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GREENACTION FOR HEALTH
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UNITED STATES NUCLEAR REGULATORY COMMISSION

Before the Executive Director for Operations

GREENACTION FOR HEALTH AND ENVIRONMENTAL JUSTICE, Petitioner, v. TETRA TECH EC, Inc. Licensee.	**10 CFR §2.206 PETITION** **TO REVOKE MATERIALS** **LICENSE NO. 29-31396-01**

I. INTRODUCTION

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

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

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

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

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

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A. Two Inadequate Investigations

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

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

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

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

[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").

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

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

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

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

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

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

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

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

[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)

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

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

II. PARTIES

A. Greenaction for Health and Environmental Justice

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

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

(Docket ID NRC-2016-0212).

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revoking its license to do radiological work.

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

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

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

III. JURISDICTION

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

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

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

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the area under jurisdiction of the State of California.

IV. STATEMENT OF LAW

A. NRC Authority

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

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

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

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

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

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V. STATEMENT OF FACTS

A. Discovery of Part of the Fraud

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

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

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

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2.206 Petitions.

[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.

[11] Exhibit H at ES-1.

[12] *Id.* at ES-2.

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conclude that the soil samples were not collected from B517."[13]

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

Similarly, COCs for 20 anomalous samples (No. 02-NPR-S0007-F030-01 through 02-NPR-S0007-F049-01) purportedly taken by Justin Hubbard, an HP supervisor, claim he took them on June 4, 2012 at: 13:00; 13:05; 13:10 and exactly five minutes thereafter until 14:35.[16]

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

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

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[13] *Id.* at 15.
[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).
[15] Exhibit H2 at 419.
[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").

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10:12; 10:15; 10:18, and continuing exactly every three minutes thereafter until 10:51.[19]

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

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

False samples were also taken over a lengthy period of time. According to the COCs in Attachment 15 to the *Anomalous Samples Report*, the earliest listed phony samples were taken on March 4, 2011 (Nos. 03707-S0016-F050-01 and 03707-S0016-F057-01), while the latest were taken nearly a year-and-a-half later, on August 15, 2012 (Nos. 03707-S0022-F056-01 through 03707-S0022-F080-01). Former employees say the COC fraud went on even longer, beginning before 2009 and continuing until at least late September 2012.[23]

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

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[19] Exhibit H2 at 789-790.
[20] *See* Exhibit B. at ¶¶ 21-23.
[21] Exhibit H at 11.
[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).

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samples meeting the definition of 'low K-40' samples have been collected at HPNS."[24]

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

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

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

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

B. Types of Fraud

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

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[24] Exhibit H at 3.
[25] *Id.*
[26] Exhibit H at 20.
[27] *See* Exhibit A at ¶¶ 11-12, 14, 51-52; Exhibit B at ¶¶ 10-11, 15-20, 24-27, 33-34.

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

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

a. Fraudulent Sampling - Stage 1

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

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

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

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

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

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

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

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

b. Fraudulent Sampling – Stage 2

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

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

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

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[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.

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

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

c. Substituting Clean Soil for Potentially "Hot" Soil

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

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

[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.).
[36] Exhibit B at ¶ 18.
[37] *See* Exhibit M (map of Hunters Point Naval Shipyard identifying buildings by number).

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

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

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

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

2. Destruction of "Hot" Soil Samples and Their Records

a. Building 351A

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

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[38] *See* Exhibit B at ¶ 19.
[39] *Id.* at ¶ 20
[40] *Id.* at ¶ 17.
[41] Exhibit I at 6.
[42] Exhibit B at ¶¶ 7-11, 16, 34.
[43] *See* Exhibit A at ¶¶ 6, 11-13.
[44] Exhibit B at ¶ 8.

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

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

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

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

[45] *Id.*
[46] *Id.* at ¶¶ 10-11.

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

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

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

b. Parcel A Background Sample

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

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

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[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.

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

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

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

c. Radioactive Fencing

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

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

[51] Exhibit B at ¶ 12.
[52] *Id.* at ¶ 13.

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be returned to its owner.[54]

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

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

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

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

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[53] *Id.* at ¶ 14.
[54] Exhibit C at ¶ 30.
[55] *Id.*
[56] *Id.* at ¶¶ 31-32.

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improper.[57]

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

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

3. Fraudulent Building Surveys

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

Tetra Tech supervisors divided building areas into three classes, Class 1, 2 and 3.[60] They classified the floors and lowest two meters (or approximately 6 feet) of the walls to be Class 1. The proper way to conduct a Class 1 survey was to slowly scan the "probable sites" of contamination,

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[57] *Id* at ¶ 33.
[58] *Id* at ¶ 34.
[59] *Id* at ¶ 35.
[60] *See* Exhibit A at ¶ 75. The contract between the Navy and Tetra Tech defined Class 1, 2, and 3 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.

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

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

Proper building survey procedure was not followed.

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

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

4. Fraudulent Data Reporting

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

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

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

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

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

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[61] Exhibit B at ¶ 25.
[62] *Id.* ¶ 26.
[63] Exhibit B at ¶ 26.
[64] *Id.* at ¶ 27.

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too high or too low.[65]

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

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

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

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

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

[65] *Id.* at ¶ 26.
[66] *Id.*

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

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

a. Potentially Hazardous Radioactive Soil Shipped Offsite

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

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

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[67] Exhibit A at ¶ 53.
[68] *See* Exhibit A at ¶ 43; Exhibit B at ¶ 28.
[69] *Id.* at ¶ 20.
[70] *Id.* at ¶¶ 17-18.

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and saying she would have to go to Tetra Tech VP Neil Hart to "beg" for more money for the conveyor belt processing of the remaining soil.[71]

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

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

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

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

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[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.

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

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

b. Potentially Hazardous Radioactive Soil Used As Backfill

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

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

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

[75] *See* Exhibit A at ¶ 23; Exhibit B at ¶ 30.
[76] *Id.* at ¶ 24; *see also* Exhibit B at ¶ 32.
[77] Exhibit A at ¶ 37.

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

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

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

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

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

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[78] *Id.* at ¶ 43.

[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.

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

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

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

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

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

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

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

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

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[80] Exhibit A at ¶¶ 33-34.
[81] *Id.* at ¶ 36.
[82] *Id.* at ¶ 37.
[83] *Id.* at ¶¶ 38-40.

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

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

d. Backfilling with Potentially Hazardous Radioactive Soil

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

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

Miller and Taylor saw to it that the large majority of soil excavated from the sewer trenches

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

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

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

6. Change in the Portal Monitor Process

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

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

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

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

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

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

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

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

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[92] *See* Exhibit C at ¶ 46.
[93] *Id.* at ¶¶8, 45.
[94] Exhibit C at ¶ 46.
[95] *See id.* at ¶ 48.
[96] *Id.* at ¶¶ 49-50.

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scanning procedure.[97]

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

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

C. Tetra Tech's Motive to Commit Fraud

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

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

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

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[97] *Id* at ¶ 50.
[98] *Id.* at ¶ 49.
[99] *See* Exhibit A at ¶ 11; Exhibit A, Attachment 1(Scope of Work Contract dated June 24, 2011) ("Exhibit A1").

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

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

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

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

D. A Culture of Fraudulent Work and Cover-up

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

[100] *See* Exhibit B at ¶¶ 7-11, 15-20, 24-31.
[101] *Id.* at ¶ 34.

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

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

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

Furthermore, managers were nearly all from outside the San Francisco Bay Area. They expressed little concern that residual radioactive contamination might remain on the Shipyard because of an attitude of, "We're not going to live here."[105]

VI. DISCUSSION

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

The NRC is charged with protecting workers and the public from the harm, illness and death that can come from exposure to radiological contamination. The facts prove that Tetra Tech's fraud could result in workers and the public being exposed to hazardous radioactive contamination, risking their health and safety. The NRC cannot allow such a dishonest and dangerous company to continue

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[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.

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

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

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

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

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

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

Samples that were known or suspected to be too "hot" were discarded along with their COCs. 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

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

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

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

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

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

Taken together, the fraudulent conduct described by former shipyard employees demonstrates that the fraud was much more widespread than the previous investigations have revealed, was committed in furtherance of intentional and deliberate schemes rather than being isolated misconduct by a couple rogue employees, and was done with an awareness that people 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

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

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

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

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

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

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

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

[106] *Hunters Point Shipyard Final Historical Radiological Assessment*, Table 4-3, *available at* http://pbadupws.nrc.gov/docs/ML0425/ML042580203.pdf.

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

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

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

C. NRC Precedent Supports License Revocation

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

In the Matter of Piping Specialists, Inc. and Forrest L. Roudebush, the NRC revoked Piping Specialists' byproduct materials license following an investigation into alleged violations of its

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license conditions and NRC regulations.[108] In that case, an NRC inspection of the licensee's operations revealed that the company had both failed to maintain and falsified records of radioactive materials usage; that it used unqualified personnel in unauthorized RAD positions; and that it failed to properly post, mark or label radioactive materials or areas, among other violations.[109] In revoking the license, the NRC emphasized that it "must be able to rely on its licensees . . . to comply with NRC requirements, including the requirement to provide information and maintain records that are complete and in all respects material to the NRC."[110] Moreover, the NRC added, "[v]iolations, in particular willful violations of Commission requirements, cannot and will not be tolerated."[111]

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

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

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

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

[109] 60 Fed. Reg. at 13,739-13,740.

[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,

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suspending Mattingly's license.[115]

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

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

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

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

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

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at 11 (Sept. 2, 2010) (Docket No. 030-20836).

[115] *Id.* at 11-14.

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

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

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

VII. CONCLUSION and PRAYER FOR RELIEF

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

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NRC in granting it a Materials License.

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

Respectfully Submitted,

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