

Form 51-102F3
Material Change Report

Item 1 Name and Address of Company

ZEN Graphene Solutions Ltd. (the “**Company**”)
210 – 1205 Amber Drive
Thunder Bay, ON P7B 6M4

Item 2 Date of Material Change

September 22, 2020

Item 3 News Release

The news release was disseminated on September 22, 2020.

Item 4 Summary of Material Change

Item 5 Full Description of Material Change

Item 6 Reliance on subsection 7.1(2) of National Instrument 51-102

Neither subsection 7.1(2) nor (3) of National Instrument 51-102 is being relied upon.

Item 7 Omitted Information

No information has been omitted on the basis that it is confidential information.

Item 8 Executive Officer

Francis Dubé
Chief Executive Officer
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DATED: September 22, 2020

Schedule "A"

ZEN Graphene Solutions Develops Graphene-Based Ink with 99% Virucidal Activity against COVID-19

Guelph, ON – September 22, 2020, ZEN Graphene Solutions Ltd. ("ZEN" or the "**Company**") (TSXV:ZEN and OTC:ZENYF) is pleased to report that after 5 months of optimization, it has developed a novel graphene-based virucidal ink with 99% effectiveness against COVID-19.

Highlights:

- ZEN's Virucidal ink is 99% effective against the COVID-19 virus
- ZEN's Virucidal ink was still 99% effective a minimum of 35 days after application to N95 mask material
- ZEN is now developing plans to expedite commercialization of this product, pending regulatory approval.
- ZEN has filed a provisional patent for this graphene-based virucidal product
- ZEN invites PPE companies to reach out for potential partnerships to bring this new technology to market: Antiviralink@ZENGraphene.com
- ZEN is beginning antibacterial and antifungal tests utilizing its proprietary ink formulation

The company has received results from the latest round of testing of its proprietary, virucidal graphene-based ink formulation at Western University's ImPaKT facility Biosafety Level 3 laboratory. Two graphene-based ink samples at different concentrations were applied to N95 mask filtration media and then exposed to the SARS-CoV-2 virus that causes COVID-19 and tested for antiviral properties in accordance with ISO 18184:2019. Very significant virucidal activity was recorded and reported, achieving 99% inactivation of the virus for both samples in 3 separate tests each and verified through a second round of testing. Of significance, the antiviral effect of the second round of testing was on material that was prepared 35 days earlier demonstrating the ongoing virucidal activity of ZEN's proprietary ink. For those interested in seeing the report, please contact the company directly.

The research and development of this antiviral ink formulation was conducted entirely by ZEN's research team at its Guelph, Ontario facility using a graphene product that was produced from its Albany Pure™ Graphite.

ZEN is now developing plans to bring this novel virucidal ink to commercial production including working with regulatory authorities and government agencies to fast track this product to Canadian and global markets to help the fight against the Coronavirus pandemic. ZEN is expanding the testing of this graphene-based ink formulation to include pathogenic bacteria and fungi and will report on these tests as soon as the results are available.

CEO Dr. Francis Dube commented, "These recent results have dramatically exceeded our expectations with our ink achieving 99% virucidal activity against the SARS-CoV-2 virus 35 days after production of the samples. I am very proud of our Research and Development team for their exceptional work in developing this novel formulation. We are excited about the role our ink can play in the fight against this global pandemic and are moving quickly to mobilize our resources to bring this product to market."

For companies interested in adding this antiviral ink to their personal protective equipment manufacturing or other potential commercial applications, please send us an email at antiviralink@zengraphene.com

ZEN Graphene Solutions is seeking advanced applied graphene-related research projects where ZEN could support this research by providing customized graphene materials and, in some cases, funding in exchange for some commercialization rights to be negotiated. Please submit your proposals in confidence to researchproposals@ZENGraphene.com.

Disclaimer

The company is not making any express or implied claims that its products have the ability to cure or contain the COVID 19 virus at this time.

About ZEN Graphene Solutions Ltd.

ZEN is an emerging graphene technology solutions company with a focus on the development of graphene-based nanomaterial products and applications. The unique Albany Graphite Project provides the company with a potential competitive advantage in the graphene market as independent labs in Japan, UK, Israel, USA and Canada have independently demonstrated that ZEN's Albany Pure™ Graphite is an ideal precursor material which easily converts (exfoliates) to graphene, using a variety of mechanical, chemical and electrochemical methods.

For further information:

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To find out more about ZEN Graphene Solutions Ltd., please visit our website at www.ZENGraphene.com. A copy of this news release and all material documents in respect of the Company may be obtained on ZEN's SEDAR profile at www.sedar.ca.

Forward-Looking Statements

This news release contains forward-looking statements. Since forward-looking statements address future events and conditions, by their very nature they involve inherent risks and uncertainties. Although ZEN believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information, which only applies as of the date of this news release, and no assurance can be given that such events will occur in the disclosed time frames or at all. ZEN disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.