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GREENACTION FOR HEALTH  
11 AND ENVIRONMENTAL JUSTICE

12  
13 **UNITED STATES NUCLEAR REGULATORY COMMISSION**  
14 **Before the Executive Director for Operations**  
15

16 GREENACTION FOR HEALTH AND  
17 ENVIRONMENTAL JUSTICE,

18 Petitioner,

19 v.

20 TETRA TECH EC, Inc.,

21 Licensee.  
22  
23  
24

) **10 C.F.R. § 2.206 PETITION**  
) **TO REVOKE MATERIALS**  
) **LICENSE NO. 29-31396-01;**  
)  
) **SUPPLEMENTAL FILING NO. 4;**  
) **SUPPLEMENTAL PRAYER for**  
) **RELIEF**

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1 **I. INTRODUCTION**

2 Greenaction for Health and Environmental Justice (“Greenaction”) submits this  
3 *Supplemental Filing No. 4* to the Nuclear Regulatory Commission (“NRC”) adding significant new  
4 facts, not previously known to the NRC or other regulatory agencies, about the nature, extent and  
5 impact of Tetra Tech’s radiological fraud on the cleanup at Hunters Point Naval Shipyard (“HPNS”  
6 or “Shipyard”). This *Supplement* adds to the already significant evidence Greenaction has brought to  
7 the NRC in its *Petition to Revoke Tetra Tech’s Materials License* (“*Petition*”) and supplemental  
8 filings.<sup>1</sup> Taken as a whole, Greenaction has provided more – much more – than sufficient evidence  
9 for the Petition Review Board (“PRB”) to recommend instituting a proceeding pursuant to 10 C.F.R.  
10 § 2.206.

11 This new and previously unknown evidence reveals that two parcels, Parcel A and Parcel D-  
12 1, both of which the Navy claimed for years were not radiologically impacted, actually are. This  
13 supplement also demonstrates that the fraud was carried out with the full knowledge and  
14 participation of Tech EC, Inc.’s (“Tetra Tech”) corporate management. Finally, it summarizes some  
15 of the regulatory violations committed by Tetra Tech that were not included in the NRC’s woefully  
16 deficient investigation into the fraud.

17 If the PRB refuses to recommend further proceedings when there is such overwhelming  
18 evidence that Tetra Tech breached its license obligations, on a scale unmatched by any licensee at a  
19 radiological cleanup site, the NRC will be acting arbitrarily and capriciously, in dereliction of its  
20 duty to adequately protect the public’s health and safety.

21  
22 **II. PROCEDURAL POSTURE**

23 On October 17, 2018, the PRB hosted a public meeting including Greenaction and Tetra Tech  
24 to discuss Greenaction’s *Petition* and its subsequent supplemental filings.

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27 <sup>1</sup> Supplements to the *Petition* include *Supplemental Filing No. 1* (January 18, 2018), *Supplemental*  
28 *Filing No. 2* (February 13, 2018), *Supplemental Filing No. 3* (July 23, 2018), Greenaction’s *Reply to*  
*Tetra Tech’s Response* (October 17, 2018), the *Transcript* of the October 17, 2018 phone  
conference, and the exhibits and attachments to each filing.

1 On February 27, 2019, Greenaction’s counsel was informed by NRC Petition Review  
2 Manager James Smith that the PRB’s preliminary recommendation to the Director of Operations was  
3 to dismiss the petition because Greenaction had not brought “significant new information” as  
4 required under NRC guidance.<sup>2</sup>

5 The PRB has offered Greenaction an opportunity to address it by teleconference prior to  
6 finalizing its recommendation. The teleconference is scheduled for June 25, 2019.

7  
8 **III. SUPPLEMENTAL FACTS**

9 **A. Parcel D-1 Is Radiologically Impacted**

10 i. Soil from Shaw’s Parcel D-1 Sewer Projects Was Screened by Tetra Tech

11 Shaw Environmental and Infrastructure, Inc. (“Shaw”) was a Navy contractor at the Shipyard  
12 for both chemical and radiological remediation. One of the radiological contracts awarded to Shaw  
13 involved the removal of the radiologically-impacted sanitary and storm water sewer systems and  
14 associated soils from Parcel D-1’s Gun Mole Pier.

15 On December 10, 2010, Shaw and Tetra Tech entered into a Memorandum of Understanding  
16 (“MOU”) under which all soil from Shaw’s Parcel D-1 sewer projects was transferred from Shaw to  
17 Tetra Tech’s Radiological Survey Yard No. 2 (“RSY-2”) for radiological screening.<sup>3</sup>

18 All soil transfers were to be memorialized in transfer-of-custody documents.<sup>4</sup> After Tetra  
19 Tech’s scanning of Shaw’s soil at RSY-2, custody of the soil was transferred back to Shaw. Shaw  
20 then transferred radiologically-impacted soil to a licensed transportation company, Environmental  
21 Management Services (“EMS”) for disposal at a licensed low-level radioactive waste disposal  
22 facility. The soil that was not impacted was stored onsite awaiting final results of offsite laboratory  
23 analysis and approval from the Navy’s Radiological Affairs Support Office (“RASO”) for the soils’  
24

25 \_\_\_\_\_  
26 <sup>2</sup> Although the standard is analyzed hereinafter and Greenaction more than meets it, Greenaction  
does not concede that it is appropriate.

27 <sup>3</sup> See *Memorandum of Understanding RE: US NRC License Use at Hunters Point Shipyard*, October  
7, 2010 (signed October 10, 2010), attached as Exhibit 1.

28 <sup>4</sup> See *Declaration of Elbert Bowers in Support of Supplemental Filing No. 4*, attached as Exhibit 2.  
Bowers was a Radiation Safety Officer Representative for Tetra Tech at HPNS.

1 final disposition. After RASO approval, the soil that was not impacted was backfilled by Shaw into  
2 the D-1 trenches from which the soil originated.<sup>5</sup>

3 Because the scanning of Shaw's soil at RSY-2 was done by Tetra Tech, Shaw did not control  
4 the quality of the scanning.<sup>6</sup> As demonstrated in Greenaction's *Petition*, RSY-2 operations were  
5 managed by an unqualified supervisor who systematically and intentionally directed the fraudulent  
6 scanning of soil so as to be cleared for free release.<sup>7</sup> There is no reason to believe Tetra Tech  
7 operated RSY-2 any differently for Shaw's soil than it did for Tetra Tech's.

8 As Bert Bowers' declaration attests, improper operations at RSY-2 resulted in at least one  
9 radiologically contaminated object remaining in supposedly "clean" soil after having been scanned at  
10 RSY-2 by Tetra Tech and transferred back to Shaw for use as fill. Shaw Health Physicist ("HP")  
11 Billy Vo told Bowers he was instructing a junior HP on how to use a Ludlum scanning instrument  
12 when the junior HP's meter spiked over soil cleared for free release at RSY-2 to be used as backfill at  
13 D-1. This spike indicated radiation levels so high that the Ludlum instrument was not capable of  
14 giving an accurate reading. Another device more appropriate for high-level measurement was  
15 procured to get a more accurate reading. The scanning uncovered a highly radioactive object, a  
16 radioactive "button," which was ultimately removed.<sup>8</sup>

17 The discovery of a highly radioactive object in soil that was deemed clean for use as backfill  
18 indicates improper scanning and remediation of Parcel D-1 soil at RSY-2, just as was done with Tetra  
19 Tech's soil.

20 Parcel D-1 has not yet been included in the Navy's re-sampling plan because it is only  
21 reviewing work done by Tetra Tech. To this date the Navy has not even admitted that Tetra Tech's  
22 screening of Shaw's D-1 soil even occurred. However, as the Navy has known for almost a decade as

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23 <sup>5</sup> See Exhibit 3: annotated map of a portion of HPNS depicting the location of RSY-2 and the areas  
24 Shaw used to store soil after scanning by Tetra Tech and before final clearance from RASO (October  
25 31, 2011). Piles of soil are clearly visible in the designated areas; See also *Declaration of Elbert*  
26 *Bowers in Support of Supplemental Filing No. 4*, Exhibit 2.

26 <sup>6</sup> See *Declaration of Kevin J. McLaughlin in Support of Supplemental Filing No. 4*, attached as  
27 Exhibit 4.

27 <sup>7</sup> See *Petition* at 26.

28 <sup>8</sup> See Exhibit 2 - *Declaration of Elbert Bowers in Support of Supplemental Filing No. 4*, paragraph  
11.

1 it approved the MOU, work done by Tetra Tech includes scanning at least one other company's soil:  
2 Shaw's. As a result, Shaw's Parcel D-1 work must be re-sampled too, as this Supplemental presents  
3 significant new information herein that the Parcel D-1 sewers may be contaminated.

4 ii. High Levels of Radioactivity Were Discovered in Parcel D-1 Surface Soil

5 The Navy has contended for years that an area of Parcel D-1 bounded by H Street, Hussey  
6 Street, Mahan Street, and Berth 29, was never radiologically impacted.<sup>9</sup> The Navy is wrong. It was  
7 impacted.

8 On April 15, 2010, Radiation Safety Officer Representative ("RSOR") Bert Bowers was  
9 summoned to check on reports of something "unusual" at D-1.<sup>10</sup> Bowers went there and met Tetra  
10 Tech Radiation Task Supervisor ("RTS") Justin Hubbard.<sup>11</sup> Bowers was told that an area of high-  
11 level radiological contamination was found while scanning in preparation for taking background  
12 reference samples. Bowers saw soil in a gallon-sized zip lock plastic bag which he understood was  
13 taken for laboratory analysis. Bowers took time-stamped photos of the area around where the soil was  
14 taken.<sup>12</sup> He also notified his superior at Tetra Tech, Radiation Safety Officer ("RSO") Erik  
15 Abkemeier. Standard operating procedure would have called for notification to RASO. Bowers did  
16 not hear anything regarding the results of any testing related to this soil sample.

17 The witness who found the high radioactivity<sup>13</sup> estimated that that the reading he took on the  
18 2350 Ludlum scanner was 750,000 counts per minute. He says the scanner picked up the radioactivity  
19 from more than three feet away. This witness also stated that spot was dug out and the contaminated  
20 soil disposed of in a low-level radioactive waste bin. The witness heard that the lab tests came out

21 <sup>9</sup> See *Parcel D-1 Record of Decision*, at 19.

22 <sup>10</sup> See Exhibit 2 - *Declaration of Elbert Bowers in Support of Supplemental Filing No. 4*, paragraphs  
23 3, 4 and 5.

24 <sup>11</sup> Hubbard is one of two Tetra Tech supervisors who pled guilty to fraud-related charges and was  
25 sentenced to 8 months of incarceration. See Exhibit 3 to Greenaction's *Reply to Tetra Tech's*  
26 *Response* (October 17, 2018): Department of Justice Press Release *Radiation Control Technician*  
27 *Supervisors Sentenced For Falsifying Former HPNS Clean-Up Records* (May 3, 2018). See also  
28 *Plea Agreement NO. CR 17-0123 JD, US v. Stephen C. Rolfe; Plea Agreement NO. CR 17-0278 JD,*  
*US. v. Justin E. Hubbard*, attached collectively as Exhibit 5.

<sup>12</sup> See Exhibit 6A-G, pictures of the scene. Building 526 clearly identified as "Bldg 526" above the  
door and spray-painted on the door. The location of the Gun-Mole Pier in the background provides  
additional support for the geographical location.

<sup>13</sup> The witness was not willing to submit this declaration publicly. See Exhibit 7, *Declaration of*  
*Steven Castleman in Support of Supplement No. 4*.

1 high for radium<sup>226</sup>, between 28 and 32 millirem per gram (mrem/gr). He also states that he was told  
2 by Justin Hubbard and subsequently by Tetra Tech’s top onsite manager, Project Manager Bill  
3 Dougherty and that the Navy would not want to hear about the contamination in D-1 so Tetra Tech  
4 was not going to tell the Navy. Construction Superintendent Dennis McWade was present when  
5 Dougherty made this statement.<sup>14</sup>

6 To date, Parcel D-1 has not been identified as impacted. The existence of high-level radiation  
7 should have resulted in characterization of the whole parcel. It has never been done. Until  
8 characterization has been completed, a health and safety risk of unknown proportion will exist at D-1.  
9 The suppression of this contamination provides further evidence contradicting the NRC’s assumption  
10 that no Tetra Tech managers above Hubbard actively participated in fraud.

11 iii. Shaw Used Tetra Tech’s Onsite Laboratory for Soil Sample Testing

12 Tetra Tech provided more services to Shaw than just soil scanning. Shaw also used Tetra  
13 Tech’s onsite laboratory for its analyses. According to a former Shaw senior Radiation Control  
14 Technician (“RCT”), Kevin McLaughlin, Shaw used Tetra Tech’s onsite lab from June 2010 to  
15 August 2012.<sup>15</sup> The MOU between Shaw and Tetra Tech also explicitly states that Tetra Tech was  
16 responsible for Shaw’s onsite laboratory needs.<sup>16</sup>

17 Since the Petition demonstrates that lab data were altered by Tetra Tech employees, Shaw’s  
18 data may be of questionable reliability just as Tetra Tech’s was found to be.

19 The Navy has been forced to retest Parcel G after throwing out data from many thousands of  
20 samples after EPA’s review revealed evidence of “falsification and data manipulation” and other  
21 reliability problems associated with Tetra Tech’s data.<sup>17</sup> The U.S. Attorney’s allegations in recent  
22 filings parallel the evidence of fraud at Tetra Tech’s lab, asserting that Tetra Tech committed fraud in  
23 connection with a contract requiring it to maintain onsite laboratory services to test survey samples  
24 for radionuclides of concern in support of contractors base-wide.<sup>18</sup>

25 <sup>14</sup> Exhibit 7, *Declaration of Steven Castleman*, paragraph 3.

26 <sup>15</sup> See Exhibit 4, *Declaration of Kevin McLaughlin*, paragraph 11.

27 <sup>16</sup> See Exhibit 1 *MOU*.

28 <sup>17</sup> See for example *EPA Comments on Draft Radiological Data Evaluation Findings Report for  
Parcels B and G Soil* (December 27, 2017), *Exhibit 2 to Supplemental Filing No. 3*, at 4.

<sup>18</sup> See Exhibit 8, *United States’ Complaint in Intervention Against Tetra Tech*, at 13. It refers to

1 But for Greenaction uncovering this new and significant information and bringing it to the  
2 NRC, the fact that D-1 is radiologically impacted would have remained unknown.

3 **B. Parcel A Is Radiologically Impacted**

4 i. The Former Sewer Systems Were Impacted But Never Investigated

5 Parcel A's former sewer systems were impacted but never investigated or reported by Tetra  
6 Tech.<sup>19</sup> Samples taken from the sanitary sewer system by Bert Bowers on January 28, 2004 indicated  
7 elevated radium-227.<sup>20</sup> At the time, Tetra Tech was the prime contractor responsible for Parcel A,  
8 including its subcontractors. Tetra Tech failed to follow up on this survey result. The sewers were  
9 removed and the surrounding soil that was likely also impacted was pushed into other areas of Parcel  
10 A. Shortly after the survey revealed radiological contamination the parcel was released and  
11 ownership transferred by the Navy so construction of homes could begin.

12 ii. Evidence of the Impact Tetra Tech's Fraud Has on Public Trust

13 In its October 17, 2018 reply to Tetra Tech's opposition to the *Petition*, Greenaction apprised  
14 the NRC of eyewitness and documentary evidence, including sampling results, indicating that the old  
15 Parcel A sanitary and storm water sewer systems were radiologically impacted and should have been  
16 investigated but never was. Greenaction's information is that the sewers were disposed of at an  
17 unknown location not located on the Shipyard and that the associated soils were bulldozed down one  
18 of Parcel A's hills in order to grade the area for development.

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21 Contract number N62473-07-D-3211, task order 0018. The U.S. Attorney alleges, and therefore has  
22 information or a good faith belief in particularized and specific acts underlying this document. Fed.  
23 R. Civ. P. 11 ("By presenting to the court a pleading [such as a complaint] ... an attorney ... certifies  
24 that to the best of the person's knowledge, information, and belief, formed after an inquiry  
25 reasonable under the circumstances ... the factual contentions have evidentiary support or, if  
26 specifically so identified, will likely have evidentiary support after a reasonable opportunity for  
27 further investigation or discovery"); see also Fed. R. Civ. P. 9 ("In alleging fraud ..., a party must  
28 state with particularity the circumstances constituting fraud").

<sup>19</sup> See Exhibit 2, *Declaration of Bert Bowers*, paragraph 13. This issue was discussed briefly in  
Greenaction's *Reply to Tetra Tech's Response to 2.206 Petition* (October 17, 2018), at 4. Exhibit 2  
describes the sampling in more detail.

<sup>20</sup> Copies of the sampling documents are attached to the Greenaction's *Reply to Tetra Tech's  
Response to 2.206 Petition* (October 17, 2018) as *Exhibit 1*.

1 Members of the San Francisco Board of Supervisors held a hearing on the matter on May 14,  
2 2018, and demanded action.<sup>21</sup> In response, although subsurface soil samples were called for, the  
3 Radiological Health Branch (“RHB”) of the California Department of Public Health only conducted a  
4 partial surface scan of Parcel A, excluding slopes and hillsides, the very areas where the soil may  
5 have been disposed. The Health Department’s efforts answer none of the questions about possibly  
6 still-existing subsurface contamination: How extensively contaminated were the sewer lines? How  
7 impacted was the soil surrounding the sewer lines; Where are the impacted soil and sewers now; And,  
8 were the impacted soil and sewer lines properly disposed of?

9 Despite the inherent limitations of a Parcel A surface scan, the Health Department stumbled  
10 upon radiological impact there. In September 2018, the Department’s scanners found a highly  
11 radioactive “deck marker” about ten inches below the ground surface, merely yards from occupied  
12 residences.<sup>22</sup> The Navy has not explained how the deck marker got to Parcel A in the first place; it  
13 simply asserts, though it has not looked, there are no other deck markers or other similar  
14 contamination.

15 Evidence of radiological impact so near residents is significant and warrants further  
16 investigation by NRC.

17 To the dismay of nearby residents and city politicians, the Navy’s response has been to  
18 minimize the significance of the finding, rather than acknowledge that other contamination could be  
19 there. A proper survey of Parcel A, in fact, could lead to further discoveries of radioactive objects and  
20 contamination.

21 **C. Tetra Tech’s Management Was Involved in the Fraud**

22 The NRC’s 2015 investigation concluded, wrongly, that only Justin Hubbard was responsible  
23 for Tetra Tech’s fraud. The evidence belies NRC’s assertion.

24 i. Further Evidence of Specific Corporate Managers’ Involvement

25 In his plea agreement, Stephen Rolfe admitted he knew his “conduct would impede the

26 <sup>21</sup> See Press Release from San Francisco Office of Community Investment and Infrastructure  
27 (February 6, 2018). Attached as Exhibit 12.

28 <sup>22</sup> See California Department of Public Health *HPNS Parcel A Update #8*, September 13, 2018  
(attached to Tetra Tech’s *Response to 2.206 Petition, Exhibit 7* (September 19, 2018)).



1 proper investigation and administration of the radiological remediation being undertaken by the U.S.  
2 Navy at HPNS.”<sup>23</sup> Rolfe stated that his motivation “came from pressure applied by the Tetra Tech  
3 supervisors.”<sup>24</sup> Thus far the NRC has not acknowledged Rolfe’s admitted guilt and statement about  
4 pressure from higher management. Rolfe’s admissions contradict the NRC’s past finding that the  
5 fraud was limited to Hubbard.

6 Greenaction has interviewed additional witnesses to Tetra Tech’s fraud who are not willing  
7 to be publicly identified but would speak to any investigative agency that can maintain their  
8 confidentiality. They say the top onsite managers, the Project Manager and Construction Manager,  
9 were involved in the fraud. The witness<sup>25</sup> to the discovery of radium contamination at Parcel D-1  
10 reported to Greenaction that Justin Hubbard explicitly ordered the suppression of the evidence of  
11 contamination.<sup>26</sup> The witness said that when he protested, he was summoned to Tetra Tech’s onsite  
12 office where he met with Project Manager Bill Dougherty, Construction Manager Dennis McWade,  
13 and Jeff Brey, Dougherty’s assistant. They told him that the Navy would not want to hear of the  
14 contamination and its discovery would not be reported.

15 More recently, numerous corporate managers have been named by the U.S. Attorney’s civil  
16 False Claims Act cases, as having “initiated and directed” the fraud,<sup>27</sup> including Andrew Bolt (then  
17 Vice President, now President of Tetra Tech), Project Manager Bill Dougherty, Assistant Project  
18 Manager Rick Weingarz and Construction Manager Dennis McWade.<sup>28</sup>

19 The U.S. Attorney’s complaints echo information submitted to the NRC by Greenaction’s  
20 *Petition*; we made copies of *Petition* and supplements available to the U.S. Attorney. Like the  
21 *Petition*, the federal government alleges that the fraud included switching soil samples, falsifying  
22 building surveys and other reports to the Navy. None of this information was available to the NRC at  
23 the time it concluded its “investigation” – in 2014.

24  
25 <sup>23</sup> Exhibit 5, *Plea Agreement of Stephen Rolfe*, at 4.

26 <sup>24</sup> Exhibit 5, *Plea Agreement of Stephen Rolfe*, at 4.

27 <sup>25</sup> The witness was not willing to come forward publically for fear of retribution. *See Exhibit 7, Declaration of Steven Castleman*, paragraph 2.

28 <sup>26</sup> *See Exhibit 7, Declaration of Steven Castleman*.

<sup>27</sup> Exhibit 8, *United States’ Complaint in Intervention Against Tetra Tech*, at 21.

<sup>28</sup> Exhibit 8, *United States’ Complaint in Intervention Against Tetra Tech*, at 21.

1                   ii. New Evidence Demonstrates Tetra Tech's *Anomalous Samples Report* Was  
2                   Willfully Inaccurate

3                   Tetra Tech conducted an internal investigation and reported its findings in the *Anomalous*  
4                   *Samples Report*. The report identified a very small number of discrepancies, the same 36 the Navy  
5                   originally questioned but failed to identify who was responsible or where phony samples came  
6                   from.<sup>29</sup> Evidence now shows how thoroughly inadequate the NRC's investigation was.

7                   Lest there be any doubt that Tetra Tech's management was involved in the whitewash, the  
8                   *Anomalous Samples Report* was authored by top safety management: Erik Abkemeier, Tetra Tech's  
9                   corporate Radiation Safety Officer ("RSO") and Greg Joyce, the top quality assurance manager.<sup>30</sup>

10                  Since its publication, the report has repeatedly been exposed as false not only by  
11                  whistleblowers and at least one of the criminal defendants, but the Navy and EPA as well. The  
12                  Navy's own review of Tetra Tech's data found substantially more evidence of data manipulation by  
13                  Tetra Tech (approximately 40%) than the *Anomalous Samples Report*. EPA's review reported  
14                  approximately double the data irregularities, in one Parcel reaching 97%!<sup>31</sup>

15                  Tetra Tech "stands by its work,"<sup>32</sup> but when challenged at the October 17, 2018, PRB  
16                  conference to publish its defense of its data, it refused.

17                  Tetra Tech's self-investigation was fatally flawed because it did not interview any former  
18                  radiation workers like Anthony Smith. It specifically mentions not having interviewed Smith because  
19                  he was no longer onsite, with no mention of any efforts to find him.<sup>33</sup> Smith's information only came  
20                  to light well after the NRC's investigation - when Greenaction submitted his declaration in support of  
21                  the *Petition*. That Smith was not interviewed as part of the investigation demonstrates Tetra Tech's  
22                  self-investigation was wholly incompetent or worse, that Tetra Tech managers willfully  
23                  misrepresented the facts in the *Anomalous Samples Report*.

24                  <sup>29</sup> See *Anomalous Samples Report*, at 19. *Exhibit H* to the *Petition*.

25                  <sup>30</sup> Adam Berry was named by Greenaction declarants Archie Jackson (*Exhibit D* to the *Petition*),  
26                  Susan Andrews (*Exhibit C* to the *Petition*), and Art Jahr (*Exhibit E* to the *Petition*). Rick Weingarz  
27                  was named by the U.S. Attorney (See Exhibit 8, p. 21 of each complaint). Erik Abkemeier was  
28                  named by Greenaction declarant Bert Bowers, Exhibit 2 herein.

29                  <sup>31</sup> See *Supplemental Filings No's 1, 2, and 3*.

30                  <sup>32</sup> See *Response to DOJ Complaints: Tetra Tech EC Stands by Its Work at Hunters Point Shipyard*  
(January 14, 2019), downloaded from Hunterspointfacts.com on June 7, 2019, attached as Exhibit 9.

31                  <sup>33</sup> See *Anomalous Samples Report*, at 18-19. *Exhibit H* to the *Petition*.

1 The shortcomings of Tetra Tech’s self-investigation are apparent in comparison to the Navy  
2 and EPA’s findings when they reviewed Tetra Tech’s data. The *Anomalous Samples Report* asserts  
3 that only 36 samples may have been problematic, whereas the EPA found such a high level of  
4 unreliability that the Navy had to jettison all of Tetra Tech’s data, tens of thousands, if not hundreds  
5 of thousands of samples. Rather than investigate and report fully and honestly about its deficiencies,  
6 as NRC expects from its licensees, Tetra Tech wrongly exonerated itself, compounding the fraud by  
7 covering it up.

8 The NRC investigation’s failure to uncover the larger fraud Tetra Tech committed indicates  
9 it accepted Tetra Tech’s bogus report at face value. This was a grave mistake, fatally tainting its  
10 investigation. The NRC must correct this failure by instituting the proceedings contemplated by the  
11 10 C.F.R. § 2.206 process.

12 **D. More Evidence of Violations Is Readily Available to the NRC**

13 Counsel for Greenaction have interviewed numerous former Shipyard radiological workers  
14 who, because they are still working in the field, do not want their identities revealed except to  
15 government investigators who can guarantee their anonymity during the pendency of any  
16 investigation. These witnesses have significant knowledge of fraud, but they are understandably  
17 afraid of the professional and personal repercussions of coming forward publicly.

18 Fear of retaliation is real and not uncommon. Multiple witnesses testified that they were  
19 threatened with firing if they raised objections to the fraud. Some of the whistleblowers were, indeed,  
20 fired after questioning Tetra Tech’s practices. Susan Andrews’ declaration, for example, details how  
21 just the threat of risking her stable, long-term job kept her quiet until she left the Shipyard.<sup>34</sup>

22 As stated above, there have been at least two important witnesses who have provided damning  
23 evidence under the condition that we maintain their anonymity. One has detailed knowledge of a  
24 wide variety of improper activities. The other has detailed knowledge of the high-level radioactivity  
25 discovered in surface soil in Parcel D-1.

26  
27  
28 <sup>34</sup> See *Declaration of Susan Andrews*, at 20. *Exhibit C* to the *Petition*.

1 Furthermore, although we debriefed the declarants and others multiple times over a period of  
2 months, there was not enough time to discover all they know. They continue to recall incidents they  
3 did not previously remember until their memories were jogged by an association they had not made  
4 before, which is not unusual. In general, they describe Tetra Tech’s culture of poor safety and cutting  
5 corners.<sup>35</sup> But they could give much more evidence of wrongdoing if only they were interviewed by  
6 an interested, skillful investigator, particularly as part of an NRC’s proceeding.

7  
8 **IV. GREENACTION HAS PROVIDED NEW AND SIGNIFICANT INFORMATION  
WARRANTING THE INITIATION OF AN NRC PROCEEDING**

9 The PRB should recommend the NRC initiate further proceedings pursuant to Greenaction’s  
10 *Petition* because it provides new and significant information warranting further investigation. That  
11 significance has only been expanded as more and more evidence in the *Petition* has been  
12 corroborated.

13 **A. NRC Guidance Establishes a Low Threshold for Recommending Review**

14 NRC’s *Management Directive 8.11* guidance establishes a low threshold for how much  
15 evidence in a section 2.206 petition to compel a PRB to recommend further proceedings. A petition  
16 should be accepted if there is a substantive concern raised and supported by any evidence that the  
17 NRC has not yet evaluated. A petition need not prove any violations beyond a reasonable doubt or  
18 even by a preponderance of evidence, but only requires that:  
19

20 The facts that constitute the bases for taking the particular action are specified. The  
21 petitioner must provide some element of support beyond the bare assertion. The  
22 supporting facts must be credible and sufficient to warrant further inquiry.<sup>36</sup>

23 <sup>35</sup> See *Petition Exhibit E, Declaration of Art Jahr* at 4; *Petition Exhibit C, Declaration of Susan*  
24 *Andrews*, at 20; and *Petition Exhibit D, Declaration of Archie Jackson*, at 4.

25 <sup>36</sup> *Management Directive 8.11*, version 2010, at § (c)(1)(ii) p. 11. Note that the 2010 version of  
26 *Management Directive 8.11* was in effect and applies to the *Petition* and previous supplemental  
27 filings. The 2019 version of *Management Directive 8.11* came into effect in on March 1, 2019 and  
28 therefore governs the instant *Supplemental Filing No. 4*. Although some changes were made to the  
form of *MD 8.11* in 2019, the changes are not material to this *Petition*; the threshold for  
accepting/rejecting a 2.206 petition in the 2010 and 2019 versions is similarly not exacting and  
Greenaction’s petition should be accepted under either version.

1 Where a petition raises issues that have already been the subject of NRC staff evaluation and review,  
2 as is the case here, the petition must provide “new” and “significant” information. “Significant”  
3 means that “the information is sufficiently great or important to be worthy of attention and that the  
4 information is real and not speculative.”<sup>37</sup> Greenaction has more than met this low threshold as  
5 further detailed below.

6 **B. Willful Dishonest Conduct Proved in This Supplemental Is Significant New**  
7 **Information Warranting a Proceeding**

8 Although the section 2.206 process is not itself an enforcement action, the NRC’s  
9 enforcement guidelines provide instruction on the relative importance of different factors in  
10 assessing penalties that are useful here. NRC enforcement criteria focus on: whether the violation (a)  
11 resulted in actual safety or security consequences; (b) had potential safety or security consequences;  
12 (c) impacted the ability of the NRC to perform its regulatory oversight function<sup>38</sup>; or (d) involved  
13 willingness.<sup>39</sup>

14 The first two criteria involve health and safety. In this case, a new mini-city is intended for  
15 the Shipyard, housing many thousands of people stretching over many decades. Areas where fraud  
16 took place cannot be fully known until a competent investigation is concluded, putting construction  
17 workers and nearby residents at short- and long-term risk of exposure to undiscovered improperly  
18 remediated soil that will be excavated for building foundations and to install utilities.

19 The long-term threat to the public from undiscovered contamination, however, is particularly  
20 insidious because negative health effects from long term exposure to low-level radiation can take  
21 decades to manifest and proving causation of particular illness, although anticipated, nevertheless  
22 remains very difficult.

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24 <sup>37</sup> *NRC Desktop Guidance for Review of 2.206 Petitions 2018*, at.12, fn 1. The *8.11 Desktop*  
25 *Guidance* was first published in 2019 (effective March 1, 2019).

26 <sup>38</sup> *NRC Enforcement Policy* (May 15, 2018) The Glossary at p. 81 identifies “a situation that  
27 prevents the NRC from using appropriate regulatory tools to address a noncompliance because the  
28 Agency is unaware that the noncompliance exists” as an impact that affects the ability of the NRC to  
perform its regulatory oversight function.

<sup>39</sup> *NRC Enforcement Policy* (May 15, 2018) § 2.2.1 at 9-10.

1 The NRC’s enforcement guidelines look upon violations which negatively impact the  
2 integrity and authority of the NRC licensing system and/or violations committed willfully as  
3 particularly egregious. Notwithstanding an actual or potential safety risk, “noncompliance itself” of  
4 the magnitude where “adequate protection is no longer provided” can result in the immediate  
5 suspension of licensed activities.<sup>40</sup> Thus, violations that undermine the integrity of the licensing  
6 system must be considered significant in this proceeding as well.

7 Tetra Tech’s fraud and subsequent cover-up are textbook examples of violations that  
8 undermine the integrity and authority of the NRC’s licensing program. The NRC relies on licensees  
9 to be truthful and to self-report and correct deficiencies. Tetra Tech did just the opposite.

10 Furthermore, willful violations are subject to some of the harshest penalties under the NRC’s  
11 enforcement guidelines. There can be no doubt that the Tetra Tech fraud was willful. Two of its  
12 supervisors pled guilty and served time for it. The whistleblowers corroborate the actions described  
13 by the U.S. Attorney in its sentencing memoranda.

14 Because Tetra Tech’s fraud undermines the integrity of the NRC’s licensing system and was  
15 committed willfully, two factors not known to the NRC until Greenaction’s *Petition*, Tetra Tech’s  
16 violations are among those the NRC’s enforcement guidance views most seriously. The PRB should  
17 not turn a blind eye on such serious violations.

18 **C. The Evidence Greenaction Has Submitted Is Significant Evidence, Warranting A**  
19 **Proceeding**

20 i. Tetra Tech’s Specific Type of NRC License Is the Starting Point for Analysis

21 The type of license and activity under review should be central to the PRB’s analysis. Tetra  
22 Tech’s has a materials license authorizing the possession and storage of a wide range of  
23 radionuclides incident to site characterization and decontamination. The license is specific to lower-  
24 level radioactivity impacting a contaminated site. As a result, although safety concerns related to  
25 Tetra Tech’s activities may be inherently less catastrophic or acute when compared to other  
26 categories of NRC’s licenses (e.g., nuclear reactor operations with large volumes of highly

27 \_\_\_\_\_  
28 <sup>40</sup> *NRC Enforcement Policy* (May 15, 2018) § 1.5 at p. 7-8.

1 radioactive materials), significant health and safety concerns are inherent to decontamination work.

2 The honesty, accountability, and reliability of a material licensee's data are paramount to the  
3 NRC's mission of protecting public health and the environment. Without defensible data, cleanup  
4 cannot be demonstrated. As the NRC now knows, *all* Tetra Tech's data has been thrown out. Data is  
5 especially important at massive federal sites where remediation is iterative, building on past data sets  
6 and taking decades. The public health risk of hiding long-term low level radiation onsite will persist  
7 for hundreds of years. San Francisco plans to build a small city on the site of the Shipyard, housing  
8 many thousands of residents. In addition to potential health and safety risks to residents and visitors  
9 to the future site, leftover contamination poses a danger to future construction workers who will be  
10 disturbing contaminated soil by excavating, installing utilities, and building foundations. If the PRB  
11 refuses to recognize the safety concerns with such low-level contamination, it will be as if the NRC  
12 stopped regulating materials licenses of the sort held by Tetra Tech entirely. As long as these  
13 materials require licensure, the NRC must take fraud seriously, and must investigate Tetra Tech's  
14 fraud at the Shipyard.

15 The public relies on the NRC to uphold minimum standards of integrity and reliability. If the  
16 PRB refuses to recognize how Tetra Tech's fraud undermined public health and safety, the NRC will  
17 have failed to fulfil its basic duty to the public.

18 Just as critically, the PRB should consider the evidence here "significant" because of the  
19 potential impact on the public's trust in the radiological cleanup industry. Refusal to investigate  
20 would be tantamount to declaring that licensees are allowed to commit fraud with impunity,  
21 effectively incentivizing cleanup fraud.

22 As one industry insider put it, "at this point, the math's been very simple. The NRC is now in  
23 the position to inform the industry of the potential consequences.... They're watching all over the  
24 country what happens here."<sup>41</sup>

25 ii. Higher Management Was Involved

26 As discussed earlier, the NRC's past enforcement action found, incorrectly, that there was no  
27

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28 <sup>41</sup> *Transcript of Informational Meeting RE Tetra Tech EC, Inc.*, (October 17, 2018), p. 77.

1 deliberate misconduct beyond Justin Hubbard, the Tetra Tech supervisor who was issued a Notice of  
2 Violation.<sup>42</sup> To the contrary, the *Petition* and supplemental filings provide specific and credible  
3 evidence that there was deliberate misconduct by specific individuals in higher management  
4 including the top onsite managers, Project Manager Dougherty and Construction Superintendent  
5 McWade. They directed that corners be cut in meetings, both as described in the *Petition* and  
6 buttressed by one of the witnesses who does not wish to be publicly identified and attended a  
7 meeting where they decided not to tell the Navy about the Parcel D-1 surface contamination.<sup>43</sup>

8 In addition to Hubbard, a second supervisor, Stephen Rolfe, pled guilty to fraud, whose  
9 motivation to commit fraud “came from pressure applied by the Tetra Tech supervisors.”<sup>44</sup>

10 More recently, the U.S. Attorney has alleged Tetra Tech’s “corporate management,”  
11 including its current President Andrew Bolt, “initiated and directed” the fraud in its civil Federal  
12 False Claims Act suit.<sup>45</sup>

13 The NRC must investigate exactly how high up in Tetra Tech the involvement went to  
14 intelligently evaluate whether the NRC can ever re-establish trust in Tetra Tech, the bedrock of the  
15 NRC’s relationship with all licensees.

16 iii. Volume and Impact of Violations

17 New evidence of the sheer volume of violations is staggering, on a scale which bears no  
18 relation to the findings in previous enforcement action by NRC. New violations implicate different  
19 regulations, more people, more locations, and a broader time frame. The cost of the fraud as most  
20 recently estimated by the Navy is up to \$300,000,000!<sup>46</sup> This proof demonstrates the fraud had a  
21 much greater impact on the cleanup than was known by the NRC, the Navy and other regulators  
22 until Greenaction brought its *Petition*. The scale of the fraud has undermined the public’s trust in  
23 Tetra Tech, the cleanup, the Navy and the NRC.

24  
25 <sup>42</sup> See Tetra Tech’s *Response to the Petition Exhibit 1* (September 19, 2018).

26 <sup>43</sup> See Exhibit 7, *Declaration of Steven Castleman*, paragraph 12.

27 <sup>44</sup> See May 3, 2018 press release, Department of Justice, *Exhibit 3* to Greenaction’s *Reply to Tetra*  
*Tech’s Response*, October 17, 2018; and Exhibit 5, *Plea Agreement of Stephen Rolfe*, at 4.

28 <sup>45</sup> Exhibit 8, *United States’ Complaint in Intervention Against Tetra Tech*, at 21.

<sup>46</sup> See *Navy Victim Impact Statement*, Greenaction’s *Reply to Tetra Tech Response, Exhibit 4*.  
(October 17, 2018).



1 Previous investigations by NRC were limited geographically to Parcels C and E. However,  
2 the *Petition* reveals evidence of fraud in areas beyond those two parcels. Furthermore, this  
3 *Supplement* provides evidence of Tetra Tech’s fraud impacting Parcels D-1 and A.

4 In addition to the geographic narrowness of the NRC’s prior inquiry, the time period in  
5 which NRC previously found violations was narrowly limited to 2011 and 2012. In contrast, the  
6 *Petition* provides evidence of violations stretching back as far as 2005,<sup>47</sup> while this *Supplemental*  
7 provides evidence of deliberate misconduct as recently as 2014 when the *Anomalous Samples Report*  
8 was whitewashed was finalized. These violations are clearly outside the scope of previous NRC  
9 findings. (The United States’ False Claims Act complaints allege the Tetra Tech fraud took place  
10 between May 2005 and January 2018,<sup>48</sup> again corroborating much of the evidence submitted by  
11 Greenaction.

12 The NRC should treat the evidence submitted by Greenaction as the tip of an iceberg of  
13 fraud. A competent investigation is necessary to characterize its true size, to date still concealed. The  
14 NRC can take steps to investigate, find additional witnesses and protect them from retaliation,  
15 something Greenaction cannot do with such limited resources.

16 The NRC must look at all the evidence under the umbrella of a single unified investigation,  
17 rather than piecemeal as it has in the past,<sup>49</sup> because the entire body of evidence is much greater than  
18 the sum of its parts. The evidence adduced by Greenaction in the *Petition* and since is new and  
19

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20 <sup>47</sup> Under the plain language of 10 C.F.R. § 30.10, Tetra Tech has a duty to refrain from engaging in  
21 deliberate misconduct that might have caused any licensee to violate any NRC regulation starting in  
22 2004 when it first was issued a license, not in 2009 when it was invoked at HPNS. Furthermore,  
23 anyone with “requisite knowledge who engages in deliberate misconduct as defined by the rule,” –  
24 knowledge Tetra Tech possessed prior to 2009 – “has the requisite intent to act in a manner that falls  
25 within the NRC’s area of regulatory concern.” In the Matter of E. Testing & Inspection, Inc., 43  
26 N.R.C. 211 (May 10, 1996).

27 <sup>48</sup> Exhibit 8, *United States’ Complaint in Intervention Against Tetra Tech*, at 5.

28 <sup>49</sup> Moreover, although the NRC talked to some of them and investigations of retaliation in 2011 and  
2012 revealed discrete safety concerns, the overlap with evidence submitted by Greenaction is  
minimal. Whistleblower interviews by NRC were extremely limited, had a different purpose, covered  
only a small fraction of what whistleblowers knew and were never evaluated for the purpose sought  
by Greenaction’s *Petition*. In fact, whistleblowers came to Greenaction only after they tried to share  
information with the NRC but were dismissed. See *Petition* Exhibit A, *Declaration of Bert Bowers*, at  
40; *Petition* Exhibit C, *Declaration of Susan Andrews*, at 19; *Petition* Exhibit D, *Declaration of*  
*Archie Jackson*, at 5.

1 significant, and is indicative of a significant body of evidence as yet undiscovered by the NRC and  
2 unavailable to Greenaction. Further investigation is warranted.

3  
4 **V. RELIEF REQUESTED**

5 Greenaction respectfully requests the relief the evidence demands. The scope of fraud  
6 described in the declarations on which the *Petition* relies is sufficient to warrant license revocation.  
7 Tetra Tech has shown itself to be unreliable and untrustworthy, characteristics that preclude NRC  
8 licensure.

9 However, the NRC has broad powers. If the PRB decides the violations proven herein are not  
10 sufficient to warrant revocation, the PRB should recommend lesser penalties it considers appropriate  
11 to the Director of Operations, including but not limited to license suspension and/or significant fines.

12  
13 **VI. CONCLUSION**

14 This *Supplemental 4* provides additional evidence beyond that Greenaction has previously  
15 brought to the NRC. The impact of the fraud has been massive. And it has shaken public confidence  
16 in the Navy, the NRC, EPA and other regulators who collectively let the fraud happen right under  
17 their noses. The NRC must initiate a proceeding to investigate Tetra Tech further and ultimately  
18 revoke Tetra Tech's license or impose a lesser penalty commensurate with the significance of Tetra  
19 Tech's violations.

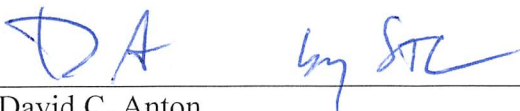
20 Respectfully Submitted,

21 

22 \_\_\_\_\_  
23 Steve Castleman  
24 M. Tyler Sullivan  
25 Environmental Law and Justice Clinic  
26 Golden Gate University School of Law

21 

22 \_\_\_\_\_  
23 Date

26 

27 \_\_\_\_\_  
28 David C. Anton  
29 Attorney at Law

26 

27 \_\_\_\_\_  
28 Date