentration exceeds the limit or action criteria.
A - Acute exposure guideline level (U.S. EPA 2016)
IDLH - Immediately Dangerous to Life or Health (NIOSH)
NR - Not recommended
PAC - Protective Action Criterion (DOE 2016).
TWA - Time-weighted average; occupational exposure level
[1] Burgeson et al. (2004)
[2] Occupational exposure limits: Ceiling limit (C), IDLH (I), or 5 times the TWA (T)
[3] Health effects: irritation (I) and/or nervous system effects (N)
[4] Levels 1-3 for 60 min. exposure action criteria or 10 min. AEGL (A)
[5] Meachum et al. (2006a)
[6] 702 AN Exhauster collected 3/4/16
[7] AN Exhauster Stack sample port collected over 8 hours on 8/11/12 WA00003232
[8] TVAT (2014) Appendix I
[9] Lack of AEGL-1 value does not imply that exposure below the AEGL-2 value is without adverse effects

62. Mercury vapor exceeds 5 times the time-weighted-average limit (equivalent to a ceiling limit not to be exceeded at any time in the workplace), and the first level of the DOE protective action criteria for protection against reversible effects. Repeated exposures to elemental mercury and the more toxic organic form, dimethylmercury, however, are concerning because of their rapid absorption by inhalation, ability to cross the blood brain barrier, slow elimination, and neurotoxic effects from accumulation in the body.

2. Consistency with reported health effects

63. Health effects reported by workers are consistent with those reported in the literature for the chemicals in the tank waste and vapors. Noted effects are related to odor, upper respiratory and eye irritation, as well as acute injury to respiratory tissue and lower respiratory tract effects. Other effects appear to involve the central nervous system (e.g., dizziness, fatigue). Reports of worker exposures (e.g., Hoffman 2010), also indicate the occurrence of repeated peak exposures resulting in medical evaluations. Repeated exposures increase the potential for permanent respiratory tract or neurological injury.

64. As summarized in the TVAT Report, vapor exposure incidents have resulted in health effects consistent with the effects of bolus exposures to tank vapor chemicals: shortness of breath, upper respiratory tract irritation, coughing, nasal bleeding, headaches, and a case of chemical pneumonitis (diagnosed). Ex. 1 at 51.

65. A voluntary survey involving 54 workers by NIOSH (2004) reported immediate symptoms that included (N of workers):

- Headache (13)
- Bloody nose (7)
- Throat irritation (6)
- Coughing (5)
- Skin rash (5)
- Metallic taste (5)
- Eye irritation (3)

- Dizziness (3)
- Shortness of breath (3)
- Nausea (2)
- Nose irritation (2)
- Chest tightness (1)
- Skin itching (1)

Symptoms and effects that persisted or occurred after exposure included:

- Frequent headaches (10)
- Decrease in pulmonary function test values (8)
- New-onset asthma (6)
- Chronic cough (5)
- Frequent nose bleeds (5)
- Sinus infections (4)
- Hoarseness (3)
- Memory loss (3)
- Shortness of breath (3)
- Bronchitis (2)
- Pneumonia (2)
- Ringing in ears (1)
- Blood in stools (1)
- Scarring of lungs (1)

3. Cancer risk

66. Ionizing radiation exposure at the Hanford site is a unique and serious concern for cancer risk from occupational exposure in the State of Washington. Various studies have established the association between high dose ionizing radiation exposure and a number of cancers based primarily on highly exposed populations such as the Japanese atomic bomb survivors (ATSDR 1999). More recently, risks for blood cancers (i.e., leukemia) and solid cancer in other organs have been examined in prospective studies of nuclear industry workers in France, United Kingdom, and the U.S. (Leuraud et al. 2015; Richardson et al. 2015). These cohorts included over 300,000 workers with monitored radiation data who were employed for at least one year in the development of nuclear weapons (as at Hanford) and nuclear power. Exposures were much higher than for the general public but substantially lower than for the atomic bomb survivors. Increasing cumulative dose of ionizing radiation within nuclear industry workers was associated with increased risk of leukemia (excluding chronic lymphocytic leukemia) (Leuraud et al. 2015) and risk of all cancers or solid cancer of various organs (Richardson et al. 2015). A positive association was also found for Hodgkin's lymphoma, non-Hodgkin lymphoma, and multiple myeloma, although the dose-response was imprecise for these cancers (Leuraud et al. 2015). Interestingly, both studies found that the cancer risk rate (i.e., increase in cancer risk per unit increase in dose) for these nuclear industry workers was similar to the cancer risk rate in male adult atomic bomb survivors (ages 20 to 60 years), thereby contradicting previous assumptions of lower incremental risk at low doses.

67. Although of lesser concern than ionizing radiation, a number of chemicals identified in tank waste and headspace vapors are known human carcinogens or are considered to potentially cause cancer based on studies in animals (Burgeson et al. 2004). A risk assessment conducted by the PNNL in 1997 examined 204 chemicals in vapors from Tank C-103 for carcinogenic risk (Maughan et al. 1997). The focus of the cancer assessment was on worker exposures over a duration of 25 years; however, the full report was not available for review of its assumptions and calculations. Total cancer risks reported ranged from 1.4 in 10,000 to 1.6 in 1000, depending on stack configuration. These risks were compared to U.S. EPA target cancer risks of 1 in 1,000,000 to 1 in 10,000. Maughan et al. (1997) also considered possible synergistic effects of chemicals in magnifying risks by a factor of 1000, resulting in risks well in excess of the EPA target range.

68. Although cancer risk using EPA methods developed for Superfund and RCRA risk assessments are not typically applied to workplace exposures to protect workers, such a screening may be appropriate in a situation involving many chemicals with unknown potential for health risk. Advanced toxicological testing as recommended by TVAT to characterize the mutagenic and carcinogenic potential of tank vapors as well as the combined toxicity of mixtures is needed to inform risk management decisions on worker protection.

IV. CONCLUSIONS

69. The Hanford tank farms contain thousands of known and unknown chemicals for which the available sampling data incompletely characterize their potential ranges in concentrations. High bolus chemical releases

affecting workers have also been inadequately characterized because of sampling limitations. Given the history of site exposures, involving ionizing radiation exposures in combination with repeated occurrences of high acute exposures to tank vapor chemicals with potential for additive or synergistic effects, the Hanford Nuclear site poses much more serious health risks to workers unlike any other workplace currently in the State of Washington.

DATED this 22nd day of Mar, 2019, in Bellevue, Washington.

/s/ JOYCE TSUJI
JOYCE TSUJI

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF ANNE SOIZA

I, Anne Soiza, declare under the penalty of perjury under the laws of the United States that the following is true and correct:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief. I have worked for the State of Washington, Department of Labor and Industries, Division of Occupational Safety and Health (DOSH) for approximately 29 years, beginning in May of 1987. I am the Department of Labor and Industries Assistant Director, appointed by Director Schurke in March of 2012. I am the State of Washington Supervisor of Industrial Safety and Health defined under RCW 43.22.040 and oversee the implementation and regulatory conduct of the oc-

cupational safety and health laws and rules effective for approximately 300,000 public and private sector workplaces in Washington State. I oversee the regulatory, rulemaking, enforcement, consultation, risk management and outreach on all matters relating to the prevention of work-related fatalities, injuries and illnesses for non-federal Washington workplaces.

2. I supervise about 380 technical professionals and support staff who perform workplace safety and health investigations in alignment with the federal and state occupational safety and health statutes. I am familiar with jobsites across the State of Washington and the types of hazards workers face.

3. I was appointed by U.S. Department of Labor Secretary Solis in 2012 and reappointed as chair by Secretary Perez in 2014 and late 2016 to the 12 member National Advisory Committee on Occupational Safety and Health (NACOSH). It was established under the Occupational Safety and Health Act of 1970 to advise the Secretaries of Labor and Health and Human Services on national occupational safety and health issues, programs and policies.

4. I am an occupational health professional (industrial hygienist) and a public safety and health professional with over 34 years of hazardous chemical safety, respiratory protection, hazardous waste, emergency response, safety and analytical chemistry experience, focused on the prevention of serious injury, illness and death.

5. I have a 1982 Bachelors of Science in Chemistry from Willamette University in Oregon.

6. The Hanford tank remediation worksite, with its numerous known and unknown highly hazardous chemical and radiological substances, presents a unique set of very hazardous conditions to Washington workers characterized by the presence of quantities and types of hazardous substances found nowhere else in Washington. Throughout the remediation and continuing to the present time, Hanford workers have been potentially exposed to hazardous substances that can potentially lead to serious injury, delayed onset of disabling occupational diseases or death. That known and unknown quantities of various chemical waste byproducts and radiological waste streams were combined and stored for years allowed for uncontrolled and uncharacterized chemical interactions, increasing both the potential risks for Hanford workers and the difficulty of responding to those risks. By characterized I mean we know the qualities of the chemical interactions. By uncharacterized I mean we do not know what the chemical interactions are, and in these circumstances DOSH presumes they are toxic.

7. The Hanford site remediation work thus presents a challenge from an occupational safety and health standpoint at the absolute highest degree of complexity. Unknown chemical interactions have occurred and have produced both characterized and uncharacterized products. The occupational health effects of these known

and unknown worker exposures are not well understood and may not yet have exhibited themselves as occupational diseases. Past and current exposures may result in future occupational diseases.

8. The potential unknown chemical reaction hazards faced by workers at Hanford are similar to those of firefighters who often face unknown and known chemical reaction byproducts that have toxic carcinogenic and disease effects.

9. Hanford workers face known and unknown hazards because of their potential exposure to the hazardous substances stored at Hanford, an assemblage of substances found nowhere else in Washington. The scope of the work on Hanford and the sheer unknown nature of many of the exposures present a unique set of circumstances in Washington. It makes sense to presume from an occupational safety and health standpoint that some exposures are toxic and harmful to Washington workers given the chemical and radiological waste and substances being processed by workers.

10. The areas outside the clean up area (200 East Area, 200 West Area both in the central plateau and 300 Area and 100 Area both in the river corridor location) do not have the unique hazards presented by work in the clean up areas.

11. My statements are based on my knowledge of many hazardous worksites and industries in Washington, a July 30, 2015 Department of Justice, Department of Energy, and Washington

River Protection Solutions Briefing I attended, and a review of the October 30, 2014 experts' report called the Hanford Tank Vapor Assessment Report.

DATED this [18th] day of Mar. 2019 in Tumwater, Washington by:

/s/ ANNE SOIZA
ANNE SOIZA

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF ANASTASIA SANDSTROM

I, Anastasia Sandstrom, declare under the penalty of perjury under the laws of the United States that the following is true and correct:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief. I am an assistant attorney general assigned to this case.

2. Attached as exhibit 1 is the House Bill Report, House Bill 1723, 65th Legislature, 2018 Reg. Sess.

3. Attached as exhibit 2 is House Bill Report, Second Substitute House Bill 2663, 57th Legislature, 2002 Reg. Sess.

4. Attached as exhibit 3 is Senate Committee Report, House Resolution 12599, 74th Congress, 1936 2d Session.

Dated this 20th day of Mar. 2019 in Seattle, Washington by:

/s/ ANASTASIA SANDSTROM
ANASTASIA SANDSTROM
WSBA No. 24163

EXHIBIT 1: HOUSE BILL REPORT

HB 1723

As Reported by House Committee On:
Labor & Workplace Standards

Title: An act relating to the presumption of occupational disease for certain employees at the United States department of energy Hanford site.

Brief Description: Creating the presumption of occupational disease for certain employees at the United States department of energy Hanford site.

Sponsors: Representatives Haler, Riccelli, Sells, Gregerson, Ormsby, Doglio and Pollet.

Brief History:

Committee Activity:

Labor & Workplace Standards: 2/9/17, 2/16/17 [DPS].

Brief Summary of Substitute Bill

- Creates a presumption for Hanford nuclear site workers that certain enumerated diseases and conditions are occupational diseases, for the purposes of industrial insurance coverage.

HOUSE COMMITTEE ON LABOR & WORKPLACE STANDARDS

Majority Report: The substitute bill be substituted therefor and the substitute bill do pass. Signed by 4

members: Representatives Sells, Chair; Gregerson, Vice Chair; Doglio and Frame.

Minority Report: Do not pass. Signed by 2 members: Representatives Manweller, Ranking Minority Member; Pike.

Minority Report: Without recommendation. Signed by 1 member: Representative McCabe, Assistant Ranking Minority Member.

Staff: Trudes Tango (786-7384).

Background:

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not a part of the legislation nor does it constitute a statement of legislative intent.

Under the state's Industrial Insurance Act (Act), employers must insure through the State Fund administered by the Department of Labor and Industries (L&I) or may self-insure if qualified. Workers who, in the course of employment, are injured or disabled from an occupational disease are entitled to benefits. Depending on the disability, workers are entitled to medical, temporary time-loss, and vocational rehabilitation benefits, as well as benefits for permanent disabilities.

To prove an occupational disease, the worker must show that the disease arose "naturally and proximately" out of employment. For certain firefighters, there is a prima facie presumption that the following medical conditions are occupational diseases: respiratory disease; certain

heart problems; specified cancers; and infectious diseases.

The presumption of occupational disease for firefighters may be rebutted by a preponderance of evidence, including, but not limited to: use of tobacco products; physical fitness and weight; lifestyle; hereditary factors; and exposure from other employment or nonemployment activities. In addition, the presumption does not apply to a firefighter who develops a heart or lung condition and who is a regular user of tobacco products or who has a history of tobacco use.

In occupational disease cases where the worker's exposure may have occurred with multiple employers, the employer covered under industrial insurance at the time of the last injurious exposure to the substance or hazard is the liable employer.

Through a special agreement with the L&I, the United States Department of Energy (DOE) operates as a self-insured employer for the purposes of providing coverage for workers of contractors at the Hanford Nuclear Reservation. In addition, there are federal programs that provide compensation to certain DOE workers.

Summary of Substitute Bill:

A prima facie presumption of occupational disease is created for Hanford site workers. A Hanford site worker is any person, including a contractor or subcontractor, who was engaged in the performance of work, either directly or indirectly, for the United States, on projects and contracts at the Hanford nuclear site and worked on the site for at least one eight-hour shift while covered under the state's industrial insurance laws.

The presumption may be rebutted by clear and convincing evidence, including the use of tobacco, physical fitness and weight, lifestyle, hereditary factors, and exposure from other employment or nonemployment activities.

The prima facie presumption applies to the following diseases and conditions:

- respiratory disease;
- acute and chronic beryllium disease;
- heart problems, experienced within 72 hours of exposure to fumes, toxic substances, or chemicals at the site;
- certain cancers specified in the bill; and
- neurological disease.

Regarding cancer, the presumption only applies to a worker who has cancer that develops or manifests and who was given a qualifying medical examination upon becoming a Hanford site worker that showed no evidence of cancer. The presumption applies to the following cancers:

- leukemia;
- primary or secondary lung cancer, including bronchi and trachea, sarcoma of the lung, other than in situ lung cancer discovered during or after a postmortem examination, but not including mesothelioma or pleura cancer;
- primary or secondary bone cancer (including specific forms listed in the bill);
- primary or secondary renal cancer;

- lymphomas, other than Hodgkin's disease;
- Waldenstrom's macroglobulinemia and mycosis fungoides; and
- primary cancer of the:
    - thyroid;
    - male or female breast;
    - esophagus;
    - stomach;
    - pharynx;
    - small intestine;
    - pancreas;
    - bile ducts;
    - gall bladder;
    - salivary gland;
    - urinary bladder;
    - brain (with certain limitations);
    - colon;
    - ovary; and
    - liver (with certain limitations).

The presumption extends to the worker following termination of service for the lifetime of that individual.

A worker, or survivor of a worker who has died from one of the conditions or diseases, whose claim was denied by the L&I, the Board of Industrial Insurance Appeals, or a court, may file a new claim for the same exposure and

contended condition or disease. The presumption applies to decisions made after the effective date of the bill, without regard to the date of last injurious exposure or claim filing.

Substitute Bill Compared to Original Bill:

The substitute bill: (a) provides that the presumption of occupational disease may be rebutted by clear and convincing evidence, including the use of tobacco, physical fitness and weight, lifestyle, hereditary factors, and exposure from other employment or nonemployment activities; (b) specifies that the presumption applies to workers who worked at least one eight-hour shift while covered under the Act (rather than who is currently covered under the Act); (c) removes the provision stating that for claims arising from the presumption, the DOE is the responsible employer and no costs may be borne by the State Fund; (d) provides that a worker, or survivor of a worker who has died from one of the conditions or diseases, whose claim was denied by the L&I, the Board of Industrial Insurance Appeals, or a court, may file a new claim for the same exposure and contended condition or disease; (e) provides that the presumption applies to decisions made after the effective date of the bill, without regard to the date of last injurious exposure or claim filing; and (f) adds acute and chronic beryllium disease to the list.

Appropriation: None.

Fiscal Note: Requested on February 1, 2017.

Effective Date of Substitute Bill: The bill takes effect 90 days after adjournment of the session in which the bill is passed.

Staff Summary of Public Testimony:

(In support) The Hanford site is half the size of Rhode Island and facilities occupy about 25 percent of the land. Nuclear weapons were produced there from the 1940s up until the 1980s and the work done there was significant and meaningful. It is now the most contaminated site in the world. The safety culture at Hanford has shifted these days. Although there are grievance procedures in place, the Department of Energy (DOE) favors management, and workers are being denied access to information about chemical exposures. There is a systematic pattern of denying occupational disease claims for Hanford workers. It is a clear violation of the central tenant of workers' compensation, which is swift and certain relief to injured workers. Hanford workers are doing the job of the nation and yet they have to fight and bring law suits in order to get workers' compensation. Workers have experienced symptoms such as nosebleeds and breathing issues. It is difficult for workers to identify a specific incident at work that causes these conditions, rather, it is the daily exposure to chemical vapors. It is difficult to prove what the exposure was when the DOE does not even know what chemicals are involved. There are hundreds of chemicals in the tanks. Workers give up trying to prove their claims. Hanford is not subject to inspections by the state agency that regulates safety in the workplace. It is a self-regulating site and that creates problems. Exposures on the site are not monitored or categorized so it is difficult for workers to prove their claims.

(Opposed) The Legislature is the steward of the workers' compensation program and it needs to balance a fair and sustainable system with the compelling needs of

covered workers. As introduced, the bill departs from long established workers' compensation policy. The occupational disease presumption for firefighters was created because there was agreement by everyone that, based on medical science, certain exposures are linked to specific conditions. There are limitations and restrictions on the firefighter presumption that this bill does not have, such as how long the person must have been working as a firefighter before the presumption applies and how long the presumption lasts. The bill is breathtaking in its scope and inclusivity. The bill does not take into account any nexus between conditions and any particular class of workers or exposures. Establishing a presumption creates a bad precedent. This bill has not been vetted.

Persons Testifying: (In support) Representative Haler, prime sponsor; Jeffery Johnson, Washington State Labor Council; Nickolas Bumpaous, United Association Plumbers and Steamfitters Local 598; Melinda Rouse; Lonnie Rouse; Abelardo Garza; Bertolla Bugarin; Seth Ellingsworth; Don Slaugh, Hanford Atomic Metal Trades Council; Tom Carpenter, Hanford Challenge; Steven Gilbert, Institute of Neurotoxicology and Neurological Disorders; Richard Lipsky, Washington Physicians for Social Responsibility; Michael White, Washington State Council of Fire Fighters; and Arthur West.

(Opposed) Kris Tefft, Washington State Self-Insurers Association; and Bob Battles, Association of Washington Business.

Persons Signed In To Testify But Not Testifying: None.

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF JAMES NYLANDER

I, James Nylander, declare under the penalty of perjury under the laws of the United States that the following is true and correct.

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief. I am the Program Manager for the Self-Insurance Section for the Department of Labor & Industries and have worked for L&I the last 30 years. I have a Bachelor of Arts degree in Economics from Central Washington University.

2. Department of Energy (DOE) contractors and subcontractors are employers under Washington's statutes. Wash. Rev. Code §§ 51.04.130, 51.08.070. L&I and DOE have voluntarily entered into several memorandums of understanding over

the last several decades where DOE has undertaken to pay workers' compensation costs for employees of selected contractors and subcontractors. Attached as Ex. 1 is the most recent memorandum of understanding, dated June 15, 2018. This agreement is authorized by Wash. Rev. Code § 51.04.130.

3. L&I does not require DOE to enter into these agreements. No state law or L&I directive compels DOE to enter into this agreement. Absent the agreement, L&I would not assess costs against DOE for workers' compensation costs. Absent the agreement, L&I would charge premiums to the individual contractors or require them to be self-insured and L&I would not charge any premiums to DOE.

4. L&I does not regulate DOE as an employer. Wash. Rev. Code § 51.12.060. The United States is not an employer under Washington's statutes. The memorandum of understanding does not cover DOE employees, as state law excludes them from state workers' compensation coverage. Wash. Rev. Code § 51.12.060.

5. Under the memorandum of understanding, DOE voluntarily assumes the role of a self-insured employer solely for the purpose of paying workers' compensation benefits to the contractors and subcontractors covered under the agreement. The current memorandum of understanding covers only the contractors and subcontractors listed in the agreement, so there are employers working at Hanford that the memorandum of understanding

does not cover. These employers are instead covered by the state fund, and it covers costs. L&I charges premiums to the employers of these workers. Wash. Rev. Code § 51.16.035. It would not charge these premiums to DOE. Wash. Rev. Code § 51.12.060.

6. Without its memorandum of understanding with L&I, DOE would not participate in the state workers' compensation system and L&I would be dealing directly with the contractors and subcontractors as either state-fund employers or self-insured employers.

7. In taking on the role as a self-insured employer, DOE is subject to the same benefits/costs as other employers. Wage replacement benefits (time loss compensation, pension benefits, and survivor benefits) are calculated the same for state fund administration and to self-insured employers under the statutes. Wash. Rev. Code §§ 51.08.178, 51.32.050, 51.32.055, 51.32.060, 51.32.080, 51.32.090. Treatment benefits are paid using rates applicable to both state fund administration and to self-insured employers. Wash. Rev. Code §§ 51.04.030, 51.36.085.

8. All employers in Washington must either self-insure or be a state fund employer. Wash. Rev. Code § 51.14.010. All must pay industrial insurance costs. If a workers' compensation claim is valid, under the memorandum of understanding, DOE must pay the claim costs. If a workers' compensation claim for other self-insured employers is valid, the self-insured employer must pay claim costs. If a workers' compensation state fund claim

is a valid, a state fund employer is the liable employer.

9. Effective June 7, 2018, the Washington Legislature enacted a law about workers' compensation benefits at the Hanford site. Wash. Rev. Code § 51.32.187. This statute provides that for "United States department of energy Hanford site workers" there is a prima facie presumption that certain diseases and conditions are occupational diseases. This places the burden of proof on the employer (which includes DOE as a self-insurer or contractor as a state fund employer, as the case may be) to disprove coverage. There is a similar presumption for firefighters. Wash. Rev. Code § 51.32.185.

10. Since the Legislature passed this act, L&I has allowed and denied self-insured claims (by DOE) and state fund claims. Workers for self-insured employers and state fund workers are treated the same under the Industrial Insurance Act. As of March 2019, there are:

Total self-insured claims	88
Allowed	40
Denied	9
Pending	39
Total state fund claims	10
Allowed	2
Denied	2
Pending	6

11. L&I gives the opportunity to rebut the Hanford presumption. Wash. Rev. Code § 51.32.187.

DATED this [7th] day of Mar. 2019 in Tumwater, Washington by:

/s/ JAMES NYLANDER
JAMES NYLANDER

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF BRUCE MILLER

I, BRUCE MILLER, declare under penalty of perjury under the laws of the state of Washington that the following is true and correct.

1. I am over the age of 18, competent to be a witness herein, and make this declaration in that capacity.

2. I am a Certified Industrial Hygienist with the American Board of Industrial Hygiene #6439. I obtained my certification on July 24, 1994. In 1990, I received a Bachelor of Science degree in Industrial Technology from Southern Illinois University. I have a Masters in Science in Industrial Hygiene that I received from Central Missouri State University in 1992. Documents I reviewed are in Attachment A. A true and correct copy of my curriculum vitae is attached as Attachment B.

3. I am the president of Health and Safety Services, LLC, located in Idaho Falls, Idaho. Health and Safety Services provides health and safety consulting services, specializing in matters involving workplace accidents, injuries, and occupational safety and health compliance for general industry, construction, and the Department of Energy regulations.

4. I have 30 years of experience in comprehensive health and safety practice and 25 years of specialized environmental remediation and construction experience at the Department of Energy (DOE), U.S. Army Corps of Engineers, Department of Defense (DoD), and National Aeronautics and Space Administration sites.

a. In addition to service in the United States Air Force within the Bioenvironmental Engineering career field, I have been employed by DOE contractors and consulting firms supporting the Idaho National Laboratory, and completed or supported projects at other DOE sites such as Hanford National Laboratory, Los Alamos National Laboratory, Pantex Plant, Argonne National Laboratories (East and West), Oak Ridge National Laboratory, Savanah River National Laboratory, and Sandia National Laboratory.

b. My experience includes serving as a health and safety director for four subsidiary companies located in 16 regional offices with more than 400 employees; health and safety program and project manager (certified industrial hygienist-required); developing all corporate health and safety programs to implement federal, state, and agency-specific (e.g., DOE, DoD, U.S. Army Corps of Engineers) regulatory requirements for occupational health and safety, radiological protection, and medical surveillance, 10

C.F.R. § 851 mandated Worker Safety and Health Programs, DOE Acquisition Regulation 970.5223-1 required Integrated Safety Management Systems Programs, and project plans; and providing direct industrial hygiene and safety field support and oversight to professional health, safety, and radiological staff for projects at some of the most complex hazardous and mixed waste (radiological and hazards waste) sites in the country.

c. Projects that I have provided occupational safety and health guidance, support, and oversight to include hurricane recovery/reconstruction; excavation of mixed waste; drilling, sampling, and logging in transuranic mixed waste[1] pits; sampling, testing, and deployment technologies to stabilize radiological contaminated soils and recover high radiation materials; construction of Category 2 nuclear facilities; radiological decommissioning and heavy demolition of nuclear facilities; waste management and retrieval in radioactive transuranic mixed waste; and remediation of high explosive fragment and unexploded ordinance sites. These projects were completed throughout the DOE complex and at numerous DoD facilities and for numerous U.S. Army Corps of Engineers sites districts.

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[1] Transuranic waste (TRU) is material contaminated with transuranic elements artificially made, radioactive elements, such as neptunium, plutonium, americium, and others that have atomic numbers higher than uranium in the periodic table of elements. Transuranic waste is primarily produced from recycling spent fuel or using plutonium to fabricate nuclear weapons.

5. In addition to my direct project experience, as a certified Industrial Hygienist I focus on a multidisciplinary approach to workplace safety and health. Industrial Hygiene is a science devoted to the anticipation, recognition, evaluation, prevention, and control of those environmental factors or stresses arising in or from the workplace that may cause sickness, impaired health and well-being, or significant discomfort among workers or among citizens of the community. Industrial hygienists use a hierarchy of controls to prioritize the methods to control hazards to protect workers. The hierarchy of controls is made up of the following controls in this preferred order:

a. Elimination: removal of the hazard. This is the most effective method to control a risk because the hazard is no longer present. It is the preferred way to control a hazard and should be used whenever possible.

b. Substitution: replacement of the hazard. Substitution occurs when a new material or form of material that is less hazardous or harmful is used in place of a more hazardous material or form of material.

c. Engineering controls: isolating people from the hazard. If elimination or substitution is not feasible, or does not completely eliminate a potential hazard, then engineering controls must be implemented to minimize the potential exposure hazard. Engineering controls are methods that are built into the design of a plant, equipment, or process to minimize the hazard. Basic types of engineering controls include:

(1) Process control. This involves changing the way a job activity or process is done to reduce the risk.

(2) Enclosure and/or isolation of emission source. This control involves the use of a physical barrier or enclosure to separate the worker from the hazard.

(3) Ventilation. Under this method, contaminated air is either removed from or clean air is added to the work environment.

d. Administrative controls: establishment of procedures or protocols that reduce the exposure to the hazard. If a hazard is not completely controlled following the implementation of engineering controls, then administrative and work practice controls must be employed, followed by the careful selection and use of personal protective equipment.

e. Personal protective equipment (PPE): protecting workers with PPE. PPE is the least preferred option of controlling workplace hazards and it should only be used to supplement other control measures to reduce exposures under very specific circumstances. This is because PPE may "fail" (stop protecting the worker) with little or no warning. For example, "breakthrough" can occur with gloves, clothing, and respirator cartridges ("breakthrough" in this context is when a chemical permeates completely through a material or object and the worker can become exposed to the chemical).

6. I have been asked by the Washington State Attorney General's Office (State) to provide this declaration in the above-captioned lawsuit. As I understand it,

the United States Department of Justice has brought a suit against the State based on the enactment of a workers' compensation law, entitled "Hanford Site Employees—Occupational Disease Presumption," or Washington Substitute House Bill 1723 ("HB 1723"), claiming that HB 1723 singles out and discriminates against the Federal Government and its contractors, purports to directly regulate the Federal Government, and imposes significant burdens on the Federal Government and its contractors without imposing them on other employers in the State, all in violation of the Supremacy Clause of the U.S. Constitution.

7. I have personal experience working at the Hanford facility.

a. From April 2016 to October 2017, I served as an expert for the Washington State Attorney General's Office for the case no. 4:15-cv-05086-TOR: *Hanford Challenge, United Association of Plumbers and Steamfitters Local Union, and the State of Washington, Plaintiffs, v. Ernest J. Moniz, in his official capacity as Secretary, the United States Department of Energy, and Washington River Protection Solutions, [WRPS] LLC, defendants*. In my role as an expert, I reviewed:

- numerous Hanford site historical documents related to the nature of the various facilities and operations;
- DOE Hanford Site and WRPS environmental, safety and health manuals, and technical procedures;
- previous tank farm vapor studies and inventories;

- Hanford tank farm work planning, operating, and emergency response procedures;
- industrial hygiene hazard and exposure assessment plans and strategies, industrial hygiene area and personal exposure monitoring procedures and records;
- occupational medical surveillance programs and implementing procedures, Hanford medical provider worker exposure procedures and records, workers' compensation documents, and historical worker exposures to chemicals;
- and the findings and recommendations from several DOE offices, National Institute for Occupational Safety and Health (NIOSH), and other third-party health and safety inspections and audits related to Hanford and tank farm-specific vapor hazards, reported exposures.

I also evaluated Hanford contractor implementation of corrective actions to address inspection findings and recommendations. All of these records and reports contain facts and data of a type that I typically rely upon in forming opinions as an industrial hygienist. They contain facts and data contained in these reports of a type reasonably relied upon by other industrial hygienists in forming their opinions. I relied on the facts and data in these materials in forming my opinions here.

b. From August to September 2009, I worked as a Technical Consultant for DOE, Office of River Protection at the Hanford Site. In this position, I prepared an Independent Government Cost Estimate

evaluation and report of WRPS's Chronic Beryllium Disease Prevention Program (CBDPP) for the Hanford Tank Farm Beryllium Program. The purpose was to align all WRPS programmatic elements with the Hanford site-wide CBDPP. This work required me to review all WRPS beryllium-specific and general industrial hygiene exposure assessment procedures and strategies, beryllium medical surveillance, beryllium training, and sampling strategy documentation used to develop the WRPS CBDPP cost estimate.

c. In addition, I had corporate health and safety oversight responsibility (in my positions with North Wind) and prepared (or reviewed and approved) all project health and safety plans for Hanford engineering and remediation projects conducted by our Richland, Washington office staff. Examples of Hanford projects I have worked on include 107 North Basin Recirculation Building Tank Waste Removal and Processing; In-situ TRU Waste Delineation and Waste Removal at Hanford 618-10 and 618-11 Burial Ground Demonstration; Decontamination and Decommissioning of the Kadlec Hospital Emergency Decontamination Facility; In-situ Vertical Pipe Unit TRU Waste Delineation and Waste Removal at Hanford 618-10 and 618-11 Burial Grounds Demonstration, and 118-K-1 Drilling & In-Situ Radiological Characterization. DOE maintains a system of self-regulation of occupational safety and health issues under 10 CFR § 851, Worker Safety and Health Program (WSHP) at its facilities, which includes the Hanford Site.

8. In addition to my personal experience at the Hanford Site, I have reviewed the complaint and attached exhibits (including "Hanford Site Employees—Occupational Disease Presumption," or Washington Substitute House Bill 1723), Department of Energy (DOE) regulations governing worker safety and health, and Hanford Site information available from DOE Hanford, DOE Richland Operations Office, DOE Office of River Protection, Washington State Department of Ecology. In addition, I have reviewed a number of reports and documents listed in Appendix A.

9. From my review of the above documents, I have confirmed the following facts concerning the Hanford Site.

a. Hanford is part of the nationwide complex that was used in the production of plutonium for nuclear weapons. The federal government selected the site in the early 1940s as part of the Manhattan Project. It was used extensively throughout the Cold War for the production of weapons-grade plutonium. Weapons production at Hanford ended in 1989, when the mission of the site was changed to cleanup. The federal government continues to employ private contractors to dispose of radioactive waste that resulted from its operations.

b. Hanford structures include nine inactive nuclear reactors along the Columbia River, five inactive chemical reprocessing facilities in the central plateau, several spent nuclear fuel storage basins along the Columbia River, the Plutonium Finishing Plant, fuel fabrication facilities, large underground storage tanks located on the central plateau, and many miscellaneous small underground storage tanks.

c. From December 1944 to 1989, Hanford produced about two-thirds of the nation's weapons-useable plutonium. This was accomplished by irradiating uranium fuel in production reactors located along the Columbia River. After being used to cool these reactors, contaminated water was discharged directly to the ground. These historic discharges have contaminated ground water and the Columbia River.

d. The irradiated fuel was chemically dissolved in separations plants. Plutonium 239 was then processed into metallic oxide form for shipment to other DOE sites for finishing and placement in weapons. Useable uranium extracted in the separations process was recycled into new reactor fuel.

e. The chemical separations plants used varying processes over time. All produced a highly radioactive and chemically hazardous liquid waste stream that was directed into large underground storage tanks after the waste was neutralized by making the solutions strongly basic. This waste stream ("tank waste") remains at the Hanford site today, with a current volume of approximately 56 million gallons, and stored in 177 underground holding tanks at the center of the Hanford site. Much of the waste is stored in 149 aging single-shell tanks, first constructed in the mid 1940's. The remainder is stored in 28 doubleshell tanks of newer construction. The tank waste is the focus of an ongoing multi-billion-dollar cleanup effort.

f. Hanford's tank waste is a complex and diverse combination of radioactive and chemical waste that takes the physical form of sludges, salts and liquids

with varying combinations of chemical properties. The waste contains at least 46 identified radionuclides. Because these radionuclides are the result of reprocessing spent nuclear fuel, tank waste is presumptively considered high level waste under the Nuclear Waste Policy Act and as such is required to be disposed of in a deep geologic repository. If key radionuclides are removed in sufficient concentrations, the separated immobilized waste may be disposed of in something other than a deep geologic repository.

g. In addition, Hanford's tank waste includes at least 26 hazardous waste constituents, including heavy metals and volatile organic compounds. All of these constituents are potentially harmful to human health and the environment. The 56 million gallons of waste in the Hanford tank systems accounts for 60 percent of the high-level waste the DOE is responsible for nationwide.

h. Other Hanford operations are focused on cleanup efforts within the River Corridor and Central Plateau. The River Corridor cleanup is dedicated to the River Corridor portion of the Hanford Site including the 100 and 300 Areas along the south shore of the Columbia River as well as considerable land area that was not directly affected by production operations.

- The 100 Areas contains nine retired plutonium production reactors. These areas are also the location of numerous support facilities and solid and liquid waste disposal sites that have contaminated groundwater and soil.

- The 300 Area, located north of the city of Richland, contains fuel fabrication facilities, nuclear research and development facilities, and associated solid and liquid waste disposal sites that have contaminated groundwater and soil.

- Non-operational areas include substantial land area that was never used for locating production operations. The non-operational areas are adjacent to the 100 and 300 Areas and extend to the Central Plateau.

i. Cleanup of the Central Plateau is a highly complex activity because of the large number of waste sites, surplus facilities, active treatment and disposal facilities, and areas of deep soil contamination. Past discharges of more than 450 billion gallons of liquid waste and cooling water to the soil have resulted in about 60 square miles of contaminated groundwater. Today, some plumes extend far beyond the plateau.

j. Exhibit C to DOE's Complaint shows three areas where the presumption in HB 1723 does not apply: state-owned land, LIGO, and Energy Northwest. Cleanup operations do not occur on this land.

10. The 586-square mile Hanford DOE Site has housed plutonium processing facilities that generated unprecedented quantities of chemical and radioactive production byproducts and waste including 270 billion gallons of contaminated groundwater, 25 million cubic feet of buried or stored solid waste, 2,300 tons of spent nuclear fuel, 20 tons of plutonium bearing materials, and 53 million gallons of liquid and sludge chemical and radioactive waste in 177 underground storage tanks.

Hanford is the largest and most complex environmental cleanup effort in the world.

11. The radiological and chemical occupational exposure potential to workers conducting the cleanup at Hanford is extraordinarily complex and unique within in the State of Washington. Even today, controlling the radiological and chemical hazards and exposures for workers is a continuous and technically challenging effort because of the array of hazards workers may encounter throughout the cleanup process. These challenges are further complicated where disposal, spill and waste inventory records are incomplete or nonexistent.

a. Solid Waste

Solid waste can be everything from broken reactor equipment and tools to contaminated clothing that a worker wore during the plutonium production activities. The solid wastes were buried in the ground in pits or trenches. Some of the waste was placed in steel drums or wooden boxes before being buried while some of the other waste was placed in the ground without a container to hold it. Depending on when the waste was buried, records about what was buried and where it was buried can be either very good, or in some cases, very poor. (DOE Hanford, Hanford Cleanup, 2019).

b. Liquid Waste

Besides the millions of tons of solid waste, hundreds of billions of gallons of liquid waste was also generated during the plutonium production days. These liquid wastes were disposed of by pouring them onto the ground or into trenches or holding ponds. Unintentional spills of liquids also took place. Liquid wastes generated

during the process of extracting plutonium from the uranium "fuel rods" were put into underground storage tanks. Just like with the solid wastes, while some records accurately describe the kinds of liquid wastes that were generated and where they went, some of the spills and the volume of the spills went undocumented. The liquid waste that had been poured onto the ground or held in ponds or trenches has long since evaporated or soaked into the soil on the Site. In doing so, the waste contaminated the soil and is thought to have also created underground "plumes" of contaminants. A "plume" is kind of like an underground river where the contaminants mix with the groundwater. (DOE Hanford, Hanford Cleanup, 2019).

c. Contaminated Buildings

Reactor buildings, support facilities, and auxiliary structures needed during the plutonium production days must also be cleaned up. For many of these buildings, the work requires crews to come in with bulldozers and other heavy equipment to bring them down. As some of these structures are either contaminated or were built using materials like asbestos, crews must take precautions to avoid being contaminated themselves or to avoid releasing contamination into the ground, the air, or the groundwater.

DOE Hanford, Hanford Cleanup, 2019).

d. Tank Farms

While many of the DOE-controlled River Corridor and Central Plateau area waste sites at the Hanford Site have been well characterized and documented, removal and disposal of the waste contained in the tank farms

remains one the most technically challenging and hazardous cleanup activities at Hanford. A team of experts from the Savannah River National Laboratory (SRNL) conducted an assessment of the tank farm vapor hazards and provided the following description of the tank farms in its 2014 report:

> Much of the waste is stored in 149 aging single-shell tanks, first constructed in the mid 1940's. The remainder is stored in 28 double-shell tanks of newer construction. The tanks are constructed of vertical cylindrical shells with dome roofs, the top of the roof being on the order of seven to fifteen feet below grade. There are typically concrete-lined pits above each tank (both single shell tanks and double shell tanks), with concrete blocks covering the pits. The topside of the cover blocks is typically at or up to a few feet above grade. Various appurtenances may extend from the tank up through the pit and the cover blocks, such as a riser for the vent stack or valve stems for operating valves located below grade. The head spaces of groups of two to eight tanks are connected by overflow piping. An estimated 53 million gallons of mixed hazardous and radioactive waste remain.
>
> Hanford waste tanks contain settled sludge, settled sludge with interstitial liquid and liquid supernatant, settled salt cake with interstitial liquid, or settled salt cake with interstitial liquid and a liquid supernatant. Five double shell tanks contain a settled salt cake with interstitial liquid, a liquid supernatant, and a floating crust containing salt cake with interstitial liquid and retained gas. The waste material is radioactive, continually generating heat, continually catalyzing both known and unknown chemical reactions

> in all layers, and continually generating gases and known and unknown chemical products that are continuously created and destroyed via chemical, thermal, radiocatalytic and radiolytic processes in all layers.
>
> A primary tank farm operation is to transfer waste material from the older single-shell tanks to the newer double-shell tanks. This process is referred to as retrieval. Retrieval operations are performed via deployment of technologies tailored to the tank from which material is being retrieved. These technologies include sluicing, mechanical methods, and low-water methods, such as the Mobile Arm Retrieval System. Sluicing involves spraying a high-pressure stream of liquid to break up the salt cake and sludge in the tank such that they can be pumped out. The dislodged waste material is then pumped to a DST [double shelled tank]. Water has been used for the sluicing medium, with about three gallons of water being required to retrieve one gallon of waste. In that this introduction of large volumes of water generates a great deal of additional waste material to be stored and eventually treated, supernatant from receiving tanks is now being introduced as the sluicing medium for tanks being retrieved.

TVAT 2014 at 21.

Although much of the liquid and sludge waste generated from the weapons production at the Hanford Site is now contained in the tank farms, it is important to understand that not all the radioactive chemical (mixed) waste was placed in tanks. The resultant spills, leaks and disposing of mixed waste has contaminated soil and groundwater inside and outside of the tank farms.

> 149 of these single shell tanks were built at Hanford between 1943 and 1964. 83 single shell tanks are located in the 200 West Area, with another 66 single shell tanks found in the 200 East Area. However, even with 149 tanks available, the volume of chemical wastes generated through the plutonium production mission far exceeded the capacity of the tanks. Some of the liquid waste did end up being put into holding facilities and some was poured into open trenches. Some of the wastes that were put into the tanks didn't stay there, as the heat generated by the waste and the composition of the waste caused an estimated 67 of these tanks to leak some of their contents into the ground. Some of this liquid waste migrated through the ground and has reached the groundwater.

DOE Richland, Central Plateau 2019.

The Center for Toxicology and Environmental Health conducted an assessment of the tank farms entitled, "Critical Assessment of the Technical Basis and Implementation of the WRPS [DOE tank farm contractor] Hanford Site Waste Tank Farm Industrial Hygiene Program" (CTEH® 2016) in 2016 and presented a summary of the tank farm waste evaluated in the document,

> The IH Technical Basis document described tank and gas vapor sources with respect to the historical role of the waste tanks to store chemicals used or generated during the many decades of plutonium production at Hanford. The waste streams feeding into the tanks included cladding wastes from uranium fuel rod cladding removal, metal wastes from isolating plutonium and other fissile species, reactor cleanout decontamination wastes, and miscellaneous wastes

> from on-site laboratories and equipment maintenance operations. Chemical and radioactive wastes stored in the tanks feed ongoing radiolytic chemical reactions to form a variety of small molecular organic species, metal containing compounds including organometals, halogenates, nitrogen-containing compounds, and sulfur and silicon compounds."

CTEH 2016 at 4.

> The document reported that the headspace vapors were composed of over 1,200 organic compounds including alkanes, cycloalkanes, alkenes and alkadienes, alcohols, phenols, esters, ketones, heterocyclic compounds, halocarbons, esters, aldehydes, and nitriles. Metals, ammonia, and nitrous oxide were also identified. Variability of headspace composition over time was discussed, with variability of less than an order of magnitude being reported. The waste disturbing activities involved with waste retrieval were described as possibly significant sources of tank headspace composition variability. These activities include water sluicing (segmenting solid waste using water jets), dissolution, and mixer pump operations.

CTEH 2016 at 5.

12. Both in the past and at present, it is difficult to accurately inventory the chemical hazards associated with mixed (radiological and chemical) wastes such as the waste contents and vapors from the tank farms. The hazardous waste constituents have changed over the years due to natural radiological processes within the waste tanks as well as from transfer and consolidation operations that have dewatered and also combined

tank contents. This lack of chemical inventory information has hampered the developing of a comprehensive hazard assessment and industrial hygiene strategy that, if in place, would allow for the development of chemical-specific occupational exposure limits (OELs) for all chemicals that workers could be exposed to.

13. Hanford chemicals associated with tank waste include known or probable human carcinogens such as benzene, furans, substituted furans, and nitrosamines, in addition to the radionuclide components of the liquid waste that can potentially become airborne during and following a tank leak or spill event. Additionally, chemicals such as ammonia can produce acute effects (adverse health conditions that develop immediately or a short time after exposure to toxic substances), in particular in the upper respiratory tract. Adverse acute health effects from exposure to tank farm vapors have been reported, requiring exposed workers to be medically evaluated. The Tank Vapor Assessment Team (TVAT) stated in its 2014 Hanford Tank Vapor Assessment Report, "TVAT finds that the body of testimony and data examined by the team strongly suggests a causal link between chemical vapor releases from Hanford waste tanks and subsequent adverse health effects, particularly upper respiratory irritation, experienced by many Hanford tank farm workers." TVAT at 15.

14. Today, numerous tank farm chemicals present acute exposure potential to workers, yet Hanford contractors (past and present) have not established short-term or ceiling OELs to protect workers. Worker exposure estimates that are provided to the medical providers in order to fully assess the medical significance following exposure events are further complicated by

historical problems detecting and quantifying tank farm vapor hazards.

15. Multiple DOE, NIOSH, and expert panel inspection findings of tank farm operations have documented poor Hanford contractor practices that limit the ability to detect worker exposures and communicate to Hanford medical providers the concentrations of airborne chemicals to which workers may have been exposed. In many cases, the post-event exposure industrial hygiene monitoring data does not reflect the conditions that existed at the time of the short-term exposure since monitoring was conducted well after the exposure event occurred. Also, historical exposure monitoring has not been specific to the hazardous tank farm chemical(s) since generalized real-time monitoring instruments respond to a suite of organic vapors and industrial hygiene technicians evaluate this response against a non-chemical-specific action limit (occupational exposure limit) to determine worker exposures. This action limit is well above the OELs for many high toxicity chemicals, including some carcinogens. The failure to accurately detect and record occupational exposures following episodic exposure events and non-chemical-specific monitoring has resulted in no detectable chemical exposures being reported by Hanford industrial hygiene staff to the medical provider who evaluated workers experiencing signs and symptoms of exposure. Without accurate exposure data, there have been challenges in correlating worker symptoms of exposure to an exposure event by medical providers. Where no exposure was documented (and the limitations of exposure data was not fully communicated to medical providers), many workers reporting symptoms of exposure (multiple workers during some events) were evaluated by

medical staff and then sent back to work with no restrictions and no follow up medical care.

16. The combination of 1) Hanford contractors' failure to develop an accurate and comprehensive hazard analysis (due to insufficient data from tank farm vapors, lack of established acute OELs, 2) post-exposure event delays by Hanford industrial hygiene staff responding to episodic events and missing potential exposure windows, and 3) use of instrumentation to quantify exposures not capable of differentiating between specific chemicals, have led to limitations and uncertainty of the worker exposure data since no detectable chemicals were recorded following many events. Industrial hygiene exposure monitoring results showing no detectable chemicals have been provided to the medical providers who evaluated workers following exposure events. But this information has been provided with no clarification as to the uncertainty and limitation of the data in terms of missing things like exposure windows, complicating the ability of medical providers to accurately assess the true chemical exposure to workers reporting symptoms of exposure.

17. All State of Washington workers' compensation claims are subject to evaluation by established criteria. Among the relevant criteria used to evaluate workers' compensation claims is a physician's opinion that a work-related illness can be attributed to work conditions. Unlike an injury, attribution of a health condition/chronic illness to work is challenging and diagnosis is often difficult as symptoms experienced may be nonspecific and can mimic those associated with non-work-related causes. When workers exposures are either not measured, due to a delay in responding to the exposure

location or the incorrect detection instruments being used for the chemicals present, this results in the Hanford IH reporting no detectable worker chemical exposures to the physician. Without a full disclosure of the limitations of the IH data provided, the ability of the physician to attribute symptoms as work-related is compromised as is the ultimate workers' compensation claim determination.

18. Hanford poses a unique exposure potential to workers conducting cleanup operations of the extremely hazardous materials, and it is unlike any other workplace in the State of Washington. The scale and complexity of the cleanup coupled with many uncharacterized and changing hazards encountered during cleanup operations, distinguishes Hanford workers from all other workers in the State. Independent inspections have well documented historical and current weaknesses in the Hanford contractors' ability to fully characterize hazards, establish a complete set of occupational exposure limits (particularly acute OELS), accurately document worker exposures, and properly communicate the limitations and uncertainty of industrial hygiene ex posure data to the physicians evaluating the workers' compensation claims. These problems impact the physician's ability to offer an opinion as to whether work-related illness is attributable to work conditions based on the medical findings and employment history. These problems have been recognized by Hanford and corrective action is being taken, but the problems are not yet resolved.

DATED this [4th] day of Mar. 2019, in Idaho Falls, Idaho.

/s/ BRUCE MILLER
BRUCE MILLER

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF GARY FRANKLIN, MD

I, Gary Franklin, MD, declare under the penalty of perjury under the laws of the United States that the following is true and correct:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief.

2. I am the Medical Director for the Department of Labor and Industries, and have worked at L&I since 1988. I lead the Office of the Medical Director at L&I. The Office of the Medical Director sets the medical policy of the agency. It has 55 medical professionals and their support staff on staff who evaluate medical issues. It promulgates agency coverage decisions and treatment guidelines.

3. I am board-certified in neurology. I am also a research professor at the University of Washington in neurology and occupational health sciences. I attended Franklin & Marshall College for undergraduate and George Washington University for medical school, and the University of California, Berkeley for a master's degree in public health.

4. The Department of Labor & Industries has a mission to make workplaces safe and to help injured workers heal and return to work:[1]

> • L&I works to prevent bad things that threaten the lives and livelihoods of the people who live and work in Washington. Among other things, that means preventing workplace injuries and deaths, the failure of equipment we regulate, violations of workers' wage and labor rights, and fraud.
>
> • When something does go wrong, L&I strives to ensure remediation and recovery—working to make individuals, workplaces and communities whole again. Success means those who are injured return to work as quickly as possible, those who are wronged get speedy relief, and those who wrong them pay the right penalty or restitution.[2]

5. As Medical Director, I am familiar with how claims are decided medically at the L&I and at

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[1] http://www.lni.wa.gov/Main/AboutLNI/Legislature/PDFs/FactSheets/LNIfact.PDF.

[2] *Id.*

the Board of Industrial Insurance Appeals. Generally speaking, a worker needs to prove that his or her condition is caused by an industrial injury or occupational exposure. Medical causation in a workers' compensation matter may be difficult to prove because of problems of proof, particularly in the occupational disease context where pinning down what a worker was exposed to may be difficult. This may be especially true if the employer has poor record keeping and monitoring about exposures. Having the worker bear the burden of proof generally is a decision of the Legislature. Wash. Rev. Code § 51.52.050. And the Legislature has decided that in cases involving firefighters, other first responders, and Hanford workers that because of their particular circumstances they do not have the burden initially to show causation for some conditions Wash. Rev. Code § 51.32.185, .187.

6. In the case of Hanford workers, this change in the burden of proof reflects that often we do not know what combination of chemicals the workers have been exposed to. But we do know that exposure to carcinogens found at Hanford may cause serious medical conditions. We also know that Hanford contractors have not been careful about monitoring exposures historically and that workers have been exposed to a wide variety of hazardous chemicals.[3] This combination presents a serious health challenge for Hanford workers. In my medical judgment, Hanford

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[3] Miller Decl. at 22-23; *Savannah River Nat'l Lab.*, Hanford Tank Vapor Assessment Report (2014), *in* Sandstrom Decl., Ex. 6.

presents a unique set of medical challenges not found elsewhere in Washington.

7. In the medical profession, the International Agency for Research on Cancer (IARC) is a credible source of evaluations of the scientific evidence examining the carcinogenicity in humans of selected agents. The federal government has relied on IARC conclusions. *E.g.*, 81 FR 36706; 63 FR 66943. Physicians routinely rely on IARC monographs when forming professional opinions regarding the carcinogenicity of agents to which humans are or may be exposed to. I relied on facts and data in these materials in forming my opinions here.

8. To illustrate some of the exposure hazards to human health at the Hanford site, we have consulted the IARC monographs for three agents known to be present at Hanford: benzene, beryllium, and ionizing radiation. This discussion is not exhaustive of these agents at Hanford, or the medical conditions linked to such agents. The Department of Energy's database of toxic substances states that these three agents are present at the Hanford site.[4] The IARC monographs for benzene, beryllium, and ionizing radiation all conclude that these agents are carcinogenic to humans.[5]

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[4] https://www.sem.dol.gov/expanded/index.cfm. *See also* Miller Decl. at 21-22.

[5] IARC Monograph, Chemical Agents and Related Occupations, Vol. 100 F, https://monographs.iarc.fr/wp-content/uploads/2018/06/mono100F.pdf; IARC Monograph, Ionizing Radiation, Vol 75, https://

9. The federal government has recognized the hazards of beryllium and radiation. At the time of the passage of the Energy Employees Occupational Illness Compensation Program Act of 2000, Congress stated that "Federal nuclear activities have been explicitly recognized under Federal law as activities that are ultra-hazardous. Nuclear weapons production and testing have involved unique dangers, including . . . recurring exposures to radioactive substances and beryllium that, even in small amounts, can cause medical harm." 42 U.S.C. § 7384(a)(1).

10. At the time of the passage of the Energy Employees Occupational Illness Compensation Program Act of 2000, Congress stated that "Over the past 20 years, more than two dozen scientific findings have emerged that indicate that certain of such employees are experiencing increased risks of dying from cancer and non-malignant diseases. Several of these studies have also established a correlation between excess diseases and exposure to radiation and beryllium. . . . [f]urthermore, studies indicate than [sic] 98 percent of radiation-induced cancers within the nuclear weapons complex have occurred at dose levels below existing maximum safe thresholds." 42 U.S.C. § 7384(a)(5), (6).

11. Benzene is carcinogenic to humans. Sufficient medical evidence establishes the carcinogenicity of benzene in humans. Benzene causes acute

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monographs.iarc.fr/wpcontent/uploads/2018/06/mono75.pdf; IARC Monograph, Arsenic, Metals, Fibres, and Dusts, Volume 100 C, https://monographs.iarc.fr/wpcontent/uploads/2018/06/mono100C.pdf.

myeloid leukemia in adults. Also, positive associations have been observed for non-Hodgkin's lymphoma, chronic lymphoid leukemia, multiple myeloma, chronic myeloid leukemia, and cancer of the lung.[6]

12. There is sufficient evidence in humans for the carcinogenicity of beryllium and beryllium compounds. Beryllium and beryllium compounds cause cancer of the lung.[7] Beryllium exposure also causes beryllium sensitization and chronic beryllium disease.[8]

13. There is sufficient evidence in humans for the carcinogenicity of X-radiation and γ-radiation.[9]

14. Based on the cited IARC monographs, L&I affirms that the agents benzene, beryllium, and ionizing radiation cause the conditions as described in paragraphs 10-12 above. This means L&I acknowledges as scientifically valid and sufficiently supported that a causal relationship ex-

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[6] IARC Monograph, Chemical Agents and Related Occupations, Vol. 100 F; https://monographs.iarc.fr/wp-content/uploads/2018/06/mono100F.pdf/

[7] IARC Monograph, Arsenic, Metals, Fibres, and Dusts, Volume 100 C, https://monographs.iarc.fr/wp-content/uploads/2018/06/mono100C.pdf.

[8] Dep't of Labor & Indus., Beryllium, diagnostic guideline, https://www.lni.wa.gov/ClaimsIns/Files/OMD/MedTreat/ClinicalGuidelinefortheDiagnosisofBerylliumSensitizationandChronicBerylliumDisease.pdf.

[9] IARC Monograph, Ionizing Radiation, Vol 75, https://monographs.iarc.fr/wp-content/uploads/2018/06/mono75.pdf;

ists at the population level between these exposures and cancer outcome s a s contemplated in the cited monographs.

Dated this [12th] day of Mar. 2019 in Tumwater, Washington by:

/s/ GARY FRANKLIN, MD
GARY FRANKLIN, MD

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF SUZANNE LISA DAHL-CRUMPLER

I, SUZANNE LISA DAHL-CRUMPLER, declare under the penalty of perjury under the laws of the United States that the following is true and correct:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief. I am and have been employed by the State of Washington, Department of Ecology, Nuclear Waste Program, for more than 23 years, beginning in July 1995. I have a Bachelor of Science in Geology and a Masters of Science in Hydrogeology from Baylor University in Waco, Texas. I have over 26 years of experience in issues related to environmental cleanup at Hanford and elsewhere.

2. Hanford is part of the nationwide complex that was used in the production of plutonium for nuclear weapons. The federal government selected the site in the early 1940s as part of the Manhattan Project, as part of World War II. It was used extensively throughout the Cold War for the production of weapons-grade plutonium. Weapons production at Hanford ended in 1989, when the mission of the site was changed to cleanup. The federal government continues to manage, treat and dispose of radioactive and mixed radioactive waste that resulted from its operations.

3. Hanford structures include nine inactive nuclear reactors along the Columbia River, five inactive chemical reprocessing facilities in the central plateau, several spent nuclear fuel storage basins along the Columbia River, the Plutonium Finishing Plant and fuel fabrication facilities (both in the process of being remediate and demolished), 177 large underground storage tanks located on the central plateau, many miscellaneous small underground storage tanks, many miles of inactive landfills, several active landfills, several large container storage buildings, and several active mixed waste treatment facilities including evaporator, effluent treatment facility and a large ground water pump and treat facility.

4. From December 1944 to 1989, Hanford produced about two-thirds of the nation's weapons-useable plutonium. This was accomplished by irradiating uranium fuel in production reactors located

along the Columbia River. After being used to cool these reactors, contaminated water was in the early years discharged to the river and later discharged directly to basins and trenches that led to disposal in the ground near the river. These historic discharges have contaminated ground water and the Columbia River.

5. The irradiated fuel was chemically dissolved in separations plants. Plutonium 239 was then processed into metallic oxide form for shipment to other Energy sites for finishing and placement in weapons. Useable uranium extracted in the separations process was recycled into new reactor fuel.

6. The chemical separations plants used varying processes over time. All produced a highly radioactive and chemically hazardous liquid waste stream that was directed into large underground storage tanks after the waste was neutralized by making the solutions strongly basic. This waste stream ("tank waste") remains at the Hanford site today, with a current volume of approximately 56 million gallons, and stored in 177 underground holding tanks at the center of the Hanford site. The tank waste is the focus of an ongoing multi-billion dollar cleanup effort, with severe and irreversible environmental consequences hanging in the balance. Because of the nature of the waste and the way it is currently being stored, the cleanup effort requires the managing of multiple moving parts, the final piece of which is disposal of immobilized high level radioactive waste at a deep geologic repository

7. Hanford's tank waste can best be described as a witch's brew of a wide range of hazardous chemicals and radioactive elements. The waste contains at least 46 identified radionuclides. Because these radionuclides are the result of reprocessing spent nuclear fuel, tank waste is presumptively considered high-level waste under the Nuclear Waste Policy Act.

8. In addition, Hanford's tank waste includes at least 26 hazardous waste constituents, including heavy metals and volatile organic compounds. All of these constituents are potentially harmful to human health and the environment. The 56 million gallons of waste in the Hanford tank systems accounts for 60 percent of the high-level waste Energy is responsible for nationwide. This is an enormous quantity of waste. As a visual aid, Energy's own documents estimate that if the contents of the tanks were placed within an area the size of a football field, they would form a column of high-level waste 150 feet tall.

9. Projects on the site at the 200 East Area, 200 West Area both in the central plateau and 300 Area and 100 Area both in the river corridor location. The work includes various environmental restoration types of work including soil and ground water cleanup, decontamination and decommissioning of old contaminated nuclear facilities, and mixed waste management treatment and disposal. It is reasonable to assume that workers would have the potential to be exposed to radioactive and hazardous chemicals and substances here.

10. Leased land and state-owned lands at the Hanford Site do not involve clean-up operations.

11. There is no other nuclear facility the same as this in Washington with the same level of hazardous substances. There is no other hazardous waste or super fund site in Washington State that is comparable in potential hazards to human health and the environment.

DATED this [7] day of Jan., 2019 in Richland, Washington by:

/s/ SUZANNE LISA DAHL-CRUMPLER
SUZANNE LISA DAHL-CRUMPLER

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON ET AL., DEFENDANTS

DECLARATION OF TOBIN MOTT

I, Tobin Mott, declare as follows:

1) I am currently employed by the United States Department of Energy ("DOE"), Richland Operations Office ("RL"), Richland, Washington. My primary job function is providing oversight of contractor industrial hygiene programs and worker safety programs, as set forth in 10 CFR § 851, Worker Safety and Health Program. I have been employed by RL in this capacity since July 2011. I have been an American Board of Industrial Hygiene Certified Industrial Hygienist since 2005. In this work I am familiar with the range of types of employment at Hanford, and the range of hazards that present for those types of employment.

2) Hanford employs slightly fewer than 10,000 DOE contractor employees, some of whom work in offices and some of whom do not. The hazardous work undertaken at Hanford is generally not done in office environments. According to the Hanford Site Population Projections 2017-2027 report developed to support Hanford's ten-year plan, about half of the employees working in the 100 Area, 200 East and West Areas,

Waste Treatment Plant, and 300 Area are office workers.

3) While some non-office workers conduct hazardous work such as demolishing former nuclear weapons production facilities, remediating waste sites, or transporting radioactive debris, other non-office workers do not come in contact with radiological and chemical hazards. Hundreds of construction workers building the Waste Treatment Plant facilities, for example, face the typical risks inherent in such work, including trips, slips and falls, but are not exposed to the hazards that are associated with Hanford cleanup activities.

4) Federal regulations for hazardous waste operations and emergency response ("HAZWOPER"), 29 CFR 1910.120, require specific training related to such hazards for private and public employees, including those at Hanford. The number of individuals taking such training is a good proxy of the number of individuals potentially exposed to hazards at the site because workers who work in hazardous positions are required to take such training courses. After taking an initial 40-hour course, followed by 24 hours of supervised field training, HAZWOPER-trained employees are required to take annual 8-hour refresher trainings. According to the Hanford HAZWOPER training office, in 2018, 3885 employees took the refresher training and in 2017, 3706 employees did so.

5) Employees who do not routinely work in hazardous jobs include administrative assistants, secretaries, lawyers, risk assessors, accountants, and other professionals. These types of workers do not enter hazardous waste sites or radiological areas during the course of their employment.

I make this declaration under penalty of perjury, and swear and affirm that the foregoing is true and correct.

Dated: Respectfully Submitted,

/s/ TOBIN MOTT

TOBIN MOTT
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99354
(509) 376-8826

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON ET AL., DEFENDANTS

DECLARATION OF MARK FRENCH

I, Mark French, declare as follows:

1) I am currently employed by the United States Department of Energy ("DOE"), Richland Operations Office, Richland, Washington, as the Director of the Projects and Facilities Division. In this capacity, my staff of over 20 federal and contracted employees and I directly oversee the cleanup work performed by Hanford contractors involved in environmental remediation, operation of nuclear facilities, and disposal of radioactive waste. I have worked for DOE at the Hanford Site since February 1975 in a number of programs, including packaging and shipment of radioactive waste to New Mexico for disposal, removal and packaging of spent nuclear fuel from underwater storage along the Columbia River, facility demolition, waste site remediation, and storage, treatment and disposal of radioactive and mixed radioactive and hazardous wastes.

2) In my position, I have witnessed and overseen federal contractor employees undertaking a wide variety of jobs related to the cleanup of Hanford. Few of

these jobs are unique to Hanford and most are undertaken elsewhere in Washington State. The type of hazardous work done at Hanford include demolition of facilities, digging up and transporting waste, removing asbestos, repackaging of waste for onsite or offsite disposal, compacting and managing a large landfill (Environmental Restoration Disposal Facility), and operating groundwater pump and treat facilities.

3) Similar work is done by Perma-Fix Northwest, which I am familiar with because projects for which I am responsible regularly ship waste to that facility. This privately-owned facility treats some of Hanford's low-level radioactive waste and mixed radioactive and hazardous waste. Perma-Fix Northwest is adjacent to Hanford and its employees do many of the same types of hazardous jobs Hanford workers do, including and packaging radioactive transuranic waste that Hanford workers created or unearthed in Central Plateau cleanup.

4) Located within Hanford is another private company, US Ecology, whose workers do the type of work done by federal contractors at Hanford. I am familiar with the work of US Ecology through my work at Hanford. US Ecology operated a landfill and disposes of low-level radioactive waste. Hanford does not dispose of any of its low-level radioactive waste at US Ecology, instead using the nearby DOE-owned and federal contractor-operated Environmental Restoration Disposal Facility.

5) Another set of workers not covered by HB 1723 who work on the Hanford site are Hanford regulators. To carry out DOE's cleanup responsibilities, several federal, state, and local regulatory agencies monitor and

ensure DOE's compliance with legal requirements, including the U.S. Environmental Protection Agency ("EPA"), the Washington State Department of Ecology ("Ecology"), and the Washington State Department of Health ("WDOH"). DOE uses an internal tracking database to document regulatory agency inspection activities. I have reviewed reports from this database that indicate that in 2018, Ecology conducted 41 inspections at Hanford and WDOH conducted 34 inspections. During the 5-year period between 2014 and 2018, Ecology conducted 250 inspections at Hanford and WDOH conducted 166 inspections.

6) Ecology employees conduct inspections throughout the cleanup areas covered by HB 1723, including within the tank farms, to ensure compliance with the state-issued hazardous waste permit. DOE and its contractors also conduct general inspections in cleanup areas covered by HB 1723 to ensure compliance with the state-issued permit. In addition, Ecology and WDOH conduct inspections to ensure DOE's compliance with air quality requirements under federal and state law. Ecology regulates criteria and toxic air pollutant emissions at Hanford, while the WDOH regulates radioactive air emissions. Employees of Ecology and WDOH conduct inspections of air emissions sources throughout the cleanup areas covered by HB 1723, including within the tank farms. Because their jobs require them to be on the Site so frequently, many Ecology and WDOH employees are issued security badges to allow them access to the Hanford Site where cleanup work is occurring. Our Hanford security office reports that 71 Ecology employees and 28 WDOH employees have these annually-issued security badges.

I make this declaration under penalty of perjury, and swear and affirm that the foregoing is true and correct.

Dated:

Respectfully Submitted,

/s/ MARK FRENCH

MARK FRENCH
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99354
(509) 373-9863

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON, ET AL., DEFENDANTS

SUPPLEMENTAL DECLARATION OF PATRICIA HICKS

I, Patricia Ann Hicks, declare as follows:

1) I am providing this declaration in support of the United States' Reply and Opposition in Support of Its Motion for Summary Judgment.

2) To correct an inadvertent error in my previously filed declaration, Paragraph 21 of the Declaration of Patricia Hicks, ECF No. 20-3, should be revised as follows:

Claim costs incurred for the 2018 calendar year alone totaled ~~$2,428,767.00~~ $17,847,496.32. Between 2009 and 2018, total costs incurred amounted to $115,929,426.88.

I make this declaration under penalty of perjury, and swear and affirm that the foregoing is true and correct.

Signed this [12] date of [Apr.] in [Benton] County, Washington.

/s/ PATRICIA HICKS
PATRICIA HICKS
Penser North America, Inc.
1802 Terminal Dr.
Richland, WA 99354
(509) 420-7290

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF KELLY WOOD

I, Kelly T. Wood, declare under the penalty of perjury under the laws of the United States that the following is true and correct:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief.

2. I am an assistant attorney general with the Counsel for Environmental Protection Unit. I have worked for the Attorney General's Office for approximately 10 years. I am counsel in *Hanford Challenge, et al. v. Perry, et al.*, No. 15-cv-5086-TOR, commonly known as the Vapors Litigation. I am intimately familiar with the terms of the settlement agreement executed by the parties in the Vapors Litigation on September 19, 2018.

3. I have reviewed the United States' Reply Statement of Disputed Facts, ECF No. 33-4 at 5 and its claim that "the monitoring of potential exposures at the tank farms has been addressed directly in the Vapors Litigation," and this declaration responds to this claim.

4. It is unclear exactly which portion of the Vapors Litigation settlement that Plaintiff references with regard to "monitoring of potential exposures at the tank farms[,]" but I assume this statement is in reference to Section IV of the agreement. This section covers "Air Monitoring, Sampling and Alarming." Specifically, the settlement agreement requires the Department of Energy (DOE) and its prime tank farm contractor, Washington River Protection Solutions (WRPS), to complete design work (not installation) for a tank vapors detection and alarming system, the Vapors Management and Detection System (VMDS), in two of Hanford's 19 tank farms, A and AX Farms, by December 31, 2018. DOE and WRPS had already installed VMDS in AP Farm prior to the execution of the Vapors Litigation settlement.

5. While the parties to the Vapors Litigation anticipate that VMDS will be deployed to A and AX Farm after DOE completed design work for use of VMDS in these additional two farms, the Vapors Litigation settlement agreement does not require installation of a VMDS system in A or AX Farm and does not require DOE to continue use of VMDS in AP Farm. Furthermore, the settlement agreement wholly does not address (and obviously does not require) VMDS in the other 16 tank farms at the Hanford site, all of which are routinely accessed by Hanford workers.

6. As a result, I strongly dispute Plaintiff's statement that monitoring of potential exposures at the tank farms has been "addressed" by the Vapors Litigation and its resulting settlement agreement. While we targeted development of VMDS for potential deployment in A and AX Farms because these farms will be most active in the immediate future (in terms of the waste retrieval schedule), the fact remains that the vast majority of tanks at Hanford are unmonitored and unaddressed by the settlement.

Dated this 22nd day of Apr. 2019 in Seattle, Washington.

/s/ KELLY T. WOOD
KELLY T. WOOD

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

DECLARATION OF CHERYL WHALEN

I, CHERYL WHALEN, declare under the penalty of perjury under the laws of the United States that the following is true and correct.:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief. I am and have been employed by the State of Washington, Department of Ecology, Nuclear Waste Program since 2006. In my job, I manage the Cleanup Section, which oversees soil and ground water cleanup and high-level tank waste storage at the Hanford Site. I have had experience of working with Hanford-related positions since 1996.

2. Hanford currently contains some 53 M gallons of high-level waste. As of 2007, this was about 60% of the high-level waste by volume managed

by USDOE. Millions of gallons of waste was directly released to the environment and is currently in the soil and groundwater. Some of this liquid was disposed in cribs and trenches. USDOE also buried thousands of cubic feet of contaminated materials both in known burial grounds and in unmarked burial grounds. Where they exist, burial records are not complete and usually are lacking chemical information.

3. Potential exposures to workers include radioactive materials (some at very high levels), chemicals (including vapors and dust), explosions (hydrogen build up in waste tanks), industrial accidents, poorly maintained storage containers (e.g., drums, canisters, chemical containers), contaminated buildings, asbestos aging facilities subject to collapse and criticalities.

4. Concerns with harmful vapors have been noted by workers since 1987. Monitors worn by workers provide ineffective monitoring. This concern is still not addressed in a final remedy. Some 1800 chemicals have been identified in the tank vapor.

5. Many of the cleanup efforts at Hanford have resulted in the release of mixed contamination. Recent releases include tritium exposure of remediation workers in the 100 Area.

6. USDOE's claims that this work is no different from that at US Ecology or PermaFix fails to recognize the size of the Hanford site and complexity of the contamination. US Ecology is a

low-level waste facility receives packaged waste meeting NRC requirements. PermaFix is a low-level mixed waste facility that receives new waste, meeting Washington Department of Health and Washington Department of Ecology requirements and treats that waste in an approved manner.

DATED this 17th day of Apr. 2019 in Richland, Washington by:

/s/ CHERYL WHALEN
CHERYL WHALEN

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

SUPPLEMENTAL DECLARATION OF JOYCE TSUJI

I, JOYCE TSUJI, declare under penalty of perjury under the laws of the state of Washington that the following is true and correct.

1. I am over the age of 18, competent to be a witness herein, and make this declaration in that capacity. I state the following based upon my personal knowledge. I have been requested to provide additional expert opinions on behalf of the State of Washington regarding the unique risks to worker health and safety from potential exposures to multiple toxic substances present at the Hanford Nuclear Reservation.

2. Attached as exhibit 1 is my resume.

3. I have reviewed the declaration of Mark French and this declaration responds to his contention

that similar work is done at Perma-Fix Northwest and US Ecology. I have also reviewed the United States' Reply to State of Undisputed Facts, ECF No. 33-4 at 5, which discusses the results of the Vapor Litigation and this declaration responds to the suggestion that recent improved monitoring means there is no longer a problem at Hanford. Finally, I have reviewed the declaration of Tobin Mott, and this declaration responds to his suggestion that non-cleanup workers are not exposed to hazards at Hanford.

4. The Hanford Nuclear Reservation has had a long history of various operations related to plutonium production and management and treatment of residual wastes. These activities have resulted in diverse exposures to multiple inorganic and organic chemicals and radioactive constituents, with incomplete exposure characterization and unknown potential for additive or synergistic effects (TVAT 2014; NIOSH 2016). In addition, the U.S. Department of Energy (DOE) has long been trying to address tank vapor exposures for more than 25 years (NIOSH 2004; TVAT 2014). Workers at the Hanford site thus have much higher potential for harmful exposures than workers at Perma-Fix Northwest and US Ecology. Although these companies process waste from Hanford, they are located near the town of Richland and far from the tank farms and waste treatment and cleanup areas at Hanford.

5. Given the history of worker tank vapor exposures at Hanford, it seems too soon to be certain

whether recent actions will be effective in preventing such exposures. As noted in my prior declaration (see Section D), the tank vapors due to their composition, concentrations, large volume, and multiple means for releases, pose a high potential to cause harm even with very brief exposures. The location of offices of Washington River Protection Solutions and other staff in temporary trailers near tank farm areas also increases the potential for exposures. As noted by NIOSH (2016), "workers in areas outside the periphery of the tank farms have reported odors believed to come from within the tank farm perimeter."

6. Even if no further exposures were to occur, past occupational exposures to workplace chemicals and substances before the recent improvements may contribute to disease processes and later outcomes such as for cardiovascular and respiratory disease or neurological effects (e.g., ATSDR 1999; Blanc 2012; Doney et al. 2014; Allam et al. 2018; Bulka et al. 2019). For example, exposure to beryllium by nuclear industry workers has a latency for development of chronic beryllium disease of up to 30 years (DOE undated).

7. Increasing knowledge of beryllium exposures that might sensitize susceptible individuals to this disease has resulted in progressively lower occupational exposure limits (Kreiss et al. 2007; Balmes et al. 2014; OSHA 2017). Moreover, as noted by Kreiss et al. (2007), beyond known worker exposures, chronic beryllium disease has

also occurred in those considered to have "trivial, unrecognized, or brief exposure to beryllium," such as "office staff, sercurity guards, building trade workers, end-product inspectors, and workers hired years after beryllium operation ceased in particular facilities."

8. Long-term health risks from carcinogens such as radiation, which typically involve years of latency before disease occurrence, have also been present at the Hanford site (Nadler and Zurbenko 2014).

9. Thus, Hanford workers, including those not directly involved in clean-up activites, have a higher potential for health risks compared to other workers in Washington State because of possible exposures to numerous inorganic, organic, and radiological substances; and incomplete substance characterization, exposure quantification, and knowledge of the toxicity of multiple constituent exposures over the history of operations at the Hanford Nuclear Reservation.

DATED this 19 day of Apr. 2019, in Bellevue, Washington.

/s/ JOYCE TSUJI
JOYCE TSUJI

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON

No. 4:18-cv-05189

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DEFENDANTS

SUPPLEMENTAL DECLARATION OF ANNE SOIZA

I, Anne Soiza, declare under the penalty of perjury under the laws of the United States that the following is true and correct:

1. I am over the age of eighteen, and am otherwise competent to testify. I make these statements on personal knowledge and belief.

2. I have reviewed the declarations of Mark French, and this declaration responds to his suggestion that work at Hanford is not unique.

3. As the head of Washington's OSHA regulatory program where I have statewide authority for over 200,000 worksites, I acknowledge there are many straight forward worker safety and health hazards that exist for workers who work at Hanford that exist elsewhere in Washington State such as office hazards, construction demolition

type job hazards, trucking hazards, machinery shop type hazards, and even hazardous waste site, garbage disposal worksite hazards where asbestos, discarded household products like paints, oil and pesticides are handled, processed and stored.

4. As stated in my previous declaration, the Hanford tank remediation worksite, with its numerous highly hazardous industrial chemical and radiological substance mixtures presents and extremely serious injury and illness exposure potential for Washington workers found nowhere else in Washington. I know of no other worksite in Washington State where the magnitude and sheer complexity of the known and unknown qualities of various hazardous industrial chemical waste byproduct and radiological waste stream mixtures combined with site demolition industry hazards (one of the most dangerous sub-industries in construction) exists at this time. Again, the Hanford tank site remediation work presents challenges from an occupational safety and health standpoint at the absolute highest degree of complexity.

5. I have direct knowledge of landfill disposal worksite operations of low-level radioactive waste at Hanford as a sate inspector at the disposal site operated by US Ecology in my early career. I personally inspected mostly 55-gallon drums and other like containers and performed tractor-trailers surveys for worker exposure to ionizing radiation prior to and during disposal. I believe

the Hanford tank remediation worksite operations to be significantly more challenging for worker safety and health management due to the magnitude and hazard complexity of the hazardous industrial chemical/radioactive material nature and quantity combined with the demolition hazards at the tank farm.

DATED this 19th day of Apr. 2019 in Tumwater, Washington by:

/s/ ANNE SOIZA
ANNE SOIZA

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON
YAKIMA, WASHINGTON

Case No. 4:18-CR-05189-SAB

UNITED STATES OF AMERICA, PLAINTIFF

v.

WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES; STATE OF WASHINGTON; JAY INSLEE, IN HIS OFFICIAL CAPACITY AS GOVERNOR OF THE STATE OF WASHINGTON; JOEL SACKS, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES, DEFENDANTS

Date: May 22, 2019

MOTION HEARING
PAGES 1 TO 60

APPEARANCES:

FOR THE PLAINTIFF:

Christopher R. Healy
Chrisopher.Healy@usdoj.gov
US Department of Justice
1100 L. Street NW
Washington, DC 20005
202-514-8095

FOR THE DEFENDANTS:

Anastasia Sandstrom
Anas@atg.wa.gov
WA Attorney General's Office—Seattle

800 Fifth Avenue
Suite 2000
Seattle, WA 98104
206-464-6993

Before: THE HONORABLE STANLEY A. BASTIAN, United States District Court Judge

[5]

(May 22, 2019; 1:38 p.m.)

THE COURTROOM DEPUTY: Please rise.

(Call to Order of the Court.)

THE COURT: All right. Good afternoon. Please be seated.

THE COURTROOM DEPUTY: The matter now before the Court is the *United States of America v. Washington State Department of Labor and—Labor & Industries*, Case No. 4:18-CV-05189-SAB. This is the time set for a motion hearing.

Counsel, please state your presence for the Court and record.

MR. HEALY: Christopher Healy for the United States.

THE COURT: All right. Good afternoon.

MS. SANDSTROM: Anastasia Sandstrom for the State of Washington.

THE COURT: All right. Good afternoon to both of you.

Can you introduce who you have at the table with you, too, so—at this time?

MR. HEALY: Sure. I'm here with my colleague Jacqueline Coleman-Snead.

THE COURT: All right. Hello.

MS. SANDSTROM: I'm here with my colleague Paul Weideman.

THE COURT: All right. Hello.

All right. We have cross motions. I believe that the United States filed its motion first, and I think the United [6] States is actually challenging the new law passed by the state, so it makes sense to me that the United States would proceed first.

Any objection to that, Ms. Sandstrom?

MS. SANDSTROM: No objection, Your Honor.

THE COURT: All right. Go ahead.

Mr. Healy, give me a moment just before you start your remarks.

MR. HEALY: Sure. Take your time.

(Pause in proceedings.)

THE COURT: All right. I've got another matter at 3 o'clock. I'm not suggesting that we need to spend the next hour and a half on this, but I'm not particularly concerned about the time.

How much time do you think you need to make your—

MR. HEALY: I'm prepared to stay within the 15 minutes-ish.

THE COURT: Okay. Well, then I'm not going to bother keeping time. I'll let you just—

MR. HEALY: I may go a little bit—I may go a little bit over.

THE COURT: That's fine. I'm not concerned about the time.

MR. HEALY: Sure.

Your Honor, Washington has passed a workers' compensation [7] law that violates the intergovernmental immunity doctrine of the Supremacy Clause because it discriminates against the federal government and its contractors, and because it directly regulates the United States.

HB1723 creates a prima facia presumption that a contract worker at the Hanford nuclear facility who works a single 8-hour shift becomes entitled to workers' compensation benefits if that worker comes down with one of a long list of illnesses, including workers—including respiratory disease and neurological disease, which are terms that are not defined in the law.

The law applies to a single federal facility on its face, and would require the federal government to cover costly health care costs, pension payments, and other benefits for workers whose illnesses are unrelated to their work at the Hanford site.

In so doing, the law places burdens on the federal government and its contractors that are faced by no other entity in the state and directly regulates the federal government by interfering with its workers' compensation operations.

I'd like to begin by addressing what the Washington —what Washington appears to be—appears to believe

is the linchpin of its case; that is, the waiver provision of 40 U.S.C. 3172.

Prior to the enactment of this provision in the 1930s, states were disallowed from regulating workers' compensation on [8] federal land or federal projects at all. The 3172 waiver allowed states to apply their workers' compensation laws to federal contractors to the same extent—so long as—as those laws apply, quote, to the same—in the same way and to the same extent as if the premises were under the exclusive jurisdiction of the state.

This provision does not waive immunity over the enactment of a discriminatory law like HB1723 at all, let alone clearly and unambiguous, as the Supreme Court—as the Supreme Court held in the *Goodyear Atomic* case. The plain language of this provision requires that the state not only regulate in the same way that they regulate elsewhere under their exclusive jurisdiction—that is, in accordance with state and federal law—but also to the same extent that the law applies elsewhere. That is, not to some extreme degree on federal land that it could not apply its law elsewhere.

HB1723 does not apply to the same extent as if Hanford were under the exclusive jurisdiction of the state because the law applies specific provisions for federal contractors at Hanford that are not applied to any other entity in the state.

The state could not apply—

THE COURT: There is no other entity in the state that has workers working on projects similar to the Hanford cleanup.

MR. HEALY: That's true, Your Honor, to an extent, but the—there are workers that do all sorts of work at Hanford. [9] There are—as we mentioned in our briefing, there are office workers at Hanford; there are workers who work in hazardous positions, and work in nonhazardous positions. And so Washington makes the point that they believe that Hanford is a class of one. And it may be that Hanford's land is a class of one, but it's—the—the law itself does not operate on Hanford's land. It operates with respect to the workers at the site and the employers at the site. And the workers and employers at the site are not a class of one. And I think that's an important distinction.

THE COURT: No, but are there other workers that are doing the same type of work that this law does not apply to?

MR. HEALY: Are there other workers doing the same type of work that this law does not apply to?

There are—for example, an office worker at the covered portion of the Hanford site, even if they are, you know, a typist, who is spending hours in front of a computer, is doing the same kind of work that those similar positions would—would be all over the state.

So, yes, is the answer; I think there are similarly situated workers elsewhere in the state.

THE COURT: Are you suggesting this—this new law that the state passed applies to the office workers working for the third-party contractors employed by the U.S. Government at the Hanford site?

[10]

MR. HEALY: It applies to federal contractors, not those employed by the U.S. Government, but those—but it applies to federal contractors on the covered portions of the site.

THE COURT: That's what I meant.

MR. HEALY: Yes, it does.

THE COURT: And so it would apply to the office workers that are working for those third-party contractors.

MR. HEALY: That's correct.

THE COURT: But are those office workers exposed to the same hazards as an office worker in this courthouse?

MR. HEALY: I—I think—it is our position that those workers are exposed to the same hazards. But I think it's important to understand that the discrimination is not only with respect to, you know, an office worker at Hanford that may potentially be exposed to something that an office worker here in this courthouse would not be. The discrimination is much more blatant than that, if you actually take a look at the specific examples in which it appears.

For example, there are numerous state contractors—state employees who work for the state Department of Health, for example, state Department of Ecology, who conduct inspections at the Hanford site. And those individuals are frequently accompanied by federal contractor employees during those inspections.

During any of these particular inspections, if an [11] inspector spends eight hours at this facility, walking through the site conducting inspections, the state employee would not receive the presumption, while the federal contractor employee would receive the presumption.

So this discrimination is very blatant, and to the point where there just cannot be any—any rational reason, let alone a significant justification, as the Supreme Court would require, for the difference in treatment that this law actually enacts.

I'd like to turn back for a minute to the—to the—Washington's argument with respect to the waiver provision, because they do appear to believe this is the crux of their case. They point to this "as if" phrase to say, look, this language allows the state to regulate federal contractors on federal land just as if it were land elsewhere in the state.

To be clear, Your Honor, the United States does not disagree with this interpretation of the statute. Congress allowed the state to regulate on federal land just as it is allowed to regulate elsewhere in the state.

What Washington appears to misapprehend, however, which I think is a very important point, is that Washington's power to regulate anywhere under its exclusive jurisdiction in the state does not include the power to discriminate against federal contractors or directly regulate the federal government.

In response to this point, in its reply on—in Footnote 2 on Page 7, the State's only response to this point is [12] that it, quote, seems unlikely that federal contractors would be working on state or private land.

This does happen, Your Honor. In fact, the *Boeing* case was exactly such a situation. In that situation, the federal contractors were doing federal cleanup work on private property that was owned by the Boeing Company. And the Ninth Circuit in that case found that a state law that applied heightened cleanup standards with respect to that property and abutting federal property violated the Supremacy Clause, notwithstanding the fact that the site was uniquely contaminated.

The obvious major problem with Washington's interpretation of the 3172 waiver is that Washington's interpretation of its regulatory power here is essentially limitless. Washington's position, as I understand it, is that it can regulate workers' compensation for federal contractors on federal land to the full extent of its power over private entities. Washington provides no reason why Congress would do such a thing, Your Honor. Indeed, their interpretation would cut directly against the heart of the intergovernmental immunity doctrine from as early as *McCulloch v. Maryland*, which established it.

THE COURT: Let me ask, if the federal government weren't involved and this was just state land, and the same third-party contractors were out there, and the same risks were involved that the state has identified, would the state have the legal [13] authority to adopt this law and create this presumption for those workers?

MR. HEALY: No, Your Honor—

THE COURT: Why not?

MR. HEALY: —because they would still be federal contractors. An intergovernmental—

THE COURT: No, I'm saying take the federal contractor out of it.

MR. HEALY: If—oh. If they were not federal contractors, and they were simply private entities on state or private land, yes.

THE COURT: Okay.

MR. HEALY: They would have that power. And, in fact, they've pointed to examples of where they've created presumptions that apply across the board on state and private land, as well as federal land; for firefighters, for example. A firefighter at Hanford isn't treated any differently than a firefighter on state land.

THE COURT: Does the fact that the state passed this law, and it became effective—and, I'm sorry, I don't have the dates at hand, but it became effective, and then a few weeks later the federal government signed the memorandum of understanding where it accepted the responsibilities of being the employer, does that play into the Government's analysis at all?

[14]

MR. HEALY: No, it doesn't—

THE COURT: In other words, the Government didn't have to be there as the employer, did it?

MR. HEALY: That's—that's true. The—the Government has been in the practice of signing these MOUs for several—for at least a decade, if not more. They've signed many iterations of these. And some substantive terms of them have not changed, although the names of the contractors have changed. And so this is—this is how this practice has worked for—for a long period of time.

But I think the—the more direct answer to your question is the fact that a state agency or, rather, a federal agency may not waive intergovernmental immunity on its own. And that is clear in the case law, that only Congress can waive intergovernmental immunity, not an agency; that Congress can only do it clearly and unambiguously.

And in the *Hancock* case, which is a Supreme Court case, the Court found that a state implementation plan under the Clean Air Act that had been approved by the EPA nonetheless waived—nonetheless violated intergovernmental immunity because of the fact that Congress had not actually provided—

THE COURT: So what you're saying is—is that—I think it's the Department of Energy, then that agency signing the MOU does not operate as a waiver because that can only happen—

[15]

MR. HEALY: That can only happen through Congress. And I think even if—even if that weren't the law, I think if you look at the MOU, the MOU doesn't actually waive immunity over—over this particular kind of regulation because it only applies with respect to applicable laws of the state of Washington, of which we would not admit that this is one, and also would only apply with respect to claims that are related to the Hanford site. And those are specific provisions that are within the MOU. And this law would require that the DOE pay—pay out claims for—for—that are not related to the Hanford site.

So I don't think that DOE has agreed to this, regardless of the fact that they've signed the MOU. But, notwithstanding, I think the argument is simply incorrect because of the fact that Congress is the one that needs to actually perform the waiver clearly and unambiguously.

THE COURT: Okay. Thank you.

MR. HEALY: I think it's important to understand that the intergovernmental—the purpose of the intergovernmental immunity doctrine here is that it's a political check. It would require that the—it allow—it ensures that the federal government, which has no voice in state legislatures, may not be burdened by regulations that are created in a forum in which the federal government does not have a direct voice.

At the very least, the 3172 provision is ambiguous, and cannot be read to presume such a result, given the clear [16] statement rule for intergovernmental immunity waivers.

THE COURT: Well, I guess I'm still hung up on that "same way and to the same extent"/"as if" language. The Government has—or the federal government has focused the Court's attention on "same way, same extent"; the State kind of focuses the Court's attention on the "as if" phrase.

But looking at it in its entirety, it says, the way I read it, is the federal government waives immunity for purposes of—these are my words, not the statutory words—

MR. HEALY: Sure.

THE COURT: —for purposes of enforcement of L&I as long as the state is—is enforcing L&I against the federal government or its contractors in the same way and to the same extent as if these premises were being operated by the state.

So does the federal government take the position that the state could not have passed this law and enforced it against its own workers if the state were managing the Hanford project?

MR. HEALY: I don't think that this—I don't think the waiver provision at all affects what the state could do with respect to the state's workers.

THE COURT: So if the state could do this against state workers or other employers that were operating the Hanford site, assuming the federal government wasn't out there, why can't they do it to the federal government or its contractors, pursuant to 3172? I mean, I see 3172 to not be as ambiguous as both the [17] federal government and the State are trying to argue to the Court it is. It doesn't seem ambiguous to me.

MR. HEALY: So I think if you look at all of the statutes, the statutes that were cited on our side and the statutes that were cited by the State, that phrase, or some version of that phrase, appears throughout these statutes. Every one—every time there's an intergovernmental immunity waiver, there is one of these "in the same manner, in the same extent," or "in the same way and to the same extent," as—and sometimes it says at the end, you know, "as other land may be taxed," or "as if under the exclusive premises jurisdiction of the state."

And—and—and the State wants to focus Your Honor's attention on the differences between the tail

end of that statute. But I think what's important to understand is that the purpose of that "same manner and same extent" is—is that in all of these statutes, the clear intent is to treat the Government in an evenhanded way. You can—you can apply your regulations either to the federal government or to federal contractors, whatever the situation is, but you have to do it in a way that doesn't discriminate against the federal government or its contractors. I think that it's clear that that's what—each—that Congress in each of these instances was doing, and I don't think that there's any legitimate rationale that can be devised to understand Congress' intent in this statute to be [18] wildly different than Congress' extent [sic] in RCRA or in CERCLA or in, you know, the various other provisions that have been pointed out by the parties.

I'd like to spend a minute talking in a little bit more detail about the discrimination aspect.

THE COURT: You're fine. You're fine.

MR. HEALY: The law discriminates on its face. It applies to—only to, quote, United States Department of Energy Hanford site workers, which are defined to include any workers who work, quote, directly or indirectly for the United States at the Hanford site. The law defines "the Hanford site" to include the federally owned and operated areas of the site and exclude nonfederal areas.

The question for this Court is whether the law treats someone else better than it treats the federal government or those with whom it deals. Courts thus uphold laws that treat the federal government, or its contractors, the same or better than nonfederal parties, but

strike down laws that treat the federal government worse than those parties.

Here it is clear, as I mentioned previously with the example of the—with the state inspectors, that these treat similarly situated entities—similarly situated individuals at Hanford dissimilarly.

In addition, there are numerous other ways you can—you can slice this to understand how this law is discriminatory. A [19] Hanford worker who worked one 8-hour shift at the Hanford site, let's say, back in the 1970s, it's been many decades since then, and now that contractor has—has fallen ill with Alzheimer's disease. And let's say that that worker has a family history of Alzheimer's; everyone in their families had Alzheimer's, both parents had Alzheimer's. It would be the responsibility of the federal government to disprove a presumption that the Alzheimer's was as a result of that one 8-hour shift decades ago, which is basically an impossible task. It's never going to be possible for the Government to disprove, by clear and convincing evidence, that there was a causal connection between—

THE COURT: Well, I think that's what the state was trying to address, is that it's been fairly difficult for workers to prove, based on the bad recordkeeping going on at the Hanford site by both the federal government and the third-party contractors, that it's been next to impossible for employees exposed to this unreasonable risk to prove the connection that their cancer or their life-threatening condition was caused by this constant exposure.

So the Court's not terribly sympathetic to the problems the Government might meet trying to disprove it. I mean, I don't see that as a very compelling argument.

MR. HEALY: I understand that that—

THE COURT: I'm still focused on if the state could do [20] this to state workers or other workers not involved with the federal government, then why can't they do that to the federal government and its third-party contractors based on, because they're treating people in the same way and to the same extent as if the premises were under the exclusive jurisdiction of the state. And the federal government has, I think, just stipulated that the state could enforce this rule against itself or against state employers.

So why can't it enforce it against the federal government?

MR. HEALY: I understand the question. I think that hypothetical fundamentally changes the nature of this statute. I think a statute that applied to this—

THE COURT: I'm just—I think you're—I think both parties, I'm going to fault both of you for trying to make a fairly simple statute appear to the Court to be ambiguous for the purposes that you're trying to argue. The statute is fairly clear.

Why don't you—tell me why what the state has done has violated the statute. Why isn't this waiver—why shouldn't the Court read this waiver of immunity as broadly as I'm clearly indicating to you that I'm inclined to do?

MR. HEALY: I understand, Your Honor's point. I respectfully disagree with the fact that this—that this is

directly analogous to a situation in which the state is—is—[21] is applying a law with respect to state workers. The intergovernmental immunity doctrine does not apply at all with respect to state workers. It applies only with respect to federal contractors.

THE COURT: I know, and the federal government, by act of Congress, has said that you can treat us just as if you would treat someone else. And you've said they could treat someone else this way, and the federal Congress has said you can treat us just the way as you would treat someone else.

So why can't they treat you that way now?

MR. HEALY: I don't think that the statute says that the—

THE COURT: Why doesn't it say that? I'm reading—

MR. HEALY: What the statute says, Your Honor—

THE COURT: Okay.

MR. HEALY: —is—with respect, is that they can apply those laws in the same way and to the same extent as if the premises were under the exclusive jurisdiction of the state.

THE COURT: Right.

MR. HEALY: It doesn't say anything about transforming the nature of the statute to apply to some other entity that the statute does not otherwise apply to. The statute applies to federal contractors.

So I think the question should be: Could they apply a state law to federal contractors elsewhere in the state? And [22] the answer is that they couldn't.

THE COURT: I don't think the statute says that, but continue with your argument.

MR. HEALY: Okay.

THE COURT: Are you arguing that this statute is basically—can't be changed? In other words, this is an enforcement statute, but it doesn't authorize the state to change the law?

MR. HEALY: I'm sorry—

THE COURT: In other words—

MR. HEALY: —I don't understand the question.

THE COURT: —you just waived immunity based on the way the state law was when this statute was passed in the 1930s, but the states can't change their L&I laws and enforce them.

MR. HEALY: I'm not sure I follow the question.

THE COURT: Okay. When was 3172 adopted?

MR. HEALY: In the 1930s. 1936—

THE COURT: Okay.

MR. HEALY: —I think.

THE COURT: So is the Government arguing to me that this statute only authorizes the government to enforce the laws as they currently existed in 1930, or does this go beyond that and say the state can change its law and still apply them to the federal government?

MR. HEALY: Oh, absolutely the state can change its [23] law—

THE COURT: Okay.

MR. HEALY: —as long as it does so in an even-handed manner. It has to do so in the same way and the same extent that it would do—it would do as if it was elsewhere in the state. So the state has multiple times amended their workers' compensation law without issue, and I think that—

THE COURT: Well, and I agree with you on that. And I think—and it could be my fault, and probably is, with my question, but this is what I'm focused on: I thought you said that the federal government stipulates that the state of Washington could pass a law that changes this burden of proof, as they've done here, and apply it to this Hanford site on the assumption that the state—and the federal government wasn't even involved, and just for purposes of my hypothetical, the federal government is not even there, it's purely a state project, and they've hired third-party contractors to come out and do this cleanup work.

I thought you said the federal government agrees the state could pass this law.

MR. HEALY: I do agree that the state could pass that law. But I don't think that's apposite to this case. And the reason—

THE COURT: Well, I think, then, the statute says the state can apply that law to the federal government in the same [24] way and to the same extent as if the premises were under the jurisdiction of the state. That's what I'm hung up on, and I'm not understanding your argument that it doesn't say what I—what I read it to say.

MR. HEALY: So—so I think, actually, perhaps the misunderstanding is not actually with the—the waiver statute. It may be with HB1723 itself.

If Your Honor takes a look at the statute—

THE COURT: Okay.

MR. HEALY: —and take a look at what HB1723—

THE COURT: Let's take a look at the words.

Is that quoted in your brief, so I can take a look at it?

MR. HEALY: The words of the statute?

THE COURT: Yeah.

MR. HEALY: Sure. It is. It is, if you'd just give me a moment.

THE COURT: I'm sure it is. I just don't know the page.

MR. HEALY: It's attached to my declaration, along with the—along with—my declaration, along with our opening motion.

THE COURT: Okay.

MR. HEALY: Declaration of Christopher Healy. I think it's Exhibit A—

THE COURT: Yeah, I didn't mean to interrupt you—

MR. HEALY: No, that's all right.

[25]

THE COURT: —but if you just give me a page number, it makes it easier.

MR. HEALY: Um, I—it's—it would be Exhibit 20-1, Declaration of Christopher Healy—

THE COURT: Okay. Go ahead. I'll find it while you—

MR. HEALY: —with the statute—I just need a moment to find the statute as well.

So the statute itself applies to the United States Department of Energy Hanford site workers, and it defines those as individuals who are performing work either directly or indirectly for the United States.

And the law itself does that. There's nothing—in this hypothetical that Your Honor has described, you would sort of have to change the nature of the law to—to say, you know, this is a state agency applying to—to state facilities. And so—

THE COURT: I think I understand. Just to make sure—

MR. HEALY: Yeah.

THE COURT: —because I've kind of been focused on this, so looking at the statute, you say that this isn't "in the same way, in the same manner/as if" because of the wording of the statute itself, which makes specific reference to the United States or its third-party contractors.

MR. HEALY: Exactly.

THE COURT: So is the Government taking the position the [26] statute would be perfectly acceptable if the statute was worded differently?

MR. HEALY: I think—

THE COURT: Instead of saying those workers at the Hanford site "working directly or indirectly for the United States," perhaps the State should have said "either directly or indirectly at the Hanford site."

MR. HEALY: I don't think it could have said "directly or indirectly at the Hanford site" because of the nature of the Hanford site as owned by the federal government. But I think if this were a law, some hypothetical law that said, you know, the state owns this facility and—and any state of Washington employees who work at this facility should receive this presumption, I don't think there would be a problem with that statute.

But this statute doesn't do that. This statute affects specifically—I don't think it's just wording. I think it's what it is substantively doing, which is affecting the United States Department of Energy Hanford site workers, those who work directly or indirectly for the United States.

THE COURT: But it seems to me you're arguing that the reason this fails for your discrimination test is because it specifically uses the words "for the United States."

MR. HEALY: So I think that that's—that's correct in that what it is doing is it is singling out federal contractors. [27] I think a differently worded statute that nonetheless singled out federal contractors would not survive intergovernmental immunity either.

THE COURT: Okay.

MR. HEALY: It's the function of what it's doing, is my point.

I think Your Honor understands the—my point with respect to discrimination, but I'd like to talk about the State's argument with respect to their invocation of the rational basis test. They say if the state had a rational basis, that then—then this Court should uphold the law.

They seem to believe that this Court should be importing Equal Protection Clause doctrine into intergovernmental immunity analysis, even though that's exactly what the Supreme Court in *Davis* asked—required courts not to do. But a state law—that—that—the Supreme Court in *Davis* required that a state law that treats federal entities differently have a reason that is directly related to or justified by a significant difference.

This law discriminates in a way that is not linked to the contaminated nature of the site. In the ways I've described, it treats similarly situated entities differently.

The State also contends that—that Your Honor should balance the interests between the state and—and the federal government. If you look at the *Davis* case, that's exactly what the Court did not do in that case. It found that a state's [28] interest in passing an allegedly discriminatory tax—as Your Honor mentioned before, the state had—has described its reasons for passing this law, and the Supreme Court in that case found that an allegedly discriminatory tax, no matter how substantial, is—the state's interest in passing that tax is, quote, simply irrelevant to the inquiry.

So the state may have had very good reasons to pass this law, Your Honor, but that inquiry is not something that should be taken into account.

THE COURT: So the U.S. Government is taking the position the rational basis test doesn't really apply to the analysis.

MR. HEALY: The rational basis test does not apply to the analysis; and, secondly, that a balancing of the interests is not the correct analysis either.

THE COURT: Balancing. Okay.

Let me go back to something else you said, and I was going to get to this towards the end of your remarks. Does this motion resolve the case one way or the other, in the opinion of you and your client?

MR. HEALY: Yes, Your Honor.

THE COURT: You've taken the position that the state act is treating similar workers differently. And I know the State, in its brief, has said no, they're not.

Is that a material issue of fact that needs to be resolved?

[29]

MR. HEALY: I don't think—I don't think it is, Your Honor. And there—I understand—I understand the point, and there certainly is difference in opinion about the potential effects of this law, but I don't think that it's necessary to do fact-finding in this case, and I think the State agrees, because the question is simply one of law. If you look at the statute on its face, it discriminates in the ways that I've described, and I think that that would occur regardless of the contaminated nature of the site, which—which, in addition, has been, under binding Ninth Circuit precedent, the—the Court in *Boeing* said that this Court shouldn't actually take a look at the contaminated nature of the site.

THE COURT: I didn't mean to suggest I wanted to do fact-finding. I just wanted—

MR. HEALY: Yes—

THE COURT: —to know your position.

MR. HEALY: —I think everyone is in agreement—

THE COURT: Okay.

MR. HEALY: —if you are, that we would not do fact-finding here.

THE COURT: Okay.

MR. HEALY: Finally, I'd like to briefly describe the direct regulation argument. The law also directly regulates the federal government by requiring it to rebut claims it would otherwise not be required to rebut, by requiring it to pay out [30] claims it would otherwise not be required to pay.

The Department of Labor and Industries itself estimated that, when this bill was being considered, that thousands of new claims would likely be filed in the next several years, and legislative testimony shows that the legislators intended DOE to foot the bill. It is easy to spend someone else's money, Your Honor, and that's what this law does.

There are numerous ways that the regulation would affect DOE's workers' compensation operations. First and foremost, it requires a higher burden of proof for rebuttal for many ailments that would not have been compensable at all prior to HB1723. It would require obtaining outdated, archived, or unavailable medical

records to do so, since it eliminates the statute of limitations for claims, and would require DOE to maintain these records indefinitely.

It also eliminates the last injurious exposure rule such that DOE must rebut claims for occupational diseases that may have been caused by more recent exposures unrelated to Hanford.

And as I mentioned before, these—rebutting this presumption may be, in many cases, impossible to do.

Washington argues that this cannot amount to direct regulation because DOE voluntarily agreed to act as employer of record under Washington law for the majority of its Hanford workforce. We've discussed this. Only a clear and unambiguous waiver from Congress may waive. I would refer Your Honor to the [31] Hanford—to the *Hancock* case, as I mentioned.

Finally, on reply, Washington argues that it would require interference with cleanup operations for there to be direct regulation of the federal government.

To be clear, if the law remains in effect, there may be some impact on cleanup operations that we don't yet know, but they provide no reason why DOE's workers' compensation operations are not also governmental operations. They've cited no case law for the proposition that DOE's MOU with the state renders all action done pursuant to that agreement nongovernmental. DOE's workers' compensation operations are operations of the federal government. The MOU does not place them outside the boundaries of the constitution's direct—restriction on direct regulation.

For the foregoing reasons, Your Honor, the Court [sic] respectfully requests that you enter judgment in

favor of the United States and deny Washington's cross motion.

Thank you.

THE COURT: Thank you.

I'll give you a chance to make a brief reply as well. Both parties can do that, since there are cross motions.

Ms. Sandstrom, you can get set up. Just give me one moment.

(Pause in proceedings.)

THE COURT: All right.

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