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NATIONAL INSTRUMENT 52-109 CERTIFICATION OF DISCLOSURE IN ISSUERS' ANNUAL AND INTERIM FILINGS

PART 1 – DEFINITIONS AND APPLICATION

1.1 Definitions

In this Instrument

“AIF” has the meaning ascribed to it in NI 51-102;

“accounting principles” has the meaning ascribed to it in NI 52-107;

“annual certificate” means the certificate required to be filed under Part 4 or section 6.1;

“annual filings” means an issuer’s AIF, if any, its annual financial statements and its annual MD&A filed under securities legislation for a financial year, including, for greater certainty, all documents and information that are incorporated by reference in the AIF;

“annual financial statements” means the annual financial statements required to be filed under NI 51-102;

“certifying officer” means each chief executive officer and each chief financial officer of an issuer, or in the case of an issuer that does not have a chief executive officer or a chief financial officer, each individual performing similar functions to those of a chief executive officer or chief financial officer;

“DC&P” means disclosure controls and procedures;

“disclosure controls and procedures” means controls and other procedures of an issuer that are designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other

reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in the securities legislation and include controls and procedures designed to ensure that information required to be disclosed by an issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is accumulated and communicated to the issuer's management, including its certifying officers, as appropriate to allow timely decisions regarding required disclosure;

"financial period" means a financial year or an interim period;

"financial statements" has the meaning ascribed to it in section 1.1 of NI 51-102;

"ICFR" means internal control over financial reporting;

"internal control over financial reporting" means a process designed by, or under the supervision of, an issuer's certifying officers, and effected by the issuer's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP and includes those policies and procedures that:

- (a) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the issuer;
- (b) are designed to provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with the issuer's GAAP, and that receipts and expenditures of the issuer are being made only in accordance with authorizations of management and directors of the issuer; and
- (c) are designed to provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the issuer's assets that could have a material effect on the annual financial statements or interim financial reports;

"interim certificate" means the certificate required to be filed under Part 5 or section 6.2;

"interim filings" means an issuer's interim financial report and its interim MD&A filed under securities legislation for an interim period;

"interim financial report" means the interim financial report required to be filed under NI 51-102;

"interim period" has the meaning ascribed to it in NI 51-102;

"issuer's GAAP" has the meaning ascribed to it in NI 52-107;

"marketplace" has the meaning ascribed to it in National Instrument 21-101 *Marketplace Operation*;

"material weakness" means a deficiency, or a combination of deficiencies, in ICFR such that there is a reasonable possibility that a material misstatement of the reporting issuer's annual financial statements or interim financial report will not be prevented or detected on a timely basis;

"MD&A" has the meaning ascribed to it in NI 51-102;

"NI 51-102" means National Instrument 51-102 *Continuous Disclosure Obligations*;

"NI 52-107" means National Instrument 52-107 *Acceptable Accounting Principles and Auditing Standards*;

"non-venture issuer" means a reporting issuer that is not a venture issuer;

"proportionately consolidated entity" means an entity in which an issuer has an interest that is accounted for by combining, on a line-by-line basis, the issuer's *pro rata* share of each of the assets, liabilities, revenue and expenses of the entity with similar items in the issuer's financial statements;

"reverse takeover" has the meaning ascribed to it in NI 51-102;

"reverse takeover acquiree" has the meaning ascribed to it in NI 51-102;

"reverse takeover acquirer" has the meaning ascribed to it in NI 51-102;

"Sarbanes-Oxley Act" means the Sarbanes-Oxley Act of 2002 of the United States of America, Pub.L. 107-204, 116 Stat. 745 (2002), as amended from time to time;

"special purpose entity" has, in respect of an issuer, the meaning ascribed to that term in the issuer's GAAP;

"SOX 302 Rules" means U.S. federal securities laws implementing the annual report certification requirements in section 302(a) of the Sarbanes-Oxley Act;

"SOX 404 Rules" means U.S. federal securities laws implementing the internal control report requirements in sections 404(a) and (b) of the Sarbanes-Oxley Act;

"U.S. marketplace" has the meaning ascribed to it in NI 51-102; and

"venture issuer" means a reporting issuer that, as at the end of the period covered by the annual or interim filings, as the case may be, did not have any of its securities listed or quoted on any of the Toronto Stock Exchange, Aequitas NEO Exchange Inc., a U.S. marketplace, or a marketplace outside of Canada and the United States of America other than the Alternative Investment Market

of the London Stock Exchange or the PLUS markets operated by PLUS Markets Group plc.

1.2 Application

- (1) This Instrument applies to a reporting issuer other than an investment fund.
- (2) This Instrument applies in respect of annual filings and interim filings for financial periods ending on or after December 15, 2008.

PART 2 – CERTIFICATION OBLIGATION

2.1 Certifying officers' certification obligation

Each certifying officer must certify the matters prescribed by the required form that must be filed under Part 4 or Part 5.

PART 3 – DC&P AND ICFR

3.1 Establishment and maintenance of DC&P and ICFR

A non-venture issuer must establish and maintain DC&P and ICFR.

3.2 MD&A disclosure of material weakness

Despite section 3.1, if a non-venture issuer determines that it has a material weakness which exists as at the end of the period covered by its annual or interim filings, as the case may be, it must disclose in its annual or interim MD&A for each material weakness

- (a) a description of the material weakness;
- (b) the impact of the material weakness on the issuer's financial reporting and its ICFR; and
- (c) the issuer's current plans, if any, or any actions already undertaken, for remediating the material weakness.

3.3 Limitations on scope of design

- (1) Despite section 3.1, a non-venture issuer may limit its design of DC&P or ICFR to exclude controls, policies and procedures of
 - (a) subject to subsection (3), a proportionately consolidated entity or a special purpose entity in which the issuer has an interest; or

- (b) subject to subsection (4), a business that the issuer acquired not more than 365 days before the end of the financial period to which the certificate relates.
- (2) An issuer that limits its design of DC&P or ICFR under subsection (1) must disclose in its MD&A
 - (a) the limitation; and
 - (b) summary financial information about the proportionately consolidated entity, special purpose entity or business that the issuer acquired that has been proportionately consolidated or consolidated in the issuer's financial statements.
- (3) An issuer must not limit its design of DC&P or ICFR under paragraph (1)(a) except where the certifying officers would not have a reasonable basis for making the representations in the annual or interim certificates because they do not have sufficient access to a proportionately consolidated entity or special purpose entity, as applicable, to design and evaluate controls, policies and procedures carried out by that entity.
- (4) An issuer must not limit its design of DC&P or ICFR under paragraph (1)(b) except in the case of
 - (a) an annual certificate relating to the financial year in which the issuer acquired the business; and
 - (b) an interim certificate relating to the first, second or third interim period ending on or after the date the issuer acquired the business.

3.4 Use of a control framework for the design of ICFR

- (1) A non-venture issuer must use a control framework to design the issuer's ICFR.
- (2) If a venture issuer files a Form 52-109F1 or Form 52-109F2 for a financial period, the venture issuer must use a control framework to design the issuer's ICFR.

PART 4 – CERTIFICATION OF ANNUAL FILINGS

4.1 Requirement to file

- (1) A reporting issuer must file a separate annual certificate in the wording prescribed by the required form
 - (a) for each individual who, at the time of filing the annual certificate, is a certifying officer; and

- (b) signed by the certifying officer.
- (2) A reporting issuer must file a certificate required under subsection (1) on the later of the dates on which it files the following:
 - (a) its AIF if it is required to file an AIF under NI 51-102; or
 - (b) its annual financial statements and annual MD&A.
- (3) If a venture issuer voluntarily files an AIF for a financial year after it has filed its annual financial statements, annual MD&A and annual certificates for the financial year, the venture issuer must file on the same date that it files its AIF a separate annual certificate in the wording prescribed by the required form
 - (a) for each individual who, at the time of filing the annual certificate, is a certifying officer; and
 - (b) signed by the certifying officer.
- (4) A reporting issuer must file a certificate required under subsection (1) or (3) separately from the documents to which the certificate relates.

4.2 Required form of annual certificate

- (1) The required form of annual certificate under subsection 4.1(1) is
 - (a) Form 52-109F1, in the case of an issuer that is a non-venture issuer; and
 - (b) Form 52-109FV1, in the case of an issuer that is a venture issuer.
- (2) Despite subsection (1)(b), a venture issuer may file Form 52-109F1 in the wording prescribed by that Form instead of Form 52-109FV1 for a financial year.
- (3) The required form of annual certificate under subsection 4.1(3) is Form 52-109F1 – AIF.

4.3 Alternative form of annual certificate for first financial period after initial public offering

Despite subsection 4.2(1), an issuer may file an annual certificate in Form 52-109F1 – IPO/RTO for the first financial year that ends after the issuer becomes a reporting issuer if

- (a) the issuer becomes a reporting issuer by filing a prospectus; and

- (b) the first financial period that ends after the issuer becomes a reporting issuer is a financial year.

4.4 Alternative form of annual certificate for first financial period after certain reverse takeovers

Despite subsection 4.2(1), an issuer may file an annual certificate in Form 52-109F1 – IPO/RTO for the first financial year that ends after the completion of a reverse takeover if

- (a) the issuer is the reverse takeover acquiree in the reverse takeover;
- (b) the reverse takeover acquirer was not a reporting issuer immediately before the reverse takeover; and
- (c) the first financial period that ends after the completion of the reverse takeover is a financial year.

4.5 Alternative form of annual certificate for first financial period after becoming a non-venture issuer

Despite subsection 4.2(1), an issuer may file an annual certificate in Form 52-109F1 – IPO/RTO for the first financial year that ends after the issuer becomes a non-venture issuer if the first financial period that ends after the issuer becomes a non-venture issuer is a financial year.

4.6 Exception for new reporting issuers

Despite section 4.1, a reporting issuer does not have to file an annual certificate relating to

- (a) the annual financial statements required under section 4.7 of NI 51-102 for financial years that ended before the issuer became a reporting issuer; or
- (b) the annual financial statements for a reverse takeover acquirer required under section 4.10 of NI 51-102 for financial years that ended before the completion of the reverse takeover.

PART 5 CERTIFICATION OF INTERIM FILINGS

5.1 Requirement to file

- (1) A reporting issuer must file a separate interim certificate in the wording prescribed by the required form

- (a) for each individual who, at the time of filing the interim certificate, is a certifying officer; and
 - (b) signed by the certifying officer.
- (2) A reporting issuer must file a certificate required under subsection (1) on the same date that the issuer files its interim filings.
- (3) A reporting issuer must file a certificate required under subsection (1) separately from the documents to which the certificate relates.

5.2 Required form of interim certificate

- (1) The required form of interim certificate under subsection 5.1(1) is
 - (a) Form 52-109F2, in the case of an issuer that is a non-venture issuer; and
 - (b) Form 52-109FV2, in the case of an issuer that is a venture issuer.
- (2) Despite subsection (1)(b), a venture issuer may file Form 52-109F2 in the wording prescribed by that Form instead of Form 52-109FV2 for an interim period.

5.3 Alternative form of interim certificate for first financial period after initial public offering

Despite subsection 5.2(1), an issuer may file an interim certificate in Form 52-109F2 – IPO/RTO for the first interim period that ends after the issuer becomes a reporting issuer if

- (a) the issuer becomes a reporting issuer by filing a prospectus; and
- (b) the first financial period that ends after the issuer becomes a reporting issuer is an interim period.

5.4 Alternative form of interim certificate for first financial period after certain reverse takeovers

Despite subsection 5.2(1), an issuer may file an interim certificate in Form 52-109F2 – IPO/RTO for the first interim period that ends after the completion of a reverse takeover if

- (a) the issuer is the reverse takeover acquiree in the reverse takeover; and
- (b) the reverse takeover acquirer was not a reporting issuer immediately before the reverse takeover; and

- (c) the first financial period that ends after the completion of the reverse takeover is an interim period.

5.5 Alternative form of interim certificate for first financial period after becoming a non-venture issuer

Despite subsection 5.2(1), an issuer may file an interim certificate in Form 52-109F2 – IPO/RTO for the first interim period that ends after the issuer becomes a non-venture issuer if the first financial period that ends after the issuer becomes a non-venture issuer is an interim period.

5.6 Exception for new reporting issuers

Despite section 5.1, a reporting issuer does not have to file an interim certificate relating to

- (a) the interim financial reports required under section 4.7 of NI 51-102 for interim periods that ended before the issuer became a reporting issuer; or
- (b) the interim financial reports for a reverse takeover acquirer required under section 4.10 of NI 51-102 for interim periods that ended before the completion of the reverse takeover.

PART 6 – REFILED FINANCIAL STATEMENTS, MD&A OR AIF

6.1 Refiled annual financial statements, annual MD&A or AIF

If an issuer refiles its annual financial statements, annual MD&A or AIF for a financial year, it must file separate annual certificates for that financial year in Form 52-109F1R on the date that it refiles the annual financial statements, annual MD&A or AIF, as the case may be.

6.2 Refiled interim financial report or interim MD&A

If an issuer refiles its interim financial report or interim MD&A for an interim period, it must file separate interim certificates for that interim period in Form 52-109F2R on the date that it refiles the interim financial report or interim MD&A, as the case may be.

PART 7 GENERAL REQUIREMENTS FOR CERTIFICATES

7.1 Dating of certificates

A certifying officer must date a certificate filed under this Instrument the same date the certificate is filed.

7.2 French or English

- (1) A certificate filed by an issuer under this Instrument must be in French or in English.
- (2) In Québec, an issuer must comply with linguistic obligations and rights prescribed by Québec law.

PART 8 – EXEMPTIONS

8.1 Exemption from annual requirements for issuers that comply with U.S. laws

- (1) Subject to subsection (2), Parts 2, 3, 4, 6 and 7 do not apply to an issuer for a financial year if
 - (a) the issuer is in compliance with the SOX 302 Rules and the issuer files signed certificates relating to its annual report under the 1934 Act separately, but concurrently, and as soon as practicable after they are filed with or furnished to the SEC; and
 - (b) the issuer is in compliance with the SOX 404 Rules, and the issuer files management's annual report on internal control over financial reporting and the attestation report on management's assessment of internal control over financial reporting included in the issuer's annual report under the 1934 Act for the financial year, if applicable, as soon as practicable after they are filed with or furnished to the SEC.
- (2) Despite subsection (1), Parts 2, 3, 4, 6 and 7 apply to an issuer for a financial year if the issuer's annual financial statements, annual MD&A or AIF, that together comprise the issuer's annual filings, differ from the annual financial statements, annual MD&A or AIF filed with or furnished to the SEC, or included as exhibits to other documents filed with or furnished to the SEC, and certified in compliance with the SOX 302 Rules.

8.2 Exemption from interim requirements for issuers that comply with U.S. laws

- (1) Subject to subsection (3), Parts 2, 3, 5, 6 and 7 do not apply to an issuer for an interim period if the issuer is in compliance with the SOX 302 Rules and the issuer files signed certificates relating to its quarterly report under the 1934 Act for the quarter separately, but concurrently, and as soon as practicable after they are filed with or furnished to the SEC.
- (2) Subject to subsection (3), Parts 2, 3, 5, 6 and 7 do not apply to an issuer for an interim period if

- (a) the issuer files with or furnishes to the SEC a report on Form 6-K containing the issuer's quarterly financial statements and MD&A;
 - (b) the Form 6-K is accompanied by signed certificates that are filed with or furnished to the SEC in the same form required by the SOX 302 Rules; and
 - (c) the issuer files signed certificates relating to the quarterly report filed or furnished under cover of the Form 6-K as soon as practicable after they are filed with or furnished to the SEC.
- (3) Despite subsections (1) and (2), Parts 2, 3, 5, 6 and 7 apply to an issuer for an interim period if the issuer's interim financial report or interim MD&A, that together comprise the issuer's interim filings, differ from the interim financial report or interim MD&A filed with or furnished to the SEC, or included as exhibits to other documents filed with or furnished to the SEC, and certified in compliance with the SOX 302 Rules.

8.3 Exemption for certain foreign issuers

This Instrument does not apply to an issuer if it qualifies under, and is in compliance with, sections 5.4 and 5.5 of National Instrument 71-102 *Continuous Disclosure and Other Exemptions Relating to Foreign Issuers*.

8.4 Exemption for certain exchangeable security issuers

This Instrument does not apply to an issuer if it qualifies under, and is in compliance with, subsection 13.3(2) of NI 51-102.

8.5 Exemption for certain credit support issuers

This Instrument does not apply to an issuer if it qualifies under, and is in compliance with, subsection 13.4(2) of NI 51-102.

8.6 General exemption

- (1) The regulator or securities regulatory authority may grant an exemption from this Instrument, in whole or in part, subject to such conditions or restrictions as may be imposed in the exemption.
- (2) Despite subsection (1), in Ontario only the regulator may grant such an exemption.
- (3) Except in Ontario, an exemption referred to in subsection (1) is granted under the statute referred to in Appendix B of National Instrument 14-101 *Definitions* opposite the name of the local jurisdiction.

PART 9 – EFFECTIVE DATE AND REPEAL

9.1 Effective date

This Instrument comes into force on December 15, 2008.

9.2 Repeal

Multilateral Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*, which came into force on

- (a) March 30, 2004, in all jurisdictions other than British Columbia, New Brunswick and Québec,
- (b) June 30, 2005, in Québec,
- (c) July 28, 2005, in New Brunswick, and
- (d) September 19, 2005 in British Columbia,

is repealed.

FORM 52-109F1
CERTIFICATION OF ANNUAL FILINGS
FULL CERTIFICATE

I, <identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>, certify the following:

1. **Review:** I have reviewed the AIF, if any, annual financial statements and annual MD&A, including, for greater certainty, all documents and information that are incorporated by reference in the AIF (together, the "annual filings") of <identify issuer> (the "issuer") for the financial year ended <state the relevant date>.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the annual filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, for the period covered by the annual filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the annual financial statements together with the other financial information included in the annual filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the annual filings.
4. **Responsibility:** The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*, for the issuer.
5. **Design:** Subject to the limitations, if any, described in paragraphs 5.2 and 5.3, the issuer's other certifying officer(s) and I have, as at the financial year end
 - (a) designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that
 - (i) material information relating to the issuer is made known to us by others, particularly during the period in which the annual filings are being prepared; and
 - (ii) information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and

- (b) designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 **Control framework:** The control framework the issuer's other certifying officer(s) and I used to design the issuer's ICFR is *<insert the name of the control framework used>* .

<insert paragraph 5.2 or 5.3 if applicable. If paragraph 5.2 or 5.3 is not applicable, insert "5.2 N/A" or "5.3 N/A" as applicable. For paragraph 5.3, include (a)(i), (a)(ii) or (a)(iii) as applicable, and subparagraph (b).>

5.2 **ICFR – material weakness relating to design:** The issuer has disclosed in its annual MD&A for each material weakness relating to design existing at the financial year end

- (a) a description of the material weakness;
- (b) the impact of the material weakness on the issuer's financial reporting and its ICFR; and
- (c) the issuer's current plans, if any, or any actions already undertaken, for remediating the material weakness.

5.3 **Limitation on scope of design:** The issuer has disclosed in its annual MD&A

- (a) the fact that the issuer's other certifying officer(s) and I have limited the scope of our design of DC&P and ICFR to exclude controls, policies and procedures of
 - (i) a proportionately consolidated entity in which the issuer has an interest;
 - (ii) a special purpose entity in which the issuer has an interest; or
 - (iii) a business that the issuer acquired not more than 365 days before the issuer's financial year end; and
- (b) summary financial information about the proportionately consolidated entity, special purpose entity or business that the issuer acquired that has been proportionately consolidated or consolidated in the issuer's financial statements.

<insert subparagraph 6(b)(ii) if applicable. If subparagraph 6(b)(ii) is not applicable, insert "(ii) N/A".>

6. **Evaluation:** The issuer's other certifying officer(s) and I have

- (a) evaluated, or caused to be evaluated under our supervision, the effectiveness of the issuer’s DC&P at the financial year end and the issuer has disclosed in its annual MD&A our conclusions about the effectiveness of DC&P at the financial year end based on that evaluation; and
 - (b) evaluated, or caused to be evaluated under our supervision, the effectiveness of the issuer’s ICFR at the financial year end and the issuer has disclosed in its annual MD&A
 - (i) our conclusions about the effectiveness of ICFR at the financial year end based on that evaluation; and
 - (ii) for each material weakness relating to operation existing at the financial year end
 - (A) a description of the material weakness;
 - (B) the impact of the material weakness on the issuer’s financial reporting and its ICFR; and
 - (C) the issuer’s current plans, if any, or any actions already undertaken, for remediating the material weakness.
7. **Reporting changes in ICFR:** The issuer has disclosed in its annual MD&A any change in the issuer’s ICFR that occurred during the period beginning on *<insert the date immediately following the end of the period in respect of which the issuer made its most recent interim or annual filing, as applicable>* and ended on *<insert the last day of the financial year>* that has materially affected, or is reasonably likely to materially affect, the issuer’s ICFR.
8. **Reporting to the issuer’s auditors and board of directors or audit committee:** The issuer’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of ICFR, to the issuer’s auditors, and the board of directors or the audit committee of the board of directors any fraud that involves management or other employees who have a significant role in the issuer’s ICFR.

Date: *<insert date of filing>*

[Signature]
[Title]

<If the certifying officer’s title is not “chief executive officer” or “chief financial officer”, indicate in which of these capacities the certifying officer is providing the certificate.>

FORM 52-109FV1
CERTIFICATION OF ANNUAL FILINGS
VENTURE ISSUER BASIC CERTIFICATE

I, *<identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>*, certify the following:

1. **Review:** I have reviewed the AIF, if any, annual financial statements and annual MD&A, including, for greater certainty, all documents and information that are incorporated by reference in the AIF (together, the "annual filings") of *<identify issuer>* (the "issuer") for the financial year ended *<state the relevant date>*.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the annual filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, for the period covered by the annual filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the annual financial statements together with the other financial information included in the annual filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the annual filings.

Date: *<insert date of filing>*

[Signature]
[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>

NOTE TO READER

In contrast to the certificate required for non-venture issuers under National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109), this Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of

- i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed,

summarized and reported within the time periods specified in securities legislation;
and

- ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate. Investors should be aware that inherent limitations on the ability of certifying officers of a venture issuer to design and implement on a cost effective basis DC&P and ICFR as defined in NI 52-109 may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

FORM 52-109F1 – IPO/RTO
CERTIFICATION OF ANNUAL FILINGS FOLLOWING
AN INITIAL PUBLIC OFFERING, REVERSE TAKEOVER OR
BECOMING A NON-VENTURE ISSUER

I, *<identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>*, certify the following:

1. **Review:** I have reviewed the AIF, if any, annual financial statements and annual MD&A, including, for greater certainty, all documents and information that are incorporated by reference in the AIF (together, the "annual filings") of *<identify issuer>* (the "issuer") for the financial year ended *<state the relevant date>*.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the annual filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, for the period covered by the annual filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the annual financial statements together with the other financial information included in the annual filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the annual filings.

Date: *<insert date of filing>*

[Signature]

[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>

NOTE TO READER

In contrast to the usual certificate required for non-venture issuers under National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109), namely, Form 52-109F1, this Form 52-109F1 – IPO/RTO does not include representations relating to the establishment and maintenance of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of

- i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
- ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate.

Investors should be aware that inherent limitations on the ability of certifying officers of an issuer to design and implement on a cost effective basis DC&P and ICFR as defined in NI 52-109 in the first financial period following

- completion of the issuer's initial public offering in the circumstances described in s. 4.3 of NI 52-109;
- completion of a reverse takeover in the circumstances described in s. 4.4 of NI 52-109; or
- the issuer becoming a non-venture issuer in the circumstances described in s. 4.5 of NI 52-109;

may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

**FORM 52-109F1R
CERTIFICATION OF REFILED ANNUAL FILINGS**

This certificate is being filed on the same date that *<identify the issuer>* (the "issuer") has refiled *<identify the filing(s) that have been refiled>*.

I, *<identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>*, certify the following:

1. **Review:** I have reviewed the AIF, if any, annual financial statements and annual MD&A, including, for greater certainty, all documents and information that are incorporated by reference in the AIF (together, the "annual filings") of the issuer for the financial year ended *<state the relevant date>*.

<Insert all paragraphs included in the annual certificates originally filed with the annual filings, other than paragraph 1. If the originally filed annual certificates were in Form 52-109FV1 or Form 52-109F1 – IPO/RTO, include the "note to reader" contained in Form 52-109FV1 or Form 52-109F1 – IPO/RTO, as the case may be, in this certificate.>

Date: *<insert date of filing>*

[Signature]

[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>

**FORM 52-109F1 – AIF
CERTIFICATION OF ANNUAL FILINGS
IN CONNECTION WITH VOLUNTARILY FILED AIF**

This certificate is being filed on the same date that *<identify the issuer>* (the “issuer”) has voluntarily filed an AIF.

I, *<identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer’s title is not “chief executive officer” or “chief financial officer”, indicate in which of these capacities the certifying officer is providing the certificate>*, certify the following:

1. **Review:** I have reviewed the AIF, annual financial statements and annual MD&A, including for greater certainty all documents and information that are incorporated by reference in the AIF (together, the “annual filings”) of the issuer for the financial year ended *<state the relevant date>*.

<Insert all paragraphs included in the annual certificates originally filed with the annual filings, other than paragraph 1. If the originally filed annual certificates were in Form 52-109FV1 or Form 52-109F1 – IPO/RTO, include the “note to reader” contained in Form 52-109FV1 or Form 52-109F1 – IPO/RTO, as the case may be, in this certificate.>

Date: *<insert date of filing>*

[Signature]

[Title]

<If the certifying officer’s title is not “chief executive officer” or “chief financial officer”, indicate in which of these capacities the certifying officer is providing the certificate.>

FORM 52-109F2
CERTIFICATION OF INTERIM FILINGS
FULL CERTIFICATE

I, <identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>, certify the following:

1. **Review:** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of <identify the issuer> (the "issuer") for the interim period ended <state the relevant date>.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.
4. **Responsibility:** The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*, for the issuer.
5. **Design:** Subject to the limitations, if any, described in paragraphs 5.2 and 5.3, the issuer's other certifying officer(s) and I have, as at the end of the period covered by the interim filings
 - (a) designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that
 - (i) material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared; and
 - (ii) information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and

- (b) designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 **Control framework:** The control framework the issuer's other certifying officer(s) and I used to design the issuer's ICFR is *<insert the name of the control framework used>*.

<insert paragraph 5.2 or 5.3 if applicable. If paragraph 5.2 or 5.3 is not applicable, insert "5.2 N/A" or "5.3 N/A" as applicable. For paragraph 5.3, include (a)(i), (a)(ii) or (a)(iii) as applicable, and subparagraph (b).>

5.2 **ICFR – material weakness relating to design:** The issuer has disclosed in its interim MD&A for each material weakness relating to design existing at the end of the interim period

- (a) a description of the material weakness;
- (b) the impact of the material weakness on the issuer's financial reporting and its ICFR; and
- (c) the issuer's current plans, if any, or any actions already undertaken, for remediating the material weakness.

5.3 **Limitation on scope of design:** The issuer has disclosed in its interim MD&A

- (a) the fact that the issuer's other certifying officer(s) and I have limited the scope of our design of DC&P and ICFR to exclude controls, policies and procedures of
 - (i) a proportionately consolidated entity in which the issuer has an interest;
 - (ii) a special purpose entity in which the issuer has an interest; or
 - (iii) a business that the issuer acquired not more than 365 days before the last day of the period covered by the interim filings; and
- (b) summary financial information about the proportionately consolidated entity, special purpose entity or business that the issuer acquired that has been proportionately consolidated or consolidated in the issuer's financial statements.

6. **Reporting changes in ICFR:** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on *<insert the date immediately following the end of the period in respect of which the issuer made its most recent interim or annual filing, as applicable >* and ended

on *<insert the last day of the period covered by the interim filings >* that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: *<insert date of filing>*

[Signature]

[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>

FORM 52-109FV2
CERTIFICATION OF INTERIM FILINGS
VENTURE ISSUER BASIC CERTIFICATE

I, *<identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>*, certify the following:

1. **Review:** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of *<identify the issuer>* (the "issuer") for the interim period ended *<state the relevant date>*.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.

Date: *<insert date of filing>*

[Signature]
[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>

NOTE TO READER

In contrast to the certificate required for non-venture issuers under National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109), this Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of

- i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed,

summarized and reported within the time periods specified in securities legislation;
and

- ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate. Investors should be aware that inherent limitations on the ability of certifying officers of a venture issuer to design and implement on a cost effective basis DC&P and ICFR as defined in NI 52-109 may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

FORM 52-109F2 – IPO/RTO
CERTIFICATION OF INTERIM FILINGS FOLLOWING
AN INITIAL PUBLIC OFFERING, REVERSE TAKEOVER OR
BECOMING A NON-VENTURE ISSUER

I, <identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>, certify the following:

1. **Review:** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of <identify the issuer> (the "issuer") for the interim period ended <state the relevant date>.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.

Date: <insert date of filing>

[Signature]

[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>

NOTE TO READER

In contrast to the usual certificate required for non-venture issuers under National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109), namely, Form 52-109F2, this Form 52-109F2 – IPO/RTO does not include representations relating to the establishment and maintenance of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of

- i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
- ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate.

Investors should be aware that inherent limitations on the ability of certifying officers of an issuer to design and implement on a cost effective basis DC&P and ICFR as defined in NI 52-109 in the first financial period following

- completion of the issuer's initial public offering in the circumstances described in s. 5.3 of NI 52-109;
- completion of a reverse takeover in the circumstances described in s. 5.4 of NI 52-109; or
- the issuer becoming a non-venture issuer in the circumstances described in s. 5.5 of NI 52-109;

may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

FORM 52-109F2R
CERTIFICATION OF REFILED INTERIM FILINGS

This certificate is being filed on the same date that *<identify the issuer>* (the "issuer") has refiled *<identify the filing(s) that have been refiled>*.

I, *<identify (i) the certifying officer, (ii) his or her position at the issuer, (iii) the name of the issuer and (iv) if the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate>*, certify the following:

1. **Review:** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of the issuer for the interim period ended *<state the relevant date>*.

<Insert all paragraphs included in the interim certificates originally filed with the interim filings, other than paragraph 1. If the originally filed interim certificates were in Form 52-109FV2 or Form 52-109F2 – IPO/RTO, include the "note to reader" contained in Form 52-109FV2 or Form 52-109F2 – IPO/RTO, as the case may be, in this certificate .>

Date: *<insert date of filing>*

[Signature]
[Title]

<If the certifying officer's title is not "chief executive officer" or "chief financial officer", indicate in which of these capacities the certifying officer is providing the certificate.>