



United States Department of the Interior

OFFICE OF THE SOLICITOR
Washington, D.C. 20240

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MEMORANDUM

TO: Will Shafroth
Acting Assistant Secretary for Fish and Wildlife and Parks

THROUGH: Arthur E. Gary *Arthur E. Gary*
Deputy Solicitor

FROM: Gavin M. Frost *Gavin M. Frost*
Attorney-Advisor

SUBJECT: Public Report on Allegations of Scientific Misconduct at Point Reyes National Seashore, California

On November 22, 2010, an individual submitted information to Secretary Salazar and requested that the U.S. Department of the Interior (DOI) investigate whether "officials and scientists in the National Park Service violated a series of federal government rules, regulations, and codes, and in so doing committed scientific misconduct." The informant asserted that research misconduct occurred when NPS employees working in the Pacific West Region (PWR) allegedly "suppressed" or "failed to disclose" existing and available "NPS data in the form of over 250,000 digital photos...and detailed logs of those photos." The subject photographs and explanatory logs primarily involve anthropogenic activities and harbor seal populations/activities in the upper portion of Drakes Estero within Point Reyes National Seashore (PORE), California.

Wanting to conduct a careful examination of relevant events, DOI's Assistant Secretary for Fish and Wildlife and Parks immediately contacted the Office of the Solicitor (SOL). Consistent with a verbal petition for assistance made by the Assistant Secretary, SOL directed an attorney with substantial employment law experience to gather relevant information, make factual findings, and offer legal advice.

SOL reviewed relevant documents and interviewed the informant, the affected NPS employees, and twenty other individuals. The factual record firmly supports conclusions that there was no criminal violation or scientific misconduct, but that NPS, as an organization and through its employees, made mistakes which may have contributed to an erosion of public confidence. Specifically, several NPS employees mishandled research in the form of photographic images showing the activities of humans, birds, and harbor seals at upper Drakes Estero in PORE.

These errors made by NPS employees, and the circumstances that surround their actions, do not support inferences sufficient to prove the demanding element of intent associated with "scientific misconduct." That charge, which does not include "honest error or differences of opinion," requires, among other things, an intent to defraud, deceive, or mislead by "manipulating research materials,

or changing or omitting data or results such that the research is not accurately represented in the research record.”

The following report summarizes the facts gathered, the conclusions drawn, and the counsel provided to the Assistant Secretary. SOL has separately provided the Assistant Secretary additional information that cannot be released publicly regarding the identities of the employees and legal advice. The withheld information that supplements this report is protected by applicable law, including the Privacy Act and applicable FOIA exemptions.

I. Submission Dated November 22, 2010

The submission to Secretary Salazar targets six NPS employees: two senior executives identified herein as SE1 and SE2; and four scientists identified herein as S1, S2, S3, and S4. The informant speculated, however, that other Agency employees may have knowingly advanced the research misconduct and encouraged DOI to identify and punish them as well. Facts gathered by the assigned SOL attorney do not support that speculation.

The informant claimed that the subject photographs and logs “refute[]” and contradict “false NPS claims” that shellfish mariculture¹ activities disturb and negatively impact harbor seal populations in upper Drakes Estero. According to the informant, the six NPS employees made the allegedly “false [] claims...in presentations, testimony, and publications during the period 2007-2010,” knew that the photographs and logs (*i.e.*, research data) undermined their “false” disturbance claims, and consequently concealed the research data from the Marin County Board of Supervisors, U.S. Senator Dianne Feinstein (D-Calif.), the DOI Office of Inspector General (OIG), the National Academy of Sciences (NAS), the U.S. Marine Mammal Commission (MMC), and others, including the public generally. The informant opined that failure to disclose the research data represented criminal misconduct in violation of 18 U.S.C. 1001, research misconduct or “scientific misconduct” as defined by Federal policies, and administrative misconduct in violation of an applicable NPS Code of Scientific and Scholarly Conduct.

Convinced that the collective or individual research misconduct has “damaged, possibly fatally,” the EIS process related to continuation of shellfish mariculture activities within PORE, the informant urged DOI to “re-establish scientific integrity within NPS.” S/he maintains that DOI will achieve that end only by abandoning the “false science,” taking “appropriate [disciplinary] actions” against all NPS employees who acted improperly, removing them from the EIS process, and restoring public confidence in the “ongoing EIS process.”

II. Background

Pursuant to valid and binding legal agreements, the Drakes Bay Oyster Company (DBOC), owned by more than one individual, presently operates a private shellfish mariculture business within PORE

¹A specialized branch of aquaculture, “mariculture” involves the cultivation of marine organisms in the natural environment.

and may lawfully continue operations through November 2012. An EIS process, initiated in September 2010, will address DBOC's authority to continue operations after November 2012.

Anticipating the battle over termination/extension of DBOC mariculture operations after November 2012, the *Point Reyes Light* published, on May 18, 2006, a provocative article entitled, "Drakes Bay Oyster Company has little impact on estero." The first sentence asserted that a "century of oyster farming has had much less impact than scientists expected on the ecosystem of Drakes Estero in the Point Reyes National Seashore." Interpreting studies not only funded by the NPS but also developed or co-authored by NPS employees, including S1, S2, and S3, the article's author wrote that the "oyster operation has no statistically significant effects on the estuary's water quality, fish, and eelgrass." The article quoted several individuals, including S1, who claimed that shellfish mariculture does "negative[ly] impact" the ecosystem in Drakes Estero, and DBOC's principal owner, who "said that the studies confirmed [her/his] prior belief that [her/his] oyster farm plays a positive role in the estuary's ecosystem." Although silent as to the direct cause-effect relationship between DBOC mariculture operations and harbor seal disturbances, the article triggered various NPS responses and laid the foundation for present criticism of NPS employees.

From May 18, 2006 to approximately July 2007, NPS employees devoted significant time and energy to rebutting the claim that DBOC mariculture operations positively influenced Drakes Estero. The OIG thoroughly documented those extensive efforts in a report² issued to the NPS Director in July 2008. Facts referenced in that OIG report support many conclusions, including the following: 1) that verbal and written statements made in private and public by NPS employees, including comments found in various versions of the document entitled "Drakes Estero: A Sheltered Wilderness,"³ reflect a lack of scientific objectivity; 2) that the "NPS perspective of 'pristine' wilderness" embraces the view that "somebody coming in and doing a harvesting operation [in Drakes Estero] just intuitively is negative"; and 3) that NPS employees, including SE2 and S1, believed "that activities associated with commercial shellfish operations (oyster farming)...disturb[] harbor seals at Drakes Estero."

Population statistics, from the harbor seal pupping and breeding seasons (March-May/June) in 2005 and 2006, led S1 to conclude that the subject pinnipeds were not hauling-out at subsites in upper Drakes Estero with the same frequency as during pupping and breeding seasons which preceded 2005, when DBOC took over operations from the declining Johnson Oyster Company. S1 attributed the decrease in harbor seals to factors and disturbances which s/he could not with certainty attach to DBOC mariculture operations because no objective, unequivocal evidence, in 2005 and 2006, revealed that DBOC had caused any disturbance(s). Although volunteer observers had seen and documented a motor boat disturbing harbor seals in upper Drakes Estero on May 6, 2006, DBOC denied, without rebuttal from NPS, ownership of the subject motor boat. Thus, the evidence

²DOI Office of Inspector General, *Report of Investigation - Point Reyes National Seashore*, Case Number OI-CA-07-0297-1 (July 21, 2008).

³With assistance and editorial review from several NPS employees, including S3, S1 wrote much of the "Sheltered Wilderness" document. The OIG report concluded that S1 "misrepresented research" in the initial versions of the "Sheltered Wilderness" document. However, the OIG report offered no definition of "misrepresent[ed]" and presented no careful, detailed analysis of facts regarding S1's intent.

insufficiently identified that disturbance, in the 2006 pupping season, as one caused by DBOC mariculture operations.

To understand the disturbance source(s) and the reason(s) for what s/he believed to be lower pinniped attendance at subsites in upper Drakes Estero, S1 decided, in late 2006 or early 2007, to purchase and install a remote, digital wildlife camera on land overlooking relevant subsites. S1 did not consult SE1, S2, S3, or S4; instead, s/he discussed the decision only with her/his direct supervisor at that time, SE2, who approved the expenditure but gave S1 no directions regarding camera purchase, installation, or use. Indeed, S1 takes full responsibility for all decisions related to the monitoring camera in 2007.

On or about April 20, 2007, Reconyx, an industry leader in the manufacture and sale of game cameras, processed S1's order for a Silent Image camera. Six days later, S1 visually observed DBOC mariculture operations cause three separate and distinct harbor seal disturbances in upper Drakes Estero on Thursday, April 26, 2007. S1 contemporaneously memorialized, in writing, her/his visual observations which directly linked, for the first time, DBOC mariculture operations to harbor seal disturbances during a pupping season.

On Sunday, April 29, 2007, three days after S1's visual observations and written documentation, which s/he labeled a "trip report," volunteer surveillants⁴ at Drakes Estero witnessed and documented two additional harbor seal disturbances caused by DBOC mariculture operations. Details of these pinniped disturbances were written in field notes and eventually included in the relevant database for harbor seal monitoring activities at PORE.

Aware of all five disturbance events and personally convinced that DBOC mariculture operations had deterred harbor seals, especially in 2007, from hauling-out at subsites in upper Drakes Estero with the same frequency as during pupping seasons prior to 2005, S1 secured the Silent Image camera to land on the east side of Drakes Estero (opposite the volunteer monitoring site and closer to, but well above and more than 250 meters from, primary harbor seal haul-out subsites). Placement occurred without public announcement in early May 2007, and unbeknownst to the public, the informant, DBOC, and most NPS employees, the camera began taking digital photos on May 5, 2007.

On Tuesday, May 8, 2007, a volunteer observer witnessed another harbor seal disturbance directly caused by DBOC activities (*i.e.*, the sixth mariculture-related disturbance observed in less than two weeks) at Drakes Estero. However, S1 inexplicably failed to analyze the photographic images on

⁴PORE maintains a harbor seal monitoring program at Drakes Estero, through which NPS trains and mentors volunteer observers. The volunteers, who must commit to a minimum of two survey days per month for a total of ten survey days from March - July, hike to a designated spot in the southwest area of Drakes Estero, use binoculars and spotting scopes, conduct population surveys at medium to low tides, and take detailed field notes of harbor seal populations and disturbances. The notes become part of a monitoring database, which NPS employees, especially S1, S2, and S3, deem quite reliable. The trustworthiness of each human observation remains the subject of heated debate and provides the cornerstone for the present scientific quarrel.

that date (or soon thereafter)⁵ for confirmation of the volunteer's visual observation, which was not followed by any other 2007 events or volunteer observations involving DBOC as the cause of harbor seal disturbances during the pupping/suckling/mating season in upper Drakes Estero.

Additionally, on Tuesday, May 8, 2007, S1 attended, with SE2 and an NPS wildlife biologist, a public meeting of the Marin County Board of Supervisors. During the public session that morning, S1 and SE2 uniformly expressed concern for the upper Drakes Estero harbor seal pupping areas, which the latter described as "seriously threatened right now." S/he also stated that "it's amazing how many [harbor seal] pups we have probably lost this year. So we've got a serious problem right now." S1 told attendees, including the informant, who first became involved in the upper Drakes Estero/harbor seal debate at the May 8 meeting, that "[o]ver the past few weeks, we have documented oyster operations disturbing mothers with pups, and oyster bags left on sandbars where seals would normally give birth and nurse their pups. The harm is resulting in abandonment of one area where more than 250 seals, including 100 pups two years ago [meaning 2004, not 2005], occurred in that spot. This year, chronic disturbance and the placement of bags on the nursery areas has caused an 80-percent reduction in the seals, dropping to around 35 this last Saturday. I was out there on Saturday, [May 5, 2007]."

Hearing comments from both S1 and SE2 and their uniform assertions that the "issue...has 'national' significance," the casual listener could easily, but incorrectly, have concluded that the harbor seal population at Drakes Estero might soon collapse due to DBOC's mariculture operations. Indeed, S1's inartful use of language and statistics, failure to note the possibility of normal fluctuations in harbor seal numbers, failure to emphasize the need for significantly more data from monitoring activities, and willingness to allow subjective beliefs and values to guide scientific conclusions needlessly raised alarms and forced immediate reactions from DBOC and the informant, who legitimately contested S1's subjective conclusions, vague temporal and geographic references, and questionable mathematic calculations.⁶

At the meeting on May 8, 2007, the informant broadly challenged the claims of "chronic disturbance" and "abandonment of one area" and "80-percent reduction," but because s/he had not received and reviewed the "scientific" monitoring data on which S1's comments relied, the informant's comments lacked specificity. To remedy that problem, the informant immediately requested, through FOIA, that PORE produce data supporting S1's claims of dramatic decreases in the harbor seal population(s) at upper Drakes Estero. Unaware of the monitoring camera, the

⁵On or about September 30, 2010, S1, S2, and S3 did review the photographic images from May 8, 2007, and determined that the camera's limited field of view prevented confirmation of the visual observation made by the volunteer witness. However, the digital photos indirectly contradicted the human observation by showing seemingly undisturbed harbor seals near the location of the alleged harassment.

⁶S1's imprecise use of words and clumsy use of numbers, such as "abandonment of *one area* [no specifics] where more than 250 seals, including 100 pups *two years ago* [actually three years], occurred in that spot" and "*chronic* [on only two dates] disturbance and the placement of bags on the nursery areas has caused an *80-percent reduction* [significantly less than 80% depending on subsite(s)] in *the seals*, dropping to *around 35* [no subsite reference] this last Saturday," spawned much of informant's criticism after May 8, 2007, and fueled verbal and written assaults on NPS officials and scientists, whom the informant has repeatedly accused of misrepresentation and scientific misconduct.

informant did not specifically request any photographic images, and such data, the collection of which began only three days before the meeting date, was obviously not the scientific material that supported S1's statements made on May 8, 2007. It follows that NPS, which initially denied (as protected by FOIA's deliberative process exemption) part of the informant's FOIA requests in June 2007, could have properly responded to the subject FOIA requests without referencing the camera and photographic data. However, clearly afforded disclosure opportunities at the May 8 meeting and through the informant's subsequent FOIA requests, S1 failed to mention the camera which began taking photographs of and near the allegedly "abandon[ed]" haul-out "area" at upper Drakes Estero on May 5, 2007.

Defending her/his failure to disclose the camera's existence voluntarily to the informant, the Marin County Board of Supervisors, and DBOC, on and soon after May 8, 2007, S1 insists that the project (which s/he declined to call research) had just begun, and s/he intended for the camera to monitor and capture any and all harbor seal disturbances in upper Drakes Estero, not solely DBOC activities. However, substantial problems limited the camera's utility as described by S1, who never designed or established any scientific method(s), protocol(s), or process(es) to achieve intended results. Camera position and northwestern orientation, poor picture quality, blurry images, significant distances, the absence of sound, lack of a zoom lens, a narrow field of view, loss of approximately 59¾ seconds out of every minute from 0700 to 1900 hours daily, and the presence of wind, fog, and nearby foliage collectively interfered with the camera's ability to capture information other than sporadic but insignificant DBOC mariculture activities. The camera was not well-suited or positioned to assess the health of pinniped populations or marine mammalian use of haul-out subsites in upper Drakes Estero, or to document disturbances from avian sources such as turkey vultures; from terrestrial predators such as coyotes and bobcats; or from aircraft, hikers, recreational clambers, or many other anthropogenic activities. In addition, the camera did not produce photographic images when S1's duties prevented her/him from monitoring the device with sufficient frequency to remove and replace dead batteries and full memory cards.

Significantly, during the research process and after the camera stopped taking photographs on or about June 19, 2007, S1 did not carefully or completely analyze the photographic data gathered in May and June 2007. S/he did not examine, and still has not examined, all of the nearly 27,000 images to count pinnipeds in Drakes Estero or to identify disturbances and their sources or to measure the use of haul-out subsites by harbor seals within the camera's narrow field of view. Instead, s/he reviewed about 15-20% of the data (or approximately 5,000 images), found the evaluation process tedious and time-consuming, and failed to look carefully at images from May 8, 2007. Seeing no images that documented harbor seal disturbances or obvious deterrence caused by DBOC mariculture operations, S1 characterized the photographic images as largely inconclusive and as ancillary data to visual observations and surveys infrequently made or done by the volunteer witnesses (located some distance away, on the opposite side of Drakes Estero), and abandoned the photographic data without fully disclosing the existence thereof, without producing any report(s), without including or referencing photographic data in the harbor seal monitoring database, and without inviting independent analysis or peer review of the photos. In S1's scientific opinion, the photographic images did not merit close examination in 2007, including May 8, 2007, because the data did not represent scientific activity in the form of monitoring compatible with, or distinct from,

volunteer observations from the southwest corner of Drakes Estero. S1 placed a very high value on human observations and a very low value on the photographic data. S/he declined to speculate on whether and how that latter value would have changed if any photo(s) had clearly shown DBOC mariculture operations disturbing harbor seals in upper Drakes Estero.

From June 2007 through July 2008, S1 neither actively disclosed nor consciously concealed the photographic data, but rather, passively ignored the digital images while s/he responded to many relevant events which occurred in that period. For example, during that block of time, OIG investigators interviewed (June 2007) and re-interviewed (March 2008) S1, who openly and truthfully provided facts for the OIG report issued in July 2008. Specifically, the OIG investigators confined their questions regarding Drakes Estero harbor seals to DBOC's "complaint about NPS redrawing the boundaries of harbor seal sites," the "accuracy of statements that [SE2] and [S1] made before [the Marin County Board of Supervisors on May 8, 2007]," and the "veracity" of S1's disturbance observations made on April 26, 2007. The latter issue, on which the OIG report offered no opinion, derived from a claim presented by the informant, who not only insisted (and still insists) that DBOC could not and did not use, on that date, the "white boat" which allegedly created the pinniped disturbances, but also attached labels of "fabricated" and "false NPS science" to S1's observations made and documented on April 26, 2007.

Uninterested in "determin[ing] whether DBOC was disturbing seals or encroaching on their habitat in [upper Drakes Estero]," the OIG investigators did not ask S1 questions related to that issue and did not expressly welcome monitoring data, such as visual observations and photographic images, which pertained to pinniped disturbances on any date other than April 26, 2007, a date prior to camera installation. As a result, S1 had neither the obligation nor the invitation to disclose or produce data related to the camera. Nevertheless, in June and October 2007, when PORE, S1, SE2, and other NPS employees voluntarily granted OIG investigators unfettered access to their network, databases, and computers, which unquestionably included the photographic data gathered at Drakes Estero in May and June 2007, OIG personnel had access to scientific material that the informant asserts was hidden or suppressed by NPS employees. While passive in the manner of production, NPS employees, specifically S1, nevertheless made the photographic data available to OIG investigators.

On July 21, 2007, in Olema, California, Senator Feinstein met with DBOC's principal owner, SE1, SE2, the informant, the NPS Director, and several others, excluding S1. Those in attendance at the Olema meeting, to which the event is often referred, discussed, among other things, 1) denial of the informant's FOIA requests for data supporting claims that pinnipeds had abandoned haul-out subsites and that harbor seal numbers had dramatically decreased at upper Drakes Estero, and 2) analytic or scientific weaknesses found in the "Sheltered Wilderness" document written primarily by S1. Other than SE2, no meeting participant knew about the photographic data, and s/he had no scientific or administrative reason to believe the images, collected beginning May 5, 2007, responded to FOIA requests which sought data in support of S1's scientific conclusions communicated on May 8, 2007. In addition, neither the camera nor the photos related in any way to the "Sheltered Wilderness" document or its flaws. Equally significant, SE2 denied knowing, at the time, about the harbor seal disturbance observed by a volunteer at Drakes Estero on May 8, 2007. It follows that

the topics of the Olema meeting, combined with S1's absence and SE2's limited knowledge of disturbances and the photographic data, did not warrant any disclosure to those present that S1 might possess new, potentially inconclusive, information related to the harbor seal population(s), pinniped abandonment of haul-out subsites, and anthropogenic disturbances in upper Drakes Estero.

However, the Olema meeting did provide the informant a forum to launch an initial attack on S1, whom the informant accused of misrepresenting science in the "Sheltered Wilderness" document. Criticizing S1's scholarly analysis and calling S1's actions "scientific misconduct," the informant convinced participants at the Olema meeting to involve independent science experts for the purpose of examining data, including the "Sheltered Wilderness" document, and the effects of shellfish mariculture on the Drakes Estero ecosystem and harbor seal populations found therein.

Persuaded that an external review might allay public concerns regarding science at Drakes Estero, the Olema meeting attendees agreed that NPS officials would ask the NAS to convene an *ad hoc* committee which would issue reports, the first of which would assess the scientific basis for NPS presentations and for various revisions of "Sheltered Wilderness" regarding the ecological effects of DBOC's operations on Drakes Estero. NPS employees timely coordinated with the informant, jointly developed pertinent questions, and subsequently sought assistance from the NAS, which thereafter directed the request to the National Research Council's (NRC) Division on Earth and Life Studies, Ocean Studies Board, which convened the evaluation Committee on Best Practices for Shellfish Mariculture in Drakes Estero (Committee). This process took several months and seemingly redirected the analysis relevant to Agency evaluation of terminating/extending DBOC mariculture operations to one based primarily on science, not policy or property or law.

Within two weeks of the Olema meeting, as directed by Senator Feinstein and the NPS Director, PORE sent the informant scientific data responsive to FOIA requests which sought material supporting S1's claims, made on May 8, 2007, of dramatic decreases in harbor seal population(s) and pinniped abandonment of haul-out subsites in upper Drakes Estero. DOI and S1, who acknowledges that s/he had not comprehensively reviewed the digital photos, had not given them much weight, and had not relied on them when speaking to the Marin County Board of Supervisors, did not include or reference in the responsive data any of the digital photos taken by the Silent Image camera at Drakes Estero in May and June 2007.

The informant reviewed the data, unilaterally concluded that the provided information did not support comments made by NPS employees on May 8, 2007, rejected the possibility of honest but different scientific opinions, and immediately accused S1 and SE2 of scientific misconduct in the form of fabricated or falsified claims. The recent submission to Secretary Salazar alleges, in part, that failure to give informant the 2007 photos, which revealed no DBOC-caused disturbances of harbor seals in upper Drakes Estero, was intentional and designed to suppress data contradicting S1's and SE2's allegedly "false" claims, presented to the Marin County Board of Supervisors, that shellfish mariculture activities disturb and negatively impact harbor seal populations in upper Drakes

Estero. Both SE2 and S1 emphatically deny⁷ omitting the photographic data, from the scientific information provided to the informant in August 2007, in an effort to deceive or to misrepresent the research record. As a factual matter, the decision to produce data without digital photos did not deceive or mislead the informant, who disagreed with S1's findings in the absence of photographic information. But the absence of photographic images from the scientific material sent to the informant arguably denied her/him additional evidence to discredit S1's scientific conclusions regarding pinniped harassment caused by DBOC mariculture operations at upper Drakes Estero during the 2007 pupping season.

In August 2007, the informant pressured SE1 to investigate claims of scientific misconduct that included S1's alleged misrepresentation of scholarly studies in the "Sheltered Wilderness" document and scientifically baseless conclusions presented in public with SE2 on May 8, 2007. When SE1 did not respond to that pressure and thus failed to produce results acceptable to the informant, the latter requested that the OIG (in November 2007), the NPS Director (in December 2007), and NAS/NRC (in December 2007) investigate said scientific misconduct, and SE1's or S4's attempt(s) to "cover-up" the problem(s) and prevent examination of the scientific misconduct allegations. Only the OIG, as evidenced by investigative questions posed to S1 and SE2 in March 2008, and language in the OIG report issued on July 21, 2008, accepted the informant's invitation and explored, albeit in a limited way, allegations of scientific misconduct.

In January 2008, consistent with agreements forged during the Olema meeting, and pursuant to joint efforts from the informant and NPS employees, the NRC's Division on Earth and Life Studies, Ocean Studies Board (OSB), convened the above-referenced evaluation Committee. On the Committee's behalf and to help the Committee produce its first report regarding DBOC and Drakes Estero, the OSB Director established and maintained contact with S4. However, neither the OSB Director nor any Committee member asked, in January 2008, that S1, S2, S3, or SE2 produce information regarding populations and disturbances of harbor seals in upper Drakes Estero. Like the informant, the OSB Director and the Committee members did not know about the digital photos taken at Drakes Estero in May and June 2007, and thus did not specifically ask NPS officials to produce such data.

On January 31, 2008, reacting quickly to renewed criticism from OIG, which questioned the lack of an applicable scientific integrity policy, the NPS issued an "Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resources Disciplines." The NPS Director attached the document to a memorandum, which was dated February 6, 2008, and sent specifically to members of the NPS National Leadership Council, including SE1, but not broadly to NPS employees. Only intended to

⁷Supporting denials from S1 and SE2, the circumstances indicate that NPS withheld the digital photos simply because they did not represent the scientific basis for conclusions drawn on and before May 8, 2007, and public comments made by S1 and SE2 on that date. Hindsight confirms that NPS could have avoided the present controversy by voluntarily disclosing the camera and digital photos, which DOI now knows indirectly contradict NPS conclusions and comments relevant to the disturbance event observed on May 8, 2007, and indirectly support the informant's position. However, at the time, SE2 and S1, neither of whom anticipated subsequent problems, merely responded to information requests with existing facts and directly responsive data.

improve the internal management of NPS and primarily drafted to establish a peer review process, the Interim Guidance also set forth a “Code of Scientific and Scholarly Conduct,”⁸ which obligated “all NPS employees working with scientific...information” to perform their duties in accordance with specific guidelines. The Code required NPS scientists, among other things, to “process data from, and communicate the results of scientific and scholarly activities honestly, objectively, thoroughly, and expeditiously” and to “fully disclose all research methods used [and] available data...in a timely manner and consistent with applicable laws and policy.” Not a scientific integrity policy,⁹ the Interim Guidance defined “research” as “[i]nvestigation aimed at the discovery and interpretation of facts...,” and defined “scientific and scholarly activities” to include “monitoring,” which involves the “systematic collection and analysis of natural and cultural resource data at regular intervals...to predict or detect natural and human-induced changes, and to provide the basis for appropriate management response.” In addition, the Interim Guidance, which did not authorize personal or judicial enforcement against the NPS, offered no definition of the concept “research record,” but did define the concept “research misconduct” to include “fabrication” and “falsification,” and applied such terms through the Code of Conduct’s reference to “scientific and scholarly misconduct.”

S4, who became aware of the document in late February-early March 2008, S1, S2, and S3 uniformly deny receiving the Interim Guidance at the time of issuance and further deny that NPS senior executives and officials in the Pacific West Region or Washington, D.C., widely distributed the document or provided training or any explanation of its application to scientific activities. S3, who recalls learning of the document in May or June 2008, responded to a call for comments, but received no confirmation from NPS officials and no further communication on the document. All four acknowledge that the Interim Guidance, with the words “DRAFT DRAFT DRAFT” in the top left corner of each page, existed and arguably applied to their scientific actions through January 28, 2011, but they remain unclear as to its application and interpretation, with the exception of language related to peer review of proposals, studies, reports, and similar papers. Initially unaware of, but nevertheless required to follow, the Interim Guidance in and beyond February 2008, S1 prepared for the harbor seal pupping and breeding season in upper Drakes Estero.

Troubled by many aspects of the 2007 camera monitoring project, S1 significantly modified that research activity in February-March 2008, but did not terminate it. First, s/he secured, through the AmeriCorps program, the volunteer services of V1, now an NPS employee, who agreed to advance the research project with guidance from S1. Second, with approval from SE2, S1 purchased another

⁸DOI never finalized, or formally applied to Agency employees, a draft “Code of Scientific Conduct” dated March 16, 2004.

⁹The Federal Policy on Research Misconduct, published by the Office of Science and Technology Policy in 2000, expressly noted that issuance of the policy alone neither created nor abridged any “rights, privileges, benefits, or obligations.” 65 Fed. Reg. 76260, 76262 n.1 (December 6, 2000). DOI did not implement that Federal Policy. Accordingly, that Federal Policy, which defines “research misconduct” and addresses the process of finding and taking administrative actions related to that concept, has never applied to NPS employees. However, DOI recently proposed and adopted a Scientific Integrity Policy with a conduct code, procedures, and definitions applicable to all Agency employees who engage in scientific activities. 75 Fed. Reg. 53325-53328 (August 31, 2010); see Secretary’s Order No. 3305, *Ensuring Scientific Integrity within the Department of the Interior* (Sept. 29, 2010). The DOI approved and incorporated, effective January 28, 2011, the Scientific Integrity Policy into the Departmental Manual at 305 DM 3.

monitoring camera (the PC85), which had zoom capabilities unmatched by the Silent Image camera used the previous year. Third, s/he decided to activate both cameras, to position them approximately 500 meters north of the spot used in 2007, and to orient the PC85 camera in a slight southwesterly direction and the Silent Image camera in a northwesterly direction (different from the northwesterly direction in 2007) at upper Drakes Estero.

On or about March 6, 2008, Reconyx processed S1's order for the additional camera. That same day, V1 retrieved and reviewed initial data from the Silent Image camera. After receipt and installation, the PC85 camera began taking digital photos on March 13, 2008. Like the process employed in 2007, placement occurred without public announcement, and relevant images were captured unbeknownst to SE1, S4, the informant, DBOC, most NPS employees, and the public generally. However, by this time, S2 and S3 knew of the cameras but offered no advice to S1, who takes full responsibility for all decisions related to the cameras in 2008.

S1 also takes full responsibility for the 2008 actions of, and data gathered by V1, whom S1 had instructed to attend the cameras three to four times each week from March-June 2008, to replace batteries and memory cards as needed, to adjust the focus and angle of the cameras as needed, to review the photographic images collected, and to prepare a written log of that review, through which V1 strictly confined her/his attention to DBOC mariculture activities, disturbances, and potential disturbances of harbor seals in upper Drakes Estero. As part of a now discontinued pilot study, S1 further directed V1 to monitor (while at, approaching, and departing the cameras) the harbor seals visually for population increases and decreases at favored haul-out subsites, to document observations, to monitor and memorialize all visible DBOC mariculture operations, and to record, in writing and with still camera and video equipment, all pinniped disturbances that V1 observed in upper Drakes Estero.

V1, complying with directions from S1, completed twenty-one handwritten disturbance surveys from March 6 to May 27, 2008; took nineteen videos in March 2008, twelve videos in April 2008, eleven videos in May 2008, and one video in June 2008; took still photos of harbor seals and anthropogenic activity in upper Drakes Estero; and generated worksheets for videos and photos, harbor seal counts generally, harbor seal counts of sub-groups, and surveillance of DBOC mariculture operations in upper Drakes Estero. V1 also reviewed about 60% of the nearly 69,000 digital photos taken by the Silent Image camera from March 6 to June 23, 2008; reviewed about 60% of the nearly 65,000 digital photos taken by the PC85 camera from March 13 to June 19, 2008; and sent to S1, on June 6, 2008, handwritten logs of all noteworthy DBOC mariculture activities, disturbances, and potential disturbance events seen in the photographic images from both cameras in March through May 2008. No evidence from V1 established that from March to May 2008, specifically including March 14, 2008, DBOC mariculture operations had harassed any harbor seals in upper Drakes Estero, had displaced the pinnipeds from any subsites in upper Drakes Estero, or had contributed to any reduction in the Drakes Estero harbor seal populations, which did not significantly decline in 2008. However, V1 did describe, as "images...of interest" and as potential DBOC disturbance documentation, digital photos taken by the PC85 camera on April 4 and May 15, 2008. A video taken by V1 on the latter date also supports a "potential" DBOC disturbance of harbor seals.

Notably, the absence of any mariculture-caused disturbances observed or documented by V1 and the cameras applies to March 14, 2008, the date on which a volunteer observer, standing a significant distance away from the camera locations on the opposite side of Drakes Estero, witnessed a DBOC boat disturb four seals from a group of nineteen in upper Drakes Estero. Without question, V1 was present at the camera locations on that date, at the exact time, and was closer to the disturbance site than the volunteer observer, but s/he neither saw nor documented or filmed any compatible anthropogenic disturbance. The PC85 camera, aimed at the area of alleged pinniped disturbance, confirmed the presence of a DBOC boat at the relevant time, but photos did not confirm any harassment of harbor seals on that date. With regard to the harbor seal disturbance on March 14, 2008, the only date during that pupping season when DBOC activities allegedly harassed pinnipeds, S1 relied heavily, but without clear explanation, on the volunteer observer's report and completely dismissed, without timely analysis or review,¹⁰ the direct or indirect contradiction of that data as presented by the negative implications of V1's observations, the photographic images, and the video clips.

Indeed, much like the approach to digital photos taken in 2007, S1 accorded little weight to the 2008 photographic data and related information gathered by V1. Deemed "incompatible" with the long term data collected from the traditional visual monitoring site in the southwest corner of Drakes Estero, the 2008 camera project and information associated therewith received little scientific attention from S1 and did not alter S1's subjective belief that DBOC mariculture operations either disturb harbor seals in upper Drakes Estero or dissuade the marine mammals from using established haul-out subsites.

Disinclined to test the reasonableness of that belief, S1 did not carefully and thoroughly analyze the new scientific material; instead, she relied on informal summaries of V1's observations, written surveys, and cursory data review. Both V1 and S1 agreed that the 2008 photographic data, while substantially greater in volume than the previous year, was only marginally better in quality. The PC85 camera produced images clearer and somewhat closer than the Silent Image camera, but all the photographic data remained blurry, with varying degrees of murk. In addition, much like the year before, camera positions, poor resolution, significant distances, the absence of sound, narrow fields of view, loss of approximately 59¾ seconds out of every minute from 0700 to 1900 hours daily, and the presence of wind, fog, and nearby foliage collectively interfered with both cameras' abilities to capture information other than intermittent, benign DBOC mariculture activities and a rogue kayaker who disobeyed closure orders and vexed pinnipeds in upper Drakes Estero on April 13, 2008. And once again, the cameras were not well-suited or positioned to assess the health of marine mammal populations or their use of specific subsites in upper Drakes Estero, or to document annoyances/perceived danger from avian sources, from terrestrial predators, or from anthropogenic activities.

¹⁰On or about September 30, 2010, S1, S2, and S3 did review the photographic images from March 14, 2008, but did not review V1's relevant research from that date. The NPS scientists noted that, consistent with the disturbance survey, the digital photos showed a DBOC boat present in upper Drakes Estero near the recorded time. Importantly though, the camera's limited field of view prevented confirmation of the visual observation made by the volunteer witness. Instead, the digital photos indirectly contradicted the human observation by showing seemingly undisturbed harbor seals near the location of the alleged harassment.

S1 did not examine, and still has not examined, that portion of the 2008 photographic data which V1 was unable to review (*i.e.*, about 40% of the photographic data or approximately 55,000 images). In addition, S1 has never developed any protocol(s) for extracting, from the 2008 digital photo set, information related to scientific goals of assessing the health of harbor seal populations in Drakes Estero, identifying pinniped disturbances and their sources, and measuring marine mammalian use/abandonment of haul-out subsites in upper Drakes Estero. Stating that the 2008 information gathered by the cameras and V1 did not produce "scientifically sound samples," S1 shelved the 2008 photographic data without fully disclosing the existence thereof, without producing any report(s), without including or referencing the photographic data in the harbor seal monitoring database, and without inviting independent analysis or peer review.

On July 31, 2008, ten days after issuance of the OIG report that formally, but without detailed analysis, condemned S1 for "misrepresent[ing] research" and for the manner in which she wrote the "Sheltered Wilderness" document, the informant served PORE with a FOIA request seeking 2007 and 2008 data on harbor seal counts and pinniped disturbances in upper Drakes Estero. S3, as manager of the harbor seal monitoring program database in 2008, became aware of the new FOIA request and spoke with S1 and S2 about the scope of responsive data. S/he specifically recalls questioning whether NPS should produce the 2007 and 2008 digital photos from the PC85 and Silent Image cameras. S3 also recalls discussing concerns with S1, who consulted a PWR employee (retired in December 2009) with expertise in FOIA matters. Dialogue between S1 and NPS employees at PWR resulted in an Agency decision to send the informant all handwritten and digital population and disturbance surveys of harbor seals in and near upper Drakes Estero. Responsive data included 2008 information from volunteer observers located in the southwest part of Drakes Estero and from V1 located on the eastern side of Drakes Estero, near the cameras.

NPS did not, however, produce for informant the following data: photographic images from, and reference to, the PC85 and Silent Image cameras; all handwritten logs from V1's partial review of the digital photos; the still photos and videos taken by V1 in April, May, and June 2008; and the worksheets that s/he generated for photos and videos, harbor seal counts of sub-groups, and surveillance of DBOC mariculture operations in upper Drakes Estero. The retired PWR employee with expertise in FOIA matters vaguely remembers speaking with S1 and advising that PORE need not produce such information absent specific reference by the informant, who had no knowledge that such data existed, and absent explicit use of the information to count seals or to document disturbances of marine mammals in upper Drakes Estero. NPS did not solicit legal counsel from any SOL attorney(s) regarding non-production of the photographic data or advice related thereto.

When asked whether they followed such guidance, which the retired PWR employee could not recall with precision, S1 and S3 replied affirmatively and denied having any conscious thoughts that the withheld data directly or indirectly contradicted all harbor seal disturbance information, including the volunteer's observations on March 14, 2008. As a result, the NPS scientists--without cognizance of the Interim Guidance language requiring full disclosure of all research methods used and all available data, and the appearance of cherry-picking information, and the value of promoting external analysis of all research, including data which could arguably be interpreted as showing that DBOC mariculture operations do not disturb harbor seals or deter them from using traditional

subsites in upper Drakes Estero--did not send the photographic research to the informant. The circumstances suggest that their failure to disclose the information derived from acceptance of advice, from narrowing the scope of said FOIA request, from poor understanding of scientific obligations, from sloppiness, from a protective approach to data, from a lack of vision, and from an insensitivity to the growing controversy, but not from any obvious intent to deceive, defraud, or mislead the informant or to falsify the research record, which, as noted above, S1 believed at the time to exclude the "incompatible" and "scientifically [un]sound" photographic data and related information.

On September 4, 2008, the *ad hoc* Committee formed by the NRC's Ocean Studies Board held a public meeting in Mill Valley, California, and took comments from SE1, S2, the informant, and others with knowledge relevant to the "scientific basis for [NPS] presentations and the report (including revisions), 'Drakes Estero: A Sheltered Wilderness Estuary,' on the ecological effects of [DBOC] on Drakes Estero."¹¹ For approximately one year prior to that date, S2, assisted by S1 and S3, had devoted substantial time and effort to researching and writing a scholarly paper which, intended for publication in *Marine Mammal Science*, studied the harbor seal colony located near DBOC mariculture operations in upper Drakes Estero and sought to explain the "patterns of [harbor] seal haul-out use during the breeding/pupping season at the seal haul-out sites closest to oyster activities." Quite familiar with information that s/he believed the Committee would find useful for its first report, S2 had previously shared with its members, in June 2008, the research s/he had conducted and the data s/he had analyzed.

To establish a statistical correlation between an increase in shellfish mariculture activities and the displacement of harbor seals, S2's paper carefully evaluated harbor seal population counts and subsite attendance and analyzed mariculture-related disturbances in 1996, 2003, and 2006, none of which related to DBOC operations; along with the three DBOC-caused disturbances witnessed by S1 on April 26, 2007; the two DBOC-caused disturbances witnessed by volunteer observers on April 29, 2007; and the DBOC-caused disturbance witnessed by a volunteer observer on May 8, 2007. A revised, final version of the subject paper included analysis of the DBOC-caused disturbance witnessed by a volunteer observer on March 14, 2008, and attempted to harmonize the significant decrease in 2008 disturbance data points with the statistical correlation. For the purposes of this public report, only the six disturbances in 2007, and the single disturbance in 2008 are relevant.

While speaking to the Committee members on September 4, 2008, S2 emphasized the importance of the 2007 disturbances, which s/he asserted were directly attributable to DBOC mariculture operations. According to S2's verbal and written analysis, DBOC mariculture operations had grown steadily from 2005 through 2008, harbor seal populations had changed in upper Drakes Estero, and pinned attendance at previously popular haul-out subsites had diminished, thus providing a

¹¹To complete its assigned task, the Committee sought to answer several questions that extended beyond the scope of the "Sheltered Wilderness" document. Among other things, the Committee wanted to identify "the body of [all] scientific studies on the impact of the oyster farm on Drakes Estero," the "effects...directly demonstrated by research in Drakes Estero itself," and the "conclusions [that] can be drawn from...scientific studies...." The informant insists, with reference to applicable definitions in the Interim Guidance, that the digital photos and accompanying logs qualified as "scientific studies" and "research" which NPS scientists had an obligation to share with Committee members.

foundation to show “how chronic disturbance activities, in this case associated with a mariculture operation, can lead to displacement of seals at haul-out sites, resulting in animals either shifting to alternate sites or leaving the area.”

Data related to the disturbance events intrigued Committee members, and they asked S2 questions related to, among other things, collection of the disturbance information. S2 explained, verbally and in writing, that “[t]rained volunteers and NPS staff conducted surveys at medium to low tides” from “one survey location” on a “bluff on the western edge of Drakes Estero” by using “binoculars and a 40-50X spotting scope” to count and “record[] the total number of...seals...present” and “[d]isturbances of the seals...during each survey.” Indeed, those surveys represented the exclusive harbor seal population and disturbance data, or the research record, upon which S2 based the statistical correlation and scientific analyses and conclusions. Having ignored the 2007 and 2008 photographic images when developing the scholarly paper and verbal comments, S2 did not tell Committee members (or the informant, SE1, S4, DBOC, or the public generally) about the cameras placed on the east side of Drakes Estero in 2007 and 2008, the associated digital photos, or the data collected by V1 in 2008, none of which evidenced any pinniped disturbance(s) and all of which either directly or indirectly conflicted with harbor seal disturbances observed by volunteers from the southwest corner of Drakes Estero in 2007 and 2008. In addition, S1, S2, and S3, who had not thoroughly examined the photographic images and data gathered by V1, did not think that such information fell within the ambit of “scientific studies” or “research” subject to disclosure to the Committee.

While presenting information to Committee members on September 4, the informant perpetuated claims that NPS senior executives and scientists had committed scientific misconduct by fabricating and falsifying data. For example, s/he reiterated the belief, unsupported by the “results” section of the OIG report issued in July 2008, that S1 had lied about harbor seal disturbances in upper Drakes Estero on April 26, 2007. The informant also renewed an assertion that a volunteer observer had lied about the harbor seal disturbance in upper Drakes Estero on May 8, 2007. The informant restated the claim that NPS assertions, originally made by S1 on May 8, 2007, of “chronic disturbance” and “abandonment of one area” and “80-percent reduction” constituted “false science” and intentionally misled the public. The informant, who immediately attached labels of “false” and “misrepresentation” and “misleading” to every scientific assertion with which s/he disagreed, accordingly sent the Committee, from September 2008 to January 2009, numerous submissions uniformly accusing S1, S2, S3, S4, SE1, and SE2 of serious wrongdoing in the form of scientific misrepresentation and research misconduct.

On September 8, 2008, the informant also urged *Marine Mammal Science* “to hold and not publish” the print-ready S2 paper on the basis that 2007 disturbance data referenced therein had allegedly been fabricated or falsified; thus, s/he asserted that both the data and the article belonged in the category of scientific misconduct. The editor of *Marine Mammal Science* expressed his opinion, on October 18, 2008, that “there is no basis for considering pulling [S2’s] paper...for ethical grounds (scientific misconduct)” and promptly published the scholarly article regarding the effects of El Niño, density-dependence, and disturbance on harbor seal counts in Drakes Estero from 1997 to 2007, hereinafter referenced as the 2009 paper. The informant continued (and presently continues) to assail the

analyses and conclusions found therein, and more specifically, the harbor seal disturbance data upon which the authors' reasoning relies.

In January 2009, the informant and DBOC's principal owner directed their attention to that "false" data, with primary focus on the alleged falsity of pinniped disturbance observations made by volunteers at Drakes Estero on April 29, 2007. They submitted separate, but substantively similar, documents to the OSB Director and posited that volunteer observers had lied about and falsified data regarding harbor seal disturbances in upper Drakes Estero on that date.¹² The informant's submission to the OSB Director declared that tide charts, along with DBOC payroll records showing that personnel did not work (and do not typically work) on Sunday, made it "physically impossible for the disturbance events to have taken place as described" on Sunday, April 29, 2007. On the tidal issue, the informant referred to a 2009 experiment which purportedly indicated that sandbars in upper Drakes Estero would not have been exposed at the time of the alleged disturbances and thus not available for pinnipeds to be resting/pupping/suckling at the time of alleged harassment by DBOC operations.

Consistent with her/his previous analysis, the informant characterized the subject disturbance data on April 29, 2007, as "false science," and equated it to the allegedly "false science" which appeared as S1's observations on April 26, 2007, and a volunteer's observations on May 8, 2007. The informant further maintained that because the 2009 paper, and S2's comments to the Committee members on September 4, hinged on said "false" data, specifically including the data points from April 29, 2007, "NPS officials and scientists...presented [the Committee] with false science, including false explanations, false data, and false analysis." The informant submitted arguments in an effort to destroy the credibility of all 2007 disturbance data, and to flatline that year's data, which would negate any statistical correlation between or among an increase in mariculture activities, evidence of pinniped harassment, and displacement of marine mammals in upper Drakes Estero. Admittedly driven by these thoughts and goals, the informant and DBOC's principal owner demanded that the OSB Director and NAS "investigate whether the NPS presented the NRC [and the Committee] with intentionally false and misleading scientific information to influence [] deliberations."

On February 3, 2009, the OSB Director sent both letters to Secretary Salazar with an explanation that the NAS, the NRC, and the Committee were "not in a position to evaluate the charges" made by the informant and DBOC's owner. S/he "therefore forward[ed the submissions] to [Secretary Salazar] as the cabinet officer responsible for the Park Service for such action as [he] may think appropriate." DOI did not conduct any investigation in accordance with the referred claims, which the NPS Deputy Director contemporaneously described in writing as already "investigated by the OIG."

The OSB Director's decision, on the Committee's behalf, to disregard criticism from the informant and DBOC's principal owner could have motivated similar reactions from NPS employees. Unfortunately, but perhaps understandably, S1, S2, and S3 refused to ignore the informant's written

¹²With few changes, the informant also sent the document, on April 28, 2010, to the Executive Director of the U.S. Marine Mammal Commission (MMC). NPS employees ignored service on the MMC.

comments and prepared an immediate rebuttal. Initial drafts of the rebuttal, however, failed to clarify who or what organization would or should receive the document, which neither Secretary Salazar nor the Committee members had requested or invited.

On February 5, 2009, S1 sent to S4, SE2, and another NPS employee¹³ a draft response designed to refute the informant's assertion, among others, that tide charts made it "physically impossible for the disturbance events to have taken place as described" on Sunday, April 29, 2007. SE1 also received a copy of the proposed reply but could not recall how, from whom, or when s/he obtained it, and neither SE1 nor SE2 carefully reviewed or suggested changes to the proposed language. To avoid premature refutation, the NPS scientists did not give their initial reply to the informant.

The draft response compared tidal activity from April 29, 2007, with dates in April and May 2008, on which the PC85 and Silent Image cameras had taken digital photos. Emphasizing that tidal activity in upper Drakes Estero on April 29, 2007, was similar to tidal activity on 2008 dates for which "NPS ha[d] time stamped images of seals on the sandbars," the NPS employees attached three digital photos taken by the PC85 camera (on April 17 and 19, 2008, and May 2, 2008), and argued that the disturbance events could indeed have occurred as witnessed by the volunteers on April 29, 2007.

The rebuttal document, developed in February 2009, represents the first time that the NPS scientists, presumably for some person or entity outside the Agency, had reviewed the photographic images and referenced them in writing. Oddly, the NPS scientists, who scrutinized the photos solely for the purpose of showing the tidal level(s) at which harbor seals haul-out on sandbars in upper Drakes Estero, cited the data outside the context of assessing the health of harbor seal populations, documenting sources of pinniped disturbances, and measuring displacement of marine mammals from traditional haul-out subsites. It follows that the NPS scientists, having previously placed little or no value on the 2007 and 2008 data, and having repeatedly declined to use the research in a manner consistent with S1's original goal (*i.e.*, installation of cameras to gather information about harbor seal populations, disturbances, and displacement), now eagerly and actively used the scientific material to challenge the informant's claim that tidal activity made "physically impossible" the disturbances observed by volunteers at Drakes Estero on Sunday, April 29, 2007. The internal NPS process, though, did not solicit comment from the informant and did not afford her/him any opportunity to review and contest the data or evidence or research used by the NPS scientists, and the informant recently referred to that process as "sleazy."

S4's responsive comments and suggested revisions, sent to S1 on February 5, 2009, raised no questions or concerns about reference to, and dependence on, the photographic images, of which he knew nothing prior to that date. Not discouraged from using the data, the NPS scientists expanded their reliance on the digital photos in subsequent versions of the unnecessary rebuttal.

¹³Duty-stationed in Fort Collins, Colorado, the NPS employee served (and continues to serve) the Agency in the Water Resources Division, Natural Resource Program Center. Having no previous or subsequent involvement in the rebuttal effort, the NPS employee lacked a contextual knowledge of the photographic data issue and could not be expected to question or contest any aspect of scientific research gathered by the cameras.

Between February 5 and May 1, 2009, the date on which the NPS scientists completed their "Response to [Informant's] January 18, 2009 Letter to NRC," V1 reviewed, at the request of S1 and S3, the handwritten logs associated with the 2008 photographic images. V1's mission was to identify digital photos showing DBOC boats present in Drakes Estero on Sundays in 2008. V1's efforts, guided by S1 and S3, related to the informant's statements which asserted that DBOC records and typical routines, evidencing no Sunday work, made "physically impossible" (not suspicious or questionable or debatable) the disturbances observed by volunteers at Drakes Estero on Sunday, April 29, 2007. V1 found what s/he thought to be a DBOC boat operating on Sunday, March 23, 2008, and that discovery resulted in modifications to the rebuttal document originally drafted in February 2009. No longer "ancillary" or "incompatible" or "scientifically [un]sound," the photographic data now proved handy for the NPS scientists' attempts to puncture every assertion made by the informant in January 2009.

The final version of the "NPS Response" (with a one-page briefing statement, eight substantive pages of text, and an additional seventeen pages divided among six appendices) fully addressed the informant's written comments dated January 18, 2009, and retained the tidal activity comments and all three photos described above. An attachment, identified in the finished product as Appendix A, included the photos and clarified that "NPS examined date and time stamped photographs taken of Drakes Estero by remote camera. The remote camera was on-site at Drakes Estero for the majority of the 2008 breeding season, capturing images every minute from 7:00 AM to 7:00 PM. The camera view encompassed the 'lateral' channel with sandbar OB in the foreground." These statements illustrated the NPS scientists' willingness to disclose the existence of cameras and photographic data. In addition, the text of the finished product addressed the Sunday issue by not only arguing that DBOC boats do operate on that day of the week but also explaining that "NPS has time stamped images of a DBOC boat present on Drakes Estero on March 23, 2008, also a Sunday." However, subsequent review of the murky images, as explained by S1, S2, and S3 in a document sent to the U.S. Marine Mammal Commission on September 30, 2010, evinced the inaccuracy of the quoted words and revealed the "DBOC boat" to be a log, a bird, or some object that "cannot be definitively identified as a DBOC motorboat."

On or about May 1, 2009, the NPS scientists knew that the Committee had completed or would soon complete its first report, and further understood that the OSB Director and Committee members intended to give NPS senior executives an advance briefing of the Committee's report. Accordingly, on May 1, 2009, the NPS scientists sent the final "NPS Response" to SE1, SE2, and S4, invited last minute editing, and anticipated that the NPS senior executives would deliver it, as modified, to the OSB Director and Committee members during the advance briefing. The three recipients uniformly deny that they carefully reviewed, or proposed to revise, the final "NPS Response," and S4 confessed that by early May 2009, he had stopped looking closely at any document about, to, or from the informant.

On May 4, 2009, the OSB Director communicated the contents of the Committee's report to various NPS senior executives and officials, who participated in person and by telephone. Those NPS employees in attendance, shocked by, and singularly focused on, that portion of the Committee's report which opined, without careful analysis, that "native Olympia oysters probably played an

important role in structuring the estuary's ecosystem for millennia until human exploitation eliminated them," did not give the "NPS Response" to the OSB Director, the Committee members, or the NAS/NRC during the advance briefing. Although service of the document during the advance briefing, which occurred only one day before public distribution of the Committee's report, would not have resulted in any revision(s) to the completed report, delivery would have publicly announced that the cameras and accompanying data existed. Because the NRC did not receive copies of the "NPS Response" in May 2009, a fact unknown to S1, S2, and S3 until late 2010, the public remained unaware of the data, and the data remained unavailable to the informant and many others.

On May 5, 2009, the Committee publicly issued a 100-page report entitled "Shellfish Mariculture in Drakes Estero, Point Reyes National Seashore, California." The document included a "Summary" section, which noted, with many other statements, that "NPS has recently released documents to inform the public about the impacts of oyster mariculture on the Drakes Estero ecosystem." However, the "limited scientific literature on Drakes Estero," obviously exclusive of the 2007 and 2008 photographic data and the 2008 information gathered by V1, led the Committee to find "that there is a lack of strong scientific evidence that shellfish farming has major adverse ecological effects on Drakes Estero at the current levels of production and under current operational practices." Arriving at that conclusion, which the 2007 and 2008 photographic data might have strengthened in favor of DBOC operations, the Committee recognized the need for more research and implicitly questioned the scientific value of the 2009 paper, through which "NPS selectively present[ed] harbor seal survey data in Drakes Estero and over-interpret[ed] the disturbance data which are incomplete and non-representative of the full spectrum of disturbance activities in the estero."

In the body of its report,¹⁴ the Committee wrote that "[h]arbor seal research and monitoring projects have been conducted within Drakes Estero over the past 30 years, but none of this research was designed specifically to assess the impacts of mariculture operations." The informant recently asserted that existence of the 2007 and 2008 camera monitoring project makes this latter statement inaccurate. However, as evidenced by other comments from the Committee, the report's statement regarding no "research [] designed specifically to assess the impacts of mariculture operations" would likely have remained, even if the Committee had known about the distant, blurry photographic images of harbor seals with narrow fields of view in upper Drakes Estero. The Committee's comments recognized the complete absence, critical importance, and extreme difficulty of designing any "study that could demonstrate whether or not short-term responses to disturbances [from activities such as DBOC's mariculture operations (*i.e.*, oyster bags on sandbars, human voices, and engine noises)] have long-term population consequences for harbor seals." Such a study, the

¹⁴Deviating from the "scientific" analysis found in the OIG report issued on July 21, 2008, the Committee's report stated that "[w]hile NPS in all versions of *Drakes Estero: A Sheltered Wilderness Estuary* accurately depicted the ecological significance and conservation value of Drakes Estero, in several instances the agency selectively presented, over-interpreted, or misrepresented the available scientific information on potential impacts of the oyster mariculture operation. Consequently, *Drakes Estero: A Sheltered Wilderness Estuary* did not present a rigorous and balanced synthesis of the mariculture impacts. Overall, the report gave an interpretation of the science that exaggerated the negative and overlooked potentially beneficial effects of the oyster culture operation" (emphasis added). Unimpressed by S1's effort, the Committee nevertheless found that the document, as understood through associated facts, may have, but did not necessarily, "misrepresent[] available scientific" studies.

Committee observed, “would require long-term study of known individuals, and high quality data on those individuals’ exposure both to disturbances and to other potential environmental stressors.” Clearly, the 2007 and 2008 camera monitoring project produced no such “high quality data,” and contrary to the informant’s reading of the Committee’s report, nothing therein suggested or contemplated that information gathered pursuant to the 2007 and 2008 camera project would have helped the Committee perform its duties and answer questions raised. But the Committee would likely have found the photographic research interesting.

The Committee, having no relevant and reliable studies from which to draw conclusions, instead focused on, and harshly criticized, available data: the monitoring database which, “staffed by volunteers,” had the “potential for simple recording errors, such as date, time, or tide level.” The Committee found that the volunteer observer data, shockingly inferior to information which might be collected from preferred studies of “known individuals” in a harbor seal colony, “cannot be reliably used to infer impacts of mariculture, relative importance of different sources of disturbance, or impacts on seal fitness.” In the Committee’s opinion, the volunteer observer data serves only “to demonstrate that there are multiple sources of human and natural disturbances to seals hauled-out on sand bars in Drakes Estero,” and does “not permit rigorous determination of which sources of disturbance, if any, have greater population-level consequences.” These substantive data deficiencies, as identified by the Committee, could only be cured by overhauling the scientific research process, not simply by eliminating the potential for human mistakes through “a data collection system that could be independently verified, such as time and date stamped photographs.” The Committee merely suggested that a photographic data collection system, while not useful for assessing direct cause and effect between types of pinniped harassment and population changes at subsites, might help “to reconstruct the exact events recorded during any individual survey” and to verify “circumstances where there is an indication of a source of disturbance that could lead to a regulatory action.” S1, S2, and S3 recall considering the Committee’s recommendations and collectively agreeing that the existing camera project, if further developed and refined, could assist in the manner described, but in their unanimous view, the existing camera project would never satisfy the Committee’s description of, and demand for, “data” of much “high[er] quality.”

Knowing that the Committee had finished its work on the first report, the NPS scientists returned to pending projects, including the collection of harbor seal information during the 2009 pupping season in upper Drakes Estero. S1, S2, and S3 uniformly deny that they interpreted the Committee’s report to request any digital images or photographic data, and further deny that they attempted to hide any aspect of the 2007 and 2008 camera monitoring project from the Committee, its members, the NAS, the NRC, the informant, or any other person or organization.

Prior to and soon after issuance of the Committee report on May 5, 2009, the informant, who still did not know the photographic evidence existed, focused attention on, and argued against, SE1’s nomination for a high-ranking DOI position. In rancorous submissions sent to Secretary Salazar on April 27, 2009, and May 10, 2009, and to the White House Science Advisor on May 16, 2009, and to the OIG on July 8, 2009, the informant “strongly encourage[d]... reject[ion of SE1] as a candidate for [a high-ranking DOI position]” and alleged that SE1 had “repeatedly violated the NPS Code of Scientific Conduct (January 2008); sanctioned, defended, and promoted false science to the [NAS];

and fully participated in the misrepresentation of science that violated the Federal Policy of Scientific Misconduct established by the White House Office of Science and Technology Policy (Federal Register, December 2000).” Responding to the informant’s claims occupied much of SE1’s time and prevented SE1, who had been instructed to avoid PORE issues by DOI senior executives on or about May 12, 2009, from further analyzing the photographic research.

While these events were occurring in April and May 2009, S1 busied herself/himself with restructuring the Drakes Estero camera project for the third pupping season. Changes included replacement of V1 with another volunteer, V2; disuse of the Silent Image camera and the northwesterly orientation/field of view; and activation of the PC85 camera in April rather than March.

Similar to 2008, S1, who takes full responsibility for the 2009 camera monitoring project, instructed V2 to attend the cameras three to four times each week, to replace batteries and memory cards as needed, to adjust the focus and angle of the cameras as needed, to review the photographic images collected, and to prepare a written log of that review, through which V2, with some guidance from V1, strictly confined attention to DBOC mariculture activities, disturbances, and potential disturbances of harbor seals in upper Drakes Estero. In addition, S1 directed V2 to monitor (while at, approaching, and departing the cameras) the harbor seals visually for population increases and decreases at favored haul-out subsites, to document observations, to monitor all visible DBOC mariculture operations, and to record, in writing but without still camera and video equipment, all pinniped disturbances observed in upper Drakes Estero.

Complying with directions from S1, V2 completed two handwritten disturbance surveys, dated April 29 and June 11, 2009. S/he also reviewed most or all of more than 75,000 digital photos taken by the PC85 camera from April 17 to August 4, 2009; and sent to S1, on November 9, 2009, a handwritten log of all noteworthy DBOC mariculture activities, harbor seal disturbances and potential disturbance events seen in the photographic images from the PC85 camera. No evidence gathered by V2 established that from April to August 2009, DBOC mariculture operations had harassed any harbor seals in upper Drakes Estero, had displaced the pinnipeds from any subsites in upper Drakes Estero, or had contributed to any reduction in the Drakes Estero harbor seal population, which did not significantly decline in 2009.

Consistent with actions taken in 2007 and 2008, S1 did not examine, and still has not examined, most of the 2009 photographic images that V2 reviewed when preparing the handwritten log. In addition, S1 has never developed any protocol(s) for extracting, from the 2009 digital photo set, information related to scientific goals of assessing the health of harbor seal populations in Drakes Estero, identifying pinniped disturbances and their sources, and measuring marine mammalian use/abandonment of haul-out subsites in upper Drakes Estero. S1 recently and verbally maintained the position that information gathered by the PC85 camera in 2009, did not produce “scientifically sound samples.” Therefore, s/he electronically stored the 2009 photographic data without fully disclosing the existence thereof, without producing any report(s), without including or referencing the photographic data in the harbor seal monitoring database, and without inviting timely peer review

or independent analysis from any person or organization, including the U.S. Marine Mammal Commission (MMC), an independent agency of the federal government.

Unhappy with the Committee's report "which has led to conclusions of many, including some decision makers, that there is nothing to be concerned about regarding commercial oyster operations in/around seal habitat," the National Parks Conservation Association and the Sierra Club Marin Group, on June 9, 2009, jointly "urge[d] the [Marine Mammal] Commission to provide input into this matter." Within weeks of receiving that request, the MMC's Executive Director explained that the MMC "[f]or some time...has been aware of the controversy regarding potential effects of oyster farming in Drake's Estero on harbor seals" and announced MMC's decision "to conduct an independent review."

In November 2009, the MMC invited the informant, PORE, and other individuals and organizations to forward relevant documents and to identify "datasets," and "other sources of data" that would "enable the [MMC] members to complete a thorough scientific review." NPS and PORE employees responded by sharing many documents, including the "NPS Response" finalized on May 1, 2009, and by describing the harbor seal monitoring database, without reference to the photographic data and related information gathered by and near the cameras during pupping seasons in 2007-2009.

In December 2009 and January 2010, the MMC uploaded documents, including the NPS Response, to an electronic index, received and distributed data, and developed Terms of Reference, which informed the public that the "purpose of [the MMC] review is to conduct a detailed assessment of the sources of disturbance in and around Drake's Estero and, where such [mariculture] effects cannot be ruled out, recommend scientific study and management measures to clarify and/or avoid such effects" caused by mariculture operations. That assessment presently continues.

On or about February 21-24, 2010, the MMC conducted an on-site review, and during that period, held a public meeting near PORE and heard testimony from SE2, S1, S2, S3, the informant, and others with pertinent knowledge. Similar to procedures followed for the *ad hoc* NRC Committee in 2008, S2 offered to the MMC verbal and written statements which, drafted with S1 and S3 on and before February 6, 2010, studied the "spatial use of Drakes Estero by harbor seals correlated to anthropogenic disturbance and natural variation during 1982-2009." The volunteer surveys and accompanying data collected from the southwest corner of Drakes Estero represented the exclusive harbor seal population and disturbance data upon which the NPS scientists based their scientific analyses and conclusions, pursuant to which they found that "[e]ncroachment of mariculture or other persistent activities on preferred pupping sandbars may displace seals but not have a detectable effect on the colony or the region until natural fluctuations occur which further limit habitat, and cause additional competition for limited space resources."

Because the protocols, which S3 described to the MMC, for monitoring harbor seals and for observing pinniped disturbances had not changed, S2 discussed the surveys with the MMC in much the same way s/he had spoken with the Committee in September 2008. Having ignored the 2007, 2008, and 2009 photographic images when developing the new scientific paper and verbal comments to the MMC, S2 did not tell the MMC (or the informant, DBOC, or the public generally) about the

cameras placed on the east side of Drakes Estero in 2007, 2008, and 2009, the associated digital photos, the data collected by V1 in 2008, or the data collected by V2 in 2009, none of which evidenced any pinniped disturbance(s) and all of which either directly or indirectly conflicted with harbor seal disturbances observed by volunteers from the southwest corner of Drakes Estero in April and May 2007 and March 2008.

In remarks made to the NRC Committee, the informant's verbal statement and 129-page powerpoint presentation to the MMC referred to "false" science used by NPS senior executives and scientists and to S1's alleged misrepresentation in the "Sheltered Wilderness" document, but the informant did not repeatedly reference "scientific misconduct." However, s/he did reiterate, among other things, the opinion that the NPS claim, originally made by S1 on May 8, 2007, of an "80-percent reduction" at a subsite in Drakes Estero, was false and misleading. The informant also insisted that all DBOC-caused disturbances observed either by S1 or volunteers at Drakes Estero in 2007 and 2008, lacked credibility.

One day after taking statements from concerned and knowledgeable parties, the MMC toured Drakes Estero and visited the exact location from which volunteers, and S1 on April 26, 2007, have historically surveyed the harbor seal population in Drakes Estero and documented pinniped disturbances and potential disturbance activities. The MMC Executive Director and DBOC's principal owner recall, separately but consistently, that while there, an unidentified MMC member pointed to the eastern part of Drakes Estero (near the locations where S1 had secured the camera or cameras in 2007, 2008, 2009, and 2010) and recommended that NPS install "wildlife" cameras on "that side" to gather data "continuously." The MMC Executive Director and DBOC's principal owner further recall that S1 said nothing in response, but neither could state unequivocally that S1 heard the suggestion, which s/he emphatically denies hearing.

On June 6, 2010, while preparing to discuss, the following day, disturbance data points with the MMC Executive Director, NPS senior executives and scientists, and other invitees, the informant read the "NPS Response," with appendices, and the attached briefing statement dated May 1, 2009. NPS had sent the complete Response document, as discussed above, to MMC in November 2009, and had notified readers, through the Response, that the "remote camera was on-site at Drakes Estero for the majority of the 2008 breeding season, capturing images every minute from 7:00 AM to 7:00 PM." The informant shared the information with DBOC's principal owner, who examined the attached pictures, learned of the camera's approximate location, and successfully sent her/his son to the area with instructions to find and photograph the "hidden" camera.

On June 7, 2010, the informant confronted the PORE Superintendent and the NPS scientists present for the meeting with questions regarding the existence of cameras and photographic images, to which the NPS employees responded affirmatively and truthfully. Being unprepared for the informant's inquiry, the responding NPS employees could not provide specific details of the camera project, which had recently produced an additional 54,000 images from February 12 to June 6, 2010. Thereafter, NPS/PORE employees, other than those individuals mentioned in this background section, learned of the issue. NPS/PORE employees also responded to many FOIA requests, through which the informant sought to prove that NPS employees had committed scientific misconduct. The

informant's recent submission to Secretary Salazar encourages removal of several NPS employees from the pending EIS process and returns the analytic focus of terminating or extending DBOC mariculture operations to scientific issues, rather than policy or property or legal concerns. Quite recently, PORE created an electronic reading room for the EIS process and uploaded to that site all information associated with the harbor seal camera monitoring research project at upper Drakes Estero from 2007 to 2010.

From June 7, 2010, to and beyond November 22, 2010, the date of the informant's request to Secretary Salazar, the MMC, through its Executive Director, has asked questions, evaluated data (including all information associated with the camera monitoring project from 2007-2010), communicated frequently with the informant and PORE officials, mediated disputes over data and science between the informant and NPS employees, and established credibility with all involved. Although the MMC has not yet reported any findings and conclusions, its Executive Director has assured stakeholders that the Drakes Estero harbor seal assessment will issue soon.

After petitioning the MMC to find that DBOC operations have not harassed, and do not harass, harbor seals in upper Drakes Estero, the informant turned her/his attention to NPS employees and filed with Secretary Salazar the subject request on November 22, 2010. The informant's submission relies on the foregoing background facts, necessitates the following analysis, and demands careful examination of claims alleging employee misconduct.

III. Discussion

The informant makes three fundamental assertions: 1) NPS senior executives and scientists have publicly expressed opinions, verbally and in writing, that DBOC mariculture operations negatively impact harbor seals in upper Drakes Estero; 2) covert research materials, in the form of nearly 300,000 photographic images and accompanying handwritten logs, evidence no DBOC-caused disturbance(s) of harbor seals at upper Drakes Estero during the pupping/mating seasons in 2007-2010; and 3) knowing that the photographic data existed and "refuted" their opinions, NPS senior executives and scientists buried that secret research and continued to express opinions hostile to DBOC mariculture operations. Strengthening those basic contentions, the informant submits that a harmful objective--terminating DBOC mariculture operations--motivated the NPS senior executives and scientists, whose opinions have always depended upon false and extremely limited disturbance data from April 26, 2007; April 29, 2007; May 8, 2007; and March 14, 2008.

Thorough analysis of the facts confirms that NPS employees erred, but not to the degree set forth by the informant. Rather, the mistakes stem from the refusal, by some NPS employees, to modify their intuitive, but statistically and scientifically unproven, belief that DBOC mariculture activities either disturb harbor seals in upper Drakes Estero or deter pinnipeds from hauling-out at historically preferred subsites there.

To aid in review at the decision-making level, SOL has supplied DOI officials with legal analysis dependent upon a variety of factors, including (1) each person's opportunity and capacity to observe the event or act in question; (2) each person's character; (3) any prior inconsistent statement made

by each person; (4) each person's bias, or lack of bias; (5) the contradiction of each person's version of events by other evidence or the consistency with other evidence; (6) the inherent improbability of each person's version of events; and (7) each person's demeanor. See *Hillen v. Department of the Army*, 35 M.S.P.R. 453, 458 (1987).

A. No Criminal Violation

The most serious allegation from the informant relates to the claim that NPS senior executives and scientists violated 18 U.S.C. § 1001, which covers and criminalizes offenses in three broad categories. The statute proscribes, "in any matter within the jurisdiction" of the federal government, conduct from "whoever...knowingly and willfully (1) falsifies, conceals, or covers-up by any trick, scheme, or device a material fact; (2) makes any materially false, fictitious, or fraudulent statement or representation; or (3) makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry." 18 U.S.C. § 1001.

A conviction under that criminal statute requires proof beyond a reasonable doubt that the defendant made a false statement or concealed information; that the statement or concealment was material and made knowingly and willfully; and that the deceptive act fell within executive, legislative, or judicial branch jurisdiction. *Brogan v. United States*, 522 U.S. 398, 400 (1998). However, concealment of a material fact violates § 1001 only if a legal duty compels the defendant to disclose the withheld information. *Hubbard v. United States*, 514 U.S. 695, 716-17 (1995) (Scalia, J., concurring); but see H.R. Rep. No. 104-680 (1996), at 2-6, reprinted in 1996 U.S.C.C.A.N. 3935, 3936-39. And the majority of circuits require that the disclosure duty be rooted in a "statute, governmental regulation, or form" independent of § 1001. See, e.g., *United States v. Safavian*, 528 F.3d 957, 964 (D.C. Cir. 2008); *United States v. Moore*, 446 F.3d 671, 678 (7th Cir. 2006); *United States v. Calhoun*, 97 F.3d 518, 526 (11th Cir. 1996); *United States v. Curran*, 20 F.3d 560, 566 (3d Cir. 1994); but see, e.g., *United States v. Stewart*, 433 F.3d 273, 318 (2d Cir. 2006); *United States v. Austin*, 817 F.2d 1352, 1354 (9th Cir. 1987).

Neither the language of § 1001, on which federal prosecutors in California may arguably rely to establish a disclosure duty, nor any statute, governmental regulation, or form independent of § 1001 mandated revelation of the inconclusive photographic data and accompanying logs to Senator Feinstein, the OIG, the *ad hoc* NRC Committee funded by the NPS, or the MMC. It follows that referral of the alleged crime(s) to the appropriate U.S. Attorney or federal investigative agency is not warranted. Moreover, the passive disclosure of the 2007 digital photos to the OIG, which had not requested such information, intended disclosure to the OSB Director and the *ad hoc* NRC Committee, and active disclosure of all photographic data to the MMC further justify a decision against referral of the informant's accusations to the appropriate U.S. Attorney or federal investigative agency.

On the other hand, a plausible interpretation of the facts supports a conclusion that NPS employees offered their opinions, and intentionally omitted the photographic research, in an effort to manipulate the outcome of the *ad hoc* Committee's report issued on May 5, 2009. See *United States v. Gaudin*, 515 U.S. 506, 509 (1995); but see *United States v. Wheeler*, 247 F.App'x. 558, 559 n.1 (5th Cir.

2007); see also *United States v. Gonsalves*, 435 F.3d 64, 71-72 (1st Cir. 2006); *United States v. Blankenship*, 382 F.3d 1110, 1136-37 (4th Cir. 2004). However, this factual interpretation overlooks the significance of passive disclosure to the OIG in 2007, and the importance of disclosure language in the NPS Response first drafted in February 2009, and made final in May 2009. In addition, this approach seemingly ignores legal reality and the Due Process Clause of the Fifth Amendment, which prohibits punishing a criminal defendant for conduct “which he could not reasonably understand to be proscribed.” *United States v. Harris*, 347 U.S. 612, 614 (1954).

For any prosecutor to succeed in criminal litigation, the defendant(s) must have “fair notice...of what conduct is forbidden.... [T]his ‘fair warning’ requirement prohibits application of a criminal statute to a defendant unless it was reasonably clear at the time of the alleged action that defendants’ actions were criminal.” *United States v. Kanchanalak*, 192 F.3d 1037, 1046 (D.C. Cir. 1999). The statutory text of § 1001, even with reference to concealing or covering-up a material fact by trick, scheme, or device, fails to indicate the particular facts or information that NPS employees were obligated to disclose during scientific conversations with representatives of the federal government. These prosecutorial problems appear fatal to any criminal litigation and counsel against referral to the appropriate U.S. Attorney or federal investigative agency.

The weight of relevant facts and law supports a finding that there exists insufficient evidence of NPS employees’ criminal intent to conceal material information from the executive and legislative branches. Accordingly, the present record discourages a referral of this matter for prosecution, but encourages full discussion and potential referral with OIG representatives.

B. No Scientific Misconduct or Research Misconduct

When S1 initially purchased and installed the Silent Image camera in 2007, no definition of “scientific misconduct” or “research misconduct” applied to her/his employment activities through any express scientific integrity policy. DOI had not implemented the Federal Policy on Research Misconduct, which, issued by the Office of Science and Technology Policy (OSTP) and published in the *Federal Register* on December 6, 2000, defined relevant terms and concepts, including but not limited to, “research,” “research record,” and “research misconduct.” Absence of an applicable policy, though, does not administratively impede Agency efforts to correct misbehavior that falls within the ambit of “scientific misconduct.” See *Wiley v. U.S. Postal Service*, 102 M.S.P.R. 535, 540 (2006); *King v. Nazelrod*, 43 F.3d 663, 665 (Fed. Cir. 1994); *Lockett v. U.S. Marine Corps*, 37 M.S.P.R. 427, 429 (1988).

Any charge that an employee specifically committed “scientific misconduct” or “research misconduct,” in or after 2007, must exclude “honest error or differences of opinion” and must include “fabrication, falsification, or plagiarism in proposing, performing, or reviewing research or in reporting research results.” Further, DOI officials must define the term “falsification” to mean “manipulating research materials, equipment, or processes or changing or omitting data or results such that the research is not accurately represented in the research record,” which DOI officials must define as the “record of data or results that embody the facts resulting from scientific inquiry,” an equivalent to “scientific method,” and thus defined as a “systematic pursuit” of knowledge through

“testing and confirmation.” See *Webster’s Third New International Dictionary* 2033 (Merriam-Webster 1993); see also *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 593 (1993). These definitions, which involve falsifying and misrepresenting information through omission of data or research, appear consistently in dictionaries, the OSTP Policy, the NPS Interim Guidance, and DOI’s present policy on scientific integrity.

Success in charging an employee with “scientific misconduct,” and by definition falsification and misrepresentation of research through manipulation or omission, demands proof by preponderant evidence that the NPS employee(s) knowingly supplied incorrect information with the specific intent to defraud, deceive, or mislead. *Christopher v. Department of the Army*, 107 M.S.P.R. 580, 586 (2008); *Delancy v. U.S. Postal Service*, 88 M.S.P.R. 129, 131-32 (2001); *Reed v. Office of Personnel Management*, 74 M.S.P.R. 616, 620 (1997); *Naekel v. Department of Transportation*, 782 F.2d 975, 977 (Fed. Cir. 1986); see also *Guerrero v. Department of Veterans Affairs*, 105 M.S.P.R. 617, 622 (2007); *Bryant v. Department of the Army*, 84 M.S.P.R. 202, ¶ 11 (1999), *aff’d* 243 F.3d 559 (Fed. Cir. 2000); *McClain v. Office of Personnel Management*, 76 M.S.P.R. 230, 236 (1997). Guided by circumstantial evidence, DOI officials may find the requisite intent, a state of mind, through inference when the incorrect information is supplied with a reckless disregard for the truth or with a conscious purpose to avoid learning the truth. See *Gager v. Department of Commerce*, 99 M.S.P.R. 216, ¶ 7 (2005); *Gustave-Schmidt v. Department of Labor*, 87 M.S.P.R. 667, ¶ 9 (2001); see also *Harmon v. General Services Administration*, 61 M.S.P.R. 327, 330 (1994), *aff’d* 47 F.3d 1181 (Fed. Cir. 1995) (Table); *Pappas v. Office of Personnel Management*, 76 M.S.P.R. 152, 156 (1997), *aff’d*, 155 F.3d 565 (Fed. Cir. 1998) (Table). DOI officials may also infer intent from an employee’s explanatory statements that lack credibility. *Kumferman v. Department of the Navy*, 785 F.2d 286, 290 (Fed. Cir. 1986). However, mere inaccuracy or omission, standing alone, will not meet the demanding element of intent, and DOI officials must consider plausible explanations for any data omitted and incorrect statements made by NPS employees. See *Kuhn v. Federal Deposit Insurance Corporation*, 48 M.S.P.R. 393, 395-96 (1991), *aff’d*, 954 F.2d 734 (Fed. Cir. 1992) (Table).

1. Defining Terms - “Research” and “Data”

When applied to the facts of record, the foregoing definitions and legal concepts offer insufficient proof that any NPS employee committed scientific misconduct by knowingly supplying incorrect information with the specific intent to defraud, deceive, or mislead the Marin County Board of Supervisors, Senator Feinstein, the OIG, the NAS and the *ad hoc* NRC Committee, the MMC, the informant, DBOC, or the public generally. Instead, persuasive evidence shows that no desire to delude motivated or influenced any NPS employee’s actions with regard to the photographic data.

As an initial matter and as firmly supported by the record, the words “research” and “data” cast definitional nets sufficient to capture all the photographic images from both cameras and the information gathered by V1 in 2008, and by V2 in 2009. See *Interim Guidance Document Governing Code of Conduct...* (January 31, 2008) (defining “research” as “[i]nvestigation aimed at the discovery and interpretation of facts...”); accord *Webster’s Ninth New Collegiate Dictionary* 1002 (Merriam-Webster 1986) (defining “research” as “studious inquiry or examination; esp:

investigation...aimed at the discovery and interpretation of facts..."); *see also Webster's Ninth New Collegiate Dictionary* 325 (defining "data" as "factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation"). Properly defining the contours of "research" and "data" and "research record," referenced in the first part of this section, is necessary to avoid the analytic pitfalls created by arguments from both the informant and NPS employees.

For example, the informant's assertions invite the Agency to conclude that all digital photos and the 2008 and 2009 handwritten logs, as research, belong in the research record. That argument presupposes that only the blurry photos and accompanying logs can "accurately represent[]" their contents, which evidence no instances of harbor seal disturbance(s) caused by DBOC mariculture operations at upper Drakes Estero during the pupping seasons in 2007-2010. Contrary to the informant's contentions, any and all research record materials that reveal no instances of DBOC-caused pinniped disturbances in those seasons "accurately represent[]" the substance of said photographic data in the research record. Even without the photos and accompanying logs, the research record accurately represents their content (*i.e.*, no DBOC-caused disturbances) for most of 2007 and 2008, and for all of 2009 and 2010.

With the exception of disturbance surveys generated by S1 on April 26, 2007, and by volunteers on April 29, 2007, May 8, 2007, and March 14, 2008, the research record contains no data which demonstrates that DBOC mariculture operations harassed any marine mammals in the relevant location at the relevant time. Because the Silent Image camera first snapped digital photos on May 5, 2007, the research record lacks an accurate representation of the photographic images for only the latter two dates.

Such analysis specifically rejects the informant's claim that all DBOC-caused disturbance observations, even the harassment of harbor seals witnessed before installation of the camera in 2007, are discredited by the overwhelming and negative implications of the digital photos and handwritten logs, which show no marine mammals being disturbed by DBOC mariculture operations. In short, the limited information found in the inconclusive photographic research neither trumps nor disproves all 2007 and 2008 DBOC-caused disturbances observed by volunteers and included in the research record. Confining attention solely to the differences between the research record and the photographic materials, an objective eye focuses solely on the adequacy of the research record for May 8, 2007, and March 14, 2008.

Facts and logic also contradict assertions made by NPS senior executives and scientists, who object to the inclusion of any digital photo and any information collected by V1 and V2 within the definitions of "research," "data," and "research record." S1, S2, and S3 genuinely and forcefully assert, but without reference to any source, that lack of scientific methodology, strict protocols, and scholarly analysis removes the cameras and related materials from the scope of research and data. Their position in that regard leads to the unacceptable conclusion, discussed below, that NPS scientists may withhold, from the research record, any information obtained through any investigative method, so long as the scientific inquiry remains loose and informal, and the collected information is not subjected to close scrutiny. The apparent honesty with which the NPS scientists offer such pinched meanings illustrates a lack of intent to defraud, deceive, or mislead; however,

because no definition of those words shelters the NPS officials' narrow interpretation, their constricted understanding of such important concepts must be rejected. Although squeezing the terms "research," "data," and "research record" so tightly could signal mendacity and corrupt the truth of words spoken and thoughts professed by the NPS scientists, the factual record inadequately supports such negative inferences.

Having defined "research" to include the digital photos and related information, an objective analysis must proceed to a determination of whether NPS senior executives or scientists manipulated, changed, or omitted the data so that the information was "not accurately represented in the research record." It follows that scientific or research misconduct would arise in the following situation: intentional acts produced a research record that did not accurately represent information found in the photographic data on May 8, 2007, and March 14, 2008. No scientific or research misconduct would exist if unintentional, negligent mishandling of the photographic data on and after those dates resulted in a research record that inaccurately represented the digital photos and related information.

2. No Specific Intent to Deceive the Marin County Board of Supervisors in May 2007

Sound factual interpretation confirms that in 2007, S1 and SE2, the only NPS employees with knowledge of the photos, spoke imprecisely when addressing the Marin County Board of Supervisors, but both credibly explained that visual observations, on and before May 5, 2007, and wholly unrelated to the camera, supported their verbal, unscientific opinions on May 8, 2007. Neither S1 nor SE2 knew of the DBOC-caused disturbance observed simultaneously by a volunteer on that date. Therefore, given a research record, on the morning of May 8, 2007, that did not yet include the disturbance survey generated that day, S1 and SE2 had no reason to reference the camera, or possible photographic contradiction of that visual observation, or the accuracy of photographic content represented in the research record. Although suspicion now surrounds the volunteer's visual observation of a harbor seal disturbance allegedly caused by DBOC mariculture operations in upper Drakes Estero on May 8, 2007, concerns about the accuracy and weight of that observation remained wholly unknown to S1 and SE2 on that date. Thus, when expressing their opinions to the Marin County Board of Supervisors on May 8, 2007, S1 and SE2 properly relied on research and data gathered days before their appearance, and accordingly made no comments with any intent to defraud, deceive, or mislead anyone present at that meeting relevant to the research record or representation therein of the photographic data. Public comments made by S1 and SE2 on May 8, 2007, do not contribute to a finding of scientific misconduct.

3. No Specific Intent to Deceive Senator Feinstein in July 2007

Similarly, SE2's communication with Senator Feinstein, on July 21, 2007, does not support any charge of scientific misconduct. During and prior to the Olema meeting, SE2 recalls knowing of the DBOC-caused disturbances observed in April 2007, but s/he does not specifically recall having knowledge of the pinniped harassment event witnessed by a volunteer on May 8, 2007. Conceding, however, the possibility that s/he may have known of that event and admitting that s/he possessed casual knowledge of the camera project, SE2 vigorously denies any concealment of the photographic research when speaking with Senator Feinstein and others in July 2007. S/he submits, with

corroboration from the informant, that obvious tension among the attendees and the Olema meeting topics (*i.e.*, analytic or scientific weaknesses found in S1's "Sheltered Wilderness" document and the Agency's denial of the informant's FOIA requests for data that supported claims, verbally made on May 8, 2007, of pinnipeds abandoning haul-out subsites and of dramatic decreases in harbor seal counts at upper Drakes Estero) discouraged conversation on marginally related issues. Digressive discussion included the existing research record and data, gathered from May 6, 2007 to the end of the pupping season, that positively and negatively evidenced DBOC mariculture operations as the cause of harbor seal disturbances.

The facts encourage a finding that no person in SE2's position, aware of the situation and circumstances as s/he understood them at the time, could have or should have announced during the Olema meeting that the existing research record contained not only a new harbor seal disturbance observed by a volunteer on May 8, 2007, but also numerous, largely inconclusive digital photos from a remote wildlife camera showing nothing more than benign DBOC mariculture operations around harbor seals at upper Drakes Estero. Indeed, persuasive evidence leads to the conclusion that SE2's silence on the issue was not borne from any conscious purpose to avoid learning about the photos, any willful disregard for the photographic research, or any express intent to defraud, deceive, or mislead Senator Feinstein. Rather, SE2's muteness derived from no opportunity or reason to raise that matter during the meeting and from a superficial understanding, as a supervisor, of what the research record actually held.

4. No Specific Intent to Deceive the OIG in 2007 or 2008

With regard to the OIG investigation, which was not designed to elicit any facts about the camera or associated photos, NPS employees, including S1 and SE2, nevertheless passively disclosed the data by voluntarily granting OIG investigators unfettered access to the PORE network, databases, and computers, which unquestionably included the 2007 research. Notwithstanding their disregard for the photographic data, the OIG's opportunity to review that research clearly shows that NPS employee(s) never intended to dupe Agency investigators or to lure them away from the digital photos. To the contrary, the voluntary actions of S1 and SE2 in response to the OIG investigation permanently and persuasively belie any intent to falsify research or to misrepresent the research record through manipulation or omission of photographic data. Even if passive disclosure to the OIG produced a less powerful inference of no deceitful intent and compelled further analysis, evaluation of subsequent events, related to intent regarding disclosure of the research, leads to findings of no falsification and thus no scientific misconduct.

5. No Specific Intent to Deceive the NRC Committee in 2008

In 2008, S1, S2, S3, and SE2 knew of the data gathered by the cameras and V1, yet did not disclose the information openly and fully in the FOIA response to the informant and in written and verbal statements made to the OSB Director and Committee members. The referenced NPS employees, especially the three scientists, explain their rationale as follows. They understood that the informant, through a FOIA request, and the *ad hoc* Committee, pursuant to its statement of task, wanted data and research relevant to the total number of harbor seals historically and presently located at upper

Drakes Estero in 2008, the number of harbor seals historically and presently associated with haul-out subsites there, and the historical and present number of pinniped disturbances attributed to DBOC (and its predecessor's) mariculture operations. The research record provided the requested information through harbor seal surveys (count data) from 1997-2007 and disturbance surveys (harassment data) from 1996-2008. Information contained in the research record revealed that volunteers and NPS employees conducted a total of 56 surveys in 2007, and a total of 40 surveys in 2008. During the 56 surveys conducted in 2007, witnesses observed only six harbor seal disturbances caused by DBOC mariculture operations on April 26, 2007 (three disturbances); April 29, 2007 (two disturbances); and May 8, 2007 (one disturbance). During the 40 surveys conducted in 2008, only one volunteer witnessed a DBOC-caused disturbance on March 14, 2008.

The NPS scientists believed that the count and harassment surveys were scientifically sound and based their unanimous belief on factors including, but not limited to, instructions provided to volunteers, strict protocols associated with the surveys, confidence in the historical testing of surveys, and scientific confirmation of survey accuracy. The scientific methods and protocols used, according to the NPS scientists, reduced or eliminated problems caused by the limited number of surveys each year, by human error, such as recording and mathematical mistakes, and by subjectively inaccurate interpretation of facts, such as incorrectly attributing the source of disturbance to DBOC mariculture operations.

The NPS scientists ensured that in 2008, the informant and the *ad hoc* Committee timely received, verbally and writing, all contents of the research record (as the NPS Scientists understood that concept at the time), which did not include any photographic materials from 2007 and 2008. Insisting that they properly omitted that research from FOIA responses to the informant and from verbal/written statements made to the Committee, the referenced NPS employees adamantly refused to characterize the photographic research as scientifically sound, as the subject of careful scientific analysis, as the product of scientific inquiry, or as the result of any systematic pursuit of knowledge through testing and confirmation. Unlike the visual research done by volunteers standing in the southwestern corner of Drakes Estero, data from the cameras and V1, in the collective view of the NPS employees, had not been carefully analyzed by scientists, had no established research methodology and no quality controls, and was either not compatible with, or simply ancillary to, the volunteer observations. This characterization of the photographic data begs the question as to why S1 continued the research program after the 2007 pupping season, without making the data compatible, without making the research more than ancillary, without improving research quality, without setting aside time for close scientific scrutiny, and without developing any scientific research plan or methods for using the photographic data.

When tested on this latter issue, the NPS employees, especially S1, appeared genuinely puzzled. Similarly, the NPS employees seemed honestly confused when asked to explain why they had not, at a minimum, timely inspected (or compared with, or analyzed alongside, or separately from, but contemporaneously with, the volunteers' visual research) and disclosed photographic images from May 8, 2007, and information gathered by the cameras and V1 on March 14, 2008. Their seemingly truthful answers signaled an inability to understand the relevance and materiality of V1's research and the grainy, inconclusive, and seemingly unhelpful (to NPS) photographic images. The NPS

employees showed no appreciation for the fact that the research record did not accurately represent available information which indirectly exonerated DBOC mariculture operations as the cause of harbor seal disturbances visually observed by the same volunteer on May 8, 2007, and March 14, 2008. Indeed, the NPS employees should have, but did not, attach evidential value to research which failed to confirm, directly and specifically, visual observations made by a volunteer on those two dates. The subject photographic research, though poor in quality and low in value, undeniably bolstered DBOC arguments that no mariculture operations harassed any harbor seals in upper Drakes Estero either in May 2007, or in March 2008. It follows that notwithstanding contrary perceptions from the NPS officials, such data was material and relevant.

However, without more, the materiality and relevance of that research does not prove deceitful intent, even when combined with facts which show that NPS employees knew the research existed. *Cf. Cancer Research Technology Ltd. v. Barr Laboratories, Inc.*, 625 F.3d 724 (Fed. Cir. 2010). Insufficiently evidencing an intent to defraud, deceive, or mislead the Committee, apparently truthful responses from the NPS employees reveal a collective but troubling mind-set that S1 enjoyed the unrestricted freedom to research harbor seals at upper Drakes Estero in any manner s/he deemed fit, without the corresponding need to share any data generated, so long as the research was not closely evaluated and the research method(s) remained, in the NPS employees' unilateral view, inferior or ancillary to other research, such as volunteer observations. That questionable state of mind, even if analyzed in conjunction with speculation that digital photos showing DBOC-caused disturbance(s) of harbor seals would have magically become "sound" science and "compatible" research, and thus would have been immediately used and disclosed, fails to meet the demanding standard of intent needed to prove falsification and misrepresentation. The evidence instead confirms that the NPS employees needed better instruction and more effective supervision; someone in their chain-of-command should have recognized the errors, sounded the alarm, and demanded disclosure of all research which a reasonable, objective scientist could interpret as data suggesting that DBOC mariculture operations did not disturb harbor seals at upper Drakes Estero on May 8, 2007, or March 14, 2008.

Help from superiors did not arrive for several reasons, none of which justify an inference of intent to defraud, deceive, or mislead. Those reasons include the failure of NPS scientists to seek supervisory assistance, and the informant's 2008 and 2009 verbal and written attacks on SE1, who had disqualified herself/himself from PORE issues on and after May 12, 2009, and on SE2 and S4, both of whom had other distractions, professional responsibilities, and competing supervisory duties which lessened or eliminated attention to the specifics of photographic research.

6. No Specific Intent to Deceive the NRC Committee in 2009, or the MMC in 2009/2010

In 2009, S1, S2, and S3 unquestionably attempted to inform the OSB Director and the Committee of the cameras and photographic data, albeit for reasons (*i.e.*, tidal activity and Sunday employment) unrelated to harbor seal populations or pinniped disturbances in upper Drakes Estero. Although unsuccessful in their efforts, from February through October 2009, to disclose the photographic data by rebutting the informant's assertions in the NPS Response, the NPS scientists clearly intended to notify the NRC and the Committee of the subject research. Those disclosure efforts do not foreclose

a finding of specific intent to defraud, deceive, or mislead; however, description of the cameras and digital photos in the NPS Response is inconsistent with the goal of falsifying and misrepresenting the accuracy of the research record on May 8, 2007, and March 14, 2008. Had the NPS scientists truly wanted to achieve that end, they would never have utilized and described the camera research in such detail from February through May 2009.

The facts also contradict any conclusion that SE1 (distracted by the informant's personal and professional attacks and disqualified from PORE issues), SE2 (focused, with other NPS employees, on analytical errors contained in the Committee's report), and S4 (disengaged from issues involving the informant) intentionally withheld the NPS Report, in May 2009, and its specific, unequivocal disclosure of the cameras and photographic data. Unrelated to any openly deceitful intent (or any conscious purpose to avoid learning the truth or any willful disregard for the truth), failure to give that NPS Report to the OSB Director and the Committee, on May 4, 2009, was simply the result of inadequate attention from NPS supervisors.

Factual confirmation of an incontestable intent to announce the existence of camera research came in November 2009, when the NPS scientists sent the NPS Response to the MMC for inclusion in the record of relevant documents. Even though the informant failed to read the document on or before June 6, 2010, the facts preclude a finding of specific intent to manipulate or intentionally omit the photographic research, or to falsify and misrepresent the accuracy of the research record, after service of the NPS Response on the MMC in late 2009.

7. Publication Not Scientific Misconduct

A final, related issue raised by the informant involves the article primarily written and revised by S2, with assistance from S1 and S3, throughout 2008, presented to the Committee in September 2008, and published in early 2009. Because the 2009 paper refers to the specific disturbance data from 2007 and 2008, without mentioning the photographic research from 2007 and 2008, the informant characterizes that article as scientific misconduct and insists that the "false" publication be retracted or withdrawn. S/he supports that demand for retraction or withdrawal by alluding to organizations, such as the California Coastal Commission, which antagonize DBOC by improperly citing the 2009 paper to support flawed assertions--particularly, that "[mariculture operations], if carried out in close proximity to harbor seal haul-out sites and intertidal sandbars, may cause seals in these areas to alter their behavior, flush towards the water, and/or flush into the water." The informant fears that refusal or failure to rescind the 2009 paper will promote widespread acceptance of that "misleading" article. Informant's invitation to interfere with said publication, and any subsequent publication(s) properly submitted for peer review by NPS scientists, must be declined.

The record, supported by the foregoing discussion relevant to the issue of deceitful intent, and lack thereof, leads to the conclusion that the 2009 paper neither represents nor evidences scientific misconduct. More specifically, reasonable findings lead to the determination that said publication does not rely on any fabricated or falsified disturbance data.

In addition, addressing the informant's other concern, the U.S. Supreme Court has held that "[p]ublication (which is but one element of peer review)...does not necessarily correlate with reliability," and exposing articles to "scrutiny of the scientific community is a component of 'good science,' in part because it increases the likelihood that substantive flaws in methodology will be detected." *Daubert*, 509 U.S. at 593-94 (citations omitted). The informant accordingly remains free to challenge the scientific validity of the 2009 paper as published, or any other articles submitted by NPS scientists for peer review. The informant's dispute, though, with any particular technique, theory, research, data, or methodology relied upon by the authors should not extend to issues of scientific misconduct, but rather, should be confined to scholarly disagreement.

An unbiased analysis of relevant facts and law leads to the conclusion that no NPS employee manipulated or intentionally omitted the photographic research in an effort to defraud, deceive, or mislead any person or organization. Objective findings further demonstrate that no NPS senior executive or scientist intentionally manipulated, changed, or omitted research so that data was inaccurately represented in the research record. Accordingly, the preceding discussion confirms that SE2, S1, S2, S3, and S4 made mistakes in the process but did not commit scientific misconduct as alleged by the informant. The decision to disqualify SE1 from PORE issues, on and after May 12, 2009, shields SE1 from any findings of error and attachment of blame.

C. Alternative Charge - No Lack of Candor

Going beyond the boundaries of the submission to Secretary Salazar on November 22, 2010, we weighed the facts to determine whether they evince a lack of candor by any NPS senior executive or scientist. Lack of candor exists when an employee breaches her or his duty "to be fully forthcoming as to all facts and information relevant to a matter...whether or not such information is particularly elicited." *Ludlum v. Department of Justice*, 87 M.S.P.R. 56, 62 (2000), *aff'd*, 278 F.3d 1280 (Fed Cir. 2002). Unlike falsification, which requires misrepresentation and a specific intent to defraud, deceive, or mislead, *Naekel*, 782 F.2d at 977, lack of candor "is a broader and more flexible concept whose contours and elements depend upon the particular context and conduct involved. It may involve a failure to disclose something that, in the circumstances, should have been disclosed in order to make the statement more complete." *Ludlum*, 278 F.3d at 1284.

The preceding discussion in this document demonstrates that the NPS employees, all of whom fully cooperated with the informant, DBOC, Senator Feinstein, the OIG, the NRC Committee, and the MMC, provided information which the NPS senior executives and scientists believed to be truthful, complete, and entirely frank. Absent any element of deception, fraud, double-dealing, subterfuge, or trickery, their actions do not support a lack of candor charge. It follows that disciplining the NPS employees for misconduct identified as a lack of candor is not warranted.

D. Failure to Satisfy NPS Interim Code of Scientific and Scholarly Conduct

Even though no "element of deception" existed and they had no intent to defraud, deceive, or mislead, most of the NPS employees targeted by the informant seemingly erred and appear to have acted improperly under the circumstances. Accordingly, DOI, through proposing/deciding officials whose

independent analyses this document cannot supply or replace, may consider addressing said misconduct and modifying future behavior through corrective action(s).

Carefully examining the failure to analyze all camera research from 2007 to the present, DOI officials may conclude that, contrary to the NPS Code of Scientific and Scholarly Conduct set forth by the Interim Guidance, S1 did not thoroughly and expeditiously “process data from...scientific...activities,” such as “monitoring,” (*i. e.*, the “systematic collection and analysis of natural...resource data...to detect natural-induced changes, and to provide the basis for appropriate management response”). Boredom with, or insufficient time for, the labor-intensive analytic review process does not excuse any failure to scrutinize all of the research, which S1 voluntarily initiated to “detect natural and human-induced changes” in the harbor seal populations. Quite possibly, digital photos from the monitoring cameras definitively prove or disprove that DBOC mariculture operations negatively impact harbor seals at upper Drakes Estero. As a direct consequence of S1’s failure to process the data completely and speedily, potentially powerful evidence remains unknown. This misconduct arose from incomplete and biased evaluation and from blurring the line between exploration and advocacy through research.

Further, SE2, S1, S2, S3, and S4 violated NPS Code of Scientific and Scholarly Conduct language, from the Interim Guidance, that not only required timely and “full[] disclos[ure of] all research methods used [and] available data,” but also obligated the NPS employees to “communicate the results of scientific...activities, [], objectively, thoroughly, and expeditiously.” *Accord*, 305 DM 3.7(A)(2) and (B)(3) (effective January 28, 2011). On and before May 1, 2009, these NPS employees, all of whom “work[ed] with scientific...information [] in performing their duties,” knew about the camera research project, and partial results associated therewith, yet failed to notify the informant, DBOC, the NAS, and the NRC Committee. Especially with regard to alleged pinniped disturbances observed on May 8, 2007, and March 14, 2008, this information was relevant, material, and necessary for the informant and DBOC to discredit or disprove the volunteer research and data, on which NPS employees heavily relied. The research also related directly to the NRC Committee’s task statement. Verbal and written omission of the photographic research thus “hinder[ed],” albeit unintentionally, the “scientific activities of others,” and potentially represents another violation the NPS Interim Code. *But see*, 305 DM 3.7(A)(6).

Finally, the decision made by S3, S2, and S1, who collectively but covertly used the photographic research to refute arguments unrelated to the information’s specific scientific purpose, was arguably inappropriate and violative of the NPS Interim Code provision requiring “full[] disclos[ure].” The NPS scientists referenced the “ancillary” or “incompatible” digital data, which rebutted the informant’s assertions regarding tidal activity and Sunday employment, in an uncontested, and seemingly improper, effort to shield their own scientific findings and to defend the reputation/reliability of volunteers who allegedly observed pinniped disturbances on April 29, 2007.

Conclusion

NPS employees erred but did not misstep in any manner defined as criminal misconduct or scientific misconduct for which the Agency could impose and successfully defend disciplinary actions. Accordingly, DOI may address the mistakes and restore public trust by concluding that several NPS

employees could and should have handled research differently and by modifying the future behavior of NPS employees with education and corrective action as deemed appropriate.