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FROM: Jeff Ruch, Director, Pacific PEER, and Paula Dinerstein, General Counsel, PEER, on behalf of Eveline Emmenegger

February 24, 2019

RESPONSE TO PROPOSED SEPARATION FROM FEDERAL SERVICE

Summary

The proposed separation of Ms. Eveline Emmenegger from federal service (January 29, 2020) is based on an unsatisfactory job performance rating she received for her annual fiscal year (FY) 2019 work evaluation from her immediate supervisor and the proposing official, Maureen Purcell, for one subtask. Ms. Purcell stated that a scientific manuscript draft written by Ms. Emmenegger (lead author) and her co-authors did not meet the quality standards for submission to a scientific (fish disease) journal. Ms. Purcell contended that because Ms. Emmenegger did not satisfactorily complete this subtask, she should receive an unacceptable 2019 job performance rating and be separated from federal service.

This response makes two basic points:

1. The proposed separation is illegal retaliation for Ms. Emmenegger's repeated disclosures regarding failures in laboratory biosafety, animal welfare, and personnel occupational health and safety at the Western Fisheries Research Science Center (WFRC). Thus, the proposed separation constitutes a prohibited personnel practice as defined by the Whistleblower Protection Act; and

2. The stated basis for the proposed separation is unfounded and the action is pretextual in nature. Among its many shortcomings, the proposed separation misstates critical facts and is rooted in an approach that conflicts with U.S. Geological Survey (USGS) guidance.

Overview: Exemplary Employee and Scientist

Ms. Emmenegger has served at this federal research center since 1992 and has never received an unsatisfactory job performance rating during more than 27 years of service.

In 2017, her annual performance rating was superior. Prior to that year, Ms. Emmenegger received almost annually some form of merit or incentive performance award.

Ms. Emmenegger has presented her research at international, national, or regional scientific conferences, workshops, or meetings annually since 1995, totaling 49 such presentations.

On average, after receiving her Masters of Science degree in 1994, Ms. Emmenegger has published a first author paper every other year (1995, 1997, 2000, 2002, 2003, 2008, 2011, 2012, 2013, 2014, 2016, 2018), and five last/corresponding author papers (2000, 2005, 2008, 2011, 2014), in addition to multiple co-authored papers.

All Ms. Emmenegger's previously submitted scientific manuscripts drafts passed through USGS internal and Bureau policy reviews with minimal edits and subsequently all the manuscripts, after responding to the typical peer journal reviewers' comments, were published in aquatic animal health journals (i.e. none of the submitted manuscripts was ever rejected).

It should also be noted that Ms. Emmenegger and another WFRC scientist developed and hold a US patent for a North American Spring Viremia of Carp Virus DNA vaccine.

Ms. Emmenegger is a specialist in fish pathogen research and has served as the supervisor/manager of the highest biosafety risk level laboratory at the research facility, one of only three certified aquatic biosafety level three (BSL-3) laboratories in the United States.

The unprecedented conclusion that Ms. Emmenegger is not competent to hold her position is inherently suspect given the above facts.

I. Proposed Action Is Illegal Whistleblower Retaliation

During the past three years, Ms. Emmenegger has made repeated disclosures about –

- Breaches in laboratory biocontainment resulting in releases of high-risk aquatic pathogens that pose a risk to the environment and native endangered fish species, including salmon and trout;

- Breakdowns in maintaining critical equipment and failure to adhere to standard operating procedures that posed dangers to researchers, the quality of their research, and the welfare of the research subjects; and

- The failures by WFRC management to report violations of permit conditions to relevant state and federal regulatory authorities; and

- The failure of WFRC management to take effective steps to prevent more incidents, breaches, and breakdowns.

These disclosures are protected under the federal Whistleblower Protection Act, as amended (WPA) [5 U.S.C. 2302(b)(8)-(9), (f)], in that they evidence violation of agency regulation, rule, and policy, most notably the Department of Interior Scientific Integrity Policy, as well as danger to the health and safety of laboratory personnel. The WPA provides that an agency may not take adverse personnel action, as is the case here, in connection with a protected disclosure. Retaliation for Ms. Emmenegger's various complaints and grievances is also prohibited under 5 U.S.C. 2302(b)(9).

As indicated in the chronology below, the proposing official, Ms. Purcell, as well as other management officials, were either immediately or eventually aware of all these disclosures prior to proposing Ms. Emmenegger's separation.

A. Ms. Emmenegger Repeatedly Made Protected Disclosures

Ms. Emmenegger made repeated reports to her own chain-of-command as well as outside authorities about WFRC animal welfare incidents and biosafety violations and infractions. Those reports include –

April 2016 – Ms. Emmenegger sends an email to Ms. Purcell, then serving as the Institutional Animal Care and Use Committee (IACUC) chairperson, Wet Lab Coordinator, Biosafety Officer, and Institutional Biosafety Committee (IBC) chairperson, asking if the electronic post-treatment check for the BSL-2 wastewater treatment system was ever installed as proposed earlier and if the input chlorine levels are at the correct concentration. Ms. Purcell doesn't answer the questions. Emmenegger learns that no electronic monitoring system was installed. Purcell and former Chief Scientist Jim Winton (now retired) do not want scientists manually monitoring the BSL-2 effluent system to check if proper decontamination has occurred. Mr. Winton reluctantly tests the chlorine post-treatment outflow concentrations one time.

May 2016 – A few weeks later, Ms. Emmenegger emails Ms. Purcell and Mr. Winton telling them that a triennial USDA Animal Plant Health Inspection Service (APHIS) inspection for laboratory certification that she oversees is coming up, and we need to address this issue concerning monitoring of BSL-2 wastewater because it was brought up at a previous inspection. Ms. Emmenegger states that post-treatment "manual testing needs to be done on a regularly basis since we don't currently have an electronic monitoring system," and she submits for their review a draft standard operating procedure (SOP) for BSL-2 effluent manual monitoring to occur at least every two weeks. Mr. Winton changes this to every 3 months, but even that relaxed monitoring timeline is not followed. [See attachment A]

July 2016 – Ms. Emmenegger warns Center Director (Jill Rolland) with Mr. Winton present that the lack of BSL-2 effluent treatment monitoring is our biggest biosafety risk at the center. [See attachment B, third page, Action Items that need to be done soon: #5]

May 2017 – Ms. Emmenegger verbally reports to her supervisor (Ms. Purcell) that poor air quality in BSL-3 laboratory is likely responsible for Ms. Emmenegger falling unconscious after working long hours on a Saturday in April.

June 2017 – Ms. Emmenegger informed the Center Director (Ms. Jill Rolland) about potential BSL-3 laboratory air quality issues and animal care concerns during a meeting, which included Ms. Purcell. Since it was already agreed that the animal care issues would be submitted as agenda items by Ms. Emmenegger for the next semi-annual IACUC meeting, the discussion on those animal welfare incidents would be delayed until then. Thereupon, Ms. Purcell started to take measures to prevent Ms. Emmenegger from disclosing these issues, as detailed below.

July 2017 – Ms. Emmenegger described animal welfare issues associated with the facility management (substandard water conditions for fish/amphibians, scientist notification after water flow and temperature alarms absent or delayed, and blocked scientists' access to monitor the intake water quality or to clean water storage holding tanks [headboxes]) at the research center's animal care meeting chaired by Ms. Purcell. One day following the meeting, a "gag-order" forbidding her from communicating with the facilities staff unless it is for an emergency is placed only on Ms. Emmenegger by Ms. Purcell. [See attachment C, first page, # 3]

August 2017 – Ms. Emmenegger discovered that an environmental release of untreated pathogen-contaminated biosafety level 2 (BSL-2) wastewater into the neighboring wetland park that drains into the second largest lake in Washington State had occurred from January to June 2017. These releases of pathogens for months into waters adjoining Lake Washington pose a substantial environmental risk. Ms. Emmenegger asks her supervisor, now Ms. Purcell, why regulatory agencies, scientists rearing animals, and those involved with biosafety procedures at the facility had not been informed. Ms. Purcell's states Ms. Emmenegger is behaving inappropriately in questioning her and attempts to dissuade Ms. Emmenegger from making any further inquiries. [See also Sec. I.B, August 2017 entry below, and attachment O]

August 2017 – The BSL-3 laboratory, the highest-level containment laboratory at the facility, that tests high-risk pathogens, had a shutdown resulting in no water flows for four hours during an experiment, resulting in possible danger to the test animals as well as possibly compromising the validity of the experimental results. Ms. Emmenegger reports to supervisor Purcell and Center Director Rolland that the shutdown was preventable if facilities staff had adhered to standard operating procedures. A chlorine injection system for the effluent treatment tank was not turned back on after facilities made a repair. Emmenegger had earlier noticed something was wrong. Because of the recent gag order, she was prevented from contacting facilities directly, so she sent an email to supervisor Purcell. Also, facilities staff had not performed the daily check of the BSL-3 effluent treatment equipment as described in BSL-3 SOP. The BSL-3 effluent treatment system failed 6 hours later and went into alarm mode causing a four-hour shutdown [see attachment D, pages 3-5, incident #2 and attachment E].

September 2017 – Ms. Emmenegger reports the environmental releases from the BSL-2 laboratory that occurred in the first half of 2017 to regulatory agencies (Washington Department of Fish & Wildlife and USDA APHIS). This non-compliance incident violated the conditions of the permits and laboratory certifications Ms. Emmenegger is issued on behalf of the research center. Ms. Purcell is aware of these reports. Ms. Emmenegger also provides a copy of her scientific integrity complaint (see next entry) to these agencies and the to the center's contract veterinarian who also works for the Washington Department of Fish & Wildlife. [See attachments F and G]

September 2017 – Ms. Emmenegger submits a scientific integrity complaint with USGS Office of Science, Quality and Integrity (OSQI) citing three incidents involving animal welfare, environmental release of contaminated wastewater, and BSL-3 laboratory deficiencies, and asks for corrective measures to be implemented to prevent future mishaps. This complaint charges Ms. Purcell and other managers with scientific misconduct in violation of the Department of Interior's Scientific Integrity Policy. Ms. Purcell is interviewed as part of the investigation of this complaint. The ultimate dismissal of this complaint is announced at an all-hands meeting attended by Ms. Purcell in July 2019. A follow-up summary report to the inquiry on the scientific integrity complaint was never provided to Ms. Emmenegger,

December 2017 – Air quality issues (respiratory ailments, headaches, and fatigue) are reported to Emmenegger by two researchers currently working in the BSL-3 laboratories (two animal wet labs and a dry lab) and also by another technician who started in September 2017. As the BSL-3 manager, Ms. Emmenegger reports this to Ms. Purcell and reiterates the past incident of Ms. Emmenegger passing out in April after working in the lab. Emmenegger was the sole researcher who performed experiments in the BSL-3 lab from February to September 2017. Ms. Purcell responds "I am bit concerned about the report of passing out". Emmenegger follows up by reminding her that she had already reported this to Purcell back in May/June 2017. A long email

exchange follows, in which Emmenegger requests information, via Ms. Purcell, from facilities staff to confirm that BSL-3 lab ventilation system was maintained as described in the SOP, but that information is never received [see attachment H].

January 2018 – Ms. Emmenegger reports BSL-3 laboratory airflow failure during a power surge. [See Attachment I]. In response, supervisor Purcell inaccurately claims that Ms. Emmenegger had caused an air containment breach and broadcasts this in a later BSL-3 laboratory report (one that Ms. Emmenegger never reviewed) to multiple agencies/shareholders (see March 2018 third entry below).

January 2018 – Ms. Purcell chairs the winter semi-annual IACUC meeting and Emmenegger reports that there are significant water temperature fluctuations in BSL-2 main wet lab tanks and alarm notifications appear to be absent in many cases. Such temperature variations can affect animal welfare and the quality of experimental results. Other principal investigators would not be aware of this because she is the only one with water temperature data recorders in her animal stock tanks. Also water stoppages, regardless of short duration, need to be reported to animal caregivers, because they can cause air blocks in incoming water lines for some tank systems. It was agreed that until a new electronic alarm notification system is in place, a white board listing the alarms will be posted, and that Ms. Emmenegger will receive a call from facilities immediately at the initiation of any water alarm.

February 2018 – Ms. Emmenegger submits via the Center Director the annual 2017 BSL-3 Laboratory Inspection & Incident Report (Attachment D) to USGS headquarters that reported on a biosecurity breach (unauthorized personnel entry) in the effluent treatment room, daily checks of the effluent treatment system not being performed by maintenance staff, and poor air quality inside the BSL-3 laboratory impacting worker health (other science staff reported feeling ill in December 2017). Center Director initially suggests removing text regarding incidents from the report.

March 2018 – Ms. Emmenegger informs supervisor Purcell of potential leak from one of the BSL-3 wastewater treatment tanks in early March. Emmenegger then learns that another leak from a wastewater transfer pipe had been ongoing since November 2017. Facilities staff was aware of the pipe leak in January 2018 (placed a bucket with bleach under it) but did not convey that information to the BSL-3 Lab Manager (Ms. Emmenegger) after she made inquiry while checking a different chlorine line leak. Notice of the pipe leak was also conveyed to supervisor Purcell, who also did not notify Ms. Emmenegger immediately [see attachment J].

March 2018 – Ms. Emmenegger reports BSL-3 noncompliance of permits/laboratory certification because of effluent containment breach to WA Department of Fish Wildlife and USDA APHIS. BSL-3 laboratory work suspended by the USGS Northwest Regional Director until assessment and repairs of the effluent treatment system and air ventilation (HVAC) system can be performed. [see Attachment J, p. 3]

March 2018 – Ms. Purcell authors a formal report that Director Rolland sends to federal and state regulatory groups regarding the BSL-3 laboratory closure, which erroneously states that there was an air breach in the BSL-3 laboratory caused my Ms. Emmenegger, and describes the biocontainment breach as a "small drip in the pipe carrying untreated effluent" to the treatment tanks. There is no mention of the second biocontainment breach involving the larger wastewater leak that is coming from the bottom of the BSL-3 effluent treatment tank that Ms. Purcell was informed of earlier in March. Emmenegger was unaware of the report until after it had been distributed [see attachment K]. Afterwards senior management went to great lengths to delay

assessment to confirm that the treatment tank was leaking and block Emmenegger from her monitoring duties (See Part I.B, below, re events of June 2018).

April 2018 – A clarification report authored by Ms. Emmenegger via Center Director Rolland is sent to state and federal agencies/groups describing the two BSL-3 laboratory biocontainment breaches and the incidents leading up to the failures [see attachment L]

April 2018 – Ms. Emmenegger reports that BSL-3 door key card access no longer working after a power surge event and the back-up manual key also failing. Supervisor Purcell and facilities staff didn't want to fix lock/key until Ms. Emmenegger pointed out that it was a safety issue.

July 2018 – Ms. Emmenegger discloses to the national USGS Biosafety Specialist, Guelaguetza Vazquez-Meves, concerns regarding the effluent tank treatment leak assessment and indicates her desire to discuss and seek input. Ms. Purcell then requests the list of tasks to justify Ms. Emmenegger's entry into the BSL-3 effluent room and Interim Director (Jonathan Sleeman) ordered Ms. Emmenegger to no longer directly contact the specialist.

August 2018 – Ms. Emmenegger notifies supervisor Purcell and others that BSL-2 alarm notifications (water flow stoppage, temperature fluctuations, etc.) by facilities staff are still not occurring or excessively delayed. Ms. Purcell states that she has sent an email to facilities staff and this will not happen again in the future.

September 2018 – Ms. Emmenegger asks Ms. Purcell, during the summer semi-annual IACUC meeting, the whereabouts of the report regarding BSL-2 wastewater treatment deviations that occurred earlier in the year. BSL-2 effluent treatment system is now monitored manually, with Ms. Purcell participating and in charge of ensuring compliance. In response, Ms. Purcell stated she was unaware of any deviations. Emmenegger explained that the monitoring logbook indicated that were three events between January and March 2018 when the effluent treatment (chlorine levels) were significantly low and insufficiently treated wastewater was released. A committee discussion ensues regarding whether this was an adverse event/SOP deviation, with no resolution. After the meeting, Ms. Purcell transfers the compliance responsibilities and reporting duties for BSL-2 effluent monitoring incidents from herself to the new biosafety officer. Subsequently, after lengthy exchanges, a SOP deviation report was generated a month later by the biosafety officer and regulatory agencies/groups (WDFW, EPA, USDA, Fisheries Co-Managers of Washington State, and University of Washington) were informed of the second set of environmental release events from the WFRC that happened in the early months of 2018.

October 2018 - USGS Headquarters industrial hygienist who was conducting the BSL-3 laboratory air quality investigation asks Ms. Emmenegger about performing a wet run (mock) experiment, to test for chlorine gas and other noxious fumes in order to confirm that the ventilation system is now functioning properly, and she recommends the test run should be done after repairs to the leaking wastewater tank and pipe are completed. Supervisor Purcell and Facilities Manager Sato intercede, stating the test run could be done while the effluent tank was still leaking. Many back and forth emails are sent after Ms. Emmenegger asks why would we expose the BSL-3 lab staff unnecessarily to bleach fumes from a leaking effluent tank and perform redundant wet runs. The industrial hygienist makes a decision to delay the ventilation test until all BSL-3 lab repairs are completed. Ms. Emmenegger continues to monitor daily air quality and ventilation/air pressure in the main BSL-3 laboratories.

March 2019 – At the spring semi-annual IACUC meeting, under a new chairperson, Ms. Emmenegger reports that alarm notifications by facilities staff have started to wane and these

incidents are summarized in the two WFRC Environmental Quality Monitoring reports involving animals being subjected to extreme rapid temperature fluctuations (~10˚C). No fish died, but two frog deaths may have been associated with the temperature extremes. Ms. Emmenegger noted that the previous December 2018 deadline issued by the IACUC for headboxes to be cleaned had passed and incoming water from headboxes was really filthy (most not cleaned since 2011). Ms. Purcell was already informed of incidents as the WFRC Wet Lab Coordinator and was copied on IACUC meeting minutes.

May 2019 – Ms. Emmenegger attends semi-annual WRFC IBC meeting under the new chairperson and learns that a third incident of low chlorine treatment levels for the BSL-2 effluent occurred in November 2018, that was likely associated with heavy rainfall and was reported to regulatory agencies/groups. Ms. Emmenegger presents a statement in response to an IBC review involving one of her experimental protocols, in which she tells IBC members that:

> "Subsequent discovery of pathogens in fish stocks with clean health histories and shipments of sick fish have occurred in the wet lab. The WFRC wet lab is a designated quarantine facility. All aquatic species that we transfer to our facility bring along their own unique circulating microbiome that is entirely unknown. Therefore, the overarching premise is that the WFRC BSL-2 effluent treatment system is capable of destroying the majority of microbes/pathogens (known or unknown)."

Ms. Purcell is aware of the presentation via the IBC chairperson, IBC meeting minutes, and because she wanted Ms. Emmenegger's experiment protocol evaluated by the IBC.

September 2019 – During semi-annual fall IACUC meeting, Ms. Emmenegger presents information to IACUC that alarm notifications by facilities are not happening again (no phone calls for 11 alarms) and a presentation of data refuting the report by facilities manager stating that scientists who performed prototype cleaning of the headboxes had damaged some components (floats). Pictures documenting continued poor water quality in headboxes are also shown. Ms. Purcell is aware of the meeting discussion and contents.

October 2019 – Ms. Emmenegger reports BSL-3 laboratory air flow cessation and alarms malfunctioning to supervisor Purcell and requests a work order to fix alarms. Ms. Purcell chastises Ms. Emmenegger for entering the lab briefly to take a picture confirming alarm malfunctions. This malfunction and absence of notification by facilities staff means that researchers will not know when or if it is safe to re/enter the laboratory. Ms. Emmenegger also reports this to the Safety and Biosafety Committees. Ms. Emmenegger requests this be event be reviewed at the next IBC semi-annual meeting. [See attachments M and N]

Within days, Ms. Purcell issues Ms. Emmenegger an unacceptable job performance rating and NODAP/PIP.

January 2020 – Ms. Emmenegger reports a BSL-2 Wastewater Treatment System bleach leak to the Safety Committee.

Later in January, Ms. Emmenegger is served with a notice of proposed separation, placed on administrative leave, and forbidden to enter the WFRC premises without prior permission from Ms. Purcell.

It is important to note the gravity of the BSL-3 laboratory work that Ms. Emmenegger performs and supervises, as is emphasized in the introduction paragraph of the BSL-3 laboratory operation manual:

"The Aquatic Biosafety Level 3 (BSL-3) laboratory at the Western Fisheries Research Center in Seattle, Washington is designed to the standards issued by the Centers for Disease Control, the National Institutes of Health and the US Department of Agriculture for microbiological and biomedical containment laboratories. The BSL-3 laboratory provides a high-level quarantine facility in which researchers can safely conduct in vivo experiments using highly virulent fish pathogens or pathogens that may be exotic to western North America... Each person involved in the operation of the BSL-3 laboratory must realize that, by their nature, the infectious agents used in these experiments may have extraordinary levels of biological, political, or economic significance. Should an accidental release occur, the fish stocks of the United States and the reputation of this laboratory might be seriously damaged. For these reasons, IT IS IMPERATIVE that procedures outlined in this manual be followed WITHOUT EXCEPTION. Only persons with adequate training are allowed in the aquatic BSL-3 laboratory and all work is conducted as described in an approved IACUC protocol." (Emphasis in original)

B. Proposing Official and Senior Staff Were Aware of and Disturbed by These Disclosures

Numerous events illustrate management's awareness of Ms. Emmenegger's disclosures and their efforts to resist and suppress them and to prevent her from learning of or disclosing additional health, animal welfare and biosafety concerns.

In mid-June 2017, after Ms. Emmenegger had reported the poor air quality in the BSL-3 lab and her feeling ill and blacking out as a result, WFRC Facility Manager, Kyle Sato announced without any warning or apparent planning that the laboratory floors would be stripped and that science staff cannot enter over the weekend. However, Ms. Emmenegger has two ongoing experiments in the BSL-3 laboratory (located in the center of the building) and must enter to check the animals and experiments, entailing work estimated to take several hours to complete. Ms. Emmenegger expressed concern to both Mr. Sato and Ms. Purcell that the fumes from the chemical strippers may be sucked into the BSL-3 laboratory (which is under negative air pressure) and pose a potential health risk.

When Ms. Emmenegger requested the material safety data sheets (MSDS) for chemicals being used, Ms. Purcell sent an email to her stating that she saw "no point" in her request to review the MSDS sheets. Shortly thereafter, Ms. Purcell confronted Ms. Emmenegger in the hallway and yelled that "she is the problem" regarding this issue.

This incident leads the Center Director (Jill Rolland) to meet with Ms. Emmenegger and Ms. Purcell. Ms. Purcell apologizes for yelling at Ms. Emmenegger, but that apology did not signal a change in attitude by Ms. Purcell on the issue. During the meeting, Ms. Emmenegger stated that she and Ms. Purcell obviously disagree on Ms. Emmenegger's claims that facilities is not following standard operating procedures and maintaining equipment (no air filter exchange logs for the BSL-3 lab, scientists not being notified about water alarms, and that scientists need to be allowed to monitor essential equipment that supports the animals). Because Ms. Purcell refuses to resolve these issues, Ms. Emmenegger suggests that the animal care issues be discussed at the next IACUC meeting.

After Ms. Emmenegger submitted three agenda items for the semi-annual animal care (IACUC) meeting to be held in late July 2017, the meeting was scheduled on a day that Emmenegger was on approved leave (family visiting from out-of-state). Ms. Emmenegger asked if it could be held another day, but Ms. Purcell informed her that she could just wait to present the agenda items at the next semi-annual meeting in another six months.

In reply, Ms. Emmenegger informs Ms. Purcell that she will attend the meeting while she is on leave. Ms. Purcell then suggests and sends an email to the IACUC coordinator rearranging the agenda order (typically new items are discussed at the end of the committee meeting), so that Emmenegger could present first and then depart the meeting to resume annual leave.

At the start of the meeting, Ms. Emmenegger presented three animal care issues and proposed cost-effective solutions or standard operating procedures (SOPs) to address long-standing maintenance issues/practices that subjected animals to undue stress and harm, and compromised experiments, with associated pictures of how animals have been impacted (fish suffering after facilities forgot to turn airflow back on, etc.) and the unsanitary water in the headboxes. She then departed the meeting.

Subsequently Ms. Purcell presented a deviation of SOP report that she authored, involving the "Chlorination of main wetlab effluent", which in the meeting minutes was described as having "discovered that the automatic chlorination system was not working properly," and no further discussion about the deviation follows her reading the report. At the end of the meeting, under a new agenda item (Committee Constitution), Ms. Purcell proposes reducing the number of committee members from 12 to 7, thereby only needing 4 members for a quorum, purportedly to improve committee efficiency. The motion passes. Unbeknownst to Ms. Emmenegger, she was one of the alternate members slated by Ms. Purcell to be removed from the committee.

One day after the animal care meeting, Ms. Emmenegger alone received a follow-up email from her supervisor (Purcell) telling her she was no longer allowed to directly communicate with facilities personnel regarding maintenance issues.

In August 2017, following a biosecurity breach in the BSL-3 effluent containment room (unauthorized personnel were provided the key code to borrow the BSL-3 manual chlorine testing kit), Ms. Emmenegger learns that there was a major release of untreated BSL-2 wastewater discovered two months prior and that facilities staff was aware that the chlorine lines were blocked, but did not tell science staff (e.g., described at the previous July IACUC meeting as the "chlorination system not working properly").

Ms. Emmenegger queries Ms. Purcell about why regulatory agencies, scientists rearing animals, and those involved with biosafety procedures at the facility were not informed, especially because Ms. Emmenegger and Ms. Purcell had a recent conversation in July about a contaminated wastewater release from federal hatchery in WA state that was reported to the EPA. Eventually Ms. Purcell acknowledges that she withheld the information from Ms. Emmenegger because she "wanted Emmenegger to focus on her science". The next day Ms. Purcell alleges that Ms. Emmenegger's queries were threatening and inappropriate. Five days later, Ms. Emmenegger sends an email to the Center Director stating that she did not want to be alone with Ms. Purcell because she was afraid that Ms. Purcell would continue to mischaracterize (mis-"paraphrase") communications. [See attachment O]

In November 2017, Ms. Emmenegger's FY2018 performance plan alters all of her work assignments, with the exception of employee supervisory duties. All the BSL-3 laboratory management and biocontainment duties were no longer listed as primary work tasks. After Ms. Emmenegger's protests, her job duties were reverted back, only to be changed again for FY2019 (see below).

In January 2018, one of the primary wet lab animal caretakers requests that Ms. Emmenegger and her technician share in the new monitoring duties of the main wet lab BSL-2 effluent system. However, Ms. Purcell does not allow them to participate, claiming she only wanted a few key personnel to perform this task. Notably, Ms. Emmenegger and her technician are the only WFRC personnel (scientists, technicians, students, contractors, and short-term visiting scientists from both ecology and fish health sections) that do not perform this rotation work duty according to the BSL-2 effluent monitoring logs.

In June 2018, the two effluent tanks that serve the BSL-3 lab were lifted and realigned, and static testing was started to assess the leaks. After Ms. Emmenegger observed (and entered into the written log) that the suspected leaking tank was not filled (i.e. you cannot test for leaks if you do not put water into the tank), the WFRC Facilities Supervisor (Kyle Sato) locked Ms. Emmenegger out of the treatment room.

When a complete lock-out was deemed inappropriate, Sato then restricted Ms. Emmenegger from entering another area of the room by using chains. [see attachment Q]. Ms. Emmenegger subsequently contacted the new USGS biosecurity and biosafety specialist (Guelaguetza Vazquez-Meves) in early July asking for a meeting to share her concerns about the assessment/restoration of the BSL-3 laboratory and to ask for advice, but NWHC/interim WFRC Director (Jonathon Sleeman) cancelled the meeting. Mr. Sleeman then required Ms. Emmenegger to send daily emails describing when and why she needed to enter the treatment room.

Mr. Sato again provided an erroneous status report about the effluent treatment tank leaks. Following that, supervisor Ms. Purcell requested that Ms. Emmenegger list the essential tasks to justify her entry into the effluent treatment room during the static testing. Ms. Emmenegger, as the BSL-3 lab manager, was the staff person who most frequently entered this room, at minimum once a day, to complete her primary job duties and the tasks listed in the BSL-3 operation manual.

In August 2018, Ms. Emmenegger sends an email to facilities stating that doors to wet lab headboxes are now locked and she needs to check water supply conditions. Mr. Sleeman responds stating that access will now be permanently cut off [see attachment P]. Shortly afterwards, WFRC issued an official directive, authored by Mr. Sleeman, that forbade scientists from checking or monitoring equipment that supported animal life support systems, stating at an all-hands meeting that "any nailed-down equipment" is exclusively the domain of WFRC Facilities staff. Ms. Emmenegger reports how shocked she is over this new "scientist lock-out policy" to the scientific integrity complaint investigators, but doesn't receive feedback [see attachment Q].

In that same month, WFRC management announces adoption of policy changes designed to prevent staff from contacting any person or agency outside the center regarding safety and biosafety issues. A follow-up email regarding these new policies sent in October 2018 by Mr. Sleeman to the two new incoming interim directors (Jane Reid and Darrin Thorne), and inadvertently copied to Ms. Emmenegger, refers to a message he sent to Ms. Emmenegger "asking her to hold off sending a report to the USDA. I think there are other messages in which I state I will send in the report. I do think this should be codified as Center policy. It is outlined to some degree in the Safety and Biosafety Charters." [see attachment R]

Again during August 2018, 22 days after Ms. Emmenegger received an alarm call from the facilities operation specialist, Rob Jackson, he submitted a written complaint stating Ms. Emmenegger had a disrespectful tone during their phone conversation on August 5th. Ms. Purcell requests that Ms. Emmenegger submit a written account of her perspective. Ms. Emmenegger responds that it was actually Mr. Jackson who had behaved inappropriately and his complaint appeared to be a reprisal for Ms. Emmenegger's action two weeks prior to the August 5th call, politely reminding facilities staff to please immediately notify her after they receive an alarm call. Ms. Emmenegger also reiterates to Ms. Purcell that the immediate notification arrangement was put in place to avoid prolonged stress and potential deaths of animals during alarm situations, which had occurred earlier in the year. Ms. Emmenegger provides context to corroborate this and Ms. Purcell decides not to take further action on Mr. Jackson's complaint. Ms. Emmenegger requests that henceforth all alarm notifications from facilities staff are via text in order to avoid any future miscommunications.

In November 2018, Ms. Emmenegger received a second year of grant funding from the USGS Emerging Disease Program. Thereafter, various budget and administrative anomalies started occurring. Ms. Purcell barred Ms. Emmenegger from speaking directly with USGS Grant Coordinator on how to proceed with some of the research after the BSL-3 laboratory assessment and repairs kept getting delayed. Significantly, all other USGS principal investigators studying animal health issues and can freely contact this person who is the national USGS wildlife disease research coordinator.

Then, Ms. Emmenegger's grant funds were misdirected to another center, and when she eventually receives the funds, they are placed under the same grant budget number shared by Ms. Purcell, even though Ms. Purcell was not listed on the grant proposal. When Ms. Emmenegger protests this, initially the WFRC senior administrative officer (Chris Cox) states it cannot be changed, yet it is later corrected.

In December 2018, all of Ms. Emmenegger's job duties for FY2019, with the exception of employee supervisory duties, are altered again. Her BSL-3 management and biocontainment work duties have been downgraded to collateral tasks. Ms. Emmenegger's protests, but the major alterations to her job duties are incorporated into her FY2019 performance plan.

In late May 2019, Ms. Purcell sends an email to all fish health scientists about contacting facilities staff directly when requesting a headbox alarm be turned off after an experiment is over. Ms. Emmenegger sends a follow-up email asking if the gag order she has been under is rescinded and that she can also contact facilities directly. Ms. Purcell responds by belittling Emmenegger, stating she must be "confused," and that Ms. Purcell can review the policies with her personally if desired [see attachment S.]

In October 2019, following a BSL-3 laboratory air flow cessation event and malfunctioning alarms, Ms. Emmenegger requests a work order. Ms. Purcell's initial response is to reprimand Ms. Emmenegger for taking a picture to document the alarm failure. Further, Ms. Purcell does not acknowledge the risk to BSL-3 laboratory staff stemming from the failure of facilities staff to inform them of the air shutdown. An ensuing exchange of emails between Ms. Emmenegger and Ms. Purcell occurs, culminating in Ms. Purcell ordering the biosafety officer to remove the large -80˚ freezer in order to reduce the need for Ms. Emmenegger to enter the BSL-3 laboratory [see attachment T].

C. This Proposal Culminates a Campaign of Harassment for These Disclosures

Ms. Purcell was promoted to the role of Chief Scientist in January 2017 and took over direct supervision of all the Fish Health scientists while the former supervisor (Jim Winton) was preparing to retire in April 2017. Ms. Emmenegger was reluctant to have Ms. Purcell become her supervisor, because of previous interactions, including Ms. Purcell informing Ms. Emmenegger that she would deny a prior conversation and making false allegations against a previous post-doctoral appointee that lead to his termination. Also, when Ms. Emmenegger was serving as the chairperson of the IBC between 2007 and when she resigned in 2011, Ms. Purcell pressured Ms. Emmenegger via her supervisor (Mr. Winton) to approve one of Ms. Purcell's experiment protocols that had not completed the biosafety review. Mr. Winton and Ms. Purcell, both members of the IBC, tried to compel Ms. Emmenegger to allow nanoparticles to be discharged in the BSL-2 wastewater and did not support Ms. Emmenegger's efforts to have the BSL-2 effluent monitored by scientists in order confirm proper decontamination of the wastewater prior to discharging into the neighboring wetland.

In November 2016, after it was first announced that Ms. Purcell was going to be the new Fish Health Section Chief, Ms. Emmenegger went to Center Director Rolland and stated that she did not want Ms. Purcell to be her supervisor. Director Rolland declined that request.

In August 2017, Ms. Emmenegger again requested a supervisor change and informed the Center Director Rolland that she does not want be alone with Ms. Purcell because of mischaracterizations of their

conversations and reiterated her concerns that Ms. Purcell was repeatedly untruthful regarding the events associated with the BSL-2 contaminated wastewater being discharged into the environment. Ms. Rolland again denied the transfer request. [See Attachment U - document was also submitted to the USGS Office of Science and Integrity as part of the scientific integrity complaint, containing original notations by Ms. Emmenegger]

In November 2017, Ms. Emmenegger' s FY2018 performance plan alters all of her work assignments, with the exception of employee supervisory duties. Her duties were elevated to match the PhD education level (GS-14 grade level job position) scientists in her research group. None of the other scientists in her group, including the scientist who has the same Masters level education (GS-12 grade level job position) like Ms. Emmenegger, had any alterations made to their performance plans. In addition, all the BSL-3 laboratory management and biocontainment duties were no longer listed as primary work tasks.

At the November 2017 annual employee-supervisor performance plan meeting, Ms. Purcell reviewed the alterations and stated that they are minimal, however Ms. Emmenegger presented a side-by-side comparison demonstrating that the job tasks are significantly different and elevated. Ms. Emmenegger tells Ms. Purcell she feels that this proposed alteration in job duties was retaliation for her raising animal welfare concerns at the last animal care meeting and reporting the biosafety violations to external regulatory agencies. Ms. Purcell responded that she had only been Section Chief for a short time and those failures were not her responsibility. Ms. Emmenegger pointed out that she (Purcell) was the chair for both committees (IACUC & IBC), BSL-2 wet lab coordinator, and the biosafety officer, and therefore clearly had the power/responsibility to do something. In reply, Ms. Purcell countered that a wastewater effluent release is "Never going to happen again on my watch." [This meeting was recorded, and an audiotape is available upon request].

Ms. Purcell agreed to revert Ms. Emmenegger's job duties back to the 2017 standards and adamantly denied that the changes had anything to do with the recent incidents. Ms. Purcell's hyper-defensive attitude on these issues only intensifies during the ensuing month, and she again changes Ms. Emmenegger's jot duties in a similar fashion for FY2019 (see December 2018 below).

At the end of the meeting, Ms. Emmenegger and Ms. Purcell agree that they will continue to communicate only via email or meet in person when other staff science members are present. That same month, Ms. Emmenegger filed a Family and Medical Leave Act (FMLA) seeking accommodation for anxiety due to a stressful/hostile work environment. Her physician suggests that if a supervisor transfer is not possible, then contact between Ms. Emmenegger and supervisor be via email or with a third person (support person or another scientist) present. Ms. Purcell at that point continues to agree to this arrangement. The FMLA is renewed a year later.

Starting in March 2018, Ms. Emmenegger was required to participate in a facilitated discussion with the Office of Collaborative Action and Dispute Resolution (CADR) related to these issues. However, the process broke down when the facilitators breached Ms. Emmenegger's confidentiality by discussing their conversations with her with Jill Rolland, one of the primary complaint subjects listed in the Scientific Integrity Complaint filed in September 2017, while the investigation was ongoing. The "facilitated discussion" consisted of a session where Ms. Emmenegger was required to meet with one of the facilitators, Ms. Caldwell, and two senior officials (Maureen Purcell & Jonathan Sleeman), both of whom are involved in the retaliation and harassment of Ms. Emmenegger. Furthermore, Ms. Emmenegger was not permitted to bring an attorney or support person, and was apparently expected to work out a solution with her harassers while feeling outnumbered and fearful. The facilitated discussion failed to reach a resolution.

In December 2018, Ms. Purcell changed Ms. Emmenegger's FY2019 performance plan, again removing all biocontainment work duties associated with BSL-3 laboratory management and oversight. This proposed FY19 EPAP substantially changed three out of Ms. Emmenegger's four critical elements/job duties and is similar to the performance plan Ms. Purcell initially proposed at the beginning of FY18 and then retracted. Ms. Purcell's justification for this complete overhaul again is that Ms. Emmenegger is a research grade evaluated (RGE) scientist, and the new USGS performance management policy issued in October 2018.

Ms. Emmenegger reminds Ms. Purcell that her job, unlike other senior RGE scientists at the center, in addition to research component (special pathogens) also has operational (biocontainment/biosafety) and technical support (training, supervising, and supporting visiting scientist/students during their projects). These are not just collateral duties, because for some projects this can be the bulk of Ms. Emmenegger's workload. Moreover, Ms. Emmenegger will not receive first-author credit on products from this work if any products are generated at all by the collaborators.

Research grade scientists' jobs at USGS centers are not cookie-cutter occupations. Ms. Emmenegger's listed job duties in her performance plan, the same since 2009, most accurately reflect the work she performs (e.g. BSL-3 lab manager, special pathogen research). Ms. Purcell ignores Ms. Emmenegger's response and the major alterations to her performance plan proceed.

Starting in April 2019 during the mid-year performance evaluation, Ms. Purcell states that she "can no longer accommodate your request for written communication only or verbal communication only when a third party is present" despite Ms. Emmenegger having an active FMLA on file with these exact physician recommendations. In anticipation of the face-to-face mid-year progress meeting, Ms. Emmenegger became so upset that she vomited, and during the meeting she started crying and vomited again into a trashcan. Within an hour after the meeting, Ms. Purcell sends an email "thanking EE for the productive meeting", stating she was going to initiate formal bi-weekly progress sessions, and expected to have further ad-hoc interactions with Ms. Emmenegger alone. [See Attachments V, W, and X]

In June 2019, Eric Janney, Acting Deputy Director of WFRC, launched a second harassment investigation stating it was in response to Ms. Emmenegger's allegations of harassment, with no specifics. However, USGS does not respond to Ms. Emmenegger's previous attorney's (Joe Shaeffer) repeated requests under the Privacy Act for documents related to the first harassment investigation in 2018, initiated in response to Ms. Emmenegger being intimidated and bullied by WFRC Senior Staff after she made disclosures. The first investigation was conducted by Donna Nash, who did not follow the investigational procedures she outlined when she met with Ms. Emmenegger. She promised that Ms. Emmenegger would be given an opportunity to review her statement before it was submitted formally, but Ms. Emmenegger's statement was submitted without her review or signature. After Ms. Emmenegger gave both oral and written statements, it appears that a USGS official who previewed a draft document reduced Ms. Nash's investigation in scope and content. The second investigation did not proceed, because Ms. Emmenegger never received any clarifications regarding the failed first investigation, closure report, or any associated documents as is warranted under the Privacy Act.

On October 17, 2019 Ms. Emmenegger received the following documents:

- An unacceptable FY19 work performance review;
- Notice of revoked teleworking status notice;
- Denial of annual within-grade pay increase; and

- Denial of a medically-approved accommodation request by her supervisor (Ms. Purcell).

Ms. Purcell also gave Ms. Emmenegger an interim annual performance rating of unacceptable because she did not complete one subtask under Critical Element 4, the submission of a scientific manuscript. For the notice of unacceptable performance and opportunity to demonstrate acceptable performance (NODAP, previously PIP), Ms. Emmenegger was directed to submit a scientific manuscript and associated metadata files by November 20, 2019, which is a total of 20 business days, because Ms. Emmenegger had previously scheduled annual leave to travel out of state and one holiday in that time frame.

In addition to the protection under 5 U.S.C. 2302(b)(8) based on retaliation for the disclosures described above, Ms. Emmenegger's administrative complaints and grievances are also protected activity under the WPA, 5 U.S.C. 2302(b)(9). To the extent that this proposed separation, and the adverse actions leading to it, stem from these complaints, they are also prohibited personnel practices.

II. Proposal Is a Pretext and Purported Basis Is Without Merit

A. New Performance Plan Critical Elements Not Aligned with Real Job Duties

The proposed separation tiers off of significant changes made in Ms. Emmenegger's (sometimes referred to as "EE" in documents cited below) FY 2019 Performance Plan, which were unjustified by legitimate agency needs and appear to be an attempt to set Ms. Emmenegger up for failure.

1. New Plan vs. Old Plan

The Performance plan (EPAP) contains four work categories or critical elements (CE) with various job subtasks.

	2009-2017/18:	2019:
CE1:	Supervisory	Supervisory (no changes)
CE2:	Project Leader for Research on Special Pathogens of Fish	Science Planning
CE 3:	Management of Aquatic Biosafety Laboratory	Science Managed
CE 4:	Science Products Delivered	Science Communicated

All titles and job tasks for critical elements 2-4 were changed to more generic descriptors, the number of tasks increased, more stringent criteria were added, and the bar was raised for achieving the same performance rating relative to previous plans. Requirements were added that were not realistic for Ms. Emmenegger to meet given the nature of her work. For example, prior to 2017, writing grant proposals was not a listed task, because the typical BSL-3 laboratory projects that Ms. Emmenegger supervises come with funding in association with the client's (USDA, USFWS, OIE, universities, etc.) desire to test a high-risk pathogen that is of national or international concern. However, Ms. Emmenegger took the initiative to write an internal grant proposal and received funds to study amphibian species susceptibility to an exotic virus, spring viremia of carp virus (SVC virus). This was the first grant Ms. Emmenegger was ever awarded and funding was for one year, with a maximum renewal of up two years. Yet, with the new performance plan, grant/proposal writing is listed as an annual task, even though the likelihood of receiving future grant funds is low, especially since the previous USGS funding source did not request any emerging disease research proposals for FY20.

Another example is the requirement for at least one first author peer reviewed publication each year, even if the projects Ms. Emmenegger will be working on that year have no potential for first authorship papers. Ms. Emmenegger's work is prioritized based on the incoming client's needs for studying emerging or exotic pathogens, and while she may supervise the BSL-3 lab, help design the project and even execute

the research, in many cases she would not be the first author of the research product. Also, unlike the BSL-2 projects in the main laboratory that involved endemic virus testing in typical hosts that were known to have some level of susceptibility to the test virus, the majority of BSL-3 projects involved testing exotic/invasive viruses in novel host species with unknown susceptibility. Thus, a higher proportion of research outcomes were negative results (host species was resistant or route of experimental exposure wasn't effective in the novel host) and clients have no desire to publish negative results or pilot results from exploratory research, since these types of studies are inherently less attractive to the peer reviewed journals.

In the new performance plan, within each critical element category all subtasks (measurable criteria) had to be accomplished by the end of the fiscal year in order to receive a fully acceptable rating, otherwise the entire performance for the year would be unacceptable. This draconian method for evaluating work progress was not used in previous years, and meant that lack of success in any subtask, even one that Ms. Emmenegger could not realistically achieve given her work priorities, could be the basis for her separation from service.

Because Ms. Emmenegger did not complete the first author manuscript by the end of FY19 (for wholly justified reasons, as discussed below), she was assigned an unacceptable performance rating for the entire year, which was the first step in removing her from government service. When an employee receives an unacceptable rating, the government requires that employee be given an opportunity to improve their performance. However, Ms. Purcell's method of doing so -- giving Ms. Emmenegger the "opportunity" to complete a scientific manuscript draft within 20 business days or face demotion or termination – was not a genuine effort to help Ms. Emmenegger improve her performance, or even to display improved performance, but rather an effort to set her up to fail and justify her removal. When Ms. Emmenegger was able to complete the task in the very short timeframe allowed, Ms. Purcell nevertheless found that she had failed to meet the performance objective, by deeming the product unsatisfactory, and justified her removal on that basis. Ms. Purcell's determination that the product was unsatisfactory was also wholly unwarranted and pretextual.

2. Events Leading to Realignment of Work Priorities

At the start of FY2019 year, Ms. Emmenegger stated it was her intention to first complete a research paper, involving sturgeon susceptibility to a highly invasive fish virus. Although Ms. Emmenegger was not the primary author on the paper, she was the corresponding last author, and completed most of the manuscript draft. She was waiting for the first author to provide some additional data to finalize the manuscript. The second proposed research product that year involved two ornamental koi breeds infected with various strains of the SVC virus.

There were, however, significant events, outside the employee's control, that impacted this proposed research, which resulted in a work alignment shift away from manuscript writing. These realignments included:

- The BSL-3 laboratory that Ms. Emmenegger managed and that was critical for her research on special pathogens (e.g. exotic, invasive, and recombinant viruses) was closed in March 2018. Ms. Emmenegger is the primary scientist who works in that laboratory, with only one other scientist occasionally performing experiments, and as of January 2020 the assessment and repairs to the BSL-3 laboratory were still ongoing;

- Ms. Purcell demanded that Ms. Emmenegger extensively modify her previous grant to include new goals and deadlines. Consequently, Ms. Emmenegger had to initiate two new large-scale research projects, despite having already reduced the amount of requested grant funds when the BSL-3 laboratory was initially closed during the grant review process. This was an internal grant

within the USGS. The grant coordinator was informed by the Center Director (Rolland) that WFRC was committed to completing the experiments when the BSL-3 laboratory reopened, but in the interim Ms. Emmenegger would use the second year funds to focus on finishing sample processing and data analyses from the first series of experiments that were completed prior to BSL-3 lab closure, and present a portion of the data at an upcoming scientific conference. Subsequently Ms. Emmenegger was awarded the second-year grant funds at the reduced amount. However, a day after the USGS industrial hygienist agreed with Ms. Emmenegger that testing of BSL-3 lab air quality should wait until effluent chlorine leaks were repaired, Ms. Purcell forced Emmenegger to make additional major formal revisions to the grant with no solicitation from the USGS Grant Coordinator. Therefore, in addition to the activities just described, Ms. Emmenegger initiated two new large-scale *in vitro* and *in vivo* projects to satisfy these newly introduced grant project goals and deadlines. Another scientist that Purcell supervises, with a different external grant project also requiring use of the BSL-3 laboratory, did not make extensive, if any, large-scale alterations to her grant research, and submitted no formal revisions of her grant project to the outside funding agency;

- Thus Ms. Emmenegger shifted her work efforts away from analyzing the BSL-3 experiment samples/data and started one of the new projects, an *in vitro* laboratory project testing two novel amphibian cell lines with multiple viral pathogens. This work was completed and generated one outreach product (poster) at the end of fiscal year 2019;

- For the second *in vivo* project, all animal experimental research efforts had to be shifted to the main BSL-2 wet laboratory due to the closure of the BSL-3 laboratory. Submission of new protocols to IACUC and committee approval were required in order to perform these new experiments during FY19;

- Ms. Emmenegger then went on to perform eleven (11) live animal experimental challenges utilizing 4 endemic virus strains for the second project in FY2019, including the collection, rearing and testing of a new invasive host species (African clawed frogs). A portion of this research was also included in the previous FY19 outreach product;

- Also during FY19 after an electrical glitch occurred, the -80˚C freezer in the BSL-3 laboratory had a catastrophic failure. Experiment samples were lost and over 20 years of virus stocks were thawed/destroyed. Due to the reduced number of experiment samples processed and subsequent insufficient data, a previous stand-alone manuscript had to be combined with another project and Ms. Emmenegger was no longer the first author because the data was incorporated into a methodology paper of a collaborator who was the lead scientist in developing the new assay.

- In addition, now prior to any new experiment (BSL-2 or BSL-3), Ms. Emmenegger had to prepare both stock and large-scale propagations of the viral pathogen and virus concentration assays had to be performed (previous to the freezer failure these materials were already prepped for use in the experimental challenges);

- In FY2019, the federal government had a five weeklong government shutdown, the longest shutdown in U.S. history, in which government employees and facilities (which included the WRFC) were furloughed due to a lapse in annual appropriations (i.e. no work could be performed other than essential tasks like animal care and BSL-3 laboratory monitoring).

- Ms. Emmenegger did not receive the needed required statistical software for data analysis until FY2020 for her second paper [see attachment Y, page 4];

- The early departure of her technician to graduate school forced Ms. Emmenegger to perform the last two live animal experiments of FY19 (August-September) by herself.

3. Mid-Year Evaluation

On April 17, 2019, Ms. Emmenegger sent supervisor Purcell a summary attachment describing the results from recently completed frog experiments and a second attachment of her mid-year accomplishments, which included a projected work schedule for the remainder of the year. The email transmittal asked: **"**let me know if this is sufficient" [see attachment Z].

In the mid-year update submission, Ms. Emmenegger stated the following regarding status of her two manuscripts:

> For the sturgeon article: "It is the intention of EE to submit this manuscript during the summer of 2019 if possible." However, Ms. Emmenegger also informed Ms. Purcell that she had not yet received a portion of the experimental data, needed to complete the scientific article, from the other (US Fish & Wildlife) agency author on the paper and research project.
>
> Regarding the koi/SVC virus study slated to be the second paper, Ms. Emmenegger stated:
>
> "However, the primary focus of EE's work until August 2019 will be collection of test animals, completion of challenge experiments, and sample processing before EE's student contract technician leaves early for graduate school (the ED [Emerging Diseases] grant contract was originally scheduled to end in September). Starting in the fall of 2019 and into FY2020, EE's work effort will shift from the laboratory endeavors to writing up the back-log of research papers, which seems expedient because the repair of the BSL-3laboratory has been delayed further (initially May 2019 now rescheduled to occur at end of FY19 or early in FY2020?) and she will not have any laboratory support staff to assist her in experiments."

[attachment Z, last page]

Ms. Purcell did not communicate nor warn that this shift to focus on completing laboratory experiments, instead of writing up a manuscript, would result in an unacceptable performance rating and possible termination. Instead, Ms. Purcell's summary feedback on April 24 to this work update submission and focus for the rest of FY19 was **"overall performance appears on track for FY19."** (emphasis added) [See Attachment W]

4. Mid- to End of Year Updates

From April to the end of September 2019, Ms. Purcell received multiple updates/communications indicating Ms. Emmenegger's work was focused on research endeavors (field collection, performing animal experiments, *in vitro* dry lab experiments, and sample analyses) and generating two other outreach research products (poster and oral presentation), and not manuscript writing as she forecasted at her formal mid-year performance review back in April 2019.

The DOI Performance Management System (Part 370 Chapter 430) states under Subsections 1.7 Related Personnel Actions, E. Addressing Performance Concerns:

> "Supervisors should address unacceptable performance at any time during the appraisal period **and should not wait until the end of the appraisal period to do so**…At a minimum, the supervisor must initiate and document discussions with the employee to identify the problems and

to assist the employee in correcting deficiencies. **Action must not be postponed until the end of the annual appraisal period**." (emphasis added)

Starting in April, Ms. Purcell was informed by Ms. Emmenegger that she had not received the data set to complete the first sturgeon paper, nor had she acquired the computer and statistical software needed to analyze the data for second koi paper, and that Ms. Emmenegger was focusing on field work, experiments, and sample collection because her technician was leaving early for graduate school. She informed Ms. Purcell that collectively these events would shift the timeline for any manuscript completion into FY2020. However, Ms. Purcell:

1) Did not communicate to Ms. Emmenegger that this would lead to an unsatisfactory/unacceptable performance rating; or

2) Take steps to discuss any alteration to the critical element criteria performance outcomes/products on Ms. Emmenegger's employee performance appraisal plan (EPAP).

5. Unacceptable Performance Rating

Ms. Emmenegger submitted on October 1st her year-end work summary and an extensive, yet abbreviated, list of ongoing tasks and accomplishments for each critical element [see attachment AA].

However, because of Ms. Purcell's alteration of Ms. Emmenegger's FY19 performance plan, requiring that all measurable criteria have to be completed every year (all or nothing), Ms. Emmenegger received an overall unacceptable performance rating.

It is not reasonable for a supervisor to judge the breadth of work Ms. Emmenegger accomplished in FY19 as unacceptable, especially given the circumstances described above.

B. NODAP/PIP Was a Pretext

Nonetheless, that unacceptable rating led to the imposition of a Notice of Opportunity to Demonstrate Acceptable Performance (NODAP), previously known as Performance Improvement Plan [PIP]).

1. Set Up to Fail

Ms. Purcell designed the NODAP to ensure that Ms. Emmenegger would fail by setting a nearly unachievable time frame for Ms. Emmenegger to complete the following tasks within 20 business days –

- Prepare a manuscript fully ready for submission; and

- Submit USGS compliant metadata for the eight datasets from the manuscript.

Ms. Emmenegger's ability to complete these tasks by the deadline was also compromised by the fact that Ms. Emmenegger had not received the statistical software to analyze the data for her manuscript until FY2020 [See attachment BB; Oct 25 progress report, # 1].

In addition, Ms. Purcell knew that Ms. Emmenegger did not have any previous experience with metadata submission and Ms. Purcell also knew that only one other fish health scientist had successfully submitted metadata, and that the task was arduous and excessively time consuming [See attachment BB; Nov 1 progress report, tasks completed, #4, and Attachment CC]. Ms. Purcell was fully aware of these impediments to Ms. Emmenegger completing her assigned tasks but refused requests for time extensions and was not fully forthcoming when Ms. Emmenegger sought information about metadata and statistics (See attachment BB; Nov 15 progress report, first page).

2. Moving Goal Posts

Ms. Purcell added to this situation by changing, with no notice, other deliverables by –

- Assigning additional administrative tasks with deadlines during the NODAP period; for example, requiring Ms. Emmenegger to attend a day of safety training on Nov 20, the same day as Ms. Emmenegger's NODAP deadline, and requiring that Ms. Emmenegger complete an employee safety hazards analysis;

- Announcing that Ms. Emmenegger's other critical elements may also be unsatisfactory and would need further "clarification", followed by assigning a new deadline of Nov. 25th for project update and further clarification during a progress meeting, which updates were submitted [see attachment DD and attachment EE (listing alterations to research aims for SVCV emerging disease grant)]

- Altering the parameters used to assess the quality and completeness of the manuscript near the end of NODAP period after it became clear that Ms. Emmenegger would complete the tasks assigned to her.

In addition, Ms. Purcell deviated from the USGS Peer and Bureaus Review Process, as stipulated in the NODAP, to preclude the author from selecting three potential expert reviewers to evaluate manuscript quality as described on USGS Authorization for Peer Review of Manuscript form (submitted to WFRC Peer Review Coordinator on Nov 20th) and a subsequent non-biased journal review [see attachment FF]. Instead, MP circumvented this process and selected an external reviewer who had had prior involvement (see below).

C. Basis for Separation of Service Cannot Withstand Scrutiny

Contrary to the notice of proposed separation, Ms. Emmenegger met all six requirements listed in the NODAP to achieve a fully acceptable FY19 performance rating that would satisfy completion of a Critical Element #4 subtask.

Despite the manuscript draft meeting quality standards for USGS review and subsequent submission, Ms. Purcell reached the opposite conclusion. Her interpretation of "high quality" in her supervisory review was the pretext she used to debase the manuscript in order to propose Ms. Emmenegger's removal from service. Her major critiques were that 1) the statistical analyses were incomplete; 2) the result/discussion sections were too long; 3) the experimental design was unbalanced, and 4) the study results lacked scientific impact. These critiques do not hold water for the following reasons:

1. Evaluation of Manuscript Draft Inapt

The hypotheses/objectives of the study, statistical analyses for all data sets, data collation, and format of the results presentation (Tables & Figures), were discussed and carried forth as specified by Ms. Purcell at the four weekly progress meetings leading up to submission of the manuscript draft. The final figures and tables from the results section and all discussion subtopics were presented, reviewed, and approved at the final progress meeting following Ms. Purcell's instructions and suggestions. For Ms. Purcell to later state in her review that Ms. Emmenegger's draft manuscript was incomplete and lacking in quality, and that Ms. Emmenegger did not follow her guidance is disingenuous.

Ms. Emmenegger's manuscript describes and presents the analyses and results from an experiment that tested the virulence of an exotic viral pathogen in two koi varieties. This manuscript was to be submitted to a peer reviewed aquatic animal disease journal.

Comparisons of four draft manuscripts from other GS-12 scientists that were not in the same field of study was not a valid methodology for evaluating the quality of Ms. Emmenegger's manuscript. Three of the four draft manuscripts used in the comparison were not comparable at all in terms of subject matter and methodologies used (e.g. modeling spatial patterns of golden eagles, reduction in nutritional value of a marine forage fish, and improving methods used in environmental DNA (eDNA) analyses). The closest comparable manuscript was by a GS-12 microbiologist who isolated and genetically characterized a new fungus (yeast) species from bats, however the fungus was not pathogenic and there were no pathogen challenge experiments done and no statistical analyses.

Further, Ms. Purcell herself stated that her own qualifications for judging two of the GS-12 manuscript drafts was low to moderate. Thus, her ability to accurately assess the merits/quality of the other GS-12 manuscripts and then make comparable "quality and completeness" comparisons to Ms. Emmenegger's manuscript is somewhat suspect.

2. Data and Statistical Analyses Are Complete and Appropriate for Manuscript Draft

It is important to note that one of Ms. Purcell's primary justifications for Ms. Emmenegger's manuscript failing to meet standards was the lack of complete statistical analyses of all of the datasets. Ms. Emmenegger's study assessed the virulence of eight different virus strains in two distinct koi varieties with different phenotypes and genetic lineages. She completed two independent 34-day long experimental challenges with nine different treatment groups and evaluated different variables (mortality/virulence, infection, and survival) by using two different pathogen detection assays. Therefore, the overall amount of data generated was substantial and complex.

In association with the study's metadata file there are eight associated raw datasets submitted that were used in the analyses:

#1 Beni Kiko koi mortality data with day of death
#2 Sanke koi mortality data with day of death
#3 Virus concentrations in dead Beni Kiko koi
#4 Virus concentrations in dead Sanke koi
#5 Virus concentrations in Beni Kiko koi survivors
#6 Virus concentrations in Sanke koi survivors
#7 Virus concentrations in timepoint sampled Beni Kiko koi
#8 Virus concentrations in timepoint sampled Sanke koi

Ms. Purcell did not list the koi type or parameter of the datasets she referenced in her review, only listing them as datasets numbered 1-8. Because Ms. Purcell's file designation was unclear, it is difficult at times to pinpoint the substance of her critique.

Ms. Emmenegger performed the standard mean day of death calculations using the data listed in datasets 1 and 2 that contained the day (time) of death associated with each fish that died during the 34-day challenge experiments. The results determined that the mean day of death was not significant between the virus strains.

In her review, Ms. Purcell confirmed that the statistical analyses for these datasets 1 and 2 were complete and accurate.

The hypothesis or question for datasets #3 and #4 regarding virus concentrations in the dead fish was a confirmatory test to demonstrate the virus was present and at sufficient concentrations to be responsible

for fish death, not to compare the time of death in association with virus titers between virus strains. Ms. Purcell stated: "you did not record or report an important factor (time of death) in the datafiles". A "time of death component" should not be listed in datasets #3 & #4, especially because this was only a subset of the fish that died on different days from each virus strain. This temporal factor was already included as an attribute in datasets 1 & 2 that covered every day of the experimental challenge. Further the accepted confirmatory sample number (n=3) and methodologies used are described in the methods sections of numerous fish disease publications to detect virus in the sampled fish, including those from our research center and by Ms. Purcell herself in an earlier publication [See attachment GG; Purcell et al. 2009].

Similarly, for the fish that survived to the end of the 34-day experiment (datasets 5 and 6), the test/hypothesis was to confirm if virus could still be detected and at what quantity for each of virus strains for each of the two koi types. Hence, presence or absence of virus and a relative average virus quantity assessment was the objective, not a statistically significant or rigorous quantitative comparison between virus strains, because only subsets of survivors were tested. This is an accepted methodology to test for the presence of virus in survivors.

For the final two datasets (7 and 8), the fish were monitored for the presence of virus through the course of the experiment as a confirmation that virus was detectable at set intervals after the fish were initially exposed to the various virus strains, which was an indicator that virus infection was progressing. Because koi are primary host species susceptible to the spring viremia of carp (SVC) virus, a relative assessment of virus titer trends over time within each host type between virus strains was sufficient. An in-depth statistical comparison between the timepoints was not the aim. Assessment of the final mortality levels in two koi varieties and differences in virulence between the virus strains based the on the multiple statistical analyses of the mortality datasets, that included the corresponding day of death, was adequate and satisfied the primary goals of the study.

The same screening methods, analyses, and sample sizes were used in testing a recombinant fish rhabdovirus with a SVC virus gene modification in koi and common carp. The nearly identical figure/results format were presented in this manuscript published in 2018 by Ms. Emmenegger, as the lead author along with co-authors/scientists from the French National Animal Health Laboratory, in the *Journal of Fish Disease*, a similar fish health publication with a similar impact factor as Diseases of Aquatic Organisms Journal [see attachment HH; Emmenegger et al. 2018]. Thus Ms. Emmenegger's statistical analyses and results compilations for the mortality, survivor, and timepoint sample datasets (1-8) were complete and appropriate for the objectives of this study.

3. Claim of No Statistical Consultation Is False

Ms. Purcell claims in her review that Ms. Emmenegger "did not consult with her or raise concerns regarding the analyses for these datasets". This is categorically false.

The majority of the initial progress meetings between Ms. Emmenegger and Ms. Purcell were spent discussing the appropriate statistical tests and analytical approaches for all the datasets and then subsequent meetings finalized the presentation of results and discussion highlights/caveats. Ms. Emmenegger repeatedly requested assistance regarding the analyses, including statistical approaches, for all the datasets. Ms. Emmenegger's progress report notes and the minutes taken by the observer, the research center's Ecology Section Chief, Dave Beauchamp (DB), show Ms. Purcell approving the statistical tests used and overall analysis of the data. [See Attachment II, first page "M-concluded that E was on the right track with the analysis"]. For example, his notes from the fourth and final progress meeting on November 15, 2019, second page, reads:

DB minutes: *"E-A new **Figure (Figure 5) was added with error bars as requested** showing comparisons of cumulative mortality for the 2 strains of Koi (side-by-side bars with error bars) among the virus strains (and mock virus).*
***M-Like this figure very much**. Anticipate that the journal reviewers might request a reduction in figures.*
E&M discussed options for integrating 3 current figures into one multi-panel figure or potentially moving the graphs for response through time to a Supplemental Materials section. The figures and tables do not duplicate the same results. Rather each display different aspects or dimensions of the results." (emphasis added)

[See Attachment II for full set of observer's progress meeting notes]

Thus, Ms. Purcell's assertion that Ms. Emmenegger did not apply statistical analyses to 75% of the datasets is unfounded. In fact, the evidence shows that Ms. Emmenegger repeatedly sought her advice on the correct analytical and statistical approach to apply to the datasets, all of which Ms. Purcell approved. Further, Ms. Purcell's assertion about a lack of consultation in the face of this evidence raises questions about her motives in this regard.

4. Charges About Complexity and Length Unsupported

After conferring with Ms. Purcell on the relevant descriptive presentation of results, Ms. Emmenegger presented updated results (e.g., compilations of the data analyses) in the figures and tables at each subsequent progress meeting. In her Notice of Proposed Separation, Ms. Purcell stated:

> "I had discussed with you during our weekly feedback meetings that the figures and data in the main body of the text appeared repetitive and redundant and suggested that you either remove the redundant figures/tables or make the redundant figures/tables supplemental files. You chose to do neither and retained the redundant information in the body of the manuscript."

This assertion is simply not true.

Ms. Purcell's actual suggestion was to either compile the three mortality associated graphs into a single figure in order to reduce the overall number of figures or make some supplemental files. The correct description of Ms. Purcell's request was also written in the Nov 15th progress minutes by the meeting observer (see above). In the final draft manuscript, Ms. Emmenegger followed Ms. Purcell's suggestion to have multiple panels combined into one figure (e.g. Figure 1 Panels A, B, and C).

Further, Ms. Purcell states that the results section of the manuscript was 1.8 times longer than the manuscripts from four other GS-12 scientists. As mentioned previously, these manuscripts were authored by USGS scientists from completely different fields of study, with dissimilar data content and analysis methods, and therefore not an applicable comparison.

Even the external reviewer stated in his summary that Ms. Emmenegger's paper "describes a difficult experiment and includes plenty of data and a thorough analysis." A longer results section for a more complex dataset is to be expected.

Ms. Purcell also complained that the discussion section of the manuscript was "quite long". However, Ms. Purcell reviewed each of the topics included in the discussion with Ms. Emmenegger at the third progress meeting on November 8th and stated" "Sounds like all components of the manuscript are coming together nicely." [See Attachment II, Minutes of Nov. 8 meeting, second page].

While it is typical that some modification of the results and discussion section occur during a manuscript review process with the goal of improving the overall product, a reduction in discussion content does not mean the entire manuscript is unacceptable, as Ms. Purcell alleged. A researcher should include more information and discuss various caveats of the conclusion in a draft manuscript, which is better than to be missing a major point that a journal reviewer or editor felt should have been included in the first place.

Ms. Purcell claimed that another major weakness of the manuscript was the classification of surviving koi as convalescent. This claim overlooks the complexity of the issue. The definition of convalescent is a person or animal recovering after an illness or operation. If Ms. Purcell's review had been more collegial, this would have been discussed. Ms. Emmenegger took the position that because koi are the most susceptible fish host species to SVC virus, then the koi in this study were likely all infected (as confirmed by the subset of samples taken 17-19 days post-exposure), and since the fish tested at end of experiment on day 34 were also virus positive but not displaying clinical signs of disease, this suggests that they were recovering (i.e. convalescent). Regardless, if Ms. Purcell felt strongly about this word preference, this would be a minor semantics edit (i.e. replace convalescent with survivor). A peer reviewed scientific manuscript would never be rejected for something this trivial. Moreover, Ms. Purcell's subjective opinion regarding this terminology as a "major weakness" of the manuscript reinforces the notion that Ms. Purcell's actions were purely pretextual.

Given that Ms. Emmenegger received multiple positive endorsements from Ms. Purcell regarding the content of the manuscript sections during the weekly meetings, and given that Ms. Emmenegger incorporated Ms. Purcell's final suggestions and completed the draft manuscript, Ms. Purcell's subsequent review of the submitted version of the manuscript draft clearly attempts to find fault in the minutiae.

Overall it is indisputable that Ms. Emmenegger's draft manuscript meets the standard of submission for internal review within the USGS and subsequent submission to a scientific journal. Further, it is not reasonable that the quality of this work should be used as grounds to separate her from federal service.

5. The Reason for the Research was Clear

Ms. Purcell also critiqued the reason or need for the research, experimental design, and potential impact of the research results, stating "I found you did not clearly articulate the need for the scientific research."

In the introduction section of the draft manuscript, Ms. Emmenegger wrote the following:

> "The need for renewable and sustainable aquaculture of many ornamental species will increase as more restrictions are placed on the collection of aquatic species from the wild."

This was followed by a discussion of the impact the exotic SVC virus has on koi, a popular ornamental fish species that is reared and sold commercially throughout the world.

Ms. Emmenegger also wrote in the draft manuscript:

> "Due to its highly infectious nature in naïve susceptible fish species, SVC virus is one of 10 notifiable fish pathogens listed by the World Organization for Animal Health, *also known as Office International des Epizooties* (OIE 2019). Outbreaks have occurred in wild and farmed fish and in both adults and juveniles, but younger fish less than a year old are typically more susceptible."

Further, the funding sources, OIE Headquarters (France) and Natural Science Foundation of Shenzhen (China), and Chinese scientists/co-authors, from the Asian OIE SVC virus reference laboratory who

collaborated on this study, all supported this research. Further, this project was first approved by the previous Fish Health Section Chief Scientist (Ms. Purcell's predecessor), but both experiments were performed under Purcell's supervision in 2017 with her support and complete understanding of the experimental design.

Moreover, Ms. Purcell did not provide any suggestions on how she wanted Ms. Emmenegger to further elaborate on the need for the study, but this could be accomplished by including an additional sentence within the introduction. However, the subjective assessment that a manuscript needs an extra sentence is not grounds for outright rejection and certainly is not indicative of a failure to accomplish the task of preparing a manuscript suitable for submission to USGS internal review.

Ms. Purcell's assertion about an unbalanced experimental design and lack of significant scientific contribution relied heavily on the external reviewer's comments and are discussed below.

6. Internal Peer Reviewer Comments Ignored

In her Notice of Proposed Separation, Ms. Purcell cited the lone external peer reviewer, yet did not characterize the input from the two internal reviewers. She conceded that she "reviewed the internal feedback" received from internal reviewers, however she stated she did not "take in consideration" the review by Gael Kurath, one of the internal reviewer Ms. Emmenegger selected on the USGS Peer Review Authorization form when she submitted draft manuscript in her evaluation. Also in Ms. Purcell's email to the human resources representative, she stated "I did not use this feedback in my evaluation." [see attachment JJ page 1]

Ms. Purcell's omission of these two internal reviewers is significant because both gave suggestions of only minimal edits and provided positive feedback. Neither made any statements questioning the quality of the manuscript draft. [Attachments JJ and KK]. One of the internal reviewers, Gael Kurath (GS-14), is an internationally renowned researcher specializing in fish rhabdoviruses, including SVC virus, who did a line-by-line and concept review, and stated the following in her summary:

> "I enjoyed reading through your new manuscript on comparative virulence of SVCV genotypes in koi. Overall it is in great shape - good organization and clear presentation of results. Both intro and discussion are good content and thorough, with nice presentation of relevant information from the literature so you can see how this fits in to the overall field of SVCV knowledge. The variation within genotype Ia is the most interesting result, and soundly proven, and very different from virulence studies of IHNV or VHSV, where host-specific virulence goes with genotype. I also like the genotype Id exception to the generally consistent virulence between the koi varieties - that is another important finding, nicely handled in your presentation. Figures and Tables are good, with a few suggestions for footnote and header edits as noted below.
>
> I do not have any substantive suggestions for improving the paper. My only comments are for minor or trivial corrections as detailed here."

[See Attachment JJ, second page]. Ms. Kurath then went on to provide minor line-by-line edits and helpful suggestions.

Bill Batts, the other GS-12 scientist in the Fish Health Section, who works extensively with novel fish viruses, had minimal edits, and primarily cited typographical errors. [See Attachment KK]

These two WFRC internal reviewers are both active researchers in the field of fish disease. By contrast, the external reviewer, while he has excellent background knowledge, has not been involved with fish disease research since he took on the managerial position with the USFW Service in 2012. The external

reviewer also indicated that he performed only a cursory review. By contrast, the two highly qualified working scientists in the fish disease field who did the WFRC Internal Reviews both did line-by-line edits of the entire document.

7. External Peer Review Misused

a) Not Anonymous or Neutral

Andrew Goodwin, the external reviewer, is neither an "anonymous or neutral" party. He wrote a letter of support as a shareholder for Ms. Emmenegger's first USGS internal SVC virus susceptibility in amphibian species grant proposal in 2017. He is also listed in the current draft manuscript's acknowledgement section:

> "Many thanks to Andy Goodwin, with the US Fish & Wildlife Service, for providing the original North American SVCV isolate (NC2002). He first initiated SVC disease research in the US and is always willing to share his advice and knowledge."

He attended Ms. Emmenegger's online national in-house USGS presentation of SVC virus research in amphibians in October and had a subsequent email exchange about the findings with Ms. Emmenegger, just a few days prior to her receiving her unacceptable performance rating. Further, he was announced as an outside agency representative from the USFWS to the entire audience (Ms. Purcell was also logged on/present). Mr. Goodwin's support of Ms. Emmenegger's research endeavors demonstrates that he believes in her competence as a scientist, however more recently he became aware of her involvement in disclosing biosafety issues at her research center.

b) External Reviewer Aware of Biosafety Disclosures.

Mr. Goodwin is employed as the USFWS Pacific Region Fish Health Program Manager, where he has oversight over federal aquatic animal health issues in the Pacific Northwest. As such he is a federal representative regarding the Salmonid Disease Control Policy of the Co-Managers of Washington State (SDCP). This policy, last revised in 2006, dictates that all co-manager or co-operator hatchery facilities within Washington state develop an exotic pathogen management plan to notify, contain, and mitigate circumstances where exotic pathogens are isolated. The WFRC is also required to adhere to the guidelines regarding proper wastewater treatment and notifications listed in this policy.

As such, he was involved with and completely aware of the WFRC BSL-2 environmental wastewater releases and WFRC BSL-3 laboratory effluent breach and subsequent shut down. He directly received a report on the BSL-3 laboratory closure written by Ms. Emmenegger in April 2018, which included the correction to Ms. Purcell's earlier report erroneously stating there had been an air contaminant breach in BSL-3 laboratory, and reports about the research center's multiple BSL-2 wastewater environmental releases.

A plethora of international and national experts, who perform SVC virus research, were available to perform a truly "anonymous and neutral" external review, yet Ms. Purcell selected a reviewer who has knowledge of the disputes at the heart of this personnel action.

c) External Reviewer Apparent Bias

Nevertheless, in the first sentences of his review of the draft manuscript, Mr. Goodwin states:

> "Challenge studies, especially with exotic viruses, are difficult to perform are [sic] variability is often very high. The authors have surmounted those obstacles and this paper clearly represents a great deal of careful work and analysis. With some revision, the work is publishable."

[See Attachment LL]

Thus, Ms. Purcell's original question to the external reviewer regarding manuscript quality was asked and answered.

Ms. Purcell then posed a follow-up question to the reviewer "if this was his employee would he allow submission to the journal." This question signals to the external reviewer that Ms. Purcell desired a different answer on this employee matter than the one he already provided. Hence the external reviewer subsequently answered, "No I would not approve the submission in its current form." Even then, he suggests easily accomplished improvements regarding simplifying the figures and a tighter focus in the discussion as the problems that would prevent him from approving submission "in its current form." [See attachment MM]

In short, this was not an entirely bias-free review.

d) Comments Misplaced

A peer reviewer should provide some constructive feedback on a draft manuscript prior to submission to a journal. If this had been an actual peer review, there would've been a collegial exchange. Ms. Emmenegger would have incorporated some of Mr. Goodwin's suggestions and constructively responded to others she disagreed with. No such exchange occurred here.

In addition, some of his comments were likely due to his missing a concept/detail, after his cursory review that he himself described as "I went with a broader overview than line by line." Attachment MM, second page

For example the external reviewer noted that 5 Asian strains of the virus, representing one genetic type (genotype), and only single virus strains from the three remaining genotypes were tested in the study. Ms. Purcell described this as "unbalanced experimental design".

The three single representative strains are all from Europe, where the virus was first reported. These European strains have been tested numerous times and are therefore well characterized. The Asian strains of the virus, all genetically related, have not been well studied, hence the reason why the Chinese collaborators and international organization monitoring animal diseases were interested. The single European strains served as reference strains, representative of the other genetic types, because there never has been a side-by-side comparison of all genetic types in a single challenge experiment.

The external reviewer understood the experimental design concept when stating "the single isolates of 1b, c, and d perhaps serve more as reference strains" and was offering a cautionary comment when he later stated "the authors need to be careful not to state that they have shown any general differences in virulence between 1a and the other SVCV types."

That is a point with which Ms. Emmenegger is in agreement, and this caveat was already addressed in the discussion section:

> "We tested only a single representative strain from each of the European genotypes, therefore challenges comparing multiple SVCV strains from the Ib, Ic, and Id genotypes are needed to confirm whether the reported virulence phenotype demonstrated in our study is consistent and homogenous within each genotype."

In another example, the external reviewer commented that because the two koi types came from the same breeding facility there was limited applicability of the results to the broader koi production industry. It is a misinterpretation to assume that the two koi types are similar because they are reared at the same farm.

Breeding fish is different than rearing them. As described in the manuscript, the two koi varieties (Beni Kiko and Sanke) used in the study have distinct phenotypes (long versus short fins, different colors, semi-scaled versus fully scaled, etc.) with different genetic lineages that are maintained by the breeders. Koi lineages (blood lines) can be especially important to buyers who are purchasing a single show koi for many thousands of dollars.

Had Ms. Emmenegger been aware of this concern, she could have added an additional sentence to the introduction to further emphasize that the koi phenotypes are distinct even when maintained at the same koi production facility.

The external reviewer stated because results demonstrated that two koi varieties experienced about the same level of mortality to each virus strain that the research would have "low impact" on koi industry/producers. Yet, if the opposite results had occurred, that Beni Kiko koi and Sanke koi had final mortality levels that were significantly different for all virus strains or specific type, then koi farmers' from different regions of world would have considered breeding and rearing the koi type that was less susceptible to the virus overall or to specific virus strains in their region. This would be especially relevant at large production facilities catering to pet-store grade koi. They could then market a koi variation known to be resistant to a dangerous exotic virus, which would potentially ease import and export trading restrictions on ornamental koi.

Finally, the external reviewer wrote:

> "The paper would be more interesting if it 1) attempted to identify a mechanism controlling virulence (in the virus and/or in the fish), 2) included more SVCV isolates from the 1 b, c, and d strains, or 3) the challenges had been conducted in more reproducible or diverse fish species."

In regard to his points 1 and 3, the results from a series of SVC virus challenges experiments testing the susceptibility of numerous diverse fish species (koi, salmon, trout, minnow, and perch) and a detailed discussion of the possible mechanisms affecting virus virulence and host susceptibility was already published by Ms. Emmenegger [see attachment NN, Emmenegger et al. 2016].

For point 2, this is a proposal to conduct a different experiment using more virus strains of European origin (genetic types 1b, 1c, and 1d), which would be an interesting experiment and require more virus isolates from Europe, but just because the experimental results are not exciting to the reviewer does not mean that the information gained doesn't have value or that the original question/hypothesis shouldn't have been asked: Do koi with different physical characteristics and genetic backgrounds have varying susceptibility to SVC virus/strains?

Mr. Goodwin did express his interest by stating that he had hoped that the draft manuscript was the results from Ms. Emmenegger's testing of amphibian susceptibility to this virus [see attachment OO page 1 top]. That testing appeared to confirm that a host jump from fish to amphibians for this exotic/invasive virus had occurred and the potential consequences this might have on both wild and propagated aquatic animal species was potentially staggering. However, there was a series of SVC virus studies and then associated papers that needed to be completed in a specific order to satisfy multiple client/shareholder needs, with the amphibian study last. This first SVC virus draft manuscript tests the Asian strains donated by Chinese scientists, the second paper, almost completed [see attachment PP], with Canadian collaborators involved developing a more sensitive assay to detect the virus and was validated using all genetic virus types, including the newly acquired Asian strains, and the third paper, supporting the interest of USFWS and other animal disease regulatory agencies, covers amphibian species susceptibility testing to the same SVC virus strains using the new assay as a detection method. [see attachment DD, page 5]

Thus, the importance of the research and the experimental design was appropriate and applicable to the goals of the study. Summary conclusions, that included the experimental caveats, were sound and further contributed to our overall understanding of SVC virus susceptibility in the primary host species (koi) and virus strain virulence.

D. Converts Peer Review from Collegial to Punitive Process

There is an obvious discordance between Ms. Purcell's review, concluding that the manuscript did not meet performance expectations, and the other reviewers, even the external reviewer in his first summation (prior to Ms. Purcell's solicitations), who all agreed that it was well-written, complete, and publishable with some revisions.

If Ms. Purcell had provided constructive feedback and then followed the USGS Peer Review Process, this would have undoubtedly led to Ms. Emmenegger making the suggested minor constructive edits, with the fundamentals of the manuscript remaining intact but improved upon, and then subsequent submission to the target fish disease journal.

This situation would have also been avoided if USGS/WFRC senior management had adhered to the US Department of Interior 2018 Personnel Bulletin No. 18-01: Prevention and Elimination of Harassing Conduct and the WPA by halting the retaliatory activities against Ms. Emmenegger.

Had the USGS Peer Review and Publication Process been allowed to proceed it would result in the subsequent submission of the manuscript to the journal. This would follow the practices established by the scientific research community and would be the ultimate determinant of manuscript quality. Based upon her past track record of peer reviewed publication, Ms. Emmenegger is confident that her manuscript would be accepted and published.

Conclusion

The foregoing account details a pattern of passive-aggressive supervision that created a profoundly hostile work environment to which Ms. Emmenegger has been subjected.

Ms. Emmenegger clearly engaged in repeated activities protected by the WPA. That law requires that supervisors be disciplined for retaliatory acts in violation of WPA.

In addition, the NODAP that is the premise of this action was not at all justified. It was not carried out in good faith and lacked any discernible element of actually improving performance. Instead, Ms. Purcell conducted a skewed "gotcha" exercise.

Further, the purported basis for the Proposed Notice of Separation does not bear up under examination. The conclusions Ms. Purcell reached were often contradicted by the record or based upon cherry-picked items taken out of context.

Besides misstating critical facts, Ms. Purcell pursued an approach that conflicts with USGS guidance on how these reviews are supposed to be conducted.

Significantly, the supposed point of this exercise was to determine if Ms. Emmenegger could produce a manuscript worthy of publication in a peer reviewed journal. It is quite apparent that Ms. Emmenegger's manuscript more than met this standard, and the process should be allowed to be completed with internal peer review and submission to the journal.

Finally, Ms. Emmenegger has for more than 27 years been a highly productive scientific contributor to the work at WFRC. Up until these recent forced interactions with Ms. Purcell, Ms. Emmenegger has had

a spotless personnel record. It would be an injustice if these contrived allegations became the basis for ending her public service.

Respectfully submitted,

Jeff Ruch, Director, Pacific PEER
Paula Dinerstein, General Counsel
Public Employees for Environmental Responsibility

Attorneys for Eveline Emmenegger