

SENT BY COURIER AND BY EMAIL

December 6, 2021

B.C. College of Applied Biology
210 – 852 Fort Street
Victoria, BC V8W 1H8

Attention: Mel Kotyk, Chair, Investigations Committee

Dear Mr. Kotyk:

**Re: Reasons for Decision and Order of the Discipline Committee – Citations: re Shawna Reed, R.P. Bio #1133
Dated October 26, 2020 and February 11, 2021**

On behalf of the Discipline Panel appointed under Rule 15 of the *College of Applied Biology Rules*, we enclose the Panel's *Reasons for Decision and Order* in the above-captioned matter the written Hearing of which was conducted under the former *College of Applied Biology Act* S.B.C. 2002, c. 68 (the "Act").

We will send the *Reasons for Decision and Order* to Ms. Reed and will advise the College when her time period to apply for a Review on the Record begins .

Please contact the writer if you or the College have any further requirements of the Panel.

Yours truly,

REED POPE LAW CORPORATION



John S. Heaney
Counsel for the Discipline Panel

jheaney@reedpope.ca

c.c. Shawna Reed
Mark G. Underhill, Counsel for the College

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**IN THE MATTER OF
CITATIONS ISSUED UNDER
THE COLLEGE OF APPLIED BIOLOGY ACT,
S.B.C. 2002, chapter 68 (the “Act”)**

BETWEEN:

THE COLLEGE OF APPLIED BIOLOGY

(the “College”)

AND:

SHAWNA REED, R.P.BIO. #1133

(the “Respondent”)

Date and Place of Hearing:

Commenced: June 11, 2021

Place: Written Hearing

Members of the Hearing Panel of the Discipline Committee:

Alison Peatt, R.P.Bio. (Chair)

Allison McLellan (Public Member)

Cliff Nietvelt, R.P.Bio

Counsel for the College:

Mark G. Underhill

Counsel for the Respondent

The Member declined to participate

Independent Legal Counsel for the Panel:

John S. Heaney

**REASON FOR DECISION AND ORDER
OF THE DISCIPLINE COMMITTEE**

1. A discipline hearing panel established under s. 28 of the Act (the “Panel”) convened on June 11, 2021, to inquire into Complaint allegations that the Respondent breached Paragraph 3 of the College’s *Member Code of Ethics* (the “Code”) which is Schedule 2 of the *Rules of the College* (the “Rules”) and that the Respondent breached *Rule 7.15* of the *Rules*¹.

A. Pre-hearing Matters

2. Prior to the Hearing, the College provided its Statement of Points and Associated Documents. Ms. Reed was served the Notice of Hearing in conformity with Rule 15.22 but declined to participate in the Hearing. The Panel resolved to proceed with its inquiry under Rule 15.30, a possibility it set out in the Notice of Hearing.

B. The Citations

3. Citation One dated October 26, 2020, sets out the College’s allegations:
 - a. In preparation of a Construction Environmental Management Plan (Project No. 12542-001), dated April 2018, and related work, the Member failed to meet the appropriate professional standard of care in relation to:
 - i. sediment and erosion monitoring techniques;
 - ii. the use of an unusual method (mud wave) technique for excluding aquatic organisms;
 - iii. the standards for reports and data management for environmental monitoring; and
 - iv. the application of the correct *Contaminated Sites Regulation* standard.
4. Citation Two dated February 11, 2021, sets out the College’s allegations:
 - a. The Member failed to respond to requests for further information from the College in respect of the allegations set out in the Citation issued October 26, 2020.
5. The College elaborated on its allegations in its Statements of Points and that wording is set out below in these Reasons.
6. The Panel decided to hear both citations under *Rule 15.36*

¹ Due to of the timing of the alleged breaches and the complaint process, this hearing was conducted under the Act, not the recently proclaimed *Professional Governance Act*, [S.B.C. 2018], c. 47.

C. Source of Evidence

7. Only the College provided documentary evidence. However, the record before the Panel includes much of Ms. Reed's work product, as well as her Response to the College's first query to her regarding the Complaint.
8. As part of its investigation of the Complaint, the College retained Lance Stewardson, an R.P. Bio member of the College since 2005. The College provided Mr. Stewardson with a copy of:
 - a. the Complainant's Complaint and attachment documents; and
 - b. a June 18, 2019 written Response from Ms. Reed to which she attached documents including the April 2018 version of her company's Construction Environmental Management Plan ("CEMP").
9. Mr. Stewardson received a B.Sc from UBC in 1995 and became a Certified Professional in Erosion and Sediment Control in 2009. Since 2000, Mr. Stewardson has been a principal and project manager with Mainstream Biological Consulting Inc.
10. The College asked Mr. Stewardson to conduct a review of the Complaint and Response materials and address whether Ms. Reed's Response was adequate to determine if Ms. Reed's Project practices with respect to the four Citation One issues were consistent with standard practices for environmental monitoring for constructions projects (the "Stewardson Questions"). Mr. Stewardson says in a supplied memorandum that he addressed the four substantial issues "to the best of [his] ability using the available information and [his] knowledge of environmental monitoring practices".
11. The College offers Mr. Stewardson's memorandum as opinion evidence from a subject matter expert to "evaluate whether [Ms. Reed's] practices in the identified areas were consistent with standard practices for professional biologists undertaking this type of work" and whether Mr. Stewardson was able to fully evaluate these matters without further information from Ms. Reed.
12. The Panel has reviewed Mr. Stewardson's background and qualifies him as an expert able to give opinion evidence on the narrow Stewardson Questions. The Panel has considered Mr. Stewardson's opinion in the context of all the evidence on the record and outlines its findings from the fact and opinion evidence later in these Reasons.
13. The Panel is not, as an administrative tribunal, strictly bound by the rules of evidence that courts apply to their own proceedings, although the Panel may be guided by the rationales that underlie those rules of evidence: "...a tribunal is entitled to consider any evidence it deems relevant, accepting portions of some and rejecting others as it sees fit." *Hale v. B.C. (Superintendent of Motor Vehicles)*, 2004 BCSC 358 at para. 23; also *Hing (Re)*, [1926] 3 D.L.R. 692, [1926 B.C.J. No. 35 (C.A.) at para. 13, and *Kane v. The Board of Governors (University of British Columbia)*, [1980] 1 S.C.R. 1105.

D. Exhibits

14. The Panel marked the following documents as Exhibits:

- a. EXHIBIT 1: Notice of Hearing, April 15, 2021.
- b. EXHIBIT 2: Citation dated October 26, 2020.
- c. EXHIBIT 3: Citation dated February 11, 2021.
- d. EXHIBIT 4: Complaint Form of Lee Nikl dated January 27, 2019, with Attachment #1 and Attachment #2
- e. EXHIBIT 5: Complaint Letter to College Registrar, September 14, 2020.
- f. EXHIBIT 6: Memorandum of Lance Stewardson, R.P.Bio., Mainstream Biological Consulting Ltd., November 15, 2019.
- g. EXHIBIT 7: College Correspondence with Ms. Reed:
 - a. To Ms. Reed, May 6, 2019;
 - b. From Ms. Reed, June 18, 2019;
 - c. To Ms. Reed, February 10, 2020;
 - d. From Ms. Reed's legal counsel, March 24, 2020;
 - e. From College to Ms. Reed's legal counsel, May 8, 2020;
 - f. From Ms. Reed's legal counsel to College, May 25, 2020;
 - g. From College to Ms. Reed, July 8, 2020; and
 - h. From College to Ms. Reed, October 28, 2020.
- h. EXHIBIT 8: Other College correspondence:
 - a. To Mr. Nikl, January 28, 2019
- i. EXHIBIT 9: Panel correspondence:
 - a. From Panel legal counsel attaching Notice of Hearing, April 15, 2021;
 - b. From College legal counsel attaching College's materials, May 6, 2021;
 - c. From Ms. Reed's legal counsel indicating Mr. Reed will not be participating, May 13, 2021; and
 - d. From Panel legal counsel conveying Panel's decision to extend Ms. Reed's time for submission of materials to June 10, 2021

j. EXHIBIT 10: *College of Applied Biology Rules*.

E. Evidence and findings

15. The overall burden of proof for professional misconduct, conduct unbecoming a practicing member or incompetence lies on the College, and the standard of proof is the civil standard of a balance of probabilities: *F.H. v. McDougall*, [2008] 3 S.C.R. 41.
16. In relation to specific facts, a party that asserts a fact bears the burden of proving that fact.
17. The central issues in this case have not required that the Panel make findings of credibility.
18. The Panel finds facts as set out herein.

F. The Respondent

19. The Respondent, Ms. Reed, is a former registered applied biologist who was in good standing with the College until January 1, 2021, when she did not renew her membership. During the time material to the Citations, Ms. Reed practiced through her own consultancy, SER Environmental Management Inc. (“SER”).
20. SER was the Contractor’s Environmental Manager to Stuart Olsen Construction Ltd (the “Contractor”) which itself was contracted to the B.C. Ministry of Transportation and Infrastructure (“MOTI”) for the four-laning of Highway 17 (Lougheed) from Silverdale Avenue to Nelson Street in Mission, B.C. (the “Project”).

G. The Complainant

21. The Complainant Lee Nikl (R.P. Bio #601) is a member of the College and a principal of Golder Associates Ltd. (“Golder”) as a senior environmentalist. Golder was an environmental consultant to MOTI and prepared an Environmental Impact Assessment of the Project for the Ministry. Mr. Nikl co-authored a Golder Report to MOTI as part of work MOTI had to perform for the Ministry of Forest, Lands and Natural Resources Operations and Rural Development (“FLNRORD”) further to a FLNRORD Stop Work Order (“SWO”) issued in respect of the Project on November 28, 2018 which is discussed below. Mr. Nikl submitted that Golder Report as an attachment to his January 27, 2019 Complaint.

H. The Construction Environmental Management Plan

22. Ms. Reed wrote SER’s CEMP for the Project which set out “environmental, protection and mitigative measures that may be implemented” during the Project and which are “intended to avoid or mitigate potential impacts of construction activities on the natural resources of the Fraser River and its tributaries, drainages and surrounding ecosystem attributes”. SER’s CEMP was reviewed and signed off by both MOTI and Golder.
23. The CEMP described environmental sensitivities which include that the Fraser River is a major fish bearing river and one of its tributaries, Chester Creek, which is adjacent to the Project site, is potentially fish-bearing.

24. The portions of the CEMP most material to this hearing and concerned with fish and aquatic organism protection are:
- a. 2.2 Environmental Spill Procedures and Equipment – which:
 - i. defines an environmental spill or incident; and
 - ii. prescribes what actions the Contractor and Environmental Monitor must take in the event of a spill in implementation of their spill action plan including containment, removal to an appropriate site and reporting.
 - b. 3.2 Erosion and Sediment Control Plan – which:
 - i. requires site-specific controls and best management practices (“BMPs”) during earthworks when soils have been disturbed and are more subject to mobilization; and
 - ii. includes detailed direction on the installation of silt-control fabric, fencing, sandbags, tarps, dams, erosion control matting and other control devices.
 - c. 4.0 Environmental Monitoring – which requires environmental monitoring to be provided as per FLNRORD and Department of Fisheries and Oceans (“DFO”) approval terms and includes:
 - i. a minimum of weekly site visits to evaluate compliance with the CEMP and other applicable guidelines, augmented in the event of heavy rainfall events or an accident or malfunction that results in a spill;
 - ii. full-time monitoring on instream works until the zone has been isolated from flows and environmental controls are functioning as intended; and
 - iii. subsequent to isolation, daily inspections conducted randomly to verify the site has remained isolated and mitigation methods are functioning or, where conditions require, need revision for construction progress, changing weather conditions or unforeseen obstacles.
 - d. 4.1 Site Inspection and Report Structure – which requires:
 - i. prescribed formal monitoring elements from the Environmental Monitor including field notes, logs and a photographic record of site visits/inspections and observed activities and conditions; and
 - ii. prescribed content for formal monitoring reports describing: findings, nonconformance with the CEMP, water quality (particularly turbidity and pH) data collected in and around the work zones, and details on dead fish, animals or carcasses observed outside the work zone.
 - e. 4.2 Water Quality Monitoring – which requires specific site works monitoring criteria including:

- i. at least once per week during dry weather; more often as needed by heavy rainfall events and activities with the potential for negative impact during inclement/wet weather; and
 - ii. specific protocols for turbidity and pH measures of site run-off or other water that might be discharged to the environment and comparison of results to provincial and other applicable guidelines.
- f. 4.3 Stop Work Procedure – which:
- i. provides the Environmental Monitor with the authority to stop work in the event the Contractor is not achieving the contract environmental requirements or there is imminent threat to the environment: and
 - ii. sets out a non-exhaustive list of situations that warrant a stop work initiation and a five-step process to be followed in the event the Environmental Monitor is required to exercise this authority.

25. Appendix G to the CEMP² is entitled Environmental Monitoring Report Templates/Checklists and provides two separate versions of similar documents:

- a. “Daily environmental monitoring checklist/report” which appears to be the creation of Seven Generations Environmental Services Ltd. (“Seven Generation Checklist”) and bears no project-specific designation; and
- b. “Environmental monitoring checklist/daily report” which has no evident authorship but is marked “Hwy 7 – Silverdale to Nelson” and is presumably the creation of Ms. Reed or was created specifically for the Project CEMP (“Hwy 7 Checklist”).

I. Project Approvals

26. Appendix “C” to the CEMP was a MOTI application to DFO seeking approval for the Project as a work which will result in serious harm to fish that are part of a commercial, recreational, or Aboriginal fishery (the “*Fisheries Act Application*”).

27. In support of the *Fisheries Act Application*, MOTI wrote that:

“The proposed work does not relate specifically to management objectives for stocks of concerns in southern BC, as the stocks identified are not expected to use the local habitat. Generally, with respect to lower Fraser chum and coho, the proposed work is expected to have little or no expected effect towards achieving or inhibiting management objectives. The project has been designed to mitigate potential negative effects where possible in accordance with management objectives, and off-setting habitat construction has been

² The Complainant’s document package contained a CEMP dated June 2018 with appendices A-G and Ms. Reed’s Response documents contained an April 2018 CEMP with appendices A-F, though both are presumed to have been created by Ms. Reed for SER and the Project. The materials do not reveal an explanation why the two provided different versions of the CEMP.

proposed so that the benefits of the proposed work will balance the effects due to the project”.

28. The *Fisheries Act* Application appended a report by Golder which concluded that:

“The project related effects anticipated to result in serious harm are effectively limited to the permanent loss or destruction of habitat. The potential for harm resulting from the death of fish will be avoided through effective implementation of the prescribed mitigation and best management practices outlined in the EIA”.

29. A *Fisheries Act* authorization for the project was issued on August 31, 2018, and required, among other things that:

- a. MOTI (through the Contractor) shall implement all necessary avoidance and mitigation measures to avoid causing the death of fish;
- b. isolation and fish salvage shall occur prior to any instream works and shall be inspected regularly and maintained throughout the Project to prevent fish from gaining access to the areas where they may be subjected to serious harm;
- c. construction activities within isolation areas will cease if isolation fails;
- d. if required monitoring indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful, construction activities will cease and a Qualified Environmental Professional (“QEP”) will inform on, and oversee implementation of, appropriate contingency measures prior to continuation of any activity that may result in unauthorized serious harm;
- e. the Environmental Monitor shall:
 - i. oversee and confirm the implementation and efficacy of measures necessary to avoid and mitigate serious harm to fish;
 - ii. provide dated photographs and inspection reports to demonstrate the implementation and functioning of mitigation measures and standards to avoid unauthorized serious harm to fish;
 - iii. assess whether the proposed works, undertakings and/or activities were carried out as proposed;
 - iv. report to DFO the results of required monitoring; and
 - v. provide details of any contingency measures that were implemented to avoid or mitigate unauthorized harm to fish.

30. The Project also required provincial approval under the *Water Sustainability Act* [S.B.C. 2014], c. 15 for the proposed changes in and about Chester Creek and Tributaries which approval was issued by FLNRORD on December 15, 2017, as amended on December 21, 2017 (the “WSA Approval”)³. Among the requirements of the WSA Approval are that:
- a. The Environmental Monitor shall provide advice on the timing of the work, on construction mitigation, daily or full-time supervision of all work in or near a stream;
 - b. The Environmental Monitor is responsible for observing the methods of construction and preparing information and reports on the compliance of the construction activities. The Environmental Monitor will assist in the isolation of the stream, erosion and sediment control measures and environmental monitoring to ensure there is minimal environmental impact on the land, species at risk, and fish and fish habitat of the streams;
 - c. The Environmental Monitor must supervise all instream works authorized under the Approval;
 - d. The Environmental Monitor is granted the authority to stop the work authorized under the Approval if deemed necessary by the Environmental Monitor to address risks to the environment;
 - e. Sediment and erosion control measures must be installed on the upland and must beat or surpass the standards outlined in applicable federal and British Columbia instruments including:
 - i. control measures to prevent the release of silt, sediment or sediment-laden water must be in place before starting works that may result in sediment mobilization; and
 - ii. care shall be exercised during all phases of the work to prevent the release of silt, sediment or sediment-laden water, raw concrete, concrete leachate, or any deleterious substances.

J. The Construction

31. SER created Environmental Monitoring reports addressed to the Contractor’s Project Manager and Project Superintendent that were written by Ms. Reed who indicated she was the “Environmental Monitor”⁴ as follows:
- a. for the week ending May 19, 2018 – when it is recorded that the Contractor began mobilization to the site and commenced clearing and related activities;

³ This is Appendix B to the CEMP

⁴ Although SER/Ms. Reed is listed in the CEMP as the Project Environmental Manager and Seven Generations Environmental Management Ltd. is listed as the Environmental Monitor, the record does not appear to contain any documents from Seven Generations and Ms. Reed is referred to as the Environmental Monitor.

- b. for the week ending June 30, 2018;
 - c. for the week ending July 14, 2018;
 - d. for the week ending July 28, 2018;
 - e. for August 2018;
 - f. for September 2018;
 - g. for October 2018; and
 - h. for November 2018.
32. SER created an Environmental Incident Report written by Ms. Reed, Environmental Monitor, and addressed to the Contractor's Project Manager and Project Superintendent regarding a September 19, 2018 "Flipped Haul Truck" incident. Reportedly, the incident resulted in up to 200 litres of diesel fuel and approximately 25 gallons of hydraulic oil being captured by a spill kit drum or entering the environment.
33. SER created an Environmental Incident and Remediation Report written by Ms. Reed, Environmental Monitor, and addressed to the Contractor's Project Manager and Project Superintendent regarding two spills on October 1, 2018 – the "Haul Truck Fuel Tank" incident. Reportedly, the two incidents occurred within two hours of each other and resulted in an estimated 500 litres of diesel fuel being spilled.
34. SER created daily environmental monitoring checklists/responses for the Contractor using the Seven Generations Checklist but not bearing Seven Generation's identifier and listing Ms. Reed as the Monitor, dated:
- a. November 1, 2018;
 - b. November 6, 2018;
 - c. November 7, 2018;
 - d. November 8, 2018;
 - e. November 13, 2018;
 - f. November 16, 2018;
 - g. November 19, 2018;
 - h. November 22, 2018;
 - i. November 28, 2018; and
 - j. November 30, 2018.

35. On November 1, 2018, a *Fisheries Act* “occurrence” - believed to be the presence of an adult salmon in the isolation area - was reported to DFO by an unidentified person according to a November 27, 2018 “Report of Habitat Occurrence – Sedimentation and Fish Passage, Chester Creek, Mission” (the “DFO Report”).
36. On November 19, 2018, another occurrence was reported to DFO according to the DFO Report.
37. On November 22, 2018, an FLNRORD Natural Resource Officer (“NRO”) attended at the Project site and identified numerous deficiencies with respect to erosion and sediment control according to a subsequent November 28, 2018 FLNRORD Stop Work Order (“SWO”).
38. The FLNRORD NRO and an FLNRORD Water Officer attended at the Project site on November 27, 2018 and, according to the final November 28, 2018 SWO, these were among their observations:
 - a. Numerous exposed, un-stabilized and unprotected stockpiles of soil placed within a wetted channel;
 - b. Extensive lengths of exposed and unprotected slopes throughout the property;
 - c. Discharge of sediment-laden water into a tributary of Chester Creek;
 - d. No protection measures installed to prevent sediment laden material from entering Chester Creek and its tributaries;
 - e. Ineffective implementation of ESC measures;
 - f. Inadequate maintenance of ESC measures throughout the worksite; and
 - g. Water at the inlet and outlet of multiple culverts was observed to be scouring out the banks leading to further sedimentation and erosion.
39. The FLNRORD Officers issued an on-site Stop Work Order on that date.
40. Also on November 27, 2018, the DFO Report indicated that its Fisheries Protection Program had determined that, among other things, erosion and sediment control (“ESC”) measures have not been sufficiently implemented, upgraded, and maintained to avoid the release of sediment into fish-bearing waters or into any place where it may enter fish-bearing waters.

K. The Citation Allegations

Issue A: Erosion and Sediment Control Techniques

41. Allegations:

- a) *Ms. Reed’s reports do not include enough detail to evaluate if she installed the required ESC measures and the effectiveness of these measures; and*

- b) *the College was unable to evaluate whether Ms. Reed was effectively monitoring the ESC measures' effectiveness in compliance with standard practice.*
42. The allegations in this issue overlap with other issues related to reporting. The Panel addresses all reporting issues under Issue C and focusses here in Issue A on:
- a. evidence of the effectiveness of the Contractor's ESC measures and whether they conform with standard practice;
 - b. evidence about Ms. Reed's awareness of the ESC measures being taken;
 - c. what she did with the information she had; and
 - d. any consequences of her conduct.
43. SER's monitoring records available to the Discipline Panel cover a period of May 2018 through November 2018.
44. Golder said in its Complaint that it was concerned that no paired TSS⁵/turbidity data was apparently used and no such relationship for the Project site was established.
45. In the SER Environmental Monitoring Report #8 for October 2018 Ms. Reed made several ESC recommendations to the Contractor:
- a. "Environmental Protection Recommendations –
 - i. Given that heavy rainfall events are anticipated to continue through November and December (the usual wettest months of the year in the Lower Mainland), erosion and sediment control measures need to be implemented in a proactive manner. Silt-control fencing should be installed along lower edges of disturbed slopes and the slopes/embankments mulched with straw. Where the "special ditching" is occurring:
 - a. removed soils should be placed in haul trucks (gates to be sealed/lined with plastic sheeting) NOT on the upland top of bank;
 - ii. the vegetative mat should be left intact as much as possible, rather than grubbed or scraped;
 - iii. ditch blocks should not be removed all at once, but rather cut down so that weirs slow flow;
 - iv. check dams should be placed across the ditch as the ditch is profiled and the machine operator moves progressively along the alignment (i.e., by end of each shift); and

⁵ Total Suspended Solids

- v. straw mulch or erosion control matting should be placed as the ditch and upland embankments are profiled by a crew following the ditching crew(s).
- b. On other upland areas –
- i. the truck turnaround at the Ledcor entrance should be paved to prevent tracking of mud onto the road;
 - ii. a street sweeper needs to run along the highway shoulders at least once per day to removed accumulated sediments from tracking and fill dumping;
 - iii. exposed/disturbed soils and slopes should be tarped or mulched (a company specializing in blown mulches can be brought to site to blow straw onto the surfaces on the far side of the new/existing ditches);
 - iv. where clean water is flowing from the upland (i.e., over the exposed bedrock), it should be directed through the work zone to the nearest culvert (flexible big O pipe can be used and is easily moveable if needed to allow machinery to pass); and
 - v. silt-control fencing should be installed as works progress by a crew following along as needed and/or by end of shift".

46. In SER's 10 daily reports in November 2018, Ms. Reed lists ESC measures as Non-compliant and reports that ESC recommendations have not been implemented, for example:

- a. "met with site super and Proj. Mgr. re: bare soils need mulching and other sediment control recommendations";
- b. Turbidity: Non-Compliance reported with comment "SRE⁶ - muddy run off from exposed soils/work zones (all areas/ditches/creek)";
- c. Silt Fencing: Non-Compliance reported with comment "Improper Installation or not Installed at all";
- d. Bank Stabilization: Non-Compliance reported with comment "oversteepened ditch embankments";
- e. Soil Stockpiles: Non-Compliance reported with comment "no tarping";
- f. Drainage & Diversions: Non-Compliance reported with comment "no checkdams; pumping muddy water";

⁶ Significant Rainfall Event

- g. entire site was running sediment-laden water and discharging to Chester Creek at pump station or to roadside ditch from Silverdale; and
- h. Erosion & sediment control recommendations not implemented.

The Standard

47. Paragraph 3 of the College's *Member Code of Ethics* ("Paragraph 3")⁷ includes the requirement that a Member must meet the professional standard of care that will avoid reasonably foreseeable undesirable outcomes; ensure data have been collected to ensure proper assessment of risks and outcomes; meet all applicable legal requirements; ensure that the client is aware of potentially adverse consequences if professional recommendations are not followed; and make certain that all appropriate documents and files are maintained.

Discussion

- 48. The federal and provincial Project approvals describe the legal requirements for protecting fish, fish habitat and water quality, including erosion and sediment control, and describe the required monitoring, reporting and stop work duties of the Environmental Monitor.
- 49. Ms. Reed's CEMP, including its Appendix "G", provide a template for daily reporting and further detailed the requirements for site-specific controls and BMPs when soils have been disturbed. It echoed the governments' requirements for monitoring that ranged from daily/full-time on instream works until the zone is isolated, a minimum of weekly site visits to evaluate compliance with the CEMP, and the Environmental Monitor's power to stop work in appropriate circumstances.
- 50. The Panel finds as fact that Ms. Reed's "weekly" reporting, including on ESC issues, occurred only eight times in the first eight months of the Project. In the month of November 2018, she created 10 "daily" reports.
- 51. Ms. Reed's report for the month of October 2018 highlighted ESC deficiencies and recommended to the Contractor that they be addressed. However, she did not exercise her power to stop work on the Project. Those deficiencies remained unresolved on November 27, 2018, when they were described by the FLNRO officers who issued a Stop Work Order at the site.
- 52. Ms. Reed had a duty as the QEP to notify federal and provincial authorities in the event of poor water quality and to stop the Contractor's work if ESC measures were not properly implemented.
- 53. The Panel's conclusion is that the state of the ESC measures and water quality as documented by the FLNRO officers on November 27, 2018 were reasonably foreseeable undesirable outcomes. Ms. Reed did not act on her reports with a stop work demand to a Contractor that was evidently ignoring her recommendations – a failure to act under her

⁷ The Code is Schedule 2 to the *Rules* of the College of Applied Biology.

authority for environmental protection on the Project site. The ESC monitoring and enforcement requirements of the provincial and federal approvals were not met.

54. On this issue, Ms. Reed breached the applicable provisions of *Paragraph 3* described above in paragraph 47.

Issue B: Use of Unusual Method (Mud Wave) Technology for Excluding Aquatic Organisms

55. Allegations:

- a. *mud wave is not a provincially-recognized method;*
 - b. *it does not appear in commonly referenced Best-Management Practice documents for site isolation techniques;*
 - c. *Ms. Reed did not explain or justify the use of the technique – to her Contractor or during the SWO review by Golder;*
 - d. *Ms. Reed did not address salvage; and*
 - e. *without Ms. Reed's further response, the College cannot assess the potential that her technique caused harm.*
56. There is no documentation by Ms. Reed in her CEMP that explains the rationale and justifications for “mud wave” as an appropriate technique to manage or prevent impacts to aquatic organisms.
57. Golder indicated that it is not familiar with this method in any BMPs it uses or is aware of.
58. The isolation of flows was not operating as intended and had resulted in a loss of isolation throughout the property.
59. Adult salmon entered the work area after failure of downstream isolation.
60. Ms. Reed’s intent in describing the mud wave in her Complaint Response was not to define the technique as the exclusive means of work zone isolation and exclusion of aquatic life and other known techniques were employed on the Project.
61. Ms. Reed conducted salvage at the beginning and during the Project and reported on her salvage methods.
62. Instream work was stopped after the observation of the adult salmon.
63. In Mr. Stewardson’s opinion, the use of a mud wave to exclude aquatic organisms from in-water work sites is not a provincially (RISC) recognized method for fish or amphibian removal and it does not appear in any commonly referenced BMP documents for site isolation techniques.

The Standard

64. *Paragraph 3* requires that the use of any new or unusual methods be justified, referenced, and explained.

Discussion

65. In the Panel’s view, it is a biology professional’s duty to document and justify non-standard methods in reports they provide, particularly where these are subject to review or assessment for compliance with legislation. While Ms. Reed conducted fish salvage and utilized other isolation methods, she was professionally required to expressly document in her CEMP the use of, or partial reliance on, the mud wave technique. This is the only way that her Contractor client, the MOTI proponent, or the regulators would have known the technique was being employed and would have had an opportunity to query its use as an isolation method.
66. While biologists should be encouraged to innovate and expand existing practices where appropriate – Ms. Reed was not entitled to either rely solely on her own expertise⁸ or to omit from her CEMP mention of a technique she intended to use.
67. By omitting this information from the CEMP and from other information given to the Contractor and MOTI, Ms. Reed breached the applicable provisions of *Paragraph 3* set out in paragraph 64.

Issue C: Standards for Reports and Data for Environmental Monitoring

68. Allegations:

- a. *Ms. Reed’s reports:*
 - i. *are difficult to follow;*
 - ii. *lack detail with respect to specific measurements (ie. turbidity), salvage of aquatic organisms, photographs not labelled.*
- b. *Ms. Reed admits her notes “contained information for other client projects or of a personal nature” – not standard practice for keeping environmental monitoring records;*
- c. *Ms. Reed did not provide original field notes which does not meet minimum standard of professional data management for construction monitoring; and*
- d. *Ms. Reed reports were not sufficient on their own to demonstrate that, as Environmental Monitor, she was following standard practice and meeting the minimum professional standard for construction monitoring data management and reporting.*

⁸ See *Lea*, B.C.C.A.B. 2018

69. Appendix G of the CEMP outlines the minimum advocated data collection and the records that are to be kept. The work conducted was not consistent with Ms. Reed's own CEMP with respect to the frequency and content of required monitoring reporting. Reports available to the Panel demonstrably lacked data to document site conditions and compliance with the CEMP.
70. The monitoring reports neither contain a summary of the data nor a comparison of upstream to downstream conditions at the time of sampling. Rather than presenting data, the reports tend to provide subjective, narrative descriptions (e.g., "not good" for turbidity) and lack information on event duration.
71. Golder did not have records to confirm that Ms. Reed was conducting weekly site visits consistent with what was prescribed in the CEMP.
72. However, in its report, Golder omitted mention of a fish salvage and water quality data spreadsheet Ms. Reed says she provided to Golder on January 15, 2019. Nor did Golder refer to data collected, and reports written, in December 2018 or January 2019.
73. Ms. Reed did not provide her field notes to the College when requested in the Complaint process and gave the reason set out in the allegation above; namely, because they contained information for other client projects or of a personal nature and could not be disaggregated easily enough for her to provide them in a timely manner.
74. With respect to reporting, Mr. Stewardson's opinion was:
 - a. Ms. Reed's Reports are difficult to follow, particularly when the reader is not familiar with the project site. They lack detail with respect to specific measurements (i.e., turbidity), salvage of aquatic organisms and photographs are not individually labelled, making it difficult to interpret what is being shown;
 - b. with respect to data management Ms. Reed admits that her notes "contained information for other client projects or of a personal nature". This is not, in my opinion, standard professional practice for keeping environmental monitoring records;
 - c. her inability to provide original field notes, raw data files for water quality monitoring, data on salvage efforts and results and additional project photographs does not meet the minimum standard of professional data management for construction monitoring;
 - d. in general, the information provided lacked details that would demonstrate consistent documentation and tracking of information;
 - e. the reports on their own are not sufficient to demonstrate that the EM was following standard practice and meeting the minimum professional standard for construction monitoring with respect to data management and reporting; and
 - f. it would be expected that the original data sources would be available for review upon request.

75. With respect to ESC measures, Mr. Stewardson provides the opinion that more information was required to evaluate if Ms. Reed was effectively monitoring the ESC measures, including:
- a. a site plan showing the monitoring locations, construction activities and all environmentally sensitive aquatic areas adjacent to or within the site;
 - b. a description of how turbidity was measured to evaluate whether the appropriate equipment was used (i.e. turbidity wedge vs optical field meter), if the equipment was likely to be measuring accurately and if measurements were taken at a reasonable frequency for the activities and conditions at the time;
 - c. a table or graph presenting the original (raw) turbidity measurements taken during the project including date, time, location and NTU measured; ideally with a log or timeline to show the duration and intensity of any potential releases of turbid water from the site, as well as document changes in water quality related to the implementation of ESC measures and, ideally linked to descriptions of the specific activities occurring at the time and/or environmental conditions that may be influencing the measurement; and
 - d. a photographic record linked to field notes and Report comments that provide visual reference for the monitoring efforts and observations. Clearly logged and labeled photographs showing site conditions and ESC measures are typically collected to document change over time and in relation to environmental conditions, construction activities and application of environmental measures.
76. With respect to spill clean-up, Ms. Stewardson's opinion was that, in order to fully evaluate if Ms. Reed followed standard practices and regulatory requirements for the characterization, transport and disposal of the impacted soil, the following information would be required:
- a. notes describing the locations where samples were collected and confirming that standard protocols for in situ and / or ex situ sample collection were followed;
 - b. original lab analysis results for the samples collected, compared to the various land use characterization for the potential receiving facilities.
 - c. manifests documenting the transfer of material from the work site to the final disposal location; and
 - d. confirmation that the receiving facility is certified by BC ENV, and that they had reviewed the results of the lab analysis and confirmed that their facility was licensed appropriately to receive those materials.

The Standard

77. *Paragraph 3* requires that members undertake their work in a manner that demonstrates due diligence, including that: background information is collected and incorporated, data have been collected to ensure proper assessment of risks and outcomes, and appropriate documents, files and filing systems are maintained.

Discussion

78. The Panel's view is that appropriate record keeping and the ability to quickly retrieve and present data and observations is central to the role and duties of an environmental monitor. All records need to be readily available and cannot be kept in a format that requires significant revisions or entails lengthy delays before they can be made available to proponents, regulators, or the public. The Panel sees value in the overview nature of monitoring reports and notes that these may have been designed for the audience of construction contractors; however, the Panel is very concerned about the lack of documentation and detail about methods, data, rationale for decisions and on-site visits by the monitor. The Panel does not see evidence of more detailed reports or information required to prove the CEMP provisions were met and the public interest protected. The inability to provide complete and timely results of environmental monitoring frustrates all parties' ability to meet their respective duties to the public.
79. Better field notes and additional detailed records were requested and should have been made available at the time Golder was doing its work in January 2019. While biology professionals have a duty to uphold the public interest, document their work to a professional standard and comply with the law, environmental monitors have a particularly important role in assuring that the work performed by others meets professional and legal/regulatory standards. The Panel is very concerned that record-keeping was insufficiently available or detailed to assure that professional standards were met or the public interest upheld. This is an unacceptable result reflecting poorly on the profession in general and Ms. Reed in particular.
80. The Panel agrees with Mr. Stewardson that the lack of clarity and detail in the provided reports, and Ms. Reed not providing any other documentation, is an aggravating factor that obstructed the College's work and prevents the Panel and College from fully assessing Issues A and D.
81. Ms. Reed breached the applicable *Paragraph 3* provisions set out in paragraph 68.

Issue D: The Application of the Correct Contaminated Sites Regulation Standard

82. Allegations:

Ms. Reed followed a typical process to characterize the waste material and identify appropriate conforming disposal location, however she:

- a. failed to meet professional standards on selection of an appropriate Contaminated Sites Regulation ("CSR") standard;*
- b. failed to provide enough information to ensure all applicable requirements were met; and*
- c. failed to meet the positive duty to demonstrate compliance with all legal requirements.*

83. As with Issue A, the Panel considers all reporting issues under Issue C.

84. The Complainant and Ms. Reed disagreed on the appropriate soil standard. Ms. Reed used the Agricultural (“AG”) soil standards and the Complainant said the sediment standards for aquatic life were more appropriate.
85. Ms. Reed explained that samples referred to as “sediments” in her Incident Monitoring Report were exposed, not submerged. She noted that, after discussing the potentially contaminated soils with the Contractor, they concluded that the most cost-effective approach was disposal to an agriculture landfill.
86. Ms. Reed therefore used the agricultural land use standards/guidelines as the starting point for comparison. Aquatic life sediment quality standards and guidelines were not applicable as the material was to be moved to upland, not left *in situ*.
87. Additional soil sampling conducted for disposal purposes along that section subsequently found that some total metals exceeded agricultural land use guidelines; therefore, the material was removed to a commercial/industrial land fill.
88. Ms. Reed acknowledged that both standards could be relevant and provided rationale for why she initially relied on the lower standard.
89. In Mr. Stewardson’s opinion:
 - a. the specific question under review is whether the appropriate *Contaminated Sites Regulation* standards were applied for the impacted soils;
 - b. spill reports documenting the spill cause, extent and clean-up efforts were available, including photos of the sites and additional information was available in the Monitoring Reports; and
 - c. information provided by Ms. Reed in her Response provided more context for the decisions made at the time that the waste materials were being characterized and disposal options were being considered. Based on the review of this information, it appears that the Member did follow the typical process to characterize the waste material and identify an appropriate disposal location that conformed with the regulatory requirements. However, this information is anecdotal, as no original information was provided.

The Standard

90. *Paragraph 3* requires that data be collected to ensure proper assessment of risks and outcomes; that all applicable legal requirements be met; and appropriate documents and files are maintained.

Discussion

91. During Golder's work after the SWO, the Complainant and Ms. Reed apparently had a difference of opinion about whether she had correctly applied the CSR when categorizing soils impacted by spills at the Project site.
92. The Complainant alleged in Attachment #1 of the Complaint that Ms. Reed applied an incorrect CSR standard (agricultural applied to sediments) and did not have enough supporting information in her reports as to applicable standards.
93. Mr. Stewardson characterized the issue as "whether the appropriate CSR standards were applied for the impacted soils".
94. In her Response, Ms. Reed outlines a process whereby, having been told by the Contractor that it preferred to dispose of the impacted soils at a facility that could take agricultural-grade soils, she initially believed the impacted soils would qualify. However, having later reviewed tests that indicated a high level of metals, she revised her advice and, to her knowledge, the impacted soils were transported to, and disposed of, at an appropriate industrial-rated facility.
95. Mr. Stewardson's opinion is that Ms. Reed "followed the typical process to characterize the waste material and identify an appropriate disposal location that conformed with the regulatory requirements".
96. The Panel's conclusion on the record before it is that the Complainant and Respondent had a difference of opinion and the Respondent's approach was sufficient to meet the standards and all legal requirements were met.

CITATION TWO: Breach of the Duty to Respond within Reasonable Time Period to Enquiries from the College and College Committees [Rule 7.15]

97. Allegations:

- a. *Ms. Reed has not replied to any of College's requests for further information in the investigation of the first Citation; and*
- b. *Neither Ms. Reed nor her legal counsel replied to a May 8, 2020 letter providing a May 25, 2020 deadline for requesting an extension to provide information.*

98. Despite the College's wording of this allegation in its Statement of Points, it is clear from the record that Ms. Reed both: responded to the College's May 2019 request for information in her June 18, 2019 Response and also replied to the College's May 8, 2020 letter through her lawyer. There is in the record other communications by Ms. Reed's lawyer to the College even after that reply

99. As per College *Rule 15.10*:

- a. the College provided Ms. Reed with an opportunity to provide a Response, a written comment on the substance of the Complaint allegations; and
 - b. the College asked Ms. Reed to direct written correspondence to the College CEO within 30 business days of receipt.
100. Ms. Reed acknowledged that she had reviewed the Complaint form, attachments and other information provided in the package she received on May 11, 2019.
101. The Discipline Committee received a June 18, 2019 Response from Ms. Reed, comprising six pages of written comment and 200+ pages of attachments, including a copy of the April 2018 CEMP. The College completed a review of it with assistance from Lance Stewardson who the College considers a Subject Matter Expert (SME). Mr. Stewardson raised additional questions during review of the Complaint and Ms. Reed's Response. On February 11, 2019, the College asked Ms. Reed to provide answers to Mr. Stewardson's questions.
102. On behalf of Ms. Reed, her lawyer stated that Ms. Reed had a progressively worsening health condition since October 2019 which interfered with her ability to be gainfully employed and function effectively in her everyday life. The lawyer indicated that Ms. Reed had to commence the process of retiring from her career and explained that Ms. Reed's long-term projects had been handed over to another environmental services company and her short-term projects were being closed out by attrition, with the majority of short-term projects to reach substantial completion by July 1, 2020. The lawyer indicated that Ms. Reed could not provide the material requested by the College and suggested the best remedy to the issue would be that the College drop or suspend its Complaint and allow Ms. Reed's membership to lapse January 1, 2021.
103. The College wrote to Ms. Reed that the *Rules* require all registrants to adhere to the *Code of Ethics* regarding their professional practice and that any Member would remain under the jurisdiction of the College's discipline process, even if a Member retires or has health issues.
104. The College did not find the proposal from Ms. Reed's lawyer to be consistent with the public interest and stated its intention to proceed with the Complaint. The College acknowledged that the Member had mentioned health issues and offered Ms. Reed the opportunity to submit a late request for extension on or before May 25, 2020 and noted that, if a request is not received by that date, the Discipline Committee's options include: dismiss; forward the Member comments to the Complainant for comment; or decide the Complaint should go to Discipline Hearing.
105. The College did not ask for proof of Ms. Reed's medical condition.
106. In a letter received on May 25, 2020, Ms. Reed's lawyer suggested an extension to December 31, 2020 and that, if Ms. Reed's condition continued to worsen, she could require a further extension at that time. The rationale provided was worsening health and challenges related to COVID-19 in obtaining treatment.
107. Ms. Reed did not provide proof of her condition through a doctor's note or other means.

108. The College wrote Ms. Reed's lawyer, asking for a call to the College's lawyer by July 17, 2020 and stating that the College would proceed with the matter under the *Rules* if it did not hear by that date.
109. After the July 17, 2020 deadline passed, the College's lawyer spoke with Ms. Reed's lawyer and advised them that she had until August 18, 2020 to provide the information requested.
110. As of September 4, 2020, no information had been received from Ms. Reed or her lawyer.

The Standard

111. *Rule 7.15* requires that College members respond within a reasonable time period to enquiries from the College and College committees. *Rule 15.10* establishes a 30-business day period for a Subject Member to provide a response to a Complaint, including any information or records in the possession of the Member relevant to the Complaint, unless an extension is granted by the Discipline Committee under *Rule 15.13.1*. Members are not relieved of these duties by choosing not to renew their College membership or by retiring from the profession.

Discussion

112. Ms. Reed was a registered member of the College of Applied Biology and was acting in a role within the profession of Applied Biology during the time material to the Complaint.
113. As required by *Rules 7.15* and *15.10*, Ms. Reed had a duty to respond to the inquiries related to the ongoing investigation of the January 2019 Complaint against her, including providing all relevant information or records in her possession. *Rule 15.10* creates a 30-business day period for response with the potential under *15.13.1* to request a reasonable extension to provide information.
114. In order to maintain public confidence in the profession of Applied Biology, Members must be held accountable for their actions in respect of the Rules. The duty to respond and to answer questions during ongoing investigations is critical to that public confidence in self-governing professions.
115. The information requested during the investigation of the Complaint was critical to that investigation. Ms. Reed did not provide all the relevant information and records in her possession. Her lawyer's March 24, 2020 assertion that Ms. Reed was unable to respond due to a worsening medical condition is undermined by her lawyer also indicating that Ms. Reed planned to continue working until July 1, 2020. Her lawyer's later request for an extension to December 2020, or possibly beyond that, was not supported by medical evidence from a doctor.
116. Ms. Reed failed to respond within a reasonable time to the College's request for additional information material to the investigation. Further, her failure to respond with all of the information requested by the College significantly hampered the investigation. Ms. Reed breached the applicable *Rules*.

M. Penalty and Costs

117. In considering penalty and costs, the Panel has considered its conclusions with respect to each of the Allegations, as well as the following:

- a. Ms. Reed breached the *Code* and *Rules* in some, but not all, of the ways alleged by the College;
- b. the College has not provided evidence of prior discipline of Ms. Reed or prior issues with her professional practice; and
- c. Ms. Reed's breaches do not rise to the level of concern found by the College in the 2018 case the College offered as authority for the appropriate penalty in this Hearing.

118. For all the foregoing reasons, the Panel makes the Order with respect to penalty and costs that follows.

119. For Citation 1

- a. a reprimand; and
- b. a fine in the amount of \$1,500.00.

120. For Citation 2

- a. a reprimand; and
- b. a fine in the amount of \$2,000.00.

121. With respect to both citations

- a. Ms. Reed will pay \$8,000.00 to partially defray the costs incurred by the College in the discipline process; and
- b. should Ms. Reed apply for reinstatement to the College, the following conditions shall be imposed on her application and registration:
 - i. complete a remedial program to the satisfaction of the Audit and Practice Review Committee which should include training on environmental monitoring and record keeping;
 - ii. subsequently appear before the Audit and Practice Committee and satisfy the Committee that she is competent to practice applied biology; and
 - iii. supervision for six months by a senior Member of the College with skills and experience in Ms. Reed's area of practice.

N. Final Word


122. The Panel has made its decision in this matter and provided its reasons. The Panel believes that both the College and College Members would benefit from a few of the Panel's observations about the Complaint and the discipline process.
123. Ms. Reed raised a concern about her deteriorating health and its effect on her ability to respond; she may have experienced some concerns about the fairness of the timelines, but did not provide any independent proof of illness.
124. For its part, the College would know from its own work on discipline issues that the response required from Members can be time-consuming and may present difficult professional and personal challenges to a Subject Member. The College offered Ms. Reed a chance to apply for an extension, but did not initially specify how long an extension it would consider reasonable and later denied the requested extension.
125. Based on its observations, the Panel recommends the following in respect of the College's implementation of its new 2021 bylaws, particularly Part 9 "*Complaints, Investigations and Discipline*" and its new Policy 9-200 "*Investigation Extension Requests*":
- a. when requesting further information from a Respondent, the College expressly notes the opportunity to seek an extension to the 9-4(3) timeline;
 - b. the College develop and publish guidelines to be used by the Registrar, Investigations Committee or Investigations Committee Chair when considering what is a fair and reasonable extension request, how the Committee or Chair should exercise their discretion and how a Member requesting an extension on a health-related basis must establish that basis; and
 - c. the College develop and publish a Member's guide or a webinar to help ensure Members understand the process and the expectations from those Members who are subject to the Investigations and Discipline Process.

O. Notice

126. Section 33(1) of the *Act* provides that a Respondent may, within 30 days of receiving notice of a determination under section 27, apply in writing to the Council for a review on the record.


127. Section 33(3) of the Act provides that the Discipline Committee may, within 30 days of the date of a determination under section 27, refer the matter to the Council for a review on the record.

These are the Panel's Reasons for Decision and Order, dated November 29, 2021

<u>Name</u>	<u>Place</u>	<u>Date</u>
 Alison Peatt, R.P. Bio	Penticton, BC	December 2, 2021
_____ Allison McLellan	_____	_____
_____ Cliff Nietvelt, R.P. Bio	_____	_____

127. Section 33(3) of the Act provides that the Discipline Committee may, within 30 days of the date of a determination under section 27, refer the matter to the Council for a review on the record.

These are the Panel's Reasons for Decision and Order, dated November 29, 2021

<u>Name</u>	<u>Place</u>	<u>Date</u>
Alison Peatt, R.P. Bio		
 Allison McLellan	Victoria, BC	Nov 30, 2021
Cliff Nietvelt, R.P. Bio		

127. Section 33(3) of the Act provides that the Discipline Committee may, within 30 days of the date of a determination under section 27, refer the matter to the Council for a review on the record.

These are the Panel's Reasons for Decision and Order, dated November 29, 2021

Name

Place

Date

Alison Peatt, R.P. Bio

Allison McLellan


Cliff Nietvelt, R.P. Bio

Vancouver, BC

Nov. 30, 2021

**IN THE MATTER OF
CITATIONS ISSUED UNDER
THE COLLEGE OF APPLIED BIOLOGY ACT,
S.B.C. 2002, chapter 68 (the “Act”)**

BETWEEN:

THE COLLEGE OF APPLIED BIOLOGY

(the “College”)

AND:

SHAWNA REED, R.P.BIO. #1133

(the “Respondent”)

Date and Place of Hearing:

Commenced: June 11, 2021

Place: Written Hearing

Members of the Hearing Panel of the Discipline Committee:

Alison Peatt, R.P.Bio. (Chair)

Allison McLellan (Public Member)

Cliff Nietvelt, R.P.Bio

Counsel for the College:

Mark G. Underhill

Counsel for the Respondent

The Member declined to participate

Independent Legal Counsel for the Panel:

John S. Heaney

**REASON FOR DECISION AND ORDER
OF THE DISCIPLINE COMMITTEE**

1. A discipline hearing panel established under s. 28 of the Act (the “Panel”) convened on June 11, 2021, to inquire into Complaint allegations that the Respondent breached Paragraph 3 of the College’s *Member Code of Ethics* (the “Code”) which is Schedule 2 of the *Rules of the College* (the “Rules”) and that the Respondent breached *Rule 7.15* of the *Rules*¹.

A. Pre-hearing Matters

2. Prior to the Hearing, the College provided its Statement of Points and Associated Documents. Ms. Reed was served the Notice of Hearing in conformity with Rule 15.22 but declined to participate in the Hearing. The Panel resolved to proceed with its inquiry under Rule 15.30, a possibility it set out in the Notice of Hearing.

B. The Citations

3. Citation One dated October 26, 2020, sets out the College’s allegations:
 - a. In preparation of a Construction Environmental Management Plan (Project No. 12542-001), dated April 2018, and related work, the Member failed to meet the appropriate professional standard of care in relation to:
 - i. sediment and erosion monitoring techniques;
 - ii. the use of an unusual method (mud wave) technique for excluding aquatic organisms;
 - iii. the standards for reports and data management for environmental monitoring; and
 - iv. the application of the correct *Contaminated Sites Regulation* standard.
4. Citation Two dated February 11, 2021, sets out the College’s allegations:
 - a. The Member failed to respond to requests for further information from the College in respect of the allegations set out in the Citation issued October 26, 2020.
5. The College elaborated on its allegations in its Statements of Points and that wording is set out below in these Reasons.
6. The Panel decided to hear both citations under *Rule 15.36*

¹ Due to of the timing of the alleged breaches and the complaint process, this hearing was conducted under the Act, not the recently proclaimed *Professional Governance Act*, [S.B.C. 2018], c. 47.

C. Source of Evidence

7. Only the College provided documentary evidence. However, the record before the Panel includes much of Ms. Reed's work product, as well as her Response to the College's first query to her regarding the Complaint.
8. As part of its investigation of the Complaint, the College retained Lance Stewardson, an R.P. Bio member of the College since 2005. The College provided Mr. Stewardson with a copy of:
 - a. the Complainant's Complaint and attachment documents; and
 - b. a June 18, 2019 written Response from Ms. Reed to which she attached documents including the April 2018 version of her company's Construction Environmental Management Plan ("CEMP").
9. Mr. Stewardson received a B.Sc from UBC in 1995 and became a Certified Professional in Erosion and Sediment Control in 2009. Since 2000, Mr. Stewardson has been a principal and project manager with Mainstream Biological Consulting Inc.
10. The College asked Mr. Stewardson to conduct a review of the Complaint and Response materials and address whether Ms. Reed's Response was adequate to determine if Ms. Reed's Project practices with respect to the four Citation One issues were consistent with standard practices for environmental monitoring for constructions projects (the "Stewardson Questions"). Mr. Stewardson says in a supplied memorandum that he addressed the four substantial issues "to the best of [his] ability using the available information and [his] knowledge of environmental monitoring practices".
11. The College offers Mr. Stewardson's memorandum as opinion evidence from a subject matter expert to "evaluate whether [Ms. Reed's] practices in the identified areas were consistent with standard practices for professional biologists undertaking this type of work" and whether Mr. Stewardson was able to fully evaluate these matters without further information from Ms. Reed.
12. The Panel has reviewed Mr. Stewardson's background and qualifies him as an expert able to give opinion evidence on the narrow Stewardson Questions. The Panel has considered Mr. Stewardson's opinion in the context of all the evidence on the record and outlines its findings from the fact and opinion evidence later in these Reasons.
13. The Panel is not, as an administrative tribunal, strictly bound by the rules of evidence that courts apply to their own proceedings, although the Panel may be guided by the rationales that underlie those rules of evidence: "...a tribunal is entitled to consider any evidence it deems relevant, accepting portions of some and rejecting others as it sees fit." *Hale v. B.C. (Superintendent of Motor Vehicles)*, 2004 BCSC 358 at para. 23; also *Hing (Re)*, [1926] 3 D.L.R. 692, [1926 B.C.J. No. 35 (C.A.) at para. 13, and *Kane v. The Board of Governors (University of British Columbia)*, [1980] 1 S.C.R. 1105.

D. Exhibits

14. The Panel marked the following documents as Exhibits:

- a. EXHIBIT 1: Notice of Hearing, April 15, 2021.
- b. EXHIBIT 2: Citation dated October 26, 2020.
- c. EXHIBIT 3: Citation dated February 11, 2021.
- d. EXHIBIT 4: Complaint Form of Lee Nikl dated January 27, 2019, with Attachment #1 and Attachment #2
- e. EXHIBIT 5: Complaint Letter to College Registrar, September 14, 2020.
- f. EXHIBIT 6: Memorandum of Lance Stewardson, R.P.Bio., Mainstream Biological Consulting Ltd., November 15, 2019.
- g. EXHIBIT 7: College Correspondence with Ms. Reed:
 - a. To Ms. Reed, May 6, 2019;
 - b. From Ms. Reed, June 18, 2019;
 - c. To Ms. Reed, February 10, 2020;
 - d. From Ms. Reed's legal counsel, March 24, 2020;
 - e. From College to Ms. Reed's legal counsel, May 8, 2020;
 - f. From Ms. Reed's legal counsel to College, May 25, 2020;
 - g. From College to Ms. Reed, July 8, 2020; and
 - h. From College to Ms. Reed, October 28, 2020.
- h. EXHIBIT 8: Other College correspondence:
 - a. To Mr. Nikl, January 28, 2019
- i. EXHIBIT 9: Panel correspondence:
 - a. From Panel legal counsel attaching Notice of Hearing, April 15, 2021;
 - b. From College legal counsel attaching College's materials, May 6, 2021;
 - c. From Ms. Reed's legal counsel indicating Mr. Reed will not be participating, May 13, 2021; and
 - d. From Panel legal counsel conveying Panel's decision to extend Ms. Reed's time for submission of materials to June 10, 2021

j. EXHIBIT 10: *College of Applied Biology Rules*.

E. Evidence and findings

15. The overall burden of proof for professional misconduct, conduct unbecoming a practicing member or incompetence lies on the College, and the standard of proof is the civil standard of a balance of probabilities: *F.H. v. McDougall*, [2008] 3 S.C.R. 41.
16. In relation to specific facts, a party that asserts a fact bears the burden of proving that fact.
17. The central issues in this case have not required that the Panel make findings of credibility.
18. The Panel finds facts as set out herein.

F. The Respondent

19. The Respondent, Ms. Reed, is a former registered applied biologist who was in good standing with the College until January 1, 2021, when she did not renew her membership. During the time material to the Citations, Ms. Reed practiced through her own consultancy, SER Environmental Management Inc. (“SER”).
20. SER was the Contractor’s Environmental Manager to Stuart Olsen Construction Ltd (the “Contractor”) which itself was contracted to the B.C. Ministry of Transportation and Infrastructure (“MOTI”) for the four-laning of Highway 17 (Lougheed) from Silverdale Avenue to Nelson Street in Mission, B.C. (the “Project”).

G. The Complainant

21. The Complainant Lee Nikl (R.P. Bio #601) is a member of the College and a principal of Golder Associates Ltd. (“Golder”) as a senior environmentalist. Golder was an environmental consultant to MOTI and prepared an Environmental Impact Assessment of the Project for the Ministry. Mr. Nikl co-authored a Golder Report to MOTI as part of work MOTI had to perform for the Ministry of Forest, Lands and Natural Resources Operations and Rural Development (“FLNRORD”) further to a FLNRORD Stop Work Order (“SWO”) issued in respect of the Project on November 28, 2018 which is discussed below. Mr. Nikl submitted that Golder Report as an attachment to his January 27, 2019 Complaint.

H. The Construction Environmental Management Plan

22. Ms. Reed wrote SER’s CEMP for the Project which set out “environmental, protection and mitigative measures that may be implemented” during the Project and which are “intended to avoid or mitigate potential impacts of construction activities on the natural resources of the Fraser River and its tributaries, drainages and surrounding ecosystem attributes”. SER’s CEMP was reviewed and signed off by both MOTI and Golder.
23. The CEMP described environmental sensitivities which include that the Fraser River is a major fish bearing river and one of its tributaries, Chester Creek, which is adjacent to the Project site, is potentially fish-bearing.

24. The portions of the CEMP most material to this hearing and concerned with fish and aquatic organism protection are:
- a. 2.2 Environmental Spill Procedures and Equipment – which:
 - i. defines an environmental spill or incident; and
 - ii. prescribes what actions the Contractor and Environmental Monitor must take in the event of a spill in implementation of their spill action plan including containment, removal to an appropriate site and reporting.
 - b. 3.2 Erosion and Sediment Control Plan – which:
 - i. requires site-specific controls and best management practices (“BMPs”) during earthworks when soils have been disturbed and are more subject to mobilization; and
 - ii. includes detailed direction on the installation of silt-control fabric, fencing, sandbags, tarps, dams, erosion control matting and other control devices.
 - c. 4.0 Environmental Monitoring – which requires environmental monitoring to be provided as per FLNRORD and Department of Fisheries and Oceans (“DFO”) approval terms and includes:
 - i. a minimum of weekly site visits to evaluate compliance with the CEMP and other applicable guidelines, augmented in the event of heavy rainfall events or an accident or malfunction that results in a spill;
 - ii. full-time monitoring on instream works until the zone has been isolated from flows and environmental controls are functioning as intended; and
 - iii. subsequent to isolation, daily inspections conducted randomly to verify the site has remained isolated and mitigation methods are functioning or, where conditions require, need revision for construction progress, changing weather conditions or unforeseen obstacles.
 - d. 4.1 Site Inspection and Report Structure – which requires:
 - i. prescribed formal monitoring elements from the Environmental Monitor including field notes, logs and a photographic record of site visits/inspections and observed activities and conditions; and
 - ii. prescribed content for formal monitoring reports describing: findings, nonconformance with the CEMP, water quality (particularly turbidity and pH) data collected in and around the work zones, and details on dead fish, animals or carcasses observed outside the work zone.
 - e. 4.2 Water Quality Monitoring – which requires specific site works monitoring criteria including:

- i. at least once per week during dry weather; more often as needed by heavy rainfall events and activities with the potential for negative impact during inclement/wet weather; and
 - ii. specific protocols for turbidity and pH measures of site run-off or other water that might be discharged to the environment and comparison of results to provincial and other applicable guidelines.
- f. 4.3 Stop Work Procedure – which:
- i. provides the Environmental Monitor with the authority to stop work in the event the Contractor is not achieving the contract environmental requirements or there is imminent threat to the environment: and
 - ii. sets out a non-exhaustive list of situations that warrant a stop work initiation and a five-step process to be followed in the event the Environmental Monitor is required to exercise this authority.

25. Appendix G to the CEMP² is entitled Environmental Monitoring Report Templates/Checklists and provides two separate versions of similar documents:

- a. “Daily environmental monitoring checklist/report” which appears to be the creation of Seven Generations Environmental Services Ltd. (“Seven Generation Checklist”) and bears no project-specific designation; and
- b. “Environmental monitoring checklist/daily report” which has no evident authorship but is marked “Hwy 7 – Silverdale to Nelson” and is presumably the creation of Ms. Reed or was created specifically for the Project CEMP (“Hwy 7 Checklist”).

I. Project Approvals

26. Appendix “C” to the CEMP was a MOTI application to DFO seeking approval for the Project as a work which will result in serious harm to fish that are part of a commercial, recreational, or Aboriginal fishery (the “*Fisheries Act Application*”).

27. In support of the *Fisheries Act Application*, MOTI wrote that:

“The proposed work does not relate specifically to management objectives for stocks of concerns in southern BC, as the stocks identified are not expected to use the local habitat. Generally, with respect to lower Fraser chum and coho, the proposed work is expected to have little or no expected effect towards achieving or inhibiting management objectives. The project has been designed to mitigate potential negative effects where possible in accordance with management objectives, and off-setting habitat construction has been

² The Complainant’s document package contained a CEMP dated June 2018 with appendices A-G and Ms. Reed’s Response documents contained an April 2018 CEMP with appendices A-F, though both are presumed to have been created by Ms. Reed for SER and the Project. The materials do not reveal an explanation why the two provided different versions of the CEMP.

proposed so that the benefits of the proposed work will balance the effects due to the project”.

28. The *Fisheries Act* Application appended a report by Golder which concluded that:

“The project related effects anticipated to result in serious harm are effectively limited to the permanent loss or destruction of habitat. The potential for harm resulting from the death of fish will be avoided through effective implementation of the prescribed mitigation and best management practices outlined in the EIA”.

29. A *Fisheries Act* authorization for the project was issued on August 31, 2018, and required, among other things that:

- a. MOTI (through the Contractor) shall implement all necessary avoidance and mitigation measures to avoid causing the death of fish;
- b. isolation and fish salvage shall occur prior to any instream works and shall be inspected regularly and maintained throughout the Project to prevent fish from gaining access to the areas where they may be subjected to serious harm;
- c. construction activities within isolation areas will cease if isolation fails;
- d. if required monitoring indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful, construction activities will cease and a Qualified Environmental Professional (“QEP”) will inform on, and oversee implementation of, appropriate contingency measures prior to continuation of any activity that may result in unauthorized serious harm;
- e. the Environmental Monitor shall:
 - i. oversee and confirm the implementation and efficacy of measures necessary to avoid and mitigate serious harm to fish;
 - ii. provide dated photographs and inspection reports to demonstrate the implementation and functioning of mitigation measures and standards to avoid unauthorized serious harm to fish;
 - iii. assess whether the proposed works, undertakings and/or activities were carried out as proposed;
 - iv. report to DFO the results of required monitoring; and
 - v. provide details of any contingency measures that were implemented to avoid or mitigate unauthorized harm to fish.

30. The Project also required provincial approval under the *Water Sustainability Act* [S.B.C. 2014], c. 15 for the proposed changes in and about Chester Creek and Tributaries which approval was issued by FLNRORD on December 15, 2017, as amended on December 21, 2017 (the “WSA Approval”)³. Among the requirements of the WSA Approval are that:
- a. The Environmental Monitor shall provide advice on the timing of the work, on construction mitigation, daily or full-time supervision of all work in or near a stream;
 - b. The Environmental Monitor is responsible for observing the methods of construction and preparing information and reports on the compliance of the construction activities. The Environmental Monitor will assist in the isolation of the stream, erosion and sediment control measures and environmental monitoring to ensure there is minimal environmental impact on the land, species at risk, and fish and fish habitat of the streams;
 - c. The Environmental Monitor must supervise all instream works authorized under the Approval;
 - d. The Environmental Monitor is granted the authority to stop the work authorized under the Approval if deemed necessary by the Environmental Monitor to address risks to the environment;
 - e. Sediment and erosion control measures must be installed on the upland and must beat or surpass the standards outlined in applicable federal and British Columbia instruments including:
 - i. control measures to prevent the release of silt, sediment or sediment-laden water must be in place before starting works that may result in sediment mobilization; and
 - ii. care shall be exercised during all phases of the work to prevent the release of silt, sediment or sediment-laden water, raw concrete, concrete leachate, or any deleterious substances.

J. The Construction

31. SER created Environmental Monitoring reports addressed to the Contractor’s Project Manager and Project Superintendent that were written by Ms. Reed who indicated she was the “Environmental Monitor”⁴ as follows:
- a. for the week ending May 19, 2018 – when it is recorded that the Contractor began mobilization to the site and commenced clearing and related activities;

³ This is Appendix B to the CEMP

⁴ Although SER/Ms. Reed is listed in the CEMP as the Project Environmental Manager and Seven Generations Environmental Management Ltd. is listed as the Environmental Monitor, the record does not appear to contain any documents from Seven Generations and Ms. Reed is referred to as the Environmental Monitor.

- b. for the week ending June 30, 2018;
 - c. for the week ending July 14, 2018;
 - d. for the week ending July 28, 2018;
 - e. for August 2018;
 - f. for September 2018;
 - g. for October 2018; and
 - h. for November 2018.
32. SER created an Environmental Incident Report written by Ms. Reed, Environmental Monitor, and addressed to the Contractor's Project Manager and Project Superintendent regarding a September 19, 2018 "Flipped Haul Truck" incident. Reportedly, the incident resulted in up to 200 litres of diesel fuel and approximately 25 gallons of hydraulic oil being captured by a spill kit drum or entering the environment.
33. SER created an Environmental Incident and Remediation Report written by Ms. Reed, Environmental Monitor, and addressed to the Contractor's Project Manager and Project Superintendent regarding two spills on October 1, 2018 – the "Haul Truck Fuel Tank" incident. Reportedly, the two incidents occurred within two hours of each other and resulted in an estimated 500 litres of diesel fuel being spilled.
34. SER created daily environmental monitoring checklists/responses for the Contractor using the Seven Generations Checklist but not bearing Seven Generation's identifier and listing Ms. Reed as the Monitor, dated:
- a. November 1, 2018;
 - b. November 6, 2018;
 - c. November 7, 2018;
 - d. November 8, 2018;
 - e. November 13, 2018;
 - f. November 16, 2018;
 - g. November 19, 2018;
 - h. November 22, 2018;
 - i. November 28, 2018; and
 - j. November 30, 2018.

35. On November 1, 2018, a *Fisheries Act* “occurrence” - believed to be the presence of an adult salmon in the isolation area - was reported to DFO by an unidentified person according to a November 27, 2018 “Report of Habitat Occurrence – Sedimentation and Fish Passage, Chester Creek, Mission” (the “DFO Report”).
36. On November 19, 2018, another occurrence was reported to DFO according to the DFO Report.
37. On November 22, 2018, an FLNRORD Natural Resource Officer (“NRO”) attended at the Project site and identified numerous deficiencies with respect to erosion and sediment control according to a subsequent November 28, 2018 FLNRORD Stop Work Order (“SWO”).
38. The FLNRORD NRO and an FLNRORD Water Officer attended at the Project site on November 27, 2018 and, according to the final November 28, 2018 SWO, these were among their observations:
 - a. Numerous exposed, un-stabilized and unprotected stockpiles of soil placed within a wetted channel;
 - b. Extensive lengths of exposed and unprotected slopes throughout the property;
 - c. Discharge of sediment-laden water into a tributary of Chester Creek;
 - d. No protection measures installed to prevent sediment laden material from entering Chester Creek and its tributaries;
 - e. Ineffective implementation of ESC measures;
 - f. Inadequate maintenance of ESC measures throughout the worksite; and
 - g. Water at the inlet and outlet of multiple culverts was observed to be scouring out the banks leading to further sedimentation and erosion.
39. The FLNRORD Officers issued an on-site Stop Work Order on that date.
40. Also on November 27, 2018, the DFO Report indicated that its Fisheries Protection Program had determined that, among other things, erosion and sediment control (“ESC”) measures have not been sufficiently implemented, upgraded, and maintained to avoid the release of sediment into fish-bearing waters or into any place where it may enter fish-bearing waters.

K. The Citation Allegations

Issue A: Erosion and Sediment Control Techniques

41. Allegations:

- a) *Ms. Reed’s reports do not include enough detail to evaluate if she installed the required ESC measures and the effectiveness of these measures; and*

- b) *the College was unable to evaluate whether Ms. Reed was effectively monitoring the ESC measures' effectiveness in compliance with standard practice.*
42. The allegations in this issue overlap with other issues related to reporting. The Panel addresses all reporting issues under Issue C and focusses here in Issue A on:
- a. evidence of the effectiveness of the Contractor's ESC measures and whether they conform with standard practice;
 - b. evidence about Ms. Reed's awareness of the ESC measures being taken;
 - c. what she did with the information she had; and
 - d. any consequences of her conduct.
43. SER's monitoring records available to the Discipline Panel cover a period of May 2018 through November 2018.
44. Golder said in its Complaint that it was concerned that no paired TSS⁵/turbidity data was apparently used and no such relationship for the Project site was established.
45. In the SER Environmental Monitoring Report #8 for October 2018 Ms. Reed made several ESC recommendations to the Contractor:
- a. "Environmental Protection Recommendations –
 - i. Given that heavy rainfall events are anticipated to continue through November and December (the usual wettest months of the year in the Lower Mainland), erosion and sediment control measures need to be implemented in a proactive manner. Silt-control fencing should be installed along lower edges of disturbed slopes and the slopes/embankments mulched with straw. Where the "special ditching" is occurring:
 - a. removed soils should be placed in haul trucks (gates to be sealed/lined with plastic sheeting) NOT on the upland top of bank;
 - ii. the vegetative mat should be left intact as much as possible, rather than grubbed or scraped;
 - iii. ditch blocks should not be removed all at once, but rather cut down so that weirs slow flow;
 - iv. check dams should be placed across the ditch as the ditch is profiled and the machine operator moves progressively along the alignment (i.e., by end of each shift); and

⁵ Total Suspended Solids

- v. straw mulch or erosion control matting should be placed as the ditch and upland embankments are profiled by a crew following the ditching crew(s).
- b. On other upland areas –
- i. the truck turnaround at the Ledcor entrance should be paved to prevent tracking of mud onto the road;
 - ii. a street sweeper needs to run along the highway shoulders at least once per day to removed accumulated sediments from tracking and fill dumping;
 - iii. exposed/disturbed soils and slopes should be tarped or mulched (a company specializing in blown mulches can be brought to site to blow straw onto the surfaces on the far side of the new/existing ditches);
 - iv. where clean water is flowing from the upland (i.e., over the exposed bedrock), it should be directed through the work zone to the nearest culvert (flexible big O pipe can be used and is easily moveable if needed to allow machinery to pass); and
 - v. silt-control fencing should be installed as works progress by a crew following along as needed and/or by end of shift".

46. In SER's 10 daily reports in November 2018, Ms. Reed lists ESC measures as Non-compliant and reports that ESC recommendations have not been implemented, for example:

- a. "met with site super and Proj. Mgr. re: bare soils need mulching and other sediment control recommendations";
- b. Turbidity: Non-Compliance reported with comment "SRE⁶ - muddy run off from exposed soils/work zones (all areas/ditches/creek)";
- c. Silt Fencing: Non-Compliance reported with comment "Improper Installation or not Installed at all";
- d. Bank Stabilization: Non-Compliance reported with comment "oversteepened ditch embankments";
- e. Soil Stockpiles: Non-Compliance reported with comment "no tarping";
- f. Drainage & Diversions: Non-Compliance reported with comment "no checkdams; pumping muddy water";

⁶ Significant Rainfall Event

- g. entire site was running sediment-laden water and discharging to Chester Creek at pump station or to roadside ditch from Silverdale; and
- h. Erosion & sediment control recommendations not implemented.

The Standard

47. Paragraph 3 of the College's *Member Code of Ethics* ("Paragraph 3")⁷ includes the requirement that a Member must meet the professional standard of care that will avoid reasonably foreseeable undesirable outcomes; ensure data have been collected to ensure proper assessment of risks and outcomes; meet all applicable legal requirements; ensure that the client is aware of potentially adverse consequences if professional recommendations are not followed; and make certain that all appropriate documents and files are maintained.

Discussion

- 48. The federal and provincial Project approvals describe the legal requirements for protecting fish, fish habitat and water quality, including erosion and sediment control, and describe the required monitoring, reporting and stop work duties of the Environmental Monitor.
- 49. Ms. Reed's CEMP, including its Appendix "G", provide a template for daily reporting and further detailed the requirements for site-specific controls and BMPs when soils have been disturbed. It echoed the governments' requirements for monitoring that ranged from daily/full-time on instream works until the zone is isolated, a minimum of weekly site visits to evaluate compliance with the CEMP, and the Environmental Monitor's power to stop work in appropriate circumstances.
- 50. The Panel finds as fact that Ms. Reed's "weekly" reporting, including on ESC issues, occurred only eight times in the first eight months of the Project. In the month of November 2018, she created 10 "daily" reports.
- 51. Ms. Reed's report for the month of October 2018 highlighted ESC deficiencies and recommended to the Contractor that they be addressed. However, she did not exercise her power to stop work on the Project. Those deficiencies remained unresolved on November 27, 2018, when they were described by the FLNRO officers who issued a Stop Work Order at the site.
- 52. Ms. Reed had a duty as the QEP to notify federal and provincial authorities in the event of poor water quality and to stop the Contractor's work if ESC measures were not properly implemented.
- 53. The Panel's conclusion is that the state of the ESC measures and water quality as documented by the FLNRO officers on November 27, 2018 were reasonably foreseeable undesirable outcomes. Ms. Reed did not act on her reports with a stop work demand to a Contractor that was evidently ignoring her recommendations – a failure to act under her

⁷ The Code is Schedule 2 to the *Rules* of the College of Applied Biology.

authority for environmental protection on the Project site. The ESC monitoring and enforcement requirements of the provincial and federal approvals were not met.

54. On this issue, Ms. Reed breached the applicable provisions of *Paragraph 3* described above in paragraph 47.

Issue B: Use of Unusual Method (Mud Wave) Technology for Excluding Aquatic Organisms

55. Allegations:

- a. *mud wave is not a provincially-recognized method;*
 - b. *it does not appear in commonly referenced Best-Management Practice documents for site isolation techniques;*
 - c. *Ms. Reed did not explain or justify the use of the technique – to her Contractor or during the SWO review by Golder;*
 - d. *Ms. Reed did not address salvage; and*
 - e. *without Ms. Reed's further response, the College cannot assess the potential that her technique caused harm.*
56. There is no documentation by Ms. Reed in her CEMP that explains the rationale and justifications for “mud wave” as an appropriate technique to manage or prevent impacts to aquatic organisms.
57. Golder indicated that it is not familiar with this method in any BMPs it uses or is aware of.
58. The isolation of flows was not operating as intended and had resulted in a loss of isolation throughout the property.
59. Adult salmon entered the work area after failure of downstream isolation.
60. Ms. Reed’s intent in describing the mud wave in her Complaint Response was not to define the technique as the exclusive means of work zone isolation and exclusion of aquatic life and other known techniques were employed on the Project.
61. Ms. Reed conducted salvage at the beginning and during the Project and reported on her salvage methods.
62. Instream work was stopped after the observation of the adult salmon.
63. In Mr. Stewardson’s opinion, the use of a mud wave to exclude aquatic organisms from in-water work sites is not a provincially (RISC) recognized method for fish or amphibian removal and it does not appear in any commonly referenced BMP documents for site isolation techniques.

The Standard

64. *Paragraph 3* requires that the use of any new or unusual methods be justified, referenced, and explained.

Discussion

65. In the Panel’s view, it is a biology professional’s duty to document and justify non-standard methods in reports they provide, particularly where these are subject to review or assessment for compliance with legislation. While Ms. Reed conducted fish salvage and utilized other isolation methods, she was professionally required to expressly document in her CEMP the use of, or partial reliance on, the mud wave technique. This is the only way that her Contractor client, the MOTI proponent, or the regulators would have known the technique was being employed and would have had an opportunity to query its use as an isolation method.
66. While biologists should be encouraged to innovate and expand existing practices where appropriate – Ms. Reed was not entitled to either rely solely on her own expertise⁸ or to omit from her CEMP mention of a technique she intended to use.
67. By omitting this information from the CEMP and from other information given to the Contractor and MOTI, Ms. Reed breached the applicable provisions of *Paragraph 3* set out in paragraph 64.

Issue C: Standards for Reports and Data for Environmental Monitoring

68. Allegations:

- a. *Ms. Reed’s reports:*
 - i. *are difficult to follow;*
 - ii. *lack detail with respect to specific measurements (ie. turbidity), salvage of aquatic organisms, photographs not labelled.*
- b. *Ms. Reed admits her notes “contained information for other client projects or of a personal nature” – not standard practice for keeping environmental monitoring records;*
- c. *Ms. Reed did not provide original field notes which does not meet minimum standard of professional data management for construction monitoring; and*
- d. *Ms. Reed reports were not sufficient on their own to demonstrate that, as Environmental Monitor, she was following standard practice and meeting the minimum professional standard for construction monitoring data management and reporting.*

⁸ See *Lea*, B.C.C.A.B. 2018

69. Appendix G of the CEMP outlines the minimum advocated data collection and the records that are to be kept. The work conducted was not consistent with Ms. Reed's own CEMP with respect to the frequency and content of required monitoring reporting. Reports available to the Panel demonstrably lacked data to document site conditions and compliance with the CEMP.
70. The monitoring reports neither contain a summary of the data nor a comparison of upstream to downstream conditions at the time of sampling. Rather than presenting data, the reports tend to provide subjective, narrative descriptions (e.g., "not good" for turbidity) and lack information on event duration.
71. Golder did not have records to confirm that Ms. Reed was conducting weekly site visits consistent with what was prescribed in the CEMP.
72. However, in its report, Golder omitted mention of a fish salvage and water quality data spreadsheet Ms. Reed says she provided to Golder on January 15, 2019. Nor did Golder refer to data collected, and reports written, in December 2018 or January 2019.
73. Ms. Reed did not provide her field notes to the College when requested in the Complaint process and gave the reason set out in the allegation above; namely, because they contained information for other client projects or of a personal nature and could not be disaggregated easily enough for her to provide them in a timely manner.
74. With respect to reporting, Mr. Stewardson's opinion was:
 - a. Ms. Reed's Reports are difficult to follow, particularly when the reader is not familiar with the project site. They lack detail with respect to specific measurements (i.e., turbidity), salvage of aquatic organisms and photographs are not individually labelled, making it difficult to interpret what is being shown;
 - b. with respect to data management Ms. Reed admits that her notes "contained information for other client projects or of a personal nature". This is not, in my opinion, standard professional practice for keeping environmental monitoring records;
 - c. her inability to provide original field notes, raw data files for water quality monitoring, data on salvage efforts and results and additional project photographs does not meet the minimum standard of professional data management for construction monitoring;
 - d. in general, the information provided lacked details that would demonstrate consistent documentation and tracking of information;
 - e. the reports on their own are not sufficient to demonstrate that the EM was following standard practice and meeting the minimum professional standard for construction monitoring with respect to data management and reporting; and
 - f. it would be expected that the original data sources would be available for review upon request.

75. With respect to ESC measures, Mr. Stewardson provides the opinion that more information was required to evaluate if Ms. Reed was effectively monitoring the ESC measures, including:
- a. a site plan showing the monitoring locations, construction activities and all environmentally sensitive aquatic areas adjacent to or within the site;
 - b. a description of how turbidity was measured to evaluate whether the appropriate equipment was used (i.e. turbidity wedge vs optical field meter), if the equipment was likely to be measuring accurately and if measurements were taken at a reasonable frequency for the activities and conditions at the time;
 - c. a table or graph presenting the original (raw) turbidity measurements taken during the project including date, time, location and NTU measured; ideally with a log or timeline to show the duration and intensity of any potential releases of turbid water from the site, as well as document changes in water quality related to the implementation of ESC measures and, ideally linked to descriptions of the specific activities occurring at the time and/or environmental conditions that may be influencing the measurement; and
 - d. a photographic record linked to field notes and Report comments that provide visual reference for the monitoring efforts and observations. Clearly logged and labeled photographs showing site conditions and ESC measures are typically collected to document change over time and in relation to environmental conditions, construction activities and application of environmental measures.
76. With respect to spill clean-up, Ms. Stewardson's opinion was that, in order to fully evaluate if Ms. Reed followed standard practices and regulatory requirements for the characterization, transport and disposal of the impacted soil, the following information would be required:
- a. notes describing the locations where samples were collected and confirming that standard protocols for in situ and / or ex situ sample collection were followed;
 - b. original lab analysis results for the samples collected, compared to the various land use characterization for the potential receiving facilities.
 - c. manifests documenting the transfer of material from the work site to the final disposal location; and
 - d. confirmation that the receiving facility is certified by BC ENV, and that they had reviewed the results of the lab analysis and confirmed that their facility was licensed appropriately to receive those materials.

The Standard

77. *Paragraph 3* requires that members undertake their work in a manner that demonstrates due diligence, including that: background information is collected and incorporated, data have been collected to ensure proper assessment of risks and outcomes, and appropriate documents, files and filing systems are maintained.

Discussion

78. The Panel's view is that appropriate record keeping and the ability to quickly retrieve and present data and observations is central to the role and duties of an environmental monitor. All records need to be readily available and cannot be kept in a format that requires significant revisions or entails lengthy delays before they can be made available to proponents, regulators, or the public. The Panel sees value in the overview nature of monitoring reports and notes that these may have been designed for the audience of construction contractors; however, the Panel is very concerned about the lack of documentation and detail about methods, data, rationale for decisions and on-site visits by the monitor. The Panel does not see evidence of more detailed reports or information required to prove the CEMP provisions were met and the public interest protected. The inability to provide complete and timely results of environmental monitoring frustrates all parties' ability to meet their respective duties to the public.
79. Better field notes and additional detailed records were requested and should have been made available at the time Golder was doing its work in January 2019. While biology professionals have a duty to uphold the public interest, document their work to a professional standard and comply with the law, environmental monitors have a particularly important role in assuring that the work performed by others meets professional and legal/regulatory standards. The Panel is very concerned that record-keeping was insufficiently available or detailed to assure that professional standards were met or the public interest upheld. This is an unacceptable result reflecting poorly on the profession in general and Ms. Reed in particular.
80. The Panel agrees with Mr. Stewardson that the lack of clarity and detail in the provided reports, and Ms. Reed not providing any other documentation, is an aggravating factor that obstructed the College's work and prevents the Panel and College from fully assessing Issues A and D.
81. Ms. Reed breached the applicable *Paragraph 3* provisions set out in paragraph 68.

Issue D: The Application of the Correct Contaminated Sites Regulation Standard

82. Allegations:

Ms. Reed followed a typical process to characterize the waste material and identify appropriate conforming disposal location, however she:

- a. failed to meet professional standards on selection of an appropriate Contaminated Sites Regulation ("CSR") standard;*
- b. failed to provide enough information to ensure all applicable requirements were met; and*
- c. failed to meet the positive duty to demonstrate compliance with all legal requirements.*

83. As with Issue A, the Panel considers all reporting issues under Issue C.

84. The Complainant and Ms. Reed disagreed on the appropriate soil standard. Ms. Reed used the Agricultural (“AG”) soil standards and the Complainant said the sediment standards for aquatic life were more appropriate.
85. Ms. Reed explained that samples referred to as “sediments” in her Incident Monitoring Report were exposed, not submerged. She noted that, after discussing the potentially contaminated soils with the Contractor, they concluded that the most cost-effective approach was disposal to an agriculture landfill.
86. Ms. Reed therefore used the agricultural land use standards/guidelines as the starting point for comparison. Aquatic life sediment quality standards and guidelines were not applicable as the material was to be moved to upland, not left *in situ*.
87. Additional soil sampling conducted for disposal purposes along that section subsequently found that some total metals exceeded agricultural land use guidelines; therefore, the material was removed to a commercial/industrial land fill.
88. Ms. Reed acknowledged that both standards could be relevant and provided rationale for why she initially relied on the lower standard.
89. In Mr. Stewardson’s opinion:
 - a. the specific question under review is whether the appropriate *Contaminated Sites Regulation* standards were applied for the impacted soils;
 - b. spill reports documenting the spill cause, extent and clean-up efforts were available, including photos of the sites and additional information was available in the Monitoring Reports; and
 - c. information provided by Ms. Reed in her Response provided more context for the decisions made at the time that the waste materials were being characterized and disposal options were being considered. Based on the review of this information, it appears that the Member did follow the typical process to characterize the waste material and identify an appropriate disposal location that conformed with the regulatory requirements. However, this information is anecdotal, as no original information was provided.

The Standard

90. *Paragraph 3* requires that data be collected to ensure proper assessment of risks and outcomes; that all applicable legal requirements be met; and appropriate documents and files are maintained.

Discussion

91. During Golder’s work after the SWO, the Complainant and Ms. Reed apparently had a difference of opinion about whether she had correctly applied the CSR when categorizing soils impacted by spills at the Project site.
92. The Complainant alleged in Attachment #1 of the Complaint that Ms. Reed applied an incorrect CSR standard (agricultural applied to sediments) and did not have enough supporting information in her reports as to applicable standards.
93. Mr. Stewardson characterized the issue as “whether the appropriate CSR standards were applied for the impacted soils”.
94. In her Response, Ms. Reed outlines a process whereby, having been told by the Contractor that it preferred to dispose of the impacted soils at a facility that could take agricultural-grade soils, she initially believed the impacted soils would qualify. However, having later reviewed tests that indicated a high level of metals, she revised her advice and, to her knowledge, the impacted soils were transported to, and disposed of, at an appropriate industrial-rated facility.
95. Mr. Stewardson’s opinion is that Ms. Reed “followed the typical process to characterize the waste material and identify an appropriate disposal location that conformed with the regulatory requirements”.
96. The Panel’s conclusion on the record before it is that the Complainant and Respondent had a difference of opinion and the Respondent’s approach was sufficient to meet the standards and all legal requirements were met.

CITATION TWO: Breach of the Duty to Respond within Reasonable Time Period to Enquiries from the College and College Committees [Rule 7.15]

97. Allegations:

- a. *Ms. Reed has not replied to any of College’s requests for further information in the investigation of the first Citation; and*
- b. *Neither Ms. Reed nor her legal counsel replied to a May 8, 2020 letter providing a May 25, 2020 deadline for requesting an extension to provide information.*

98. Despite the College’s wording of this allegation in its Statement of Points, it is clear from the record that Ms. Reed both: responded to the College’s May 2019 request for information in her June 18, 2019 Response and also replied to the College’s May 8, 2020 letter through her lawyer. There is in the record other communications by Ms. Reed’s lawyer to the College even after that reply

99. As per College *Rule 15.10*:

- a. the College provided Ms. Reed with an opportunity to provide a Response, a written comment on the substance of the Complaint allegations; and
 - b. the College asked Ms. Reed to direct written correspondence to the College CEO within 30 business days of receipt.
100. Ms. Reed acknowledged that she had reviewed the Complaint form, attachments and other information provided in the package she received on May 11, 2019.
101. The Discipline Committee received a June 18, 2019 Response from Ms. Reed, comprising six pages of written comment and 200+ pages of attachments, including a copy of the April 2018 CEMP. The College completed a review of it with assistance from Lance Stewardson who the College considers a Subject Matter Expert (SME). Mr. Stewardson raised additional questions during review of the Complaint and Ms. Reed's Response. On February 11, 2019, the College asked Ms. Reed to provide answers to Mr. Stewardson's questions.
102. On behalf of Ms. Reed, her lawyer stated that Ms. Reed had a progressively worsening health condition since October 2019 which interfered with her ability to be gainfully employed and function effectively in her everyday life. The lawyer indicated that Ms. Reed had to commence the process of retiring from her career and explained that Ms. Reed's long-term projects had been handed over to another environmental services company and her short-term projects were being closed out by attrition, with the majority of short-term projects to reach substantial completion by July 1, 2020. The lawyer indicated that Ms. Reed could not provide the material requested by the College and suggested the best remedy to the issue would be that the College drop or suspend its Complaint and allow Ms. Reed's membership to lapse January 1, 2021.
103. The College wrote to Ms. Reed that the *Rules* require all registrants to adhere to the *Code of Ethics* regarding their professional practice and that any Member would remain under the jurisdiction of the College's discipline process, even if a Member retires or has health issues.
104. The College did not find the proposal from Ms. Reed's lawyer to be consistent with the public interest and stated its intention to proceed with the Complaint. The College acknowledged that the Member had mentioned health issues and offered Ms. Reed the opportunity to submit a late request for extension on or before May 25, 2020 and noted that, if a request is not received by that date, the Discipline Committee's options include: dismiss; forward the Member comments to the Complainant for comment; or decide the Complaint should go to Discipline Hearing.
105. The College did not ask for proof of Ms. Reed's medical condition.
106. In a letter received on May 25, 2020, Ms. Reed's lawyer suggested an extension to December 31, 2020 and that, if Ms. Reed's condition continued to worsen, she could require a further extension at that time. The rationale provided was worsening health and challenges related to COVID-19 in obtaining treatment.
107. Ms. Reed did not provide proof of her condition through a doctor's note or other means.

108. The College wrote Ms. Reed's lawyer, asking for a call to the College's lawyer by July 17, 2020 and stating that the College would proceed with the matter under the *Rules* if it did not hear by that date.
109. After the July 17, 2020 deadline passed, the College's lawyer spoke with Ms. Reed's lawyer and advised them that she had until August 18, 2020 to provide the information requested.
110. As of September 4, 2020, no information had been received from Ms. Reed or her lawyer.

The Standard

111. *Rule 7.15* requires that College members respond within a reasonable time period to enquiries from the College and College committees. *Rule 15.10* establishes a 30-business day period for a Subject Member to provide a response to a Complaint, including any information or records in the possession of the Member relevant to the Complaint, unless an extension is granted by the Discipline Committee under *Rule 15.13.1*. Members are not relieved of these duties by choosing not to renew their College membership or by retiring from the profession.

Discussion

112. Ms. Reed was a registered member of the College of Applied Biology and was acting in a role within the profession of Applied Biology during the time material to the Complaint.
113. As required by *Rules 7.15* and *15.10*, Ms. Reed had a duty to respond to the inquiries related to the ongoing investigation of the January 2019 Complaint against her, including providing all relevant information or records in her possession. *Rule 15.10* creates a 30-business day period for response with the potential under *15.13.1* to request a reasonable extension to provide information.
114. In order to maintain public confidence in the profession of Applied Biology, Members must be held accountable for their actions in respect of the Rules. The duty to respond and to answer questions during ongoing investigations is critical to that public confidence in self-governing professions.
115. The information requested during the investigation of the Complaint was critical to that investigation. Ms. Reed did not provide all the relevant information and records in her possession. Her lawyer's March 24, 2020 assertion that Ms. Reed was unable to respond due to a worsening medical condition is undermined by her lawyer also indicating that Ms. Reed planned to continue working until July 1, 2020. Her lawyer's later request for an extension to December 2020, or possibly beyond that, was not supported by medical evidence from a doctor.
116. Ms. Reed failed to respond within a reasonable time to the College's request for additional information material to the investigation. Further, her failure to respond with all of the information requested by the College significantly hampered the investigation. Ms. Reed breached the applicable *Rules*.

M. Penalty and Costs

117. In considering penalty and costs, the Panel has considered its conclusions with respect to each of the Allegations, as well as the following:

- a. Ms. Reed breached the *Code* and *Rules* in some, but not all, of the ways alleged by the College;
- b. the College has not provided evidence of prior discipline of Ms. Reed or prior issues with her professional practice; and
- c. Ms. Reed's breaches do not rise to the level of concern found by the College in the 2018 case the College offered as authority for the appropriate penalty in this Hearing.

118. For all the foregoing reasons, the Panel makes the Order with respect to penalty and costs that follows.

119. For Citation 1

- a. a reprimand; and
- b. a fine in the amount of \$1,500.00.

120. For Citation 2

- a. a reprimand; and
- b. a fine in the amount of \$2,000.00.

121. With respect to both citations

- a. Ms. Reed will pay \$8,000.00 to partially defray the costs incurred by the College in the discipline process; and
- b. should Ms. Reed apply for reinstatement to the College, the following conditions shall be imposed on her application and registration:
 - i. complete a remedial program to the satisfaction of the Audit and Practice Review Committee which should include training on environmental monitoring and record keeping;
 - ii. subsequently appear before the Audit and Practice Committee and satisfy the Committee that she is competent to practice applied biology; and
 - iii. supervision for six months by a senior Member of the College with skills and experience in Ms. Reed's area of practice.

N. Final Word


122. The Panel has made its decision in this matter and provided its reasons. The Panel believes that both the College and College Members would benefit from a few of the Panel's observations about the Complaint and the discipline process.
123. Ms. Reed raised a concern about her deteriorating health and its effect on her ability to respond; she may have experienced some concerns about the fairness of the timelines, but did not provide any independent proof of illness.
124. For its part, the College would know from its own work on discipline issues that the response required from Members can be time-consuming and may present difficult professional and personal challenges to a Subject Member. The College offered Ms. Reed a chance to apply for an extension, but did not initially specify how long an extension it would consider reasonable and later denied the requested extension.
125. Based on its observations, the Panel recommends the following in respect of the College's implementation of its new 2021 bylaws, particularly Part 9 "*Complaints, Investigations and Discipline*" and its new Policy 9-200 "*Investigation Extension Requests*":
- a. when requesting further information from a Respondent, the College expressly notes the opportunity to seek an extension to the 9-4(3) timeline;
 - b. the College develop and publish guidelines to be used by the Registrar, Investigations Committee or Investigations Committee Chair when considering what is a fair and reasonable extension request, how the Committee or Chair should exercise their discretion and how a Member requesting an extension on a health-related basis must establish that basis; and
 - c. the College develop and publish a Member's guide or a webinar to help ensure Members understand the process and the expectations from those Members who are subject to the Investigations and Discipline Process.

O. Notice

126. Section 33(1) of the *Act* provides that a Respondent may, within 30 days of receiving notice of a determination under section 27, apply in writing to the Council for a review on the record.


127. Section 33(3) of the Act provides that the Discipline Committee may, within 30 days of the date of a determination under section 27, refer the matter to the Council for a review on the record.

These are the Panel's Reasons for Decision and Order, dated November 29, 2021

<u>Name</u>	<u>Place</u>	<u>Date</u>
 Alison Peatt, R.P. Bio	Penticton, BC	December 2, 2021
_____ Allison McLellan	_____	_____
_____ Cliff Nietvelt, R.P. Bio	_____	_____

127. Section 33(3) of the Act provides that the Discipline Committee may, within 30 days of the date of a determination under section 27, refer the matter to the Council for a review on the record.

These are the Panel's Reasons for Decision and Order, dated November 29, 2021

<u>Name</u>	<u>Place</u>	<u>Date</u>
Alison Peatt, R.P. Bio		
 Allison McLellan	Victoria, BC	Nov 30, 2021
Cliff Nietvelt, R.P. Bio		

127. Section 33(3) of the Act provides that the Discipline Committee may, within 30 days of the date of a determination under section 27, refer the matter to the Council for a review on the record.

These are the Panel's Reasons for Decision and Order, dated November 29, 2021

Name

Place

Date

Alison Peatt, R.P. Bio

Allison McLellan


Cliff Nietvelt, R.P. Bio

Vancouver, BC

Nov. 30, 2021