

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

ASP Isotopes Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

00218A105

(CUSIP Number)

06/30/2025

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- ☒ Rule 13d-1(b)
☐ Rule 13d-1(c)
☐ Rule 13d-1(d)

SCHEDULE 13G

CUSIP No. 00218A105

1	Names of Reporting Persons AWM Investment Company, Inc.
2	Check the appropriate box if a member of a Group (see instructions) <input type="checkbox"/> (a) <input type="checkbox"/> (b)
3	Sec Use Only
4	Citizenship or Place of Organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 619,874.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 619,874.00
	8	Shared Dispositive Power 0.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person 619,874.00	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) <input type="checkbox"/>	
11	Percent of class represented by amount in row (9) 6.9 %	
12	Type of Reporting Person (See Instructions) IA	

Comment for Type of Reporting Person: AWM Investment Company, Inc., a Delaware corporation (AWM), is the investment adviser to Special Situations Private Equity Fund, L.P. (SSPE). As the investment adviser to the Funds, AWM holds sole voting and investment power over 619,874 shares of Common Stock of the Issuer (the Shares) held by SSPE.

SCHEDULE 13G

Item 1.

(a) **Name of issuer:**

ASP Isotopes Inc.

(b) **Address of issuer's principal executive offices:**

601 PENNSYLVANIA AVENUE NW, SOUTH BUILDING, SUITE 900, WASHINGTON, DISTRICT OF COLUMBIA, 20004

Item 2.

(a) **Name of person filing:**

The person filing this report is AWM Investment Company, Inc., a Delaware corporation (AWM), which is the investment adviser to Special Situations Private Equity Fund, L.P., a Delaware limited partnership (SSPE), (SSPE, will hereafter be referred to as the Funds). The principal business of each Fund is to invest in equity and equity-related securities and other securities of any kind or nature.

David M. Greenhouse (Greenhouse) and Adam C. Stettner (Stettner) are members of MG Advisers, L.L.C., a New York limited liability company (MG), the general partner of SSPE. Greenhouse and Stettner are also controlling principals of AWM.

(b) **Address or principal business office or, if none, residence:**

The principal business address for AWM is c/o Special Situations Funds, 527 Madison Avenue, Suite 2600, New York, NY 10022.

(c) **Citizenship:**

AWM is a Delaware Corporation

(d) **Title of class of securities:**

Common Stock

(e) **CUSIP No.:**

00218A105

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

(a) ☐ **Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);**

- (b) ☐ Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c) ☐ Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d) ☐ Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
- (e) ☐ An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);
- (f) ☐ An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);
- (g) ☐ A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h) ☐ A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) ☐ A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) ☐ A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution:
- (k) ☐ Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

- (a) Amount beneficially owned:

619,874

- (b) Percent of class:

6.9 %

- (c) Number of shares as to which the person has:

- (i) Sole power to vote or to direct the vote:

AWM is the investment adviser to the Fund. As the investment adviser to the Fund, AWM holds sole voting power over 619,874 shares of Common Stock of the Issuer (the Shares) held by SSPE. Greenhouse and Stettner are members of MG, the general partner of SSPE. Greenhouse and Stettner are also controlling principals of AWM.

- (ii) Shared power to vote or to direct the vote:

0

- (iii) Sole power to dispose or to direct the disposition of:

AWM is the investment adviser to the Fund. As the investment adviser to the Fund, AWM holds sole investment power over 619,874 shares of Common Stock of the Issuer (the Shares) held by SSPE. Greenhouse and Stettner are members of MG, the general partner of SSPE. Greenhouse and Stettner are also controlling principals of AWM.

- (iv) Shared power to dispose or to direct the disposition of:

0

Item 5. Ownership of 5 Percent or Less of a Class.

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

AWM Investment Company, Inc.

Signature: Adam Stettner

Name/Title: Executive Vice President

Date: 08/14/2025