



NATIONAL RESEARCH COUNCIL CANADA

NRC Research Integrity Policy

Adoption by NRC Senior Executive Committee
15 October 2013

Supersedes: 01-12-2005 and 09-14-2009



National Research
Council Canada

Conseil national
de recherches Canada

Canada

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NRC Vision, Mission and Values

The NRC Research Integrity Policy (2013) is one of the instruments that apply and give meaning to the commitments in the NRC Code of Conduct (2013), which includes *the Values and Ethics Code for the Public Sector* and the Statement on NRC Values.

These commitments provide the guiding framework for this policy.

NRC Vision

To be the most effective research and technology organization in the world, stimulating sustainable domestic prosperity.

NRC Mission

Working with clients and partners, we provide innovation support, strategic research, scientific and technical services to develop and deploy solutions to meet Canada's current and future industrial and societal needs.

NRC Values

Impact

We make a positive difference for our stakeholders.

Accountability

We are responsible for our work and our workplace.

Leadership

We value leadership, initiative and the application of best practices in our work.

Integrity

We engage fairly and openly to earn credibility and trust.

Collaboration

We actively collaborate to engage vital knowledge and expertise and to generate better, more efficient solutions.

1. Purpose of Policy

1.1 Trust

A history of research excellence and scientific distinction has secured for NRC and its employees the respect and trust of the Canadian public, clients, research organizations, and researchers around the world. As scientific advances are considered to be critical in areas such as economic competitiveness, health, national security, and environmental protection, public officials in all industrialized countries are obligated to ensure the highest levels of integrity in research.

Research is an increasingly complex team endeavour involving a variety of participants and requiring a strong element of trust among all players.

The main purpose of NRC's Research Integrity Policy is to help maintain this trust.

1.2 Awareness

This policy will help ensure that NRC's managers and employees adhere to the most rigorous standards required of scientific research. This policy also applies, to the extent that it is reasonable and feasible, to guest workers and other collaborators involved in NRC research activities.

1.3 Transparency

A more specific goal of this policy is to clearly set out an open process that will be followed to address allegations of research misconduct.

2. Principles

To ensure the integrity of NRC research, everyone involved in research with or within NRC is required to observe these basic principles:

- a) conduct research and experimental development in compliance with accepted standards;
- b) use scholarly and scientific rigor in obtaining, recording and analyzing data and in reporting results;
- c) maintain complete records of research and keep all relevant data;
- d) disclose to the appropriate body any conflict of interest that could be seen to influence one's judgment, not only in the conduct of research but also in related activities such as participation in a peer review process;
- e) respect all NRC obligations under research collaboration agreements;
- f) use the unpublished work of other researchers only with permission and due acknowledgement and use published work of other researchers with due acknowledgement;
- g) use archival material in accordance with the rules of the archival source;

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- h) meet the requirements of the NRC Policy on Research Publications and Authorship (see Annex A);
 - i) meet the requirements of the NRC policies on research involving human subjects and animals, as well as those of the NRC Occupational Safety and Health Directive;
 - j) use research funds in compliance with the prescribed funding conditions and requirements;
 - k) report suspected misconduct situations as soon as possible and in a responsible manner in accordance with the processes set out in this policy;
 - l) participate in the conduct of research integrity inquiries or investigations when required; and
 - m) inform NRC if one has been the subject of any formal allegation of research misconduct by another organization.

3. Promoting and Ensuring Integrity in Research

3.1 Responsibility

The President of NRC has overall responsibility for the NRC Research Integrity Policy and has assigned the responsibility of monitoring and supporting its implementation as well as proposing revisions to the policy, when appropriate, to Secretary General of the NRC.

3.2 Promotion

It is NRC's responsibility to clearly state its requirements in the area of research integrity and to ensure that those requirements are widely disseminated. NRC portfolios, branches and programs also have a crucial role to play in the promotion of research integrity and in fostering the discussion of research integrity issues.

3.3 Shared responsibility

While the responsibility for maintaining integrity in research and publication rests primarily with researchers themselves, the involvement of NRC management is also necessary. To this end, NRC will provide a supportive working environment by actively promoting programs for the education of staff involved in research, particularly by:

1. holding information sessions for new employees, students or collaborators when they arrive at NRC and periodically thereafter, and
2. encouraging managers and supervisors to discuss research integrity with their employees and, by their example, to demonstrate adherence to its principles.

3.4 Accepted standards

It is the responsibility of all who conduct research for NRC to ensure that the methodology and practices employed in their research conform to accepted standards for their field of research. Furthermore, NRC requires that research procedures be carefully designed so that fabrication or falsification of data will not likely go undetected. Researchers are thus expected to conduct proper experiments with appropriate protocols.

NRC management should establish a process to periodically verify if accepted standards are met (possibly through evaluations, internal audits, or other existing mechanisms) and take corrective measures if needed.

3.5 Records retention

Records of experiments (regardless of physical form or medium) should be properly secured and stored. They can be kept as bound laboratory notebooks with numbered and dated pages or as secure, dated computer files that cannot be altered. If the electronic files are alterable, a quality system that ensures that records are appropriately stored, tracked, maintained and archived must be established.

Written and electronic records of research are the property of NRC and must not be destroyed except in accordance with NRC's policies on records retention including relevant obligations under the Access to Information, Privacy, and Library and Archives of Canada Acts. Portfolios and programs must ensure that researchers have access to and use appropriate facilities for the storage of research data and documents.

4. Definition of Research Misconduct

4.1 General

NRC deems any action that is inconsistent with the principles of research integrity stated in a previous section of this policy as "research misconduct". Research misconduct can, however, be of a minor or major nature.

The spectrum of types of minor and major misconduct by scientists, researchers, engineers and technicians is broad. The following list, although not exhaustive, presents the main research misconduct categories.

Fabrication of data, falsification of data, and plagiarism are considered **major** misconduct by NRC and most other research organizations in Canada and abroad. Such research misconduct would include:

- Selectively excluding data from analysis
- Misinterpreting data to obtain desired results (including inappropriate use of statistical methods)

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- Doctoring images in publications
 - Producing false data or results

The following may be considered either as major or as minor research misconduct, depending on the nature and extent of the behaviour involved. If misconduct is considered minor, it can be addressed by managers in accordance with other relevant processes, with reference to this policy, but independent of the investigation provisions within it.

Data related and physical research materials misconduct

- Not preserving primary data
- Bad data management, storage
- Withholding important data from the scientific community

Research practice misconduct

- Research activities that are contrary to health, safety or environmental policies
- Violation of human subject protocols
- Violation of laboratory animals protocols

Publication related misconduct

- Claiming undeserved authorship
- Intentional disregard for basic fairness principles of authorship
- Artificially proliferating publications
- Failure to correct the publication record when needed

Financial, and other misconduct

- Peer review abuse e.g., non-disclosure of conflict of interest, unfairly delaying a rival's publication
- Misrepresenting credentials or publication record
- Misuse of research funds for unauthorised purchases or for personal gain
- Making malicious misconduct allegations

4.2 Disputes within research team(s)

For the purposes of this policy, research misconduct does not include situations that may arise from disputes within research teams rather than from a breach of integrity. Such cases might be related, for example, to disagreements about authorship credits prior to publication, sharing of data, access to equipment or budget issues. If such cases cannot be settled at the portfolio level, the Vice-President (VP) responsible for the division concerned can consider resolution mechanisms such as mediation.

4.3 Honest error or differences in interpretation

Research misconduct does not include unintended error (experimental, analytical, and/or computational) or honest differences in interpretations or judgments of data. All types of scientific misconduct must be interpreted

reasonably with a sense of what is customary in the relevant scientific and engineering research community.

4.4 Interpersonal misconduct

For the purposes of this policy, research misconduct does not include situations related to inappropriate personal behaviour, harassment, insensitivity to social or cultural norms, as these are not specific to the research context and are dealt with by other NRC policies and processes.

5. Reporting Suspected Research Misconduct

5.1 Non compliance

NRC is committed to an open process that is readily accessible to any person who brings forward an allegation of non-compliance with research integrity principles. Under this policy, any allegation of serious misconduct in NRC's research activities will be thoroughly reviewed and, if substantiated, will be addressed in a timely fashion. In this process, NRC will endeavour to protect the rights and needs of all persons involved.

5.2 Range of sources

Suspicion of misconduct may arise regarding work done within NRC. Allegations may originate within or outside the organization. They may concern not only current but also former NRC employees, and even visiting researchers for work performed at NRC.

5.3 Other Policies and Legislation

In accordance with other relevant policies and legislation, NRC will take steps to protect personal information and otherwise provide safeguards in order to give NRC employees the confidence to bring forward, in good faith, allegations of research misconduct to the attention of the appropriate authorities or participate in an investigation procedure without suffering reprisal.

5.4 Portfolio level

Whenever possible, suspicions of misconduct should first be discussed with the relevant manager, the Director or the General Manager (GM) concerned. Recognizing that suspicion of misconduct places the person that is the object of the concerns and the person who brings forward the concerns in vulnerable positions, the first administrative response should be characterized by sensitivity, confidentiality, objectivity, and fairness.

The portfolio (Director or GM) does not conduct an investigation but prepares, without delay, written recommendations for the VP responsible for the division concerned based upon available information. The recommendations should specify:

1. whether the suspicions appear to be verifiable or unverifiable in an independent manner;
2. if the suspicions are obviously unsubstantiated and why;
3. whether the concerns seem to have been raised in good faith or may be malicious.
4. Whether research activities should be suspended or not, should the allegations relate to an active project or program

The rationale for the recommendations should also be provided. The VP confirms whether he accepts the recommendation, requires additional information, or decides on a different course of action. If the VP chooses to conclude the process at this stage, the VP keeps a record of the recommendation for his/her documentation in the event that further actions are needed.

5.5 Allegation to the VP or the Secretary General

Allegations can also be sent directly to the VP responsible by the person making the allegations with a justification for the absence of discussion at the portfolio level. Persons external to NRC who wish to submit allegations should be directed to the responsible VP or to the NRC Secretary General.

5.6 Other allegations

Allegations that should also be reported to the VP:

1. allegations concerning work done outside of NRC by NRC researchers or with NRC's involvement (e.g. a research collaboration or work involving NRC funding); and
2. allegations received from anonymous sources or via a third party if the relevant information is available and the facts are independently verifiable.

5.7 Relations with the Source

The Source of allegations should be aware that he/she will have the opportunity to present relevant information as any person having such information, but will not have special status during the process and will not be informed in detail of the evolution of the process.

5.8 Presumption of good faith

A finding that the allegations are not substantiated does not constitute a finding that the Source was at fault in bringing the allegation forward. The presumption should be that the Source made a mistake in good faith. However, if it is evident that the Source acted maliciously with no reasonable justification for the allegation, a separate report should be prepared on that matter and forwarded to

the responsible VP. The unfounded allegation may be dealt with as a possible, separate research misconduct case or cause for disciplinary action.

6. Response to Allegations

6.1 Head of the Response

The VP responsible for the division concerned by the allegations will normally be the Head of the Response. If, for any reason, the responsible VP is not or could not be perceived as neutral, the President will appoint another member of NRC's Senior Executive Committee to assume the role of Head of the Response.

6.2 Steps

The response to allegations of scientific misconduct may include up to three (3) stages. At each stage, the Head of the Response may decide not to pursue the process any further if developments make this decision appropriate. For example, if the respondent admits misconduct, it is possible to complete the process without going through all the stages. In such a case, corrective action and/or disciplinary measures may be decided upon immediately.

Depending on the case, communication with NRC partners and collaborators, national and international, might be in order. The necessity of this action will be determined by the Head of the Response.

6.3 Preliminary Assessment Stage

(See Annex 2 for detailed process) This stage should not take more than twenty (20) calendar days from the time the responsible VP receives the allegations. The purpose of this stage is to determine whether the allegation falls under this policy and whether the information available justifies further action. The result of the Preliminary Assessment can be a decision either to not pursue an allegation further or to move to the Fact-Finding Stage.

6.4 Fact-Finding Stage

(See Annex 3 for detailed process) At this stage, the person who is the object of the allegation (the Respondent) is to be formally notified of the allegation. A Fact-Finding Assessor will be nominated by the Head of the Response in order to collect the relevant data, documents, electronic files, and materials, to take appropriate measures to secure the various items that will be considered, and to proceed to a first interview with persons who might have relevant information. A Fact-Finding Panel (as described in Annex 3) is nominated. The Panel will review the information collected and interview the persons involved including the Source and the Respondent as well as other persons who might have relevant information. The Panel might also want to consult experts in the relevant domain.

The role of the Fact-Finding Panel is not to determine whether or not there was misconduct, but to indicate whether a full Investigation is needed.

6.5 Investigation Stage

(See Annex 4 for detailed process) At this stage a body that comprises a broader range of experience and expertise than that of the Fact-Finding Panel is needed to conduct a full Investigation of the allegation. The role of this body, the Investigation Committee, is to develop a factual record of the issues by exploring the allegations in detail and by examining the evidence in depth, leading to recommendations and a finding of whether research misconduct has been committed, by whom and to what extent. This Committee should also determine whether there are additional instances of possible research misconduct that would justify broadening the scope beyond the initial allegations. This might include a review of previous scientific work published by the Respondent.

7. Considerations Relevant to Any Stage

7.1 Resource Persons

The process of addressing allegations of research misconduct should be conducted by persons with a significant level of scientific knowledge in the relevant research areas. However, in the application of the procedures involved, those persons will need the support and guidance of other professionals. At each stage, to minimize the risk of complications at a later stage, it is strongly recommended that the following NRC offices be contacted on relevant issues:

- Legal Services
- Access to Information and Privacy (ATIP)
- Human Resources Branch (Labour Relations Group)
- Secretary General's Office

7.2 Written Statements

All statements should be produced in writing and signed. The Respondent and/or any possible witnesses are not required to make a statement. All concerned should, however, be aware that a lack of cooperation will not impede the proceedings. No statement, including the allegations, will be accepted in the Investigation Stage "in confidence". NRC will only pay for legal fees in accordance with Treasury Board policies on indemnification and in support of the requirements of its processes.

7.3 Access to Information and Privacy Acts

Under the Access to Information and Privacy (ATIP) Acts, any personal information or written information on the conduct and conclusions of the research integrity process can only be shared within the limits of the legislation or if the persons involved agree. On request, research funding organizations can be

informed of the results of the process by the Secretary General's Office or the responsible VP subject to the requirements of the ATIP Acts.

7.4 Disciplinary Measures

Decisions regarding disciplinary measures are a management responsibility and are governed by NRC's Policy on Discipline Procedures (Section 5.6, Human Resources Manual). The Fact-Finding Panel and the Investigation Committee do not take decisions on disciplinary matters, but may make recommendations on this issue at the request of the Head of Response.

7.5 Policy Improvement

To help improve and update this policy on an ongoing basis, the Head of the Response will inform the Secretary General of any issue relevant to the policy and its procedures at the end of the process and, if appropriate, throughout it.

8. Exoneration

8.1 Procedure

When the process concludes, at any stage, that the complaint of research misconduct is unsubstantiated, the Head of the Response should ensure the following:

1. that all persons who are likely to have knowledge of the process, such as witnesses who were interviewed (including the Source), be told, in writing that the matter has been concluded because it was determined to be unfounded; and
2. that the person exonerated of research misconduct should be provided a formal statement, in writing, that an allegation was made, a review process was established, no substantiation was found, and no further action is contemplated.

8.2 Restoring Reputations

If the allegations are not substantiated and the person(s) exonerated of an allegation of research misconduct request(s) assistance in restoring their reputation, the Head of the Response may send identical, formal, letters from NRC to appropriate concerned parties.

9. Treatment of Documents

9.1 Privacy Protection

Persons involved in a review of a case of suspected research misconduct must make every effort to preserve the privacy and reputation of all parties concerned.

Therefore, all documents relating to a case that is in progress should be treated and protected material in a separate file under the control of the Head of the Response and the President as appropriate. After a case has concluded, the documents will be kept as a special category in the NRC's central records, with access restricted to the President and specifically authorized personnel only, preserved for a period of time in accordance with NRC's policy on records retention, and then destroyed.

9.2 Personal Files

Nothing relating to an unsubstantiated case should appear in the personnel files of any person. The Report of Findings in which the allegations were found to be substantiated will be placed in the personnel files of the person responsible for the research misconduct and regarded as a document concerning disciplinary action.

10. External Notifications and Reports

10.1 Funding Organizations

All research funding organizations concerned will be informed of the final report and findings of an investigation of research misconduct at NRC, including the results of an investigation that has been terminated before completion for any reason. Unless otherwise specified, it is not necessary to inform funding organizations at the Preliminary Assessment Stage, nor at the Fact-Finding Stage.

10.2 Contents

The report to external organizations must be provided by the Secretary General's Office and should include a comprehensive summary of the evidence, the procedure, the conclusions and, if appropriate, the proposed remedial action.

10.3 Copies

A copy of all reports to external agencies, except Federal investigative bodies, must be given to the Respondent, who may supplement those reports with personal comments.

10.4 Formal Agreements

If a formal agreement between NRC and another institution stipulates that misconduct must be reported to an external organization, such situations will be reported through the NRC Secretary General. Misconduct in this context will be those cases that involve fabrication, falsification or plagiarism in proposing, performing or reviewing research, or in reporting research results.

11. Timetable

The time required to carry out the research misconduct proceedings will depend largely on the complexity of the issues and the number of individuals involved in the process. The normal timetable for a full process, assuming it is not suspended for any reason, starting when the Head of the Response receives the allegations, would be as follows:

		All References are to Calendar Days
Preliminary Assessment (including the submission of the Head of the Response's report)	20	
Fact-Finding Assessor Nominated	5	135
Appointment of the Fact-Finding Panel	10	
Period of objection by the Respondent	10	
First meeting of the Fact-Finding Panel	10	
Draft Report of the Fact-Finding Panel	60	
Respondent's comments	10	
Final Report of the Fact-Finding Panel	10	
Senior Management Response	20	
Investigation Committee Appointed	10	210
Period of objection by the Respondent	10	
Draft Report of the Investigation Committee	120	
Respondent's comments	30	
Final Report of the Investigation Committee	10	
NRC Decisions	30	

12. Resources

Tri-Agency Framework: Responsible Conduct of Research (2011)

Office of Research Integrity (USA): Model Policy for Responding to Allegations of Research Misconduct (November 2006)

*Honesty, Accountability and Trust :Fostering **Research Integrity** in Canada*, The Expert Panel on Research Integrity, Council of Canadian Academies (2010)

Public Servant Disclosure Protection Act (April 2007)

Canada Privacy Act (1983)

NRC's Discipline Procedures (Human Resources Manual)

CIHR Procedure for Addressing Allegations of non-compliance with Research Policies (December 2006)

Université Laval, Politique relative à l'intégrité scientifique, Mars 1995

Organisation for Economic Co-Operation and Development Global Science Forum (2007) Best practices for Ensuring Scientific Integrity and Preventing Misconduct

Singapore Statement on Research Integrity (2nd World Conference on Research Integrity)

Montreal Statement on Research Integrity in Cross-Boundary Collaborations (3rd World Conference on Research Integrity)

ANNEX A

NRC POLICY ON RESEARCH PUBLICATIONS AND AUTHORSHIP

A.1 Purpose and Scope

The Policy defines some principles and guidelines regarding the internal approval of research publications submitted by NRC employees and the determination of authorship for publications resulting from joint research.

The objective of the Policy is to ensure consistency in the practices of NRC portfolios while recognizing that there might be some variations between disciplines and fields of activity.

The Policy focuses on research papers submitted to refereed journals but is also applicable, although to a lesser degree, to other forms of research disclosure such as conference presentations, abstracts, and other non-refereed published material.

The Policy applies only to publications related to professional work performed by NRC employees while on duty.

A.2 Definitions

Manuscript: an author's written, typed, or word-processed copy of a work intended for publication in printed or electronic form.

Intellectual property: proprietary information and technical information inclusive of scientific and technical discoveries of any kind and in a form which is useful and transferable and which may be protected under law by way of, but not limited to, patents, trademarks, copyrights, industrial designs, software, know-how and trade secrets.

Contractual obligations: in the context of this policy, requirements arising from contracts between NRC and clients or formal agreements between NRC and companies or organizations, under which the dissemination of the results of particular research projects is not entirely left to NRC's discretion.

A.3 Internal Approval of Research Publications

As the dissemination of research is one of NRC's main functions, results of research undertaken at NRC should generally be fully publishable. However, NRC must ensure that the public interest is protected. As a general principle, it is therefore required that manuscripts be submitted in advance to relevant management for approval. Factors to be considered by management include the potential value of the intellectual property, NRC's contractual obligations, and, in some cases, ethical issues. Intellectual property issues must be addressed within the framework provided by NRC's Intellectual Property Policy.

The normal level of approval is the relevant manager or the laboratory Director in consultation, where appropriate, with corporate branches and external parties. If needed, the decision is referred to the portfolio GM and, ultimately, to the responsible Vice-President.

Given the diversity of NRC's research areas and activities, the NRC portfolios are encouraged to either adopt or continue to implement their own internal procedures while complying with the spirit of the Policy.

A.4 Authorship

NRC research publications shall identify as authors all those, but only those, who have made a substantial intellectual contribution to the research. The other contributions should be recognized separately in the manuscript.

As a minimum requirement, recognizing that there might be variations in accepted practice between disciplines, fields of activity and research journals, NRC recommends that inclusion as an author should be justified by direct participation in at least two of the following activities:

- conception of the research project
- performance of the research
- interpretation of the data, and
- writing of the manuscript.

General supervision of the research group is not sufficient for authorship but may be acknowledged in a separate paragraph, as may be the case for contributions such as technical assistance, data collection, critical reviews of the manuscript, and funding of the research.

All authors share responsibility for a manuscript. While they may not be expected to defend all aspects of the research, they should each be prepared to defend the aspects of the research in which they were directly involved.

Authorship should be discussed at the earliest possible phase of the research and issues should be addressed well before the writing of a manuscript. Relevant managers or laboratory Directors should ensure at this point that all relevant research data and documents are being preserved appropriately.

Disputes should be settled within the research group and only when no agreement can be reached should they be referred to management.

Intentional disregard for basic fairness principles in the recognition of authorship credits could result in a research misconduct investigation under NRC's Research Integrity Policy.

B.1 Purpose

The purpose of the Preliminary Assessment is to determine:

- if the allegations fall under the research integrity policy
- if the information available justifies further action; and
- if a Fact-Finding Panel should be appointed

B.2 Timeline

The Preliminary Assessment should not take more than twenty (20) calendar days as measured from the time when the responsible VP receives the allegations until the submission of the Preliminary Assessment Report to the NRC Secretary General.

B.3 Head of the Response

The VP responsible for the division concerned by the allegations will normally be the Head of the Response, who will be responsible for pursuing every case to a conclusion. At the earliest stage, the VP will inform and consult with the Secretary General. If, for any reason, the responsible VP is not or could be perceived as not being in a position to act in a neutral manner, the President will appoint another member of NRC's Senior Executive Committee to assume this role.

B.4 Interview with the Source of Allegations

The Head of the Response, normally joined by the relevant General Manager if there is no counter indications (or by another manager if it is not appropriate to involve the GM), will, if possible, interview the person making the allegation (s) (the Source), promptly after receiving the allegation(s). This will give the Source an opportunity to present relevant information and to be briefed about the procedure, including how he/she will be kept informed of future developments. The interviewers should check with the Source concerning any other persons who may have been made aware of the allegations and/or who may have relevant information. This information is needed in order to protect the identity of the Source and facilitate privacy protection measures. The Source should have the opportunity to indicate the impact of revealing his/her identity.

B.5 Purview of this Policy

At this stage, the Head of the Response must determine if the allegations fall within the purview of this policy. If this is not the case, the Head of the Response should inform the Source in writing and, whenever possible, refer the Source to the appropriate body that may be in a position to assist him/her (e.g. the Human Resources Branch for harassment or discrimination cases). It is the responsibility of the Source to then contact the appropriate body.

B.6 Nature of Information

If the allegations fall within the purview of this Policy, the next step is to determine whether the information presented does justify further action.

An allegation may be impossible to pursue without further information, which cannot be obtained because either the Source is anonymous and the facts are not publicly available nor otherwise independently verifiable, or the Source refuses or is unable to provide additional information. NRC will not pursue an anonymous allegation without separate substantiating information.

When this is the case, the process may be halted upon submission of a written report to the responsible VP (if this VP is not the Head of the Response), the General Manager of the Portfolio concerned and the Secretary General. The Head of the Response will also inform the Source in writing that the process is not being pursued. The person targeted by the allegations (the "Respondent") will be informed that the process is not being pursued if, and only if, that person is already aware of the allegation.

It should be noted that mere weakness of information is not a reason for halting the process at this stage, since the next stage is dedicated to the collection of relevant information.

B.7 Notification to SEC

When a decision is made to move to the Fact-Finding Stage, the Head of the Response will notify the NRC Senior Executive Committee (SEC) of the decision.

It should be stressed in such communications that a decision to move to a Fact-Finding Stage does not amount to a finding of fault or misconduct.

B.8 Other NRC Portfolio or Other Organizations

Before moving to the next step, the preliminary assessment should determine if other NRC research portfolios and/or other organisation(s) are involved, and how they will be involved in the process.

The Head of the Response and his/her counterpart in another organization(s) involved in the matter should examine their respective policies to identify any significant differences and ensure, as much as possible, compliance with the highest standards of both policies.

C.1 Purpose

The objective of this stage is to collect information about the alleged research misconduct and research activities, to protect any relevant material and to have these examined by a restricted panel. The role of the Fact-Finding Panel is to evaluate the evidence submitted to it and the testimonies obtained during the Fact-Finding stage. Normally, the Panel is asked to determine whether a full Investigation is warranted, and not to decide whether misconduct definitely occurred and who is involved.

C.2 Timeline

The Fact-Finding Stage begins after the notification to the SEC committee. This stage may require up to 135 calendar days.

C.3 Head of the Response

The Head of the Response is responsible for:

1. appointing of a Fact-Finding Assessor;
2. notifying the Respondent;
3. appointing the Fact-Finding Panel;
4. facilitating the role of the Fact-Finding Assessor and the Fact-Finding Panel whenever necessary; and
5. inviting the persons that might be interviewed to cooperate with the Fact-Finding Assessor and/or the Fact-Finding Panel.

Through the whole process, the Fact-Finding Assessor and the Chair of the Fact-Finding Panel will report to the Head of the Response on developments in the process.

If administrative actions are considered (regarding the Source, the Respondent, or other persons involved), they will be taken by the responsible GM in consultation with the responsible VP (and/or the Head of the Response) and, if appropriate, the VP of the Human Resources Branch and/or the Director of NRC Legal Services.

The Head of the Response should contact the Director of NRC Legal Services at the very beginning of the Fact-Finding Stage to inform them of the process and have a resource person identified if a legal intervention or advice is needed.

The Head of the Response should also contact the NRC Access to Information and Privacy (ATIP) Office in order to take appropriate measures to protect personal information throughout the process.

C.4 Appointment of a Fact-Finding Assessor

The Head of the Response will appoint a Fact-Finding Assessor, to assist in conducting the Fact-Finding Stage, within five (5) days following the notification to SEC. The Fact-Finding Assessor may be an employee of NRC or an external person that has experience with allegations of non-compliance with organizational policies. No conflict of interest should exist or appear to exist on the part of the Fact-Finding Assessor. The

Fact-Finding Assessor should have a scientific background or sufficient knowledge in the area under discussion to accurately report the discussions. The Fact-Finding Assessor is responsible for taking prompt and firm action to obtain and preserve tangible evidence, including, when required, elements belonging to NRC that might have been removed from NRC's premises.

The Fact-Finding Assessor will conduct a first set of interviews with the persons involved. When meeting with the Respondent and witnesses, the Fact-Finding Assessor shall be accompanied by another person, normally an NRC Labour Relations Officer, to reduce the risk of conflicting interpretations of the conversations.

The Fact-Finding Assessor will gather the following information:

1. documentary evidence such as laboratory notebooks and specimens as well as computer files related to the laboratory work (and obtained in accordance with NRC policies in this regard);
2. complete information on any external funding for the research activities related to the allegation;
3. statements from people who may know relevant facts. The Respondent or any possible witness should be informed that they are not required to make a statement. However, everyone will be made aware that a lack of cooperation will not impede the proceedings. No statement will be accepted "in confidence." The Fact-Finding Assessor will provide the complete file to the Head of the Response, including the Fact-Finding Assessor's notes. Preferably, the Fact-Finding Assessor will also act as the Secretary of the Fact-Finding Panel.

C.5 Notification to the Respondent

The Head of the Response will inform the Respondent, in writing, that a Fact-Finding will be undertaken, with a copy to the General Manager concerned. A copy of this policy should be attached. The notification will not normally include the identity of the Source at this stage. The notification will include the name of the Fact-Finding Assessor and explain the role of this person. This should be done within ten (10) days after the notification to SEC.

C.6 Appointment of the Fact-Finding Panel

The Head of the Response will appoint a Fact-Finding Panel. The Head of the Response should be in a position to propose the composition of the Fact-Finding Panel within ten (10) calendar days after having informed the SEC on the decision to move to the Fact-Finding Stage.

The Head of the Response is responsible for notifying the Respondent of the proposed panel membership to give the Respondent an opportunity to object to a proposed member based on a personal, professional or financial conflict of interest. The period for submitting objections should be limited to ten (10) calendar days. The Head of the Response will make the final determination of whether a conflict exists.

The Panel will consist of at least two senior persons, but not the Fact-Finding Assessor. One member of the Panel should be from an external organization and have experience with cases of suspected research misconduct. On specific issues, the Panel may consult other experts. The Panel may request the assistance of subject matter experts on an ad

hoc basis, regarding the quality and originality of the research and the methods used, the authenticity and originality of purported results, and/or the named authors' actual contribution to the work. The Head of the Response should be allowed to observe the Fact-Finding Panel Process but should not be a member of the Panel.

C.7 Fact-Finding Panel Process

At its first meeting, the Panel will be briefed by the Head of the Response on the case and related issues, will review its mandate, will confirm the need for the Fact-Finding, and will develop a working plan.

The Head of the Response will make the complete file, including the Fact-Finding Assessor's notes, available to the Panel members, after a review of the document by the NRC Access to Information and Privacy (ATIP) Office, to ensure compliance with the Privacy Act. This kind of review should also take place at later stages when other documents are distributed.

The Head of the Response will summon the Respondent to an interview before the Panel to discuss the allegations. If there is more than one person suspected of research misconduct, they shall be interviewed individually. The Panel will also normally interview the Source of allegations and key witnesses as well as examine relevant research records and materials.

Throughout the Fact-Finding Stage, the Head of the Response will review the situation and determine if interim administrative actions need to be taken to prevent any harm to NRC, its clients and/or collaborators, and/or the research community in general. Such actions might include the suspension of research project(s), notifications to external parties and the temporary withdrawal of papers submitted for publication. Before any action is taken involving external parties, the Head of the Response will consult with the Director of NRC Legal Services.

C.8 Outcome of the Fact-Finding Panel

At the end of the Fact-Finding, the Panel will submit a written report to the Head of the Response that will provide the relevant background information on the case, a description of the allegation, a review of the evidence, a summary of the testimonies and the rationale for a decision to undertake or not to undertake a full Investigation. All written statements will be attached. The Fact-Finding Panel has 60 days for the interviews and the draft report.

A recommendation not to proceed with a full Investigation might result from a partial or complete admission of responsibility by the Respondent, to the Panel's satisfaction. In such a case, the Panel's report might include proposed corrective action. The role of the Fact-Finding Assessor and the Fact-Finding panel will then be fulfilled and the Head of the Response will finalize the file. Depending on the case, a report to NRC clients and collaborators, national and international, including the U.S. Office of Research Integrity, might be in order. The necessity for this action will be determined by the responsible NRC Vice-President.

If the Panel's conclusion is that a full Investigation is warranted, the Head of the Response will consult with the Head of NRC Legal Services to ensure that the Panel's draft report establishes reasonable grounds for an investigation. If there are doubts, the Panel should meet with the Head of Legal Services to review the issues before sharing its report with other concerned parties.

The Head of the Response will send a copy of the draft report () to the Respondent for comments within ten (10) days. These comments will be forwarded to the Panel and, on that basis, the report will be finalized. Copies of the final report will be made available, in confidence, to the Respondent, the President of NRC, the Secretary General, the GM of the portfolio concerned and the VP of the Human Resources Branch.

C.9 Conclusion

If the case is concluded at this point, the VP of Human Resources, in consultation with the Portfolio General Manager, will monitor the situation for a period of up to one (1) year by, for example, providing a contact point for the parties involved to ensure that any residual or new human resources issues that might arise after the closure of the case are promptly and adequately addressed.

D.1 Purpose

The role of the Investigation Committee is to develop a factual record by exploring the allegations in detail and examining the evidence in depth, leading to recommended findings on whether research misconduct has been committed, by whom and to what extent. The Investigation Committee should also determine whether there are additional instances of possible research misconduct that would justify broadening the scope beyond the initial allegations. This might include a review of previous scientific work published by the Respondent.

D.2 Timeline

The Investigation Stage begins at the time of the submission of the final report of the Fact-Finding Panel. This stage may require up to 210 calendar days.

D.3 Head of the Response

The Head of the Response is responsible for:

1. notifying the agencies concerned;
2. appointing the members of the Investigation Committee;
3. allowing the Respondent to comment on the Committee's membership;
4. convening the first meeting of the Committee;
5. providing the Respondent with a confidential copy of the Committee's draft report;
6. helping the Committee finalize its report, taking into account the Respondent's input;
7. drafting a proposed response to the Committee's recommendations;
8. forwarding the report and the proposed response to the President and the Secretary General;
9. conveying NRC's questions, requests or decisions to the Committee; and
10. informing the Respondent of the final decisions, with a copy of the final report

D.4 External notifications

If the allegation of research misconduct proceeds to the Investigation Stage, and if the research which is alleged to be tainted by research misconduct was ever supported by funding from any agency that requires reports of research misconduct, the Head of the Response must, before the Investigation, notify that agency. The notification would indicate that NRC is conducting a review into an allegation of research misconduct and that the results of this review will be communicated when available.

If the agency, client, or collaborator has no stated requirement for notification about reports of research misconduct, the Head of the Response should consider whether notification would nevertheless be appropriate at an early stage. If a notice is sent, the Head of the Response should indicate that appropriate interim administrative actions are being taken to protect the external funding interests and to ensure that the purposes of the external body's assistance are being carried out.

D.5 Investigation Committee

If the Head of the Response decides to undertake a full Investigation, he or she will appoint the members of the Investigation Committee as soon as possible after the Fact-Finding Panel has submitted its final report. Members of the Fact-Finding Panel should not serve again on the Investigation Committee as a broader membership will likely be needed in order to provide a sufficient range of expertise and experience and the Respondent should be informed of the membership of the Investigation Committee. At least two members should be from outside NRC. The Secretary General would normally be a member. Also, NRC Legal Services may assist the Investigation Committee members on procedural and evidentiary issues. It may be prudent for NRC Legal Services be present when the Respondent or witnesses opt to be accompanied by lawyers when being interviewed.

NRC will take every appropriate measure to protect the Source of an allegation of research misconduct from reprisal and to keep personal information confidential. However, the Source must be prepared to be identified in the Investigation Stage. The decision on whether the Source would be named and be made known during the Investigation Stage will be taken by the Head of the Response in each case in consultation with the Director of NRC Legal Services. In such cases, the Source will be informed in advance.

Whenever appropriate and feasible, consideration should be given to the appointment of a Chair from among the external members of the Committee.

D.6 Comments on Committee Membership

The Head of the Response will give the Respondent an opportunity to comment on the proposed Investigation Committee membership, within a period of ten (10) days. Once the membership decisions are finalized, the Head of the Response will convene the first meeting of the Investigation Committee to review the mandate of the Committee, to develop a work plan and to address any issues that could be raised by members.

D.7 Expectations

The Investigation Committee is expected to:

1. use diligent efforts to ensure that the process is thorough and sufficiently documented and includes examination of all research records and evidence relevant to reaching a decision on the merits of each allegation;
2. take reasonable steps to ensure an impartial and unbiased process to the maximum extent practical;
3. interview each Respondent, the Source of allegations, and any other available person who has been identified as having information regarding any relevant aspects of the situation, including witnesses identified by the Respondent;
4. make a record of each interview, provide the record to the persons interviewed for review, and include the record of such interviews in the documentation of the procedure; and
5. pursue diligently all significant issues and leads discovered that are determined relevant to the review, including evidence of any additional instances of possible research misconduct, and continue the process to completion.

D.8 Preliminary Report

At the end of the Investigation Stage, the Committee will submit to the Head of the Response a written draft report describing the allegations, the nature of the research (including any relevant external collaborations or external funding interests) and the evidence reviewed, as well as a statement of findings for each allegation of research misconduct identified during the process.

D.9 Statement of Findings

Each statement of findings must:

1. identify clearly the Respondent(s);
2. identify whether the research misconduct was falsification, fabrication or plagiarism, and whether it was committed intentionally, knowingly, or recklessly;
3. summarize the facts and the analysis that support the conclusion;
4. consider the merits of any reasonable explanation by the Respondent to establish by a preponderance of the evidence that the alleged misconduct was rather the result of honest errors or differences of opinion; and
5. identify whether any publication needs correction or retraction.

In addition to the statement of findings, the Investigation Committee will normally make recommendations on the research activities related to the matter but should refrain from recommending specific disciplinary measures unless specifically requested to do so by the Head of Response.

D.10 Delay

The draft Investigation Report should be completed within 120 calendar days after the appointment of the Investigation Committee is finalized.

D.11 Respondent's Comments

The Head of the Response will give to the Respondent confidential copies of the draft report, including a copy of, or supervised access to, the evidence on which the case is based. The Respondent will have thirty (30) calendar days to provide written comments.

D.12 Final Report

The Head of the Response will assist the Investigation Committee in finalizing the report, will ensure that the comments of the Respondent are included and considered, and will forward the report to the Secretary General and to the President of NRC.

D.13 NRC Decision

Following consultations with the President and other NRC officials as appropriate, the Head of the Response will inform in writing the Investigation Committee of NRC's decisions regarding the Committee's findings and recommendations. If these decisions are different from the Committee's findings and recommendations, the Head of the Response will explain the basis for the decisions. Alternatively, the Head of the Response may return the report to the Investigation Committee with a request for further fact-finding or analysis.

D.14 Notification to Respondent

When a final decision on the case has been reached, the Head of the Response will notify the Respondent in writing and provide him/her with a copy of the final report.

D.15 Request for Review

Requests for a formal review of the report and findings of an Investigation Committee can be made by a Respondent or other concerned parties to the President of NRC within twenty (20) calendar days of receipt of the Report and must be based upon a failure to follow appropriate procedures or significant new information. The President will not substitute his judgment for the judgment of an Investigation Committee. The President's only recourse, upon finding the request for review to be justified, is to establish a new Investigation Committee which will examine all evidence, including any significant new information put forward by the parties concerned.

D.16 Other Organizations

A report on the outcome of the Investigation must be sent to all organizations that have received or should have received preliminary notification of the Investigation.

15 October 2013