

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 12b-25

NOTIFICATION OF LATE FILING

(Check one): ☐ Form 10-K ☐ Form 20-F ☐ Form 11-K
☒ Form 10-Q ☐ Form 10-D ☐ Form N-CEN ☐ Form N-CSR

For Period Ended: **September 30, 2025**

- ☐ Transition Report on Form 10-K
☐ Transition Report on Form 20-F
☐ Transition Report on Form 11-K
☐ Transition Report on Form 10-Q

For the Transition Period Ended: _____

Nothing in this form shall be construed to imply that the Commission has verified any information contained herein.

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates:

PART I - REGISTRANT INFORMATION

ASP Isotopes Inc.

Full Name of Registrant

Former Name if Applicable

601 Pennsylvania Avenue NW, South Building, Suite 900

Address of Principal Executive Office (Street and Number)

Washington, DC 20004

City, State and Zip Code

PART II - RULES 12b-25(b) AND (c)

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed. (Check box if appropriate)

- ☒ (a) The reason described in reasonable detail in Part III of this form could not be eliminated without unreasonable effort or expense;
- ☒ (b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-CEN or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report or transition report on Form 10-Q or subject distribution report on Form 10-D, or portion thereof, will be filed on or before the fifth calendar day following the prescribed due date; and
- (c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

PART III - NARRATIVE

State below in reasonable detail the reasons why Forms 10-K, 20-F, 11-K, 10-Q, 10-D, N-CEN, N-CSR, or the transition report or portion thereof, could not be filed within the prescribed time period.

(Attach extra Sheets if Needed)

The Registrant could not complete the filing of its Quarterly Report on Form 10-Q for the quarter ended September 30, 2025 due to a delay in obtaining and compiling information required to be included in its Form 10-Q, which delay could not be eliminated by the Registrant without unreasonable effort and expense. In accordance with Rule 12b-25 promulgated under the Securities Exchange Act of 1934, the Registrant will file its Form 10-Q no later than the fifth calendar day following the prescribed due date.

PART IV - OTHER INFORMATION

- (1) Name and telephone number of person to contact in regard to this notification

<u>Heather Kiessling</u>	<u>(202)</u>	<u>756-2245</u>
(Name)	(Area Code)	(Telephone Number)

- (2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If answer is no, identify report(s). Yes ☒ No ☐
- (3) Is it anticipated that any significant change in results of operations from the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof? Yes ☐ No ☒

If so, attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

ASP Isotopes Inc.

(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned hereunto duly authorized.

Date: November 14, 2025

By: /s/ Heather Kiessling

Heather Kiessling

Chief Financial Officer