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13

14 **UNITED STATES NUCLEAR REGULATORY COMMISSION**
15 **Before the Executive Director for Operations**
16

17
18 GREENACTION FOR HEALTH AND ENVIRONMENTAL JUSTICE,) **10 CFR §2.206 PETITION**
ENVIRONMENTAL JUSTICE,)
19) **TO REVOKE MATERIALS**
Petitioner,)
20) **LICENSE NO. 29-31396-01**
v.)
21)
22 TETRA TECH EC, Inc.)
Licensee.)
23)
24)
25)
26)
27)
28)

1 **I. INTRODUCTION**

2 Greenaction for Health and Environmental Justice (“Greenaction” or “Petitioner”) hereby
3 seeks the revocation of Materials License No. 29-31396-01, granted by the Nuclear Regulatory
4 Commission (“NRC”) to Tetra Tech EC, Inc. (“Tetra Tech”). This Petition is made pursuant to 10
5 C.F.R. § 2.206, which provides that any person may seek to modify, suspend, or revoke an NRC
6 license.

7 The United States Navy contracted with Tetra Tech to assist in the cleanup of Hunters Point
8 Naval Shipyard (“the Shipyard” or “HPNS”) in San Francisco, California, a National Priorities List
9 Superfund site, including remediation of radiological contamination. However, Tetra Tech’s role
10 was marked by intentional fraud, greed and disregard for the health and safety of present and future
11 San Francisco residents as well as the greater Northern California community.

12 Tetra Tech employees and the radiological subcontractors it directly supervised were
13 involved in at least six types of fraud: (1) fake sampling, in which soil samples – potentially
14 thousands of them – were reported to have been taken at one location when they were actually taken
15 from another; (2) discarding samples and analytical results when they came back radiologically too
16 “hot” (i.e., above the cleanup standard); (3) altering scanning data to make them appear
17 radiologically acceptable; (4) conducting false building surveys in which certain scan results were
18 fabricated and others were falsified; (5) remediating radioactive material in soil improperly, resulting
19 in potentially radioactively-contaminated soil being shipped offsite as well as being used as backfill
20 for trenches at the Shipyard; and (6) altering Portal Monitor procedures so potentially radioactively-
21 contaminated soil was allowed to be shipped offsite for commercial purposes to places unknown.

22 Fraudulent sampling, scanning, and surveys led to fraudulent remediation; sites that required
23 additional cleanup were not remediated and remain contaminated because fake samples indicated
24 areas were “clean” when they were not.

25 Evidence shows Tetra Tech’s top onsite management, its Project Manager and Construction
26 Superintendent, participated in and directed the fraud. Their employees engaged in sustained
27 widespread misconduct, significantly compromising the cleanup. Tetra Tech’s willful fraud
28 demonstrates it is unworthy of an NRC license.

1 **A. Two Inadequate Investigations**

2 Tetra Tech has admitted it engaged in fraud. But it has not acknowledged the breadth and
3 scope of the fraud, specifically that it was widespread and directed by onsite management.
4 After the Navy confronted it with evidence of fraud, Tetra Tech conducted its own “investigation”
5 into the faked samples (though Tetra Tech calls them “anomalous,” rather than faked). The result
6 was an April 2014 report, *Investigation Conclusion Anomalous Soil Samples at Hunters Point Naval*
7 *Shipyards, Revision 1* (“*Anomalous Samples Report*”). But the investigation was fatally flawed. It was
8 not conducted by trained investigators and failed to question former employees who were no longer
9 in danger of losing their jobs if they told the truth. Consequently, the result of the internal inquiry
10 was inconclusive; Tetra Tech claimed it neither determined the source of the phony samples, nor
11 who was responsible.¹

12 As their sworn statements in support of this Petition attest, former employees know who was
13 responsible. The soil sampling fraud involved multiple Health Physics Specialists (“HPs”) and
14 supervisors. It began at the direction of top Tetra Tech onsite management and took place over a
15 period of years rather than weeks or months.² *Thousands* of samples may be involved, not just the
16 few dozen originally identified by the Navy. Furthermore, the fraud involved a host of activities, not
17 just the soil sampling addressed in the *Anomalous Samples Report*. Rather, the fraud spanned
18 virtually all radiological remediation functions for which Tetra Tech was responsible.

19 The NRC also conducted an investigation (NRC Investigation Report 1-2014-018). The
20 NRC investigation, conducted from April 29, 2014 to September 17, 2015, “revealed that a
21 Radiation Control Technician (RCT) and a Radiation Task Supervisor (RTS) working for Tetra Tech
22 at HPNS deliberately falsified soil sample surveys Based on the evidence gathered during the
23 OI investigation, it appears that the RCT and RTS had deliberately falsified soil sample surveys of
24 the HPNS Parcel C.”³ (HPNS is divided into Parcels A-H.) The NRC brought action against Tetra
25

26 ¹Exhibit H, Tetra Tech EC, Inc., *Investigation Conclusion Anomalous Soil Samples at Hunters Point*
Naval Shipyards, Revision 1, at ES 2-3 (Apr. 2014).

27 ² See Exhibit H, Attachment 15, *Chain-of-Custody Sheets, Gamma Survey Records, and Ancillary*
Information Associated with Survey Units Containing Anomalous Soil Sample Results as Listed
in Tables 2 and 3(Apr. 2014) (“Exhibit H2”).

28 ³ Exhibit I, Letter from James M. Trapp, NRC Division of Nuclear Materials Safety to Andrew N.

1 Tech (Docket No. 03038199) and a single supervisor, Justin Hubbard.⁴ It correctly concluded that
2 between November 18, 2011 and June 4, 2012, Hubbard, “directed that soil samples be taken from
3 areas that were suspected to be less contaminated and documented on related chain-of-custody forms
4 that the soil samples had been taken from areas that had been specified.”⁵

5 But the NRC also concluded, in error, that Hubbard was the sole supervisor to direct
6 fraudulent sampling. It actually involved at least one other HP supervisor and Tetra Tech’s top onsite
7 management, including its Project Manager and Construction Superintendent. The NRC action
8 against Hubbard was also limited to fraudulent samples taken in HPNS’s Parcel C, when the
9 fraudulent sampling actually took place throughout the Shipyard.⁶

10 The NRC’s investigation was too narrowly focused to uncover the true breadth and depth of
11 the fraud committed by Tetra Tech at the Shipyard. Multiple whistleblowers say they felt the NRC
12 investigators “blew them off” rather than take their concerns seriously. For example, witnesses
13 suggested the NRC interview witnesses whom the NRC investigators never contacted. The NRC also
14 failed to follow up on suggestions for where to take samples and what buildings at HPNS to inspect.⁷

15 As a result of an inadequate investigation, the NRC took inadequate action. It initially fined
16 Tetra Tech a mere \$7,000. But by Confirmatory Order of October 11, 2016,⁸ the NRC waived even
17 that minimal sum after alternative dispute resolution, leaving only an order that Tetra Tech train its
18 personnel not to lie, cheat or steal – in other words, to do what was already required by law. The
19 NRC took action against only supervisor Justin Hubbard, when other members of management knew
20 about, participated in and directed the extensive radiological fraud.

21 Tetra Tech’s pattern and practice of fraud at the Shipyard demonstrate it cannot be trusted to
22

23 Bolt, President, Tetra Tech EC, Inc. on NRC Office of Investigation Report No. 1-2014-018, at 6
(Feb. 11, 2016).

24 ⁴ Exhibit J, Letter from Daniel H. Dorman, NRC Regional Administrator to Andrew N. Bolt,
25 President, Tetra Tech EC, Inc. on Tetra Tech EC, Inc. Notice of Violation and Proposed
26 Imposition of Civil Penalty - \$7,000 – NRC Investigation Report No. 1-2014-018 with
27 Enclosures 1-4 (July 28, 2016).

28 ⁵ *Id.* Letter from Daniel H. Dorman, NRC Regional Administrator to Justin Hubbard on Notice of
Violation (NRC Investigation Report No. 1-2014-018) (July 28, 2016).

⁶ See Exhibit B, Decl. of Anthony Smith, ¶¶ 7-11, 15-32.

⁷ See Exhibit A, Decl. of Bert Bowers, ¶ 79; Exhibit C, Decl. of Susan Andrews, ¶¶ 56-59; Exhibit
D, Decl. of Archie Jackson, ¶ 21.

⁸ Exhibit K, Confirmatory Order In the Matter of Tetra Tech EC, Inc., 81 FR 73144 (Oct. 24, 2016)

1 investigate or remediate the site, a site that is anticipated to be transferred to the City of San
2 Francisco for large-scale residential and commercial development. Tetra Tech's pattern and practice
3 of fraudulent activities over years of work for the Navy demonstrate that it cannot be trusted with the
4 great responsibilities the NRC has vested in Tetra Tech by issuance of an NRC license.

5 Petitioner respectfully urges the NRC to revoke Tetra Tech's license for its long-running
6 fraud. Tetra Tech has fundamentally compromised the cleanup of the Shipyard. The NRC should
7 ensure that the company can never again participate in radiological cleanup at the Shipyard or any
8 other area of the United States. Finally, the NRC should revoke Tetra Tech's license to deter other
9 license holders from engaging in similar fraudulent conduct.

10 11 **II. PARTIES**

12 **A. Greenaction for Health and Environmental Justice**

13 Petitioner Greenaction is a non-profit corporation based in San Francisco, California.
14 Founded in 1997, Greenaction's mission is to mobilize community power to change government and
15 corporate policies and practices to protect public health and promote environmental, economic and
16 social justice. To build a clean and healthy environment for all, Greenaction works with low income
17 and disadvantaged communities to hold polluters accountable. Greenaction also challenges
18 government agencies that regulate polluters to assure they protect health and promote environmental
19 justice.

20 Some of Petitioner's members live in neighborhoods abutting the Shipyard and are concerned
21 about its cleanup – particularly fraudulent cleanup – and its effect on their communities. Petitioner's
22 members are directly impacted by the inadequate cleanup and seek to ensure fraudulent remediation
23 is corrected, that the ongoing remediation be done properly and that both the existing neighborhoods
24 and the new ones intended for the Shipyard be protected from environmental harm. Petitioner's
25 members have lost all trust in Tetra Tech's integrity and ability to properly remediate the Shipyard
26 and seek to ensure Tetra Tech is no longer permitted to participate in this and other cleanups by
27

28 (Docket ID NRC-2016-0212).

1 revoking its license to do radiological work.

2 **B. Tetra Tech, Inc. and Tetra Tech EC, Inc.**

3 Tetra Tech, Inc. is a worldwide company with corporate headquarters in Morris Plains, New
4 Jersey. Tetra Tech’s website states that it provides engineering services to public and private clients
5 addressing the need for water, a clean environment, infrastructure, resource management and
6 international development. Tetra Tech EC, Inc. is a wholly owned subsidiary of Tetra Tech, Inc., and
7 is based in Pasadena, California.

8 Tetra Tech EC, Inc. contracted with the United States Navy to perform remediation of
9 radioactive materials at closed military bases, including the decommissioned Hunters Point Naval
10 Shipyard in San Francisco. Tetra Tech initially hired New World Environmental Inc. (“NWE”), a
11 radiological staffing firm, as a radiological subcontractor. Subsequently, on or about April of 2009,
12 Tetra Tech invoked its first-ever use of its own NRC-issued Materials License, NO. 29-31396-01,
13 and the company became directly responsible for radiological work at the Shipyard.

14
15 **III. JURISDICTION**

16 The northern portion of HPNS is subject to exclusive federal jurisdiction. The United States
17 obtained ownership of the property, the State of California ceded legislative jurisdiction to the
18 United States, and the Federal Government accepted jurisdiction through letters of acceptance by the
19 Secretary of the Navy on December 22, 1942, February 4, 1943, and June 4, 1943. The Federal
20 Government has not relinquished exclusive legislative jurisdiction over the federal enclave to which
21 the Federal Government accepted jurisdiction in 1942 and 1943. Attached as Exhibit L is a map of
22 HPNS. The shaded area of the Shipyard is the area in which the Federal Government accepted
23 exclusive jurisdiction and the NRC has jurisdiction to the exclusion of the State of California.

24 California is an “agreement state” with the NRC. As such, the State of California has joint
25 jurisdiction with the NRC in oversight of conduct of NRC-licensed entities in areas where there is no
26 exclusive federal jurisdiction. As the United States did not obtain exclusive jurisdiction over the
27 southern portion of HPNS, the State of California maintains jurisdiction in that area.

28 Tetra Tech’s radiological fraud took place in both the exclusive Federal jurisdiction zone and

1 the area under jurisdiction of the State of California.

2
3 **IV. STATEMENT OF LAW**

4 **A. NRC Authority**

5 The Nuclear Regulatory Commission has jurisdiction to issue licenses related to the handling
6 of radioactive materials including jurisdiction over Materials Licenses granted to contractors
7 involved in the remediation and handling of radioactive wastes. Tetra Tech has a Materials License
8 issued by the NRC. The initial License was number 46-27767-01. Tetra Tech was subsequently
9 issued License No. 29-31396-10. (License numbers have changed due to Tetra Tech changing the
10 principal location of the Radiation Safety Officer (“RSO”) named on the license. This move changed
11 the region within which it was to be regulated and prompted the NRC to issue new license numbers
12 to reflect the proper NRC Region responsible for oversight.)

13 Licenses are required for byproduct material, source material and special nuclear material. Tetra
14 Tech’s NRC licenses were issued pursuant to these regulations:

- 15
- 16 • 10 C.F.R. § 30.3: “[N]o person shall manufacture, produce, transfer, receive, acquire,
17 own, possess, or use byproduct material except as authorized in a specific or general
18 license issued in accordance with the regulations in this chapter.”
 - 19 • 10 C.F.R. § 40.3: “A person subject to the regulations in this part may not receive title
20 to, own, receive, possess, use, transfer, provide for long-term care, deliver or dispose
21 of byproduct material or residual radioactive material as defined in this part or any
22 source material after removal from its place of deposit in nature, unless authorized in a
23 specific or general license issued by the Commission under the regulations in this
24 part.”
 - 25 • 10 C.F.R. § 70.3: “No person subject to the regulations in this part shall receive title
26 to, own, acquire, deliver, receive, possess, use, or transfer special nuclear material
27 except as authorized in a license issued by the Commission pursuant to these
28 regulations.”

24 The NRC has promulgated regulations and procedures to provide the public with the means
25 to request that the Commission modify, suspend or revoke a license.⁹ This Petition is brought
26 pursuant to 10 C.F.R. § 2.206.

27
28 ⁹ 10 C.F.R. § 2.206; *see also* NRC, Management Directive 8.11: Review Process for 10 C.F.R. §

1 **V. STATEMENT OF FACTS**

2 **A. Discovery of Part of the Fraud**

3 The initial suspicion that Tetra Tech engaged in fraudulent sampling was raised in October
4 2012, by the Navy’s Radiological Affairs Support Office (“RASO”). While reviewing post-
5 remediation soil sample results, a RASO official identified discrepancies between the first two sets
6 of systematic sample results from the footprint of former Building 517 (“B517”)¹⁰ and the third set
7 taken from that site post-remediation: “These results reported low potassium-40 (K-40) sample
8 activity (i.e. < 5 picocuries per gram) coupled with low activity for radium 226 (Ra-226), bismuth-
9 214 (Bi-214) and lead-214 (Pb-214) in 36 out of 36 samples.”¹¹ This difference in lab results raised
10 the prospect that the post-remediation samples were taken from a different site than the first two sets
11 of systematic samples, that is, a different location from that claimed on chain-of-custody (“COC”)
12 documents.

13 In response to the Navy’s concerns, Tetra Tech conducted an “investigation” and compiled
14 its findings in the *Anomalous Samples Report*. Tetra Tech conceded that the “anomalous” samples
15 were not taken from the areas that were claimed, and speculated the samples could have been taken
16 from two areas of the Shipyard: “Either the former Building 707 Triangle Area or the Building
17 253/211 drill cuttings, or a combination of both, may have been used as substitute soil samples;
18 however, the investigators were unable to conclusively determine a source.”¹²

19 Not only the low K-40 results indicated fraudulent sampling. So did the sample’s uniform
20 physical characteristics: “One clear feature is that the samples from the third set of systematic
21 samples do not appear similar in color to any of the other systematic samples, and all of the samples
22 within the set look extremely similar, if not identical. This color uniformity coupled with the
23 homogeneity of the low K-40, Ra-226, and progeny concentrations . . . led the investigators to
24

26 2.206 Petitions.

27 ¹⁰ Building 517 had previously been used as a brig (jail) and the Naval Radiological Defense
Laboratory Cobalt Animal Irradiation Facility. Exhibit H at 3.

28 ¹¹ Exhibit H at ES-1.

¹² *Id.* at ES-2.

1 conclude that the soil samples were not collected from B517.”¹³

2 In fact, examination of the COCs alone substantiates fraud. Proper procedure¹⁴ calls for
3 samplers to note the correct time and location for every sample. However, COCs for anomalous
4 samples purport they were collected in exact five-minute intervals, precisely on the five-minute
5 mark. For example, COCs for anomalous samples which identify Jeff Rolfe as the sampler claim he
6 took 8 samples (Nos. 03707-S0016-F079-01 through 03707-S0016-F086-01) on June 7, 2011 at
7 13:40, 13:45, 13:50, 13:55, and every five minutes thereafter, exactly, until 14:15. The next day,
8 COCs claim he took 20 samples (03707-S0009-F059-01 through 0307-S0009-F078-01) every 5
9 minutes from 8:15 am until 10:20 and an additional 20 samples (03707-S0017-F064-01 through
10 03707-S0017-F083-01), every 5 minutes from 10:30 a.m. until 12:05 p.m.¹⁵

11 Similarly, COCs for 20 anomalous samples (No. 02-NPR-S0007-F030-01 through 02-NPR-
12 S0007-F049-01) purportedly taken by Justin Hubbard, an HP supervisor, claim he took them on June
13 4, 2012 at: 13:00; 13:05; 13:10 and exactly five minutes thereafter until 14:35.¹⁶

14 According to experienced HPs, however, soil samples cannot be taken with such rigid
15 regularity. The need to prevent cross-contamination of samples and sampling equipment from one
16 sample location to another precludes it; HPs need to follow exacting practices to decontaminate all
17 sampling equipment between samples, making five-minute intervals impossible.¹⁷ Indeed, in an
18 interview of Justin Hubbard conducted by Tetra Tech in connection with the *Anomalous Samples*
19 *Report*, Hubbard notes that “[o]ne sample could take 40 minutes.”¹⁸

20 Other COCs claim samples were taken precisely every three minutes without deviation. For
21 example, 18 anomalous samples purportedly taken by Joe Cunningham (Nos. 02-PCT-302-005
22 through 02-PCT-302-022) on May 22, 2012 were supposedly taken at 10:00; 10:03; 10:06; 10:09;
23

24
25 ¹³ *Id.* at 15.

26 ¹⁴ See Exhibit O, U.S. Navy Base Realignment and Closure Program Management Office West,
Base-Wide Radiological Work Plan, Revision 1, Hunters Point Shipyard, San Francisco, CA
(Oct. 5, 2007).

27 ¹⁵ Exhibit H2 at 419.

28 ¹⁶ *Id.* at 64.

¹⁷ See Exhibit B at ¶¶ 21-23; Exhibit A at ¶ 73.

¹⁸ Exhibit H, Attachment 9, *Personnel Interviews*, 7 (“Exhibit H1”).

1 10:12; 10:15; 10:18, and continuing exactly every three minutes thereafter until 10:51.¹⁹

2 To Petitioner’s knowledge, neither Tetra Tech nor the Navy has ever offered an explanation
3 for these dubious patterns on the COCs. However, former employee Anthony Smith can explain it.
4 As further detailed below, he says the COCs were filled out in advance – including the time of
5 sampling and who took the sample – by someone other than the actual sampler, calling into question
6 the entire sampling and documentation process.²⁰

7 COCs also reported that samplers took more samples than was physically possible and that
8 HPs were in two places at once. When interviewed by Tetra Tech, “both Justin Hubbard and Ray
9 Roberson stated that collection of more than two sets of systematic samples in one day would be
10 difficult.” But “Roberson was listed on chains of custody for four sets of systematic samples from
11 the North Pier, which is extremely rocky and difficult to sample, as well as an additional trench
12 segment survey unit, all on May 31, 2012.”²¹ Even more remarkably, Roberson (who has since died)
13 supposedly collected soil samples at Survey Unit 304 “at the same time he was listed as collecting
14 soil samples at North Pier Survey Unit 11.”²²

15 False samples were also taken over a lengthy period of time. According to the COCs in
16 Attachment 15 to the *Anomalous Samples Report*, the earliest listed phony samples were taken on
17 March 4, 2011 (Nos. 03707-S0016-F050-01 and 03707-S0016-F057-01), while the latest were taken
18 nearly a year-and-a-half later, on August 15, 2012 (Nos. 03707-S0022-F056-01 through 03707-
19 S0022-F080-01). Former employees say the COC fraud went on even longer, beginning before 2009
20 and continuing until at least late September 2012.²³

21 The Navy’s original suspicions centered on 36 phony samples. But a review of the sampling
22 results contained in Attachment 15 to the *Anomalous Samples Report* indicates there were many
23 more samples with K-40 below 5 picocuries per gram: “Since January 1, 2008, approximately 2,500
24

25 ¹⁹ Exhibit H2 at 789-790.

26 ²⁰ See Exhibit B. at ¶¶ 21-23.

27 ²¹ Exhibit H at 11.

28 ²² *Id.* at 16.

²³ Exhibit B at ¶¶ 7, 15-20; Exhibit F ¶¶ 2, 9 (Chain-of-custody fraud ongoing in 2007-2008 during those 2 years of her employment at HPNS).

1 samples meeting the definition of ‘low K-40’ samples have been collected at HPNS.”²⁴

2 Although Tetra Tech interviewed various people during its investigation – some of those
3 listed on the COCs, their supervisors, other members of the sampling crews and laboratory personnel
4 – it stated, “[t]he results of the interviews were inconclusive.”²⁵

5 Tetra Tech’s investigation was inconclusive because it failed to ask the right people the right
6 questions. Tetra Tech directed the fraud and did not want its fraudulent conduct exposed. Had Tetra
7 Tech employed trained investigators, they would have insisted on speaking to the right people,
8 including former employees who no longer had a motive to keep quiet or be fired. A competent
9 investigation would have discovered a pattern and practice of fraudulent activity directed by Tetra
10 Tech’s top onsite management.

11 Tetra Tech’s investigation, though gravely flawed, got some things right: some of the causes
12 of the fraud. Possible causes, the *Anomalous Samples Report* says, could be: improper focus on
13 production (“i.e., that completion of work by a scheduled date was of undue importance”);
14 inadequate field supervision; inadequate quality control; inadequate review of data; and inadequate
15 concern for others (i.e., “individual workers may not have questioned actions by co-workers that
16 appeared to be nonstandard”).²⁶

17 The *Anomalous Samples Report* failed to recognize a major driver of the fraud, however,
18 namely that in order for Tetra Tech to get paid the final installment on a contract it needed to obtain
19 final radiological clearance. The added cost and time involved in doing a proper and complete
20 radiological remediation was more time and money than Tetra Tech was willing to expend, cutting
21 into the company’s profits.²⁷ In short, the *Anomalous Samples Report* was an effort to whitewash the
22 soil-sampling fraud directed by Tetra Tech's management.

23 **B. Types of Fraud**

24 Former employees at HPNS describe six types of fraud: (1) fake sampling, in which soil
25 samples were reported to have been taken at one location when they were actually taken from

26
27 ²⁴ Exhibit H at 3.

²⁵ *Id.*

²⁶ Exhibit H at 20.

28 ²⁷ See Exhibit A at ¶¶ 11-12, 14, 51-52; Exhibit B at ¶¶ 10-11, 15-20, 24-27, 33-34.

1 another; (2) samples and their analytical results were discarded because they came back too “hot;”
2 (3) scanning data were altered to make them appear acceptable; (4) building survey data were
3 fabricated; (5) radioactive material in soil was inadequately remediated, resulting in potentially-
4 contaminated soil being used as backfill for trenches at the Shipyard; and (6) Portal Monitor
5 procedures were altered resulting in potentially radioactively-contaminated soil being allowed to be
6 shipped offsite to points unknown.

7 **1. Fake Soil Sampling: Parcels C, D, E**

8 **a. Fraudulent Sampling - Stage 1**

9 As the *Anomalous Samples Report* details, samples purportedly taken from the footprint of
10 former Building 517 (Parcel D) were actually taken from a different location. According to former
11 employees at the Shipyard, B517 was not the only place from which samples were faked. Phony
12 samples supposedly taken from various sites on the Shipyard, including the areas around Building
13 707 (Parcel E), the 500 Series of buildings (Parcel D), and Parcel C,²⁸ were actually taken elsewhere.

14 Senior HP Anthony Smith says fake sampling took place in two stages. At first, HPs were
15 directed to take samples from the general location intended to be sampled, but to fudge the specific
16 location of the samples.²⁹

17 When they were tasked with soil sampling, proper procedure was for HPs to initially scan the
18 soil seeking radioactive hot spots. The scanning data were used by engineers to identify locations of
19 high radioactivity and then to plot out their locations on a map, with the highest readings delineating
20 where soil samples should be taken.

21 HPs followed the correct procedure in the early years at Hunters Point. But that practice
22 changed in the latter part of 2008 and early 2009. At that time, Tetra Tech was having difficulty
23 obtaining free releases; post-remediation samples came back too “hot.”

24 In response, HPs were ordered by their supervisors not to take the samples from the spots
25 marked by the engineers as the highest radioactive-reading spots. Rather, the HPs were told to make
26 it appear they took the samples from the marked spots, but to actually take the samples from clean
27

28 ²⁸ See Exhibit I at 1, 6 (findings of fraudulent soil samples from Parcel C).

1 areas close by.³⁰ An HP (also known as a Radiation Control Technician, or “RCT”) admitted this
2 form of fraud to the NRC: “the RCT stated that, when sufficiently low contamination levels were not
3 obtained, the RTS [Radiation Task Supervisor] would direct the RCT to move 5 to 10 feet in another
4 direction and obtain a new sample from that location. Meanwhile, the new sample would be
5 represented as having been obtained from the original, specified location.”³¹

6 These close-by phony samples would be expected to have the same K-40 levels as other
7 samples from the area, and might not involve K-40 activity below 5 picocuries. Thus, there is a
8 strong likelihood that substantial numbers of fraudulent samples could not be identified by the Navy
9 and regulators by focusing on the K-40 levels.

10 **b. Fraudulent Sampling – Stage 2**

11 Time and again the fraudulent post-remediation soil samples resulted in laboratory results
12 with radioactive contamination above the free release levels. For example, around Building 707
13 repeated rounds of remediation failed to decontaminate all the soil; successive post-remediation
14 samples came back too “hot.” When sample results exceeded the free release levels, Tetra Tech was
15 required to do more cleanup, which cost time and money.³²

16 Due to the frustration of Tetra Tech’s attempts to obtain free release and the desire to cut
17 costs to increase profits, the manner of the fraud changed. HPs were directed by their supervisors to
18 obtain false samples nowhere near the area intended to be sampled, but rather in at least three remote
19 locations known from prior sampling to contain “clean” soil. Tetra Tech management pressured its
20 supervisors to have the HPs engage in fraudulent sampling that would guarantee lab results under the
21 free release levels so it could get fully paid without incurring the full costs of the cleanup.³³

22 Former employees, like Senior HP Anthony Smith, state that he and others took the second-
23 stage type of fraudulent samples from at least three locations known to be low in radiological
24 activity. The specific location was chosen depending on the type of soil they were trying to match.³⁴

25
26 ²⁹ Exhibit B at ¶¶ 15-16; *see also* Exhibit I at 6.

³⁰ *See* Exhibit B at ¶ 15.

³¹ Exhibit I at 6.

³² *See* Exhibit B at ¶¶ 16-19; Exhibit A at ¶¶ 11-12.

³³ *See* Exhibit B at ¶¶ 16-17.

³⁴ *Id.* at ¶ 18.

1 If HPs needed to match “green serpentine”³⁵ soil, Smith and others took false samples from
2 one of two locations. Originally, the green serpentine soil used to submit false samples was taken
3 from a sewer trench in front of the Building 500 series of buildings. That site was supplanted by a
4 second one, an area inside the remains of the foundation of an old movie theater in the 500 series
5 area. According to Smith, the theater foundation was preferable to the sewer trench because it
6 afforded greater privacy – employees could take samples there unseen when inside the foundation
7 walls. Smith says he would wait until laborers not involved in the fraud went to lunch or left for the
8 day and he would then fill a 5-gallon bucket with soil from the theater site which he knew to be
9 clean.³⁶

10 If HPs needed to match sandy soil, they would fill five-gallon buckets with soil taken from
11 an area under two palm trees in the vicinity of an old pump house (Building 521) that was also near
12 the old movie theater foundation.³⁷

13 **c. Substituting Clean Soil for Potentially “Hot” Soil**

14 Senior HP Smith states he would take the five-gallon buckets of either green serpentine or
15 sandy soil to the Conex (a shipping container that acted as a temporary field office), where HP
16 supervisor Steve Rolfe, his wife HP Tina Rolfe, and HP Rick Zahensky would transfer the soil into
17 sample containers to substitute for real samples. The original, and potentially “hot” samples, would
18 be emptied into another 5-gallon bucket and Smith would dump that soil into open trenches that had
19 been dug for sewer removal. In short, the true soil samples were switched with the soil known to be
20 radiologically clean with the intent to fraudulently “prove” to the Navy, regulators, and the public
21 that all radiological hazards had been removed.

22 Smith estimates this type of false sampling happened “pretty much every day” over at least
23 the last one-and-a-half years he worked at the Shipyard. He says fake soil samples he took from all
24 three sites – the sewer trench, the palm tree site and the theater – resulted in 800 to 1,000 false
25

26 ³⁵ Exhibit H, Attachment 1 Site Conceptual Model for Low K-40 Soil, at 1 (“As mapped by the
United States Geological Survey (USGS), the upland portion of HPNS consists of Franciscan
bedrock and includes serpentine, chert, altered volcanic rocks, and interbedded sandstones and
shales.” The serpentine rock and soil derived from it at HPNS has a slight green tint.).

27 ³⁶ Exhibit B at ¶ 18.

28 ³⁷ See Exhibit M (map of Hunters Point Naval Shipyard identifying buildings by number).

1 samples.³⁸ Other HPs on the team under Smith’s supervisor, Steve Rolfe, also regularly engaged in
2 taking false soil samples, as did HPs under the supervision of Justin Hubbard.³⁹

3 Samples were switched not only from the former site of Building 517, as acknowledged by
4 the *Anomalous Samples Report*. Smith avers he switched samples taken from the area around the
5 Building 707 “Triangle Area” in Parcel E, and the area of the former 500 series of buildings in
6 Parcel D.⁴⁰ Other areas had falsely switched samples taken by HPs other than Smith, as reflected in
7 the *Anomalous Samples Report*, including the North Pier and structures referred to as “shacks” 79
8 and 80, and in Parcel C, as the NRC Investigation Report states.⁴¹

9 Former employees declare that the fraudulent practices escalated in the years after Tetra
10 Tech’s contract with the Navy changed from a time-and-materials contract to a firm fixed-price
11 contract.⁴² This provided a financial incentive for fraud: the less time and resources Tetra Tech spent
12 on sampling and cleanup, the more profit they would make.⁴³

13 It is not clear if the switched soil samples taken from the 500 series trench, the old theater
14 foundation and the two palm trees *all* had low K-40 activity or if one or more did not. If any of these
15 locations had K-40 activity in soil over 5 picocuries, samples taken from them could not be
16 identified as “anomalous” based on K-40 readings and the number of fraudulently switched soil
17 samples could grow dramatically.

18 **2. Destruction of “Hot” Soil Samples and Their Records**

19 **a. Building 351A**

20 Building 351A had been used by the Navy's Radiological Defense Laboratory for decades
21 conducting extensive experiments with hazardous radionuclides.⁴⁴ It was one of the last buildings in
22 Parcel G that had not been free released. Clearance of building 351A was holding up final payment
23 to Tetra Tech for all of the work the company had done in that parcel, potentially millions of dollars.
24

25 ³⁸ See Exhibit B at ¶ 19.

26 ³⁹ *Id.* at ¶ 20

26 ⁴⁰ *Id.* at ¶ 17.

27 ⁴¹ Exhibit I at 6.

27 ⁴² Exhibit B at ¶¶ 7-11, 16, 34.

28 ⁴³ See Exhibit A at ¶¶ 6, 11-13.

28 ⁴⁴ Exhibit B at ¶ 8.

1 Direct readings from radiological survey detection instruments indicated the presence of
2 elevated radioactivity in a large amount of soil in a crawl space under Building 351A. Remediation
3 attempts within the crawl space were performed in 2008 by a group of laborers who dug up the soil
4 while HPs Anthony Smith and Josh Hooper monitored them. The laborers used pick axes, shovels
5 and trowels to loosen the soil and a large vacuum truck that sucked the soil from under the building
6 through an 8-inch hose. The soil was ultimately placed in bins to be disposed offsite as radioactive
7 waste.⁴⁵

8 At the conclusion of approximately two weeks of remediation, HPs Anthony Smith and Josh
9 Hooper took post-remediation soil samples from the crawl space in an attempt to demonstrate that
10 there was no longer any residual radiological contamination above established free-release levels.
11 However, a post-remediation sample came back too “hot,” demonstrating the radioactive cleanup
12 had not been successfully completed. Proper procedure mandated another round of soil removal.
13 This additional round of remediation would once again involve laborers and a vacuum truck,
14 followed by another round of post-remediation sampling. However, Tetra Tech’s management
15 directed that proper procedures be ignored.

16 Smith and Hooper were summoned to a meeting that included Bill Dougherty, Tetra Tech’s
17 HPNS Project Manager, and Dennis McWade, Tetra Tech’s Construction Superintendent, among
18 other senior Tetra Tech and sub-contractor managers. Speaking of the vacuum truck, Dougherty told
19 Hooper and Smith “Do you know how much that machine cost to rent for two weeks? We can’t
20 afford to do that again, get rid of that sample,” or words to that effect. McWade gave Smith the
21 containerized sample and its COC document, completely contrary to acceptable procedures, and
22 Smith and Hooper did what they were told. They got rid of the sample and the COC record.⁴⁶

23 Thereafter they engaged in the first type of soil-sampling fraud described above and took a
24 false sample under Building 351A. Tetra Tech had its engineers mark the areas under the building
25 that were known to be *clean* so that Smith could be assured he would not obtain another soil sample
26

27 ⁴⁵ *Id.*

28 ⁴⁶ *Id.* at ¶¶ 10-11.

1 that came back too “hot.”⁴⁷ Smith says he understood, based on what his supervisors told him, that
2 Tetra Tech wanted to get free release of the building despite the remaining contamination so Tetra
3 Tech would get paid the final installment for its work in Parcel G.

4 Tetra Tech submitted false documents to the Navy claiming that Building 351A had been
5 properly cleared of all radioactive material above release levels, when significantly elevated
6 radioactivity, beyond free release levels, was known to still exist in the crawl space under the
7 building. The radioactive contamination was not remediated over the next three-plus years that
8 Smith continued to work at the Shipyard. To the best of his knowledge it never has been.⁴⁸

9 Smith states that the soil sample from under Building 351A was the first instance where he
10 was told to get rid of a sample. As further described below, it was not the last.

11 **b. Parcel A Background Sample**

12 In July or August 2009, Tetra Tech was about to start, or had just started, a project to remove
13 sewer lines from under Fisher Avenue and Spear Streets in Parcel C. Smith was directed by Hubbard
14 to obtain a background reference sample (i.e., a sample known not to be radioactively contaminated)
15 for the Spear/Fisher sewer projects. Smith had been told that Parcel A was never used for any
16 industrial purpose, that it was deemed by the Navy to be free of contamination and, as a result, had
17 been transferred to the City of San Francisco for development in 2004. Because of its close
18 proximity to the Fisher/Spear project and assuming Parcel A was clean, Smith determined it would
19 be an appropriate place to obtain a background sample.⁴⁹

20 Smith proceeded to a location just north of the intersection of Fisher Avenue and Spear
21 Street.⁵⁰ On the north side of the road next to Fisher Avenue and just beyond the sidewalk, there is a
22 concrete wall which descends in height as it extends west and parallel to Fisher Avenue. Beyond the
23 wall is a hill that rises to the top of Parcel A. Just before the stop sign at the intersection of Fisher
24 and Spear (i.e., just northeast of the intersection) and approximately 20 feet from a light pole on the
25 north side of Fisher Avenue, the wall was about waist-high for Smith. Because of how the hill rose

26
27 ⁴⁷ *Id.* at ¶ 11.

⁴⁸ *Id.*

⁴⁹ Exhibit B at ¶ 12.

⁵⁰ In Exhibit M the location of Anthony Smith’s Parcel A sample is marked in red.

1 behind the wall, Smith was able to reach over the wall and use a trowel to take a sample without
2 bending over. He dug a hole about 6 inches deep in the hillside and took a sample from the bottom
3 of the hole. He gave the sample to Justin Hubbard, who took it to the laboratory. In a violation of
4 proper procedure, there was no chain-of-custody document accompanying the sample.⁵¹

5 The next day, Hubbard approached Smith and had the sample with him. In the presence of
6 HPs Jeff Rolfe, Ray Roberson and Carey Bell, Hubbard told Smith the sample had come back “hot.”
7 Hubbard said it contained 2 to 3 picocuries per gram of cesium-137, which Smith knew was much
8 higher than background levels and the cesium-137 cleanup standard of 0.113 picocuries per gram –
9 18 to 26 times higher than the set health and safety ceiling. Hubbard gave the sample to Smith and
10 told him to “get rid of it and not say a word,” or words to that effect. Smith took the sample back to
11 the site where he had taken it and put the soil back in the hole he created earlier for taking the
12 sample. He disposed of the plastic sample container by putting it in a bin set aside for radiological
13 waste. That same day, Smith took a different sample, to be used as the background sample, from a
14 distant site on the shipyard he knew to be clean from prior sampling and analysis.⁵²

15 To the best of Smith’s knowledge, the soil contamination he discovered in Parcel A was
16 never thereafter remediated for cesium-137 or other potential radioactive contaminants.⁵³

17 **c. Radioactive Fencing**

18 Tetra Tech established fenced-off areas within HPNS to separate locations known to contain
19 radioactive contaminants from other areas that were not contaminated. These areas were referred to
20 as Radiologically Controlled Areas or “RCAs.” Much of the fencing used to establish the
21 Radiologically Controlled Areas was rented from private companies.

22 In 2009, a large amount of fencing that had established the perimeter of an RCA was no
23 longer needed. Tetra Tech directed HPs to scan the metal fencing panels for clearance to release the
24 fencing to the rental company. Susan Andrews, a Senior HP, along with two other HPs, scanned the
25 fencing with radiation detection field instruments. During the scanning, Tetra Tech Construction
26 Superintendent McWade pressured the HPs to scan the fence quickly to obtain its release so it could

27 ⁵¹ Exhibit B at ¶ 12.

28 ⁵² *Id.* at ¶ 13.

1 be returned to its owner.⁵⁴

2 Andrews' scanning detected significant radiation on the fence, what she termed "screaming
3 hot." The fencing had apparently become infused with radioactive contaminants due to the length of
4 use on the Shipyard. In an effort to be sure of her scan results, Andrews asked for HP Phil Poole's
5 sensor to scan the same fence panels. The scan with Poole's sensor registered the same high
6 radioactive readings. She then asked for HP Bob Evan's sensor and scanned the same fence panels,
7 again getting the same "screaming hot" readings, far above release levels.

8 Proper procedure required that the fencing be put into an RCA because any radioactive
9 material was required to be confined there. However, Construction Superintendent McWade refused
10 to allow the fencing to be put into an RCA.⁵⁵

11 Andrews completed her scanning and smears (i.e., swab samples) of the fencing. Following
12 proper procedure, she took the scan meter and the smears to the lab at HPNS and turned the material
13 in. The next day, Tetra Tech alternate Radiation Safety Officer Representative (RSOR) Charles
14 Taylor told Andrews that the lab results from the smears she had submitted tested high for
15 radioactivity, beyond free-release levels. Taylor informed Andrews that the sensor readings also
16 showed elevated radioactivity above release standards. Andrews reviewed the lab results and the
17 sensor readings, confirming the high radioactivity.⁵⁶

18 Taylor told Andrews that Tetra Tech would not treat the fencing as radioactively
19 contaminated despite the lab results and sensor readings. Tetra Tech RSOR Taylor ordered Andrews
20 to go to the laboratory and obtain the smears and their associated records and destroy them. Taylor
21 also ordered Andrews to delete the records of the elevated fencing readings from her sensor and
22 from the Tetra Tech computer or else she would be fired. Andrews received this order in the
23 presence of her supervisor Rhonda Richardson, who expressed concern that if these orders were not
24 followed that both Andrews and she might be terminated. At no time did Richardson object to
25 Taylor's orders or contend that the destruction of legitimate lab results and instrument readings was
26

27 ⁵³ *Id.* at ¶ 14.

⁵⁴ Exhibit C at ¶ 30.

⁵⁵ *Id.*

⁵⁶ *Id.* at ¶¶ 31-32.

1 improper.⁵⁷

2 Andrews did what she was told. She went to the lab, obtained the smears and records and
3 destroyed them. Andrews had worked in the lab previously, for about 4 years, and was familiar with
4 the computer system, called “Access.” Andrews erased the sensor readings from the computer but
5 believed, from her experience and training, that her efforts did not erase them from the computer’s
6 hard drive, meaning a competent investigator might still be able to locate the records. Andrews
7 subsequently informed Richardson and Taylor that she had complied with his order to destroy the
8 smears, the lab results and the sensor data.⁵⁸

9 Andrews says that thereafter the fence was stored outside an RCA for approximately a
10 month, after which it was gone. Senior HP Bob Evans told Andrews he had gotten the fence released
11 so it could be returned to the rental company. When she questioned how that happened, he replied, “I
12 didn’t scan where you did, dummy.”⁵⁹

13 **3. Fraudulent Building Surveys**

14 The contract between the Navy and Tetra Tech required the company to perform static scans
15 and smears of buildings to determine if they were contaminated with radioactivity beyond free
16 release levels. When a building was found to have elevated levels of radioactivity, Tetra Tech was
17 contracted to engage in remediation to remove the radioactive contamination and bring contaminant
18 levels below release levels. After remediation, Tetra Tech was required to again scan and take
19 smears of the building to determine if all radioactive readings were within acceptable levels. Tetra
20 Tech ordered the post-remediation building scans be done fraudulently so as to obtain free release.

21 Tetra Tech supervisors divided building areas into three classes, Class 1, 2 and 3.⁶⁰ They
22 classified the floors and lowest two meters (or approximately 6 feet) of the walls to be Class 1. The
23 proper way to conduct a Class 1 survey was to slowly scan the “probable sites” of contamination,

24 ⁵⁷ *Id* at ¶ 33.

25 ⁵⁸ *Id* at ¶ 34.

26 ⁵⁹ *Id* at ¶ 35.

27 ⁶⁰ *See* Exhibit A at ¶ 75. The contract between the Navy and Tetra Tech defined Class 1, 2, and 3
28 differently from the way Tetra Tech supervisors in the field used the terms. Under the contract,
Class 1, 2, and 3 were defined in large part based on information as to whether the area was
known to be contaminated with radioactivity, suspected to be contaminated, or not believe to
have contamination above free release levels, respectively.

1 such as drains down which radioactive liquids might have been poured, and to scan each surface
2 (i.e., the floor and lower walls) using a Ludlum 2350 scanner (which measures gamma radiation) in
3 a systematic grid. In addition, smear samples were to be taken from area surfaces which the scans
4 identified as highest in radioactivity.

5 For Class 2, HPs were supposed to take static scan and smear samples in a systematic grid
6 from the higher sections of the walls, above 2 meters. Class 3 areas were considered the ceiling and
7 roof. Scans and smears were to be taken of these areas, but without requiring the strict grid patterns
8 of a Class 1 or 2.

9 Proper building survey procedure was not followed.

10 Anthony Smith was assigned to perform a large number of building surveys. Sometime
11 between the summer of 2010 and early 2011, he was assigned to do building surveys in Building
12 707, buildings and building footprints throughout the 500 series and Buildings 351, 351A, 411, 401,
13 414, 406, 144, 146, 130, 103, 113, and 521. Smith's Tetra Tech HP supervisor, Steve Rolfe, told his
14 survey team, consisting of Jeff Rolfe, Rick Zahensky and Smith, not to worry about doing Class 2 or
15 3 scans and smears at all. Rather, they were instructed to "just get some numbers and get it done," or
16 "just set your meter down on the ground and let it count," meaning they should allow the scanner to
17 operate in order to obtain data, but that the scanner should be stationary rather than doing a
18 systematic survey of the area as required. Smith and his co-workers followed instructions, did not do
19 proper Class 2 and 3 scans, and reported fraudulent data for the Class 2 and Class 3 scans for nearly
20 all buildings at Hunters Point.⁶¹

21 When Smith challenged this practice, Tetra Tech HP supervisor Steve Rolfe told him,
22 "That's what Bill Dougherty [Tetra Tech's Project Manager] wants." The false scanning was also
23 done on other buildings by HP Supervisor Justin Hubbard's team, including Buildings 103, 114, 145,
24 130, 439, 366, and 813.

25 **4. Fraudulent Data Reporting**

26 The contract between the Navy and Tetra Tech required the company to do scans for
27 radioactive contaminants of buildings, developed areas, and areas of open soil.
28

1 Tetra Tech directed that scan data be altered that were too high, which would result in having
2 to do additional expensive remediation, or too low, which would raise questions about the scan
3 integrity and potentially require that the scanning be entirely redone.

4 Anthony Smith personally witnessed HP Tina Rolfe changing scan results so that they would
5 fall within acceptable limits, that is, not too high but not too low to raise suspicions. One time when
6 Smith was downloading data from his equipment onto a computer, he came up behind Tina Rolfe
7 and saw her working on a computer changing readouts from a Ludlum 2350. Smith estimates that
8 the HPs downloaded thousands of scan results per day. He states that changing these scan numbers
9 was a very simple thing to do. He also saw her changing numbers on readings from a Ludlum 2360
10 (which collects surveillance data for alpha and beta radiation). The fact that Tetra Tech was
11 “changing the numbers” was common knowledge among the HPs. Both HPs Ray Roberson and Joe
12 Cunningham told Smith they were aware that scan results were being altered.⁶²

13 Smith observed that Tina Rolfe was directed to change the numbers by her husband, Steve
14 Rolfe, a Tetra Tech HP supervisor. Several times he heard Steve Rolfe say of one sample or another,
15 “that number’s too high, it’s way above background,” and he directed that it be altered to be lower to
16 be closer to the background levels.⁶³ Tetra Tech HP supervisor Justin Hubbard was also aware of the
17 alterations. Smith complained about the scan results being changed, and Hubbard told him that Tetra
18 Tech was doing it everywhere else on the Shipyard.⁶⁴

19 Smith reports that Senior HP Rick Zahensky told him he also changed scan result numbers
20 for an extended period, involving many months, if not years. On numerous occasions Zahensky took
21 a computer home in order to change scan results overnight. Zahensky told Smith that at times he
22 worked until the early hours of the morning to “get the numbers right.” Smith was present on several
23 occasions when Zahensky did not “get the numbers right,” and was “chewed out” by Steve Rolfe.
24 Smith also witnessed Tina Rolfe being “chewed out” by her husband Steve, when numbers remained
25

27 ⁶¹ Exhibit B at ¶ 25.

⁶² *Id.* ¶ 26.

⁶³ Exhibit B at ¶ 26.

⁶⁴ *Id.* at ¶ 27.

1 too high or too low.⁶⁵

2 Tetra Tech also violated proper protocol by holding up the delivery of the scan results to the
3 project management office. Proper procedure was that the scan results were to be submitted to the
4 office by the end of each day on thumb drives. However, rather than submit scan results by day's
5 end, the scan results were held up so that employees like Zahensky could manipulate results that
6 were deemed too high or too low. When Zahensky was given the scan results to take home in the
7 evening, the thumb drive was not submitted until the following day at the earliest. The office had no
8 objection to the tardy delivery of the scan results, since their fraudulent manipulation was done at the
9 direction and insistence of Tetra Tech's upper-level onsite project management.⁶⁶

10 Bert Bowers, the former RSOR, states that a lab technician, Neil Berrett, and a lab
11 supervisor, Phil Smith, came to him on separate occasions complaining they were being asked by
12 upper level project management to "write away" laboratory analysis results, that is, change the
13 results of sample analyses and scans. Bowers directed the employees to go back to the project
14 management, talk with them, and come back to Bowers if they were not satisfied. At that time,
15 Bowers had not been aware project management had been ordering the falsification of samples and
16 scan results.⁶⁷

17 **5. Potentially Hazardous Radioactive Soil Shipped Offsite and Backfilled at HPNS**

18 In the years preceding the Shipyard cleanup, Navy studies established that many of the drain
19 and sewer lines throughout the base were contaminated as a result of the Navy having previously
20 disposed of radioactive waste by simply dumping it down the drain. Investigation also found that
21 many of the drain and sewer lines had severely broken or cracked over the years, causing radioactive
22 contamination to leach into the surrounding soil. Remediating the extensive radioactive
23 contamination stemming from drain and sewer lines was thus a major component of Tetra Tech's
24 cleanup responsibilities at HPNS, and included large-scale soil excavation and sewer and drain line
25 removal.

26 Soil removed from around the sewer lines was required to be scanned and remediated as

27 ⁶⁵ *Id.* at ¶ 26.

28 ⁶⁶ *Id.*

1 necessary. Soil that remained contaminated with radiation was to be disposed of as low-level
2 radioactive waste. Soil that was deemed successfully remediated was either backfilled into trenches
3 at the Shipyard or shipped offsite to be used for commercial purposes.⁶⁸

4 From the very beginning of the sewer trench remediation, however, potentially radioactive
5 soil was allowed to be shipped offsite that Tetra Tech claimed was free of radioactive materials
6 when it may not have been. Tetra Tech management engaged in deliberate fraudulent practices to
7 conceal the potentially radioactive nature of soil cleared for use as backfill. To date, Tetra Tech has
8 failed to alert the public of the potentially hazardous nature of soil that left the Shipyard or
9 acknowledge that potentially radioactive soil was backfilled throughout the Shipyard.

10 **a. Potentially Hazardous Radioactive Soil Shipped Offsite**

11 In late 2005, soon after Tetra Tech began remediating soil that had been removed from
12 trenching in connection with drain and sewer line removal and the broad remediation of areas within
13 Parcel E, Tetra Tech established a conveyor belt system at HPNS to screen soil for radioactive
14 material above release levels.⁶⁹ Under this system the soil was first spread no more than 6 inches
15 deep on a conveyor belt. The soil was then to be moved at an established slow speed under
16 radiological sensors that would set off an alarm if the sensors picked up excessive radioactivity. If
17 the alarms sounded, the soil within a specified number of feet on either side of the sensors was to be
18 removed from the conveyor belt and placed in low level radioactive containers for offsite disposal.
19 The soil that did not set off the radiological sensor alarms was permitted unrestricted radiological
20 release from Hunters Point unless it was chemically contaminated.⁷⁰

21 Sometime in early 2006, RSOR representative Bert Bowers contacted Ulrika Messer, a Tetra
22 Tech manager in San Diego who was responsible for the conveyor belt system and the specific
23 contracts under which the conveyor belt processing was being undertaken. Bowers informed Messer
24 that NWE had reached 80% of the budgeted costs Tetra Tech had allotted for the conveyor belt
25 processing of radioactively contaminated soil. Messer reacted very strongly, screaming at Bowers
26

27 ⁶⁷ Exhibit A at ¶ 53.

⁶⁸ See Exhibit A at ¶ 43; Exhibit B at ¶ 28.

⁶⁹ *Id.* at ¶ 20.

⁷⁰ *Id.* at ¶¶ 17-18.

1 and saying she would have to go to Tetra Tech VP Neil Hart to “beg” for more money for the
2 conveyor belt processing of the remaining soil.⁷¹

3 After Bowers alerted Tetra Tech to the budgeted funds running low, Tetra Tech Construction
4 Superintendent Joe Levell, who reported to Messer, substantially increased the conveyor belt speed.
5 Increasing the speed made the radiation detectors much less able to detect radiological
6 contamination. Tetra Tech’s internal memos admit that the speeds were increased to double the
7 approved speed. However, HPs who worked on the conveyor belt system report that the speeds were
8 actually increased by a factor of 6 to 9 times the authorized conveyor belt speed.⁷² Bowers estimates
9 that the high scanning speed would make the radiation detectors nearly worthless, unable to detect
10 all but extreme radiation emissions.⁷³

11 In that same 2006 timeframe, further efforts to cripple the effectiveness of the conveyor belt
12 system were taken. Messer communicated regularly with NWE CEO Mike Wilson. The brother of
13 Mike Wilson, Gary, was a senior HP working at the Shipyard for NWE. Sometime shortly after
14 Bowers informed Messer that the budget for operating the conveyor belt systems was nearly maxed
15 out, Gary Wilson, with the assistance of HP Jane Taylor, silenced the sensor alarms so the sensor
16 system would never alert that excessive radioactive contamination was present in the soil.⁷⁴

17 After months of the improper conveyor belt speed and alarm deactivation, HPs raised
18 objections to Tetra Tech, ultimately forcing it to stop the improper conveyor belt use in July 2006.
19 When Gary Wilson was questioned about why he and Jane Taylor deactivated the sensor alarms, he
20 stated that they were silenced because they were going off so much that a large amount of the soil
21 was found to be radiologically contaminated and Tetra Tech wanted less soil deemed contaminated.
22 Wilson also said the alarms were silenced due to pressure from Tetra Tech management.⁷⁵

23 In the months prior to July 2006, before the use of the conveyor belt system was stopped,
24 tens of thousands of cubic yards of soil were fraudulently “cleared” as non-radiologically
25 contaminated due to the excessive conveyor belt speed and disabling the alarm. Tens of thousands of

26
27 ⁷¹ *Id.* at ¶ 20.

⁷² *Id.* at ¶¶ 17, 21-23; *see also* Exhibit B at ¶ 29; Exhibit N, Decl. of Robert McLean, ¶¶ 8-11.

⁷³ *See* Exhibit A at ¶ 22.

⁷⁴ *See* Exhibit B at ¶ 29, Exhibit A at ¶ 23.

1 cubic yards of soil fraudulently “cleared” were shipped off Hunters Point for use by unknowing
2 customers before July of 2006.

3 Tetra Tech management, including Tetra Tech Vice President Neil Hart, was aware that tens
4 of thousands of cubic yards of potentially contaminated soil with levels of radioactivity above
5 release levels had been improperly screened by the conveyor belt system. VP Hart and others in
6 Tetra Tech management also knew that Tetra Tech could not represent that the soil was free of
7 hazardous radioactivity. Despite this knowledge, Tetra Tech took no steps to inform the recipients of
8 the soil that it was potentially hazardous. Moreover, Tetra Tech took no steps to inform appropriate
9 regulatory agencies.⁷⁶ Tetra Tech’s failure to warn the public and regulatory agencies of the risk it
10 created is a breach of the trust the NRC placed in the company by granting it a license.

11 **b. Potentially Hazardous Radioactive Soil Used As Backfill**

12 After the conveyor belt system was exposed as having been misused and ineffective, Tetra
13 Tech implemented an alternative soil scanning system using Radiological Screening Yard (“RSY”)
14 pads. In the RSY pad system, soil excavated from trenches was spread out in an approximately 6-
15 inch layer across a pad roughly the size of a football field and scanned for radioactivity above
16 release levels. At first, HPs walked the pad hand scanning for radioactivity and they would remove
17 soil registering above release levels.

18 Later, as the process of having HPs walk and scan the RSY pads proved to be time
19 consuming and expensive, Tetra Tech switched to using an array of radioactive sensors pulled
20 behind a small tractor, known in the field as a “towed array.” With the towed array system, the
21 information gathered by sensors, including GPS data, was transmitted to a data center computer. A
22 data specialist would then develop a detailed map of the areas of soil on the pad marking the highest
23 radioactive readings. The map was then transmitted to an HP who would direct other HPs to the
24 high-level spots to remove the radioactive soil.⁷⁷

25 The RSY pad system was central to determining if soil removed from the trenches was to be
26

27 ⁷⁵ See Exhibit A at ¶ 23; Exhibit B at ¶ 30.

28 ⁷⁶ *Id.* at ¶ 24; *see also* Exhibit B at ¶ 32.

⁷⁷ Exhibit A at ¶ 37.

1 disposed of as radioactive waste or could be used as backfill at the Shipyard.⁷⁸ In its early stages,
2 2008 and early 2009, the towed array appears to have been used properly and experienced and
3 qualified HPs led the process. The towed array procedure for the RSY pads also proved much more
4 effective compared to having the HPs hand-scan the soil. Still, RSY pad processing was expensive
5 and time consuming for Tetra Tech, and the fixed price contracts provided an incentive for work to
6 be performed quickly and fraudulently at minimal cost.

7 **c. Unqualified Supervisors and Untrained Workers Responsible for RSY Pad**
8 **Soil Processing**

9 Beginning in 2009, Tetra Tech undertook conduct aimed at cutting the cost of the RSY pad
10 soil processing and in turn severely undermined the credibility of RSY remediation work. Most
11 notably, Tetra Tech installed unqualified workers in positions of responsibility at the RSY pads,
12 some of whom had no experience in the radiological industry.

13 For example, Jane Taylor was hired as a Junior HP in 2006 despite suspicion her resume was
14 fraudulent. Jane Taylor had a daughter, Samantha Taylor, who was a Junior HP at the Shipyard. Jane
15 Taylor wanted Samantha Taylor to help her get a job at Hunters Point. According to Senior HP
16 Arthur Jahr, Samantha Taylor asked him to lie on Jane Taylor's behalf, asking Jahr to falsely state he
17 had previously worked with Jane in the radiological field. Jahr refused.⁷⁹ Furthermore, according to
18 Senior HP Richard Stoney, Samantha Taylor told him that her mother had no radiological
19 experience.

20 In applying for a job through New World Environmental, Jane Taylor submitted a resume
21 that claimed she had years of radiological experience working for a firm called "Taylor Made
22 Construction." However, RSOR Bert Bowers was familiar with firms that did radiological work, had
23 never heard of "Taylor Made," and came to the conclusion that the resume was fraudulent. Bowers
24 shared this suspicion with Kari Guidry, NWE's Human Resources Director. Subsequently Jane
25 Taylor submitted a second resume that omitted any reference to "Taylor Made Construction" and the
26 claim she had prior radiological experience.

27 ⁷⁸ *Id.* at ¶ 43.

28 ⁷⁹ Exhibit E, Decl. of Arthur Jahr III, ¶ 10-11; *see also* Exhibit C at ¶¶ 18-25; Exhibit G, Decl. of
Richard Stoney, ¶¶ 5-9; Exhibit A at ¶¶ 29-36.

1 Despite the red flags raised about her resume, Taylor was hired as a Junior HP, and within
2 just a few months, promoted to Senior HP even though it normally took Junior HPs at least several
3 years to gain the experience necessary to be a Senior.

4 Other HPs who observed Taylor's work saw that she was not competent to be an HP at all,
5 let alone a Senior HP.

6 Subsequently, Taylor left HPNS to pursue work elsewhere. However, she was rehired a short
7 time later. At the insistence of Construction Superintendent Dennis McWade, with whom Taylor had
8 a romantic relationship (and later married), Taylor was re-hired as a Senior HP.⁸⁰

9 Sometime in 2009, Taylor was put in charge of the RSY pad radiological remediation.⁸¹

10 In early 2009, Tetra Tech hired Thorpe Q. Miller to oversee the data system used for the
11 RSY pad processing, including the development of the maps used for the remediation of soil on the
12 RSY pads. Bowers states that Miller did not have the education, training, or experience required by
13 the Navy contracts to hold this position.⁸²

14 However, Miller is the son of Laurie Lowman, who was the Lead Environmental Protection
15 Manager in the Navy's Radiological Affairs Support Office (RASO), responsible for oversight of
16 Tetra Tech and the radiological remediation at Hunters Point. Tetra Tech employed him apparently
17 as a favor to Lowman and to curry favor with her. Miller was originally a Tetra Tech employee, but
18 its management arranged to have him employed by a subcontractor, though his job was exactly the
19 same, in an attempt to avoid the conflict of interest being so obvious.⁸³

20 With Miller and Taylor in charge of the RSY pad processing, Tetra Tech stopped having
21 qualified HPs perform soil sampling and removal on the pads. Tetra Tech instead had unskilled
22 laborers assist Taylor at the RSYs. According to accounts of former HPs, trained and skilled Senior
23 HPs were not regularly assigned to RSY pad processing from 2010 on.⁸⁴

24 The use of unskilled laborers for the RSY pad processing under the supervision of Taylor put
25 the health and safety of the laborers at risk. The laborers were not sufficiently trained to understand

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27 ⁸⁰ Exhibit A at ¶¶ 33-34.

⁸¹ *Id.* at ¶ 36.

⁸² *Id.* at ¶ 37.

28 ⁸³ *Id.* at ¶¶ 38-40.

1 the health risks of inhaling or ingesting the radioactive contamination they were working with, and
2 Taylor lacked the competence to ensure the laborers performed the work properly and safely. Senior
3 HP Art Jahr observed laborers working the RSY pads with Taylor without the proper protective
4 equipment, such as gloves and respiratory protection. Jahr also observed the laborers creating
5 unnecessary dust and misusing the Ludlum sensors by swinging them too high and too fast over the
6 ground, rendering the instruments ineffective. In August of 2010, Jahr brought his concerns over the
7 laborer's conduct and the lack of proper supervision by Taylor to a Tetra Tech supervisor, Brian
8 White. Jahr told White that if NRC inspectors saw the conduct Taylor was supervising, the NRC
9 would shut down the HPNS project. Jahr was terminated shortly thereafter.⁸⁵

10 Other Senior HPs also observed the conduct of Taylor in her supervision of the RSYs. For
11 example, in processing the RSY pads, soil samples were to be taken from the 32 highest radioactive
12 reading spots that the towed array identified and Miller mapped. On one occasion, Senior HP Archie
13 Jackson overheard laborers tell Taylor they had collected less than the necessary 32 samples from a
14 pad. Jackson then overheard Taylor direct the laborers to "just get the soil from anywhere," that is, it
15 did not matter if the soil samples came from the proper RSY pad.⁸⁶ The direction given by Taylor
16 was in clear violation of procedures and resulted in the fraudulent submission of soil samples from
17 the wrong location. It also calls into the question the legitimacy of the RSY remediation process.

18 **d. Backfilling with Potentially Hazardous Radioactive Soil**

19 Taylor and Miller were responsible for selecting the locations from which soil samples were
20 taken at RSY pads. The protocol established by the Navy required that the soil samples be taken
21 from the locations on the pad with the highest readings of radioactive activity.⁸⁷

22 Some soil processed at the RSY and determined to be free from contamination was used as
23 backfill. Other soil cleared from the RSY pads as no longer containing high levels of radioactive
24 contamination was to be shipped offsite, going through the Portal Monitor for a final check.⁸⁸

25 Miller and Taylor saw to it that the large majority of soil excavated from the sewer trenches
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27 ⁸⁴ *Id.* at ¶ 36; Exhibit E at ¶¶ 13, 18; Exhibit D, Decl. of Archie Jackson, ¶¶ 10-12.

⁸⁵ Exhibit E at ¶ 18.

⁸⁶ Exhibit D at ¶¶ 15-17.

28 ⁸⁷ *See* Exhibit A at ¶ 37; Exhibit C at ¶¶ 41-42.

1 was not treated as radioactively-contaminated soil. For example, soil removed from a parcel referred
2 to as “UC-3 Work Area #16” had 1,023 cubic yards of soil removed. After processing which Miller
3 and Taylor oversaw, only 10 cubic yards of soil were remediated as containing radioactive and
4 chemical contamination, or less than .01% of the soil processed.⁸⁹ Through intentional fraud or
5 incompetence, taking samples that avoided the existing high radioactivity in the RSY pad soil
6 permitted the tests to incorrectly meet the Navy standards and incorrectly obtain clearance for the
7 RSY pad soil to be used as backfill at Hunters Point.⁹⁰

8 Tetra Tech knew that the RSY pad processing under the supervision of Miller and Taylor
9 resulted in dramatically more Portal Monitor failures in 2010 and the first 9 months of 2011. Tetra
10 Tech also knew that the soil cleared to be used as backfill at HPNS never went through the Portal
11 Monitor screening process.⁹¹ Despite the fact that the soil leading to increased Portal Monitor alarms
12 had been processed by the same individuals as the soil cleared for backfill, Tetra Tech never took
13 any steps to verify that the soil that was to be used as backfill at Hunters Point did not contain the
14 same type of residual radiological contamination that led to increased Portal Monitor failures.

15 **6. Change in the Portal Monitor Process**

16 When the Portal Monitor process was first instituted, the Navy required loaded trucks to pass
17 through the Portal Monitor to detect whether hazardous radioactive contamination existed in the
18 truckload. If a truckload set off the Portal Monitor alarm, the truck was to go through the Portal
19 Monitor two more times. If the truck failed two out of three passes, then the load was not to go
20 offsite. Rather, HPs were to scan the truck’s load in an effort to locate the radioactive material and
21 the load was required to be taken back to the RSY pads to be reprocessed.⁹²

22 By 2011, trucks loaded with RSY-processed soil were frequently failing the Portal Monitor
23 screening. Senior HP Susan Andrews recalls, and entered into her logs, that when working the Portal
24 Monitor in the first half of 2011, nearly all of the 37 loaded trucks she screened one day set off the
25 Portal Monitor alarm, requiring all loads to be returned to the RSY pad to be re-worked. The time
26

27 ⁸⁸ See Exhibit A at ¶ 43.

⁸⁹ Exhibit A at ¶ 44; Exhibit A, Attachments 4, 5 (“Exhibit A4” and “Exhibit A5,” respectively).

⁹⁰ See Exhibit C at ¶¶ 44-45.

28 ⁹¹ *Id.* at ¶¶ 42-43; see also Exhibit C at ¶¶ 43-44.

1 and expense to Tetra Tech associated with the Portal Monitor failures was significant as loads
2 needed to be reprocessed entirely.⁹³

3 In early September 2011, Tetra Tech responded to the increased Portal Monitor failures by
4 making two fundamental changes affecting loads of soil from the RSY pads. First, Tetra Tech
5 substantially decreased the sensitivity of the Portal Monitor from “sigma 3 plus mean background
6 level” to “sigma 8 plus mean background level.”⁹⁴ This means in plain language that the sensor
7 sensitivity was decreased by nearly two-thirds. Radioactivity that should have set off the alarm no
8 longer set it off. This change crippled the Portal Monitor’s effectiveness in catching excessive
9 radioactivity that could cause disease, including cancer.

10 Second, Tetra Tech weakened the procedure for scanning trucks after radioactivity set off the
11 Portal Monitor alarm. Before the September 2011 changes, a truckload that set off the alarm on two
12 out of three passes had to have the load returned to the RSY pads to be re-worked. After the change
13 in procedure, Tetra Tech instituted a hand-scanning process that virtually ensured hazardous levels
14 of radioactivity would not be found, allowing the truckload to be released and leave Hunters Point.

15 Tetra Tech had learned from years of experience with the Portal Monitor that HPs usually
16 located the radioactive materials that set off the alarm when they scanned the soil in the load by
17 climbing a scaffold and scanning over the top of the trailer. Tetra Tech also knew from the prior
18 years that very few scans through the body of the trailer were able to detect the radioactive materials
19 due to shielding by the metal trailer body and the thickness of the soil in the trailer.⁹⁵

20 In September 2011, Tetra Tech forbade the HPs to use the scaffolding and required that the
21 scanning be done solely through the metal shell of the trailer. This change also allowed a load that
22 failed the newly weakened Portal Monitor to leave the Shipyard without having to be sent back to
23 the RSY pads to be reworked.⁹⁶ The Portal Monitor became largely irrelevant because loads that
24 failed the Portal Monitor were allowed to leave Hunters Point as non-radioactive based on a corrupt
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26 ⁹² See Exhibit C at ¶ 46.

27 ⁹³ *Id.* at ¶¶ 8, 45.

28 ⁹⁴ Exhibit C at ¶ 46.

⁹⁵ See *id.* at ¶ 48.

⁹⁶ *Id.* at ¶¶ 49-50.

1 scanning procedure.⁹⁷

2 As a result of the changes Tetra Tech made to the Portal Monitor, potentially hazardous
3 radioactive materials were regularly permitted to leave Hunters Point designated as free of hazardous
4 radioactivity. Tetra Tech was able to dramatically reduce the costs it incurred for the soil processing.
5 The September 2011 changes increased profits at the expense of those who unknowingly received
6 potentially hazardous radioactive soil from the Shipyard.⁹⁸

7 Tetra Tech's practice of putting incompetent individuals in charge of the critical RSY
8 screening process, removing competent HPs from the process, reducing the sensitivity of the Portal
9 Monitor, and barring HPs from scanning truckloads from an overhead scaffolding increased the
10 likelihood that radioactive soil above the cleanup standard was shipped off HPNS. To date, Tetra
11 Tech has not alerted the entities that received soil from HPNS after September 2011 that the soil
12 may contain elevated radioactivity at levels potentially hazardous to health.

13 **C. Tetra Tech's Motive to Commit Fraud**

14 Tetra Tech put its production schedule and profits ahead of proper radiological sampling and
15 remediation. As early as 2006, it demonstrated it was willing to cut corners, taking steps to
16 fraudulently disable its scanning system for detecting elevated levels of radioactivity in soil,
17 resulting in potentially contaminated soil being shipped offsite.

18 Starting in 2009 and continuing thereafter, the agreements between the Navy and Tetra Tech
19 changed from cost-plus contracts to firm fixed-price contracts,⁹⁹ which significantly accelerated
20 Tetra Tech's fraudulent practices. After this change, Tetra Tech faked both radiological investigation
21 and remediation; unlike previously, cutting costs led directly to increased profits.

22 Furthermore, under the fixed-price contracts, the bulk of the payments to Tetra Tech – and
23 bonuses for its management – depended on the Navy obtaining free release of materials, soil, areas
24 and buildings. Tetra Tech was to be paid in incremental stages on each contract covering specific
25 areas, but was not to be paid the largest share of the contract – 40% – until all hazardous radioactive
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27 ⁹⁷ *Id.* at ¶ 50.

⁹⁸ *Id.* at ¶ 49.

28 ⁹⁹ *See* Exhibit A at ¶ 11; Exhibit A, Attachment 1 (Scope of Work Contract dated June 24, 2011)
("Exhibit A1").

1 materials were removed and post-remediation sampling indicated radioactivity fell below cleanup
2 levels established under the contract. This substantial final payment motivated the fraudulent
3 sampling and remediation necessary to obtain free release, encouraging Tetra Tech to falsely claim
4 remediation was successfully completed when it was not.

5 Tetra Tech found that certain areas of the Shipyard, like the Building 707 “Triangle” area,
6 proved difficult to meet free release levels because elevated radioactivity continued to be found in
7 post-remediation samples despite repeated efforts at remediation. Tetra Tech chose not to incur the
8 additional costs of cleanup and have payment delayed. Rather, the management of Tetra Tech
9 directed HPs to engage in fraud.¹⁰⁰

10 HPs also had an incentive to go along with the fraud. They were paid both a salary and a
11 generous tax-free per diem, adding up to substantial compensation. In addition, the cleanup was
12 slated to last for years, making a job at the Shipyard unusually stable, unlike the short stints of work
13 HPs were used to during nuclear plants’ temporary shut-downs. The money and stability were
14 powerful inducements to be complicit in the management-directed fraud rather than to challenge
15 improper practices, no matter how wrong they were.¹⁰¹ In addition to the inducements of stable
16 employment and substantial pay, Tetra Tech also kept HPs in line with threats. Management
17 compelled HPs to engage in fraud or be fired.¹⁰²

18 This combination of “carrots” and “sticks” created a toxic Tetra Tech culture of fraud.
19 But some HPs were sufficiently offended by Tetra Tech’s practices that they quit rather than be
20 complicit. Others felt badly enough about what they had been ordered to do that they “blew the
21 whistle” after they left the Shipyard. These HPs are the whistleblowers whose declarations, under
22 penalty of perjury, support this Petition.

23 **D. A Culture of Fraudulent Work and Cover-up**

24 Tetra Tech’s toxic culture overemphasized production at the expense of radiological safety.
25 Its onsite management viewed radiological investigation and remediation as impediments to the
26 construction schedule. Its Radiological Safety Department was not sufficiently independent of the

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28 ¹⁰⁰ See Exhibit B at ¶¶ 7-11, 15-20, 24-31.

¹⁰¹ *Id.* at ¶ 34.

1 Construction Department. The perceived needs of the Construction Department to speed up work
2 and cut costs overrode proper radiological practices.¹⁰³

3 Tetra Tech’s culture was also one of favoritism, where preferred people were made senior
4 HPs and supervisors despite not having the experience necessary for those positions.¹⁰⁴ Lack of
5 qualified supervisors contributed to slipshod and fraudulent work by the HPs working for them,
6 seriously compromising sampling and remediation.

7 The company also had a system of covering up improper practices. HP supervisors had an
8 “early warning system,” which alerted them when the chief onsite radiological safety officer, the
9 Radiation Safety Officer’s Representative was about to come out to the field. Thus alerted,
10 employees knew not to continue to engage in fraud, at least until the RSOR went back to his office.

11 Furthermore, managers were nearly all from outside the San Francisco Bay Area. They
12 expressed little concern that residual radioactive contamination might remain on the Shipyard
13 because of an attitude of, “We’re not going to live here.”¹⁰⁵

14 15 **VI. DISCUSSION**

16 The United States Navy hired Tetra Tech to participate in the proper radiological cleanup of
17 HPNS and the NRC entrusted Tetra Tech with a Materials license. However, as detailed above, Tetra
18 Tech’s role in the remediation is a story of intentional fraud, greed and disregard for the health and
19 safety of present and future residents of San Francisco and Northern California. Tetra Tech’s
20 fraudulent conduct, engaged in by corporate managers, superintendents, and supervisors over no less
21 than six years, demonstrates that Tetra Tech was willing to sacrifice radiological safety for profit.

22 The NRC is charged with protecting workers and the public from the harm, illness and death
23 that can come from exposure to radiological contamination. The facts prove that Tetra Tech’s fraud
24 could result in workers and the public being exposed to hazardous radioactive contamination, risking
25 their health and safety. The NRC cannot allow such a dishonest and dangerous company to continue
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27 ¹⁰² See Exhibit B at ¶¶ 7, 15-32, 34; Exhibit C at ¶¶ 13-15, 30-35, 39, 52-55; Exhibit N at ¶¶ 10-11.

¹⁰³ See Exhibit A at ¶¶ 11-15, 51-52; see also Exhibit C at ¶¶ 30-35; 40-51.

¹⁰⁴ See Exhibit A at ¶¶ 8, 25-49; Exhibit C at ¶¶ 18-29; Exhibit D at ¶¶ 9-14.

¹⁰⁵ See Exhibit B at ¶ 34; Exhibit C at ¶ 59.

1 to retain an NRC license. Tetra Tech’s NRC license should be revoked.

2 **A. The Petition Establishes Tetra Tech Engaged in Widespread Fraud**
3 **Incompatible with an NRC License.**

4 Although Tetra Tech acknowledged, after being caught, that it engaged in soil-sampling
5 fraud, former employees and documents demonstrate more widespread intentional misconduct. The
6 fraud went well beyond the phony soil sampling addressed in the *Anomalous Samples Report*. Fraud
7 spanned virtually all remediation functions: fake soil sampling occurred across large portions of the
8 Shipyard; COC documents were regularly falsified; building surveys were faked; inconvenient data
9 were manipulated or destroyed; and soil was fraudulently remediated by individuals selected by the
10 company because of their incompetence and willingness to cheat and keep quiet. This resulted in
11 potentially contaminated soil being shipped offsite or being backfilled in Shipyard trenches.

12 Whereas the *Anomalous Samples Report* is limited to fake samples taken in lieu of real post-
13 remediation samples at the shell of Building 517, witnesses and records indicate that potentially
14 thousands of samples taken throughout Hunters Point were phony.

15 Witnesses describe the fraudulent soil sampling changing over time. At first, the phony
16 samples were taken in the general vicinity intended to be sampled but from locations where it was
17 thought samples would come back “clean.” However, when even those close-by samples came back
18 too “hot,” the fraud was adapted; phony samples were taken from one of three remote locations
19 known to be clean, a trench in front of the 500 series, the old movie theater or the palm tree site,
20 depending on the type of soil to be matched.

21 HPs were instructed to conceal their improper activity. They filled buckets with clean soil
22 from these areas during lunch or after normal work hours, when they would not be observed, and
23 delivered the known-clean soil to a Conex where samples were switched undercover. Fraudulent soil
24 sampling effectively guaranteed that costly soil remediation and disposal would not be required.
25 From employee statements and the records contained in the *Anomalous Samples Report*, it is certain
26 the intentional fake soil sampling took place for years.

27 Samples that were known or suspected to be too “hot” were discarded along with their COCs.
28 This was true not only of the samples from around Building 707 and the 500 series, but also for the
background reference sample taken from Parcel A, the post-remediation samples of the soil in the

1 crawl space under Building 351A and for radioactively-contaminated fencing.

2 In the case of the Parcel A sample, Tetra Tech knew from lab results that Parcel A had
3 dangerous levels of cesium-137 contamination, many times the cleanup level. Tetra Tech directed
4 that the sample and test result be discarded so no one would learn of the contamination, putting the
5 health and safety of the community at risk, contrary to the NRC's fundamental mandate to protect
6 the public from the health hazards of radiological contaminants.

7 In the case of Building 351A, Tetra Tech's top onsite executive, the Project Manager, was
8 not only aware of sample destruction, but directed it. The fact that contaminated soil still remains
9 under Building 351A would continue to be hidden but for the whistleblowers whose declarations are
10 attached to this Petition.

11 Fraudulent soil sampling was accompanied by building-survey fraud in which Class 1 scans
12 were done improperly and Class 2 and 3 scans were completely fabricated. "Just get some numbers,"
13 HPs were told by Tetra Tech's supervisor. The fraud entailed holding a scanner in place long enough
14 to collect the required number of readings indicating an entire area was scanned when systematic
15 scanning did not take place.

16 Portal Monitor procedures were altered in two fundamental ways: barring HPs from using the
17 overhead scaffolding to scan down into a truckload; and no longer requiring every truck that tripped
18 the Portal Monitor alarm to be reworked at an RSY pad. As a result, potentially hazardous
19 radioactive soil was designated as "clean" when Tetra Tech knew hazardous radioactive
20 contamination could remain in the soil shipped offsite. Tetra Tech was thereby able to dramatically
21 reduce the costs it incurred for soil processing and increase its profits at the expense of proper
22 radiological procedure, at the expense of actual radiological cleanup, and at the expense of those
23 who may come into contact with the radiological dangers that Tetra Tech allowed to remain in place.

24 Taken together, the fraudulent conduct described by former shipyard employees
25 demonstrates that the fraud was much more widespread than the previous investigations have
26 revealed, was committed in furtherance of intentional and deliberate schemes rather than being
27 isolated misconduct by a couple rogue employees, and was done with an awareness that people
28 could be exposed to radioactive contaminants Tetra Tech knew were not going to be cleaned up.

Because Tetra Tech has not admitted the full extent of its fraud and because contamination

1 above free-release levels remains un-remediated, the fraud is continuing.

2 **B. Tetra Tech Was Willing to Sacrifice Radiological Safety for Profits**

3 The facts submitted in this Petition show that no later than 2006 and continuing to at least
4 August 2012, corporate officials, managers, and supervisors of Tetra Tech directed widespread fraud
5 knowing their conduct could result in radium-226 and other highly toxic radioactive materials being
6 shipped throughout Northern California and remain buried in trenches at the Shipyard. Radium 226
7 and the other radioactive contaminants that Tetra Tech was charged with remediating have been
8 deemed by the NRC to be highly toxic to humans; radium can cause cancer and has a half-life of
9 nearly 1,600 years.¹⁰⁶

10 As early at 2006, at the VP level of Tetra Tech, decisions were made to cripple the
11 effectiveness of radiological remediation of soil. Tetra Tech management knew that much of the soil
12 it fraudulently processed would be shipped to unsuspecting landfills and companies with Tetra
13 Tech's false assurance the soil was free of radiological contamination.

14 Crippling the soil conveyor belt in 2006 was just the beginning of a growing corporate
15 conspiracy to defraud the Navy, regulators, and the public. The fraud escalated after the contract
16 changed from cost-plus to fixed-price in 2009. All the while, Tetra Tech knew its fraud increased the
17 health risks to workers and the public, now and for hundreds of years into the future.

18 Fraudulent building scans and samples led to the improper free release of buildings. The
19 possibility that excessive and dangerous radiation still exists in these buildings puts future workers
20 who demolish or rehab them at risk, as well as future occupants, a risk that could remain for
21 hundreds and hundreds of years.

22 Tetra Tech also manipulated scanning results, changing data in order to submit numbers that
23 were neither too high to prevent free release nor too low to raise suspicion. This widespread and
24 intentional alteration of scan data evidences disregard for the health of those who may be
25 unknowingly exposed to radioactivity that could potentially cause serious illness like cancer.
26 The use of unskilled laborers for the RSY pad soil processing under unqualified supervision resulted

27 _____
28 ¹⁰⁶ *Hunters Point Shipyard Final Historical Radiological Assessment*, Table 4-3, available at
<http://pbadupws.nrc.gov/docs/ML0425/ML042580203.pdf>.

1 in inadequate remediation, and unwarranted health risks to the laborers. Thousands of cubic yards of
2 potentially contaminated soil were improperly remediated and backfilled into Hunters Point
3 trenches, which could expose future workers and residents at Hunters Point to radioactive health
4 hazards for centuries.

5 Tetra Tech management directed the destruction of samples and records showing excessive
6 radioactive contamination because it chose not to spend the time and money to do a proper cleanup.
7 Employees engaged in the conduct knew it was wrong. Management personnel who directed the
8 fraud knew it was wrong. Tetra Tech's management pressured its supervisors to have HPs engage in
9 fraud to guarantee free release of radiologically contaminated soil and buildings so Tetra Tech could
10 get fully paid and profit without incurring the full costs of the cleanup. The fraudulent conduct went
11 on for years because of corporate greed and employees' fear that to object meant termination.

12 Employees who knew the conduct was wrong and could result in the exposure of innocent
13 people to hazardous radioactive contamination contributed to the fraud and kept their mouths shut
14 due to the real threats by Tetra Tech of termination for breaking ranks with the conspiracy. Tetra
15 Tech's conduct over no less than half a dozen years at Hunters Point risked the health and lives of
16 innocent people for wrongful profits. Tetra Tech does not deserve to retain the NRC license it now
17 holds.

18 **C. NRC Precedent Supports License Revocation**

19 Pursuant to its enforcement authority under the Atomic Energy Act and NRC regulations, the
20 NRC may revoke any license for failure to comply with the requirements of the AEA and/or the
21 rules and regulations of the NRC, or for the discovery of conditions that would have warranted
22 license refusal at the time of application.¹⁰⁷ As previous NRC revocation decisions demonstrate,
23 license revocation is an appropriate remedy in cases such as this where the licensee has engaged in
24 repeated, willful and deliberate misconduct, and where a licensee's noncompliance unreasonably
25 jeopardizes the public health and safety.

26 *In the Matter of Piping Specialists, Inc. and Forrest L. Roudebush*, the NRC revoked Piping
27 Specialists' byproduct materials license following an investigation into alleged violations of its
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1 license conditions and NRC regulations.¹⁰⁸ In that case, an NRC inspection of the licensee’s
2 operations revealed that the company had both failed to maintain and falsified records of radioactive
3 materials usage; that it used unqualified personnel in unauthorized RAD positions; and that it failed
4 to properly post, mark or label radioactive materials or areas, among other violations.¹⁰⁹ In revoking
5 the license, the NRC emphasized that it “must be able to rely on its licensees . . . to comply with
6 NRC requirements, including the requirement to provide information and maintain records that are
7 complete and in all respects material to the NRC.”¹¹⁰ Moreover, the NRC added, “[v]iolations, in
8 particular willful violations of Commission requirements, cannot and will not be tolerated.”¹¹¹

9 In upholding the NRC enforcement order revoking Piping Specialists’ license, the Atomic
10 Safety and Licensing Board members further noted that it had “failed to act as a reasonable manager
11 of licensed activities; failed to detect and correct violations caused by an employee; willfully
12 attempted to conceal violations from NRC staff; and g[ave] untruthful information to the Staff
13 during its inspection and investigations.”¹¹² Taken together, the violations “collectively
14 demonstrated a lack of effective oversight in the Licensee’s radiation safety program” and thus
15 warranted license revocation.¹¹³

16 Similarly, *In the Matter of Mattingly Testing Services, Inc.*, in 2009, the NRC revoked the
17 license of an industrial x-ray provider based on the lack of “reasonable assurance that Mattingly
18 w[ould] provide for the safe use and security of the radioactive materials in its possession or that the
19 public health and safety is adequately protected by continuing activities under the existing
20 license.”¹¹⁴ Citing the repetitive nature of the violations, as well as the threat to public safety
21 resulting from Mattingly’s deliberate and willful violations, the NRC issued an order immediately
22

23 ¹⁰⁷ 42 U.S.C. § 2236; 10 C.F.R. §§ 30.61, 40.71, 70.81.

24 ¹⁰⁸ *Piping Specials, Inc. Kansas City, MO; Order Suspending License (Effective Immediately)*, 56
25 Fed. Reg. 55,514 (Oct. 28, 1991); *Forrest L. Roudebush, Kansas City, Missouri; Order
26 Prohibiting Involvement in NRC-Licensed Activities and Requiring Certain Notification to NRC*,
60 Fed. Reg. 13,739 (Mar. 14, 1995).

27 ¹⁰⁹ 60 Fed. Reg. at 13,739-13,740.

28 ¹¹⁰ *Id.* at 13,740.

¹¹¹ 56 Fed. Reg. at 55,514.

¹¹² 60 Fed. Reg. at 13739 (citing ASLB Final Initial Decision (Revoking License), LBP-92-156, 36
NRC 156 (1992)).

¹¹³ 56 Fed. Reg. at 55,514.

¹¹⁴ *Order Revoking License In the Matter of Mattingly Testing Services, Inc.*, NRC OE EA-10-100,

1 suspending Mattingly's license.¹¹⁵

2 Applying the rationale of the prior NRC revocation decisions here, Tetra Tech's repeated
3 falsification of soil samples and data, repeated failure to adhere to established radioactive materials
4 safety protocols, and disregard for the health and safety of both onsite workers and the greater public
5 provide ample justification for license revocation in this case.

6 Furthermore, during the NRC's investigation, Tetra Tech actively concealed the true scope
7 and breadth of its fraudulent activities. Rather, Tetra Tech suggested in its own report that violations
8 were limited to "anomalous" samples committed by a few employees. As detailed herein, however,
9 Tetra Tech's violations far exceeded the fraudulent sampling addressed in its report and mirror many
10 of the violations that warranted revocation in *Piping Specialists*: staff regularly manipulated and
11 falsified records, such as scan data and COC forms; untrained and unqualified personnel were used
12 throughout Shipyard, often in significant roles; and it permitted potentially contaminated soil to
13 return to the ground as backfill or be shipped offsite. Indeed, the scale on which violations occurred
14 at Hunters Point far exceeded the scale of violations in prior NRC revocation decisions, and created
15 a far greater risk to public health and safety.

16 **D. The NRC License Must Be Revoked to Ensure Tetra Tech Is Never**
17 **Again Entrusted with Radiological Remediation**

18 The Superfund cleanup of radiation at Hunters Point, for which the United States government
19 has spent hundreds of millions of dollars, is a fraud due to Tetra Tech's corporate greed. The United
20 States will have to spend millions of dollars to try to determine and correct the full extent to Tetra
21 Tech's radiological fraud. Tetra Tech cannot be allowed to continue to perform cleanup work at the
22 Shipyard, even under the guise of correcting its frauds. The fundamental confidence that the
23 company can be entrusted with this critical work has been irreparably shattered by its intentional
24 fraud.

25 No other community should be subjected to the fraudulent conduct of Tetra Tech. It has
26 shown its willingness to put the health and lives of communities at risk for profit. No other

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28 ¹¹⁵ at 11 (Sept. 2, 2010) (Docket No. 030-20836).
Id. at 11-14.

1 community in America should experience the damage Tetra Tech has inflicted upon Hunters Point
2 and San Francisco.

3 **E. The NRC Should Conduct a Comprehensive Investigation into**
4 **Tetra Tech's Fraud**

5 Petitioners have demonstrated that widespread fraud took place. However, this Petition only
6 tells part of the story; Petitioner was only able to interview a small number of the employees who
7 worked at the Shipyard for Tetra Tech and its subcontractors. Interviews of all former employees are
8 necessary to document the extent of the fraud and the impact it had on the cleanup. Without their
9 testimony, practices that may have compromised the cleanup will remain hidden. The NRC should
10 conduct a comprehensive investigation into Tetra Tech, including interviewing as many former
11 employees as can be located.

12 **VII. CONCLUSION and PRAYER FOR RELIEF**

13
14 The fraud was directed by all levels of Tetra Tech's management, from the VP level on down
15 to supervisors. Tetra Tech's fraud was motivated by greed. The more Tetra Tech could lower costs,
16 cut corners, and cheat the more it stood to profit. Tetra Tech put profits not only over proper
17 radiological procedures, compromising the cleanup of radioactive materials at the Shipyard, but over
18 the health of innocent people, now and for generations to come. License revocation is warranted
19 because Tetra Tech's approach to the Hunters Point cleanup displayed a total disregard for
20 established radiological procedures, and was a dereliction of the duty entrusted to Tetra Tech by the

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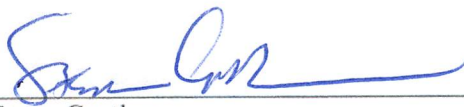
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1 NRC in granting it a Materials License.

2 Petitioner Greenaction respectfully requests that the NRC revoke its license, both as an
3 appropriate sanction for Tetra Tech's fraudulent conduct and to deter others from engaging in
4 fraud.

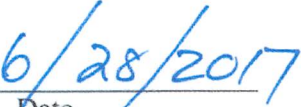
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6 Respectfully Submitted,

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8
9 


Date

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25
26 LLM student Pauline Balaire assisted in this investigation.

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