June 27, 2022

VIA EDGAR

U.S. Securities and Exchange Commission Division of Corporation Finance Office of Energy and Transportation 100 F. Street NE Washington D.C. 20549 Attn: Irene Barberena-Meissner

Re: Astra Space, Inc.

Post-Effective Amendment No. 1 to Registration Statement on Form S-1

(Registration No. 333-257930)

Filed: May 5, 2022

Ladies and Gentlemen:

On behalf of our client, Astra Space, Inc. (the "Company"), we submit this letter in response to verbal comments (the "Supplemental Comments") the Company received from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") on June 22, 2022, relating to the above referenced Post-Effective Amendment No. 1 to Registration Statement on Form S-1 (the "Post-Effective Amendment") and which followed our correspondence to the Commission dated May 27, 2022 in response to verbal comments the Company received from the Staff on May 19, 2022. The Company's responses are set forth below. Page references in the text of our responses correspond to page numbers in the Post-Effective Amendment.

Verbal comment regarding request for additional disclosure

In response to the Supplemental Comments received from the Staff regarding certain disclosures related to the Company's inadvertent release of certain Company technical data (the "Incident"), the Company respectfully submits to the Staff the following revised disclosures that the Company intends to make in an amendment to the Post-Effective Amendment (changes marked from the version submitted on May 27, 2022) for consideration (the "Revised Disclosures").

(a) Revised Disclosure on page 30.

We are subject to stringent U.S. export and import control laws and regulations.

Our business is subject to stringent U.S. import and export control laws and regulations as well as economic sanctions laws and regulations. We are required to import and export our products, software, technology and services, as well as run our operations in the United States, in full compliance with such laws and regulations, which include the EAR, the ITAR, and economic sanctions administered by the Treasury Department's OFAC. Similar laws that impact our business exist in other jurisdictions. These foreign trade controls prohibit, restrict, or regulate our ability to, directly or indirectly, export, deemed export, re-export, deemed re-export or transfer certain hardware, technical data, technology, software, or services to certain countries and territories, entities, and individuals, and for end uses. We have had inadvertent disclosures of certain of our products or components which are subject to the requirements of these U.S. import and export control laws, including one which occurred recently (the "Recent Incident"). The Recent Incident relates to a disclosure of a photograph of one of our components. Our practice is to provide a voluntary disclosure to the appropriate regulatory authority when such an inadvertent disclosure occurs and, in the case of the Recent Incident, we did provide an initial voluntary disclosure notification to the appropriate regulatory agency. This regulatory agency has not yet responded to our initial voluntary disclosure notification and we do not know when this regulatory agency will respond to our initial voluntary disclosure notification. Subsequent to the occurrence of the Recent Incident and after filing our initial voluntary disclosure notification, we sought approval from the Department of Defense to release this photo publicly, which was granted on June 24, 2022. Given the approval of the Department of Defense to the public release of the photograph at issue in the Recent Incident, we intend to seek the closure of our voluntary disclosure notification with the regulato

While no such regulatory authority has yet determined that any such inadvertent disclosure, including the recent incident, has violated these U.S. import and export control laws, we could be found to be in violation of these laws and regulations. Such a violation, if determined, could result in civil and criminal, monetary and non-monetary penalties, the loss of export or import privileges, debarment and reputational harm. If we are unable to maintain adequate controls related to the disclosure of information subject to U.S. import and export control laws and regulations, we may have future incidents that could result in violations of these laws and regulations.

Pursuant to these foreign trade control laws and regulations, we are required, among other things, to (i) maintain a registration under the ITAR, (ii) determine the proper licensing jurisdiction and export classification of products, software, and technology, and (iii) obtain licenses or other forms of U.S. government authorization to engage in the conduct of our spaceflight business. The authorization requirements include the need to get permission to release controlled technology to foreign person employees and other foreign persons. Changes in U.S. foreign trade control laws and regulations, or reclassifications of our products or technologies, may restrict our operations. The inability to secure and maintain necessary licenses and other authorizations could negatively impact our ability to compete successfully or to operate our spaceflight business as planned. Any changes in the export control regulations or U.S. government licensing policy, such as those necessary to implement U.S. government commitments to multilateral control regimes, may restrict our operations. Given the great discretion the government has in issuing or denying such authorizations to advance U.S. national security and foreign policy interests, there can be no assurance we will be successful in our future efforts to secure and maintain necessary licenses, registrations, or other U.S. government regulatory approvals.

Under the "Exon-Florio Amendment" to the U.S. Defense Production Act of 1950, as amended (the "DPA"), the U.S. President has the power to disrupt or block certain foreign investments in U.S. businesses if he determines that such a transaction threatens U.S. national security. The Committee on Foreign Investment in the United States ("CFIUS") has been delegated the authority to conduct national security reviews of certain foreign investments. CFIUS may impose mitigation conditions to grant clearance of a transaction.

The Foreign Investment Risk Review Modernization Act ("FIRRMA"), enacted in 2018, amended the DPA to, among other things, expands CFIUS's jurisdiction beyond acquisitions of control of U.S. businesses. Under FIRRMA, CFIUS also has jurisdiction over certain foreign non-controlling investments in U.S. businesses that have involvement with critical technology or critical infrastructure, or that collect and maintain sensitive personal data of U.S. citizens ("TID U.S. Businesses"), if the foreign investor receives specified triggering rights in connection with its investment. We are a TID U.S. Businesse because we develop and design technologies that would be considered critical technologies. Certain foreign investments in TID U.S. Businesses are subject to mandatory filing with CFIUS. These restrictions on the ability of foreign persons to invest in us could limit our ability to engage in strategic transactions that could benefit our stockholders, including a change of control, and could also affect the price that an investor may be willing to pay for our common stock.

(b) Revised Disclosure on page 48.

International Traffic in Arms Regulations ("ITAR") and Export Controls

Our business is subject to, and we must comply with, stringent U.S. import and export control laws, including the ITAR and Export Administration Regulations ("EAR") of the Bureau of Industry and Security of the U.S. Department of Commerce. The ITAR generally restricts the export of hardware, software, technical data, and services that have defense or strategic applications. The EAR similarly regulates the export of hardware, software, and technology that has commercial or "dual-use" applications (i.e., for both military and commercial applications) or that have less sensitive military or space-related applications that are not subject to the ITAR. The regulations exist to advance the national security and foreign policy interests of the U.S.

The U.S. government agencies responsible for administering the ITAR and the EAR have significant discretion in the interpretation and enforcement of these regulations. The agencies also have significant discretion in approving, denying, or conditioning authorizations to engage in controlled activities. Such decisions are influenced by the U.S. government's commitments to multilateral export control regimes, particularly the Missile Technology Control Regime concerning the spaceflight business.

Many different types of internal controls and measures are required to ensure compliance with such export control rules. In particular, we are required to maintain registration under the ITAR; determine the proper licensing jurisdiction and classification of products, software, and technology; and obtain licenses or other forms of U.S. government authorizations to engage in activities, including the performance by foreign persons, related to and who support our spaceflight business. Under the ITAR, we must receive permission from the Directorate of Defense Trade Controls to release controlled technology to foreign person employees and other foreign persons.

See "We are subject to stringent U.S. export and import control laws and regulations" in "Risk Factors" above for more information about the risks associated with the requirements of ITAR and EAR, including those that could (i)_occur in the case of a failure of any internal controls or measures we have implemented to ensure our compliance with such export and import control laws or (ii) result from any inadvertent disclosures of certain of our products or components, including the Recent Incident. See also "Failure to maintain adequate financial, information technology and management processes and controls could result in material weaknesses which could lead to errors in our financial reporting, which could adversely affect our business financial condition and results of operation" in "Risk Factors" above.

Verbal comment regarding Company's conclusions regarding assessment of material fines and penalties as a result of the Incident

In the Company's response to the Staff's initial comments from May 19, 2022, the Company stated:

it is not reasonably probable that the Company would be assessed any material fines or penalties in connection with the Incident.

In its Supplemental Comments, the Staff requested information relating to the process the Company undertook to reach the determination set forth above. As part of its analysis into the likelihood of a material penalty or fine resulting from the Incident and its investigation into the circumstances underlying the Incident, the Company sought the input and advice of its internal compliance counsel and external legal counsel. In making its determination, the Company gave considerable weight to the inadvertent (as opposed to intentional) nature of the Incident, the isolated nature of the Incident and the Company's intent to disclose the Incident to the appropriate regulatory authority through its voluntary self-disclosure procedures, all of which the Company believed would be viewed as mitigating factors in the assessment of any penalty and fine. The Company also reviewed the maximum penalty that could be assessed in connection with a violation of the import and export laws and determined that the amount of that maximum penalty, if assessed, would not be material to the Company's financial statements. Further, as mentioned earlier, the Company considered the fact that no regulatory agency has determined such a violation has occurred under these import and export laws as another factor leading to the conclusion set forth above.

The Company submitted an initial voluntary disclosure notification regarding the Incident to the appropriate regulatory agency. A final voluntary disclosure notification is due from the Company in late July 2022. As part of its investigation into the Incident, the Company submitted the photograph that was inadvertently released and which underlies the Incident to the Department of Defense to request approval to make the photograph available to the public by publication in the public domain, including through publicly facing government filings, advertisements, and other means of communication with the public. The Department of Defense granted the Company's request on June 24, 2022. As a result of the Department of Defense's decision, the Company intends to request the closure of its initial voluntary disclosure notification, which, if granted, would remove the need for the Company to file a final voluntary disclosure notification.

If you have any questions, please contact me at kgettman@cozen.com or 612-260-9075.

Very truly yours,

/s/ Katheryn A. Gettman

Katheryn A. Gettman Attorney