ASP ISOTOPES INC.

CHARTER OF THE NOMINATING AND CORPORATE GOVERNANCE COMMITTEE OF THE BOARD OF DIRECTORS

(As amended through December 9, 2024)

I. STATEMENT OF POLICY

This Charter specifies the scope of the responsibilities of the Nominating and Corporate Governance Committee (the "*Committee*") of the Board of Directors (the "*Board*") of ASP Isotopes Inc. (the "*Company*") and the manner in which those responsibilities shall be performed, including the Committee's structure, processes and membership requirements.

The primary responsibilities of the Committee are to (i) identify and screen individuals qualified to become Board members; (ii) select, or recommend to the Board, director nominees for each election of directors; (iii) develop and recommend to the Board criteria for selecting qualified director candidates; (iv) consider committee member qualifications, appointment and removal; (v) recommend corporate governance principles, including policies, applicable to the Company; and (vi) provide oversight in the evaluation of the Board and each committee.

II. ORGANIZATION AND MEMBERSHIP REQUIREMENTS

The Committee shall be appointed by the Board and shall be comprised of three or more directors, each of whom must be determined by the Board to be "independent" under the rules of the Nasdaq Stock Market ("*Nasdaq*"), provided that the Committee membership shall be subject to the exemptions afforded issuers under Securities and Exchange Commission ("*SEC*") and Nasdaq rules.

The members of the Committee shall be appointed by the Board and shall serve until their successors are duly elected and qualified or until their earlier resignation, removal or death. Any member of the Committee may be removed or replaced by the Board at any time with or without cause. Unless a Committee Chair is elected by the full Board, the members of the Committee may designate a Chair by majority vote of the full Committee. The Chair shall preside at all regular meetings of the Committee and set the agenda for each Committee meeting.

The Committee may, from time to time, delegate duties or responsibilities to one or more subcommittees or to one member of the Committee.

III. MEETINGS AND COMMITTEE ACTION

The Committee shall meet as often as it deems necessary or appropriate to fulfill its responsibilities hereunder, and at least twice during each fiscal year. The Committee may meet with management or individual directors at such time as it deems appropriate to discuss any

matters before the Committee. The Committee shall report regularly to the Board regarding its actions and make recommendations to the Board as appropriate.

A majority of the members shall represent a quorum of the Committee and, if a quorum is present, any action approved by at least a majority of the members present (in person or by telephone conference call) shall represent the valid action of the Committee. The Committee may also take action by unanimous written consent without a meeting. Any actions taken by the Committee during any period in which one or more of the members fail for any reason to meet the membership requirements set forth above shall still constitute duly authorized actions of the Committee for all corporate purposes. The Committee shall maintain written minutes of its meetings, which minutes will be filed with the minutes of the meetings of the Board.

The Committee shall have the authority to obtain advice or assistance from consultants, legal counsel, or other advisors as appropriate to perform its duties hereunder. Without limiting the generality of the foregoing, the Committee shall have the sole authority to retain or terminate any search firm to be used to identify director candidates and to determine and approve the terms, costs and fees for such engagements. The fees and costs of any consultant or advisor engaged by the Committee to assist the Committee in performing its duties hereunder shall be borne by the Company.

IV. AUTHORITY AND RESPONSIBILITIES

To fulfill its responsibilities and duties hereunder, the Committee shall:

A. Nominating Functions

1. Determine criteria for selecting new directors, including desired board skills, experience and attributes, and identify and actively seek individuals qualified to become directors.

2. Evaluate and select, or recommend to the Board, nominees for each election of directors, except that if the Company is at any time legally required by contract or otherwise to provide any third party with the ability to nominate a director, the Committee need not evaluate or propose such nomination, unless required by contract or requested by the Board.

3. Consider any director candidates recommended by the Company's stockholders pursuant to the procedures described in the Company's proxy statement, and any nominations of director candidates validly made by the Company's stockholders in accordance with applicable laws, rules and regulations, the provisions of the Company's charter documents and policies of the Company in respect of director nominations.

4. Review and make recommendations to the Board concerning qualifications, appointment and removal of committee members

B. Corporate Governance Functions

1. Develop, recommend for Board approval, and review on an ongoing basis the adequacy of, the corporate governance principles applicable to the Company. Such principles

shall include, at a minimum, director qualification standards, director responsibilities, committee responsibilities, director access to management and independent advisors, director compensation, director orientation and continuing education, management succession and annual performance evaluation of the Board and committees.

2. Review and discuss with management disclosure of the Company's corporate governance practices, including information regarding the operations of the Committee and other Board committees, director independence and the director nomination process, and to recommend that this disclosure be included in the Company's proxy statement or annual report on Form 10-K, as applicable.

3. In consultation with the Audit Committee of the Board (the "*Audit Committee*"), review and recommend to the Board for adoption any revisions to the Company's Code of Business Conduct and Ethics (the "*Code*"), which meets the requirements of Item 406 of the SEC's Regulation S-K and the rules of the Nasdaq, and provide for prompt disclosure to the public of any change in, or waiver of the Code, and adopt procedures for monitoring and enforcing compliance with the Code.

4. Review, at least annually, the Company's compliance with the corporate governance listing requirements of the Nasdaq, and report to the Board regarding the same.

5. Review the Company's policy and procedures with respect to related person transactions, at the request of the Audit Committee, and recommend any amendments or revisions for consideration and adoption by the Board as so requested.

6. Assist the Board in developing criteria for the evaluation of Board and committee performance.

7. If requested by the Board, assist the Board in its evaluation of the performance of the Board and each committee of the Board.

8. Review and recommend to the Board changes to the Company's bylaws as needed.

9. Working with management, develop orientation materials for new directors and corporate governance-related continuing education for all Board members.

10. Oversee succession planning for executive officers.

11. Make reports to the Board regarding the foregoing as appropriate.

12. Oversee and make recommendations to the Board regarding compliance with rules and regulations promulgated by the SEC and Nasdaq relating to environmental, social and governance ("*ESG*") matters relevant to the Company's business, including any required ESG disclosure in the Company's filings with the SEC.

13. Review and reassess the adequacy of this Charter as appropriate and recommend any proposed changes to the Board for approval.

14. Perform any other functions and activities consistent with this Charter, the Company's Bylaws and governing law, as the Committee or the Board deems necessary or appropriate

IV. PERIODIC REVIEW

The Committee shall review on at least an annual basis the scope of responsibilities of the Committee and the Committee's performance of its duties. Any proposed changes to this Charter or the scope of responsibilities of the Committee, where indicated, shall be referred to the Board for appropriate action.