## August 03, 2021

Khaled EI-Domiaty, P.E.
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## Subject: Technical approval letter for "Enviro BRM ${ }^{\top M}$ Design Free Field Blast Load 10 psi-200msec" report (Stone Project\# 2002-004C)

Dear Mr. El-Domiaty,

Omega-Risk has performed a 3rd party review of the Blast Resistant Module (BRM) report by SPS titled "Enviro BRM ${ }^{\top M}$ Design Free Field Blast Load 10 psi, 200 msec", dated July 12, 2021.

As a part of the $3^{\text {rd }}$ party review and in addition to reviewing the report mentioned in the subject, OmegaRisk reviewed the following:

- SPS Enviro BRM ${ }^{\top \mathrm{M}}$ construction drawings (Rev. 4, General Revision, May 28, 2021).
- Detailed Single-Degree of Freedom (SDOF) calculations and design checks for the BRM.
- "Proprietary Extreme- WoodlamTM Panel Blast Test Report", dated October 5, 2016, by Stone OBL.
- "Stone Protective Solutions - Enviro BRMTM Blast Test Report", dated February 15, 2021, prepared by Stone Security Engineering for SPS.
- SAP2000 3D Model of the BRM.

Based on the review of the documents provided, Omega-Risk finds the design and analysis of the BRM acceptable per ASCE "Design of Blast-Resistant Buildings in Petrochemical Facilities" design procedures (and other widely used guidelines and references such as UFC 3-340-02, PDC-TR 06-08) and in compliance
with API RP 752/753 practices. Furthermore, Omega-Risk finds the blast test performed properly and confirms that the analytical results match the test results.

End user of the BRM to verify at site that the calculated horizontal sliding performance and effects (on a project basis) is acceptable in the event of a blast incident.

Sincerely,


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