As filed with the U.S. Securities and Exchange Commission on May 18, 2016

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

ENTEGRIS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)

129 Concord Road, Billerica, MA (Address of Principal Executive Offices) 41-1941551 (I.R.S. Employer Identification No.)

> 01821 (Zip Code)

Entegris, Inc. Amended and Restated Employee Stock Purchase Plan (Full title of the plan)

Sue Lee, Esq. Senior Vice President, Secretary and General Counsel Entegris, Inc. 129 Concord Road Billerica, MA 01821 (978) 436-6500 (Name, address and telephone number, including area code, of agent for service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Non-Accelerated Filer \Box (Do not check if a smaller reporting company)

Accelerated Filer□Smaller reporting company□

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee(2)	
Common Stock, par value \$0.01 per share, to be issued under the					
Entegris, Inc. Amended and Restated Employee Stock Purchase					
Plan	2,000,000	\$12.96	\$25,920,000.00	\$2,610.14	
(1) This registration statement on Form S-8 (this "Registration Statement") covers shares of common stock of Entegris. Inc. (the "Registrant") par value					

(1) This registration statement on Form S-8 (this "Registration Statement") covers shares of common stock of Entegris, Inc. (the "Registrant"), par value \$0.01 per share (the "Common Stock"), that may be issued under the Entegris, Inc. Amended and Restated Employee Stock Purchase Plan (the "Plan"). In addition, pursuant to Rule 416(a) under the Securities Act of 1933, this Registration Statement also covers such additional indeterminable number of shares of Common Stock as may be required to be issued pursuant to the Plan in the event of a stock dividend, stock split, recapitalization or other similar change in the Common Stock.

(2) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(h) on the basis of the average of the high and low sale prices of the Common Stock on The Nasdaq Global Select Market on May 13, 2016.

EXPLANATORY NOTE

This Registration Statement is filed pursuant to General Instruction E to Form S-8 by Entegris, Inc., a Delaware corporation (the "Registrant"), to register 2,000,000 shares of common stock, par value \$0.01 per share (the "Common Stock"), which shares are in addition to those previously registered on Form S-8 (File No. 333-53382) and on Form S-8 (File No. 333-203789) filed with the Securities and Exchange Commission (the "Commission") on January 8, 2001 and May 1, 2015, respectively, for issuance pursuant to the Entegris, Inc. Amended and Restated Employee Stock Purchase Plan, which was approved by the stockholders of the Registrant on May 17, 2016. The Registrant incorporates herein by reference the contents of such previously filed Registration Statement.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed with the Commission are hereby incorporated by reference and shall be deemed to be a part of this Registration Statement:

- (a) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Commission on February 29, 2016;
- (b) All other reports filed pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), since the end of the fiscal year covered by the Annual Report on Form 10-K referred to in (a) above, including the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended April 2, 2016 filed with the Commission on April 28, 2016 and the Registrant's current reports on Form 8-K filed with the Commission on February 26, 2016, March 11, 2016 and May 18, 2016;
- (c) The description of the Registrant's Common Stock contained in the Registrant's registration statement on Form S-3/A filed with the Commission on September 2, 2009 under the heading "Description of Capital Stock", including any amendments and reports updating such description; and
- (d) All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement indicating that all securities offered have been sold or that deregisters the distribution of all securities then remaining unsold, will be deemed to be incorporated by reference into this Registration Statement and will be a part of this Registration Statement from the date such document is filed, except as to portions of any future Current Report on Form 8-K furnished under items 2.02, 7.01, and 9.01 of Form 8-K that are deemed not to be filed under such provisions.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained in this Registration Statement or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

The validity of the securities has been passed upon by Sue Lee, Esq., Senior Vice President, Secretary and General Counsel of the Registrant. Mrs. Lee beneficially owns shares of Common Stock and is eligible to participate in the ESPP.

Item 6. Indemnification of Directors and Officers.

The Registrant is incorporated under the laws of the State of Delaware. Section 145 ("Section 145") of the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (the "DGCL"), inter alia, provides that a Delaware corporation may indemnify any persons who were, are or are threatened to be made parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was

serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his conduct was illegal.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against him and incurred by him in any such capacity, arising out of his status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

The Registrant's certificate of incorporation provides that the Registrant's directors shall not be liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent that the exculpation from liabilities is not permitted under the DGCL as in effect at the time such liability is determined. The Registrant's certificate of incorporation provides that the corporation shall indemnify its directors to the full extent permitted by the laws of the State of Delaware. In addition, the Registrant's bylaws provide for indemnification of the registrant's officers and directors to the fullest extent permitted by applicable law.

All of the Registrant's directors and officers are covered by insurance policies maintained by the Registrant against specified liabilities for actions taken in their capacities as such, including liabilities under the Securities Act of 1933.

The Registrant has entered into indemnification agreements with its directors and certain of its executive officers providing for the indemnification of such director or executive officer, as applicable, to the extent legally permissible and the payment of expenses, including counsel fees reasonably incurred in connection with the defense or disposition of any action, suit or other proceeding in which such individual may be involved by reason of such individual being or having been a director or officer of the Registrant.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit

- 4.1 Entegris, Inc. Amended and Restated Employee Stock Purchase Plan, as amended and restated effective May 17, 2016
- 5.1 Opinion of Sue Lee, Senior Vice President, Secretary and General Counsel of the Registrant
- 23.1 Consent of Sue Lee, Senior Vice President, Secretary and General Counsel of the Registrant (included in Exhibit 5.1)
- 23.2 Consent of KPMG LLP, Independent Registered Public Accounting Firm
- 24.1 Power of Attorney

Item 9. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of a

prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

 (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) above shall not apply if the information required to be included in a posteffective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, Entegris, Inc. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Billerica, Commonwealth of Massachusetts, on May 18, 2016.

ENTEGRIS, INC.

By /s/ Bertrand Loy

Bertrand Loy President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-8 has been signed by the following persons in the capacities and on the date indicated.

SIGNATURE	TITLE	DATE
/s/ Bertrand Loy Bertrand Loy	President, Chief Executive Officer and Director (Principal executive officer)	May 18, 2016
/s/ Gregory B. Graves Gregory B. Graves	Executive Vice President, Chief Financial Officer & Treasurer (Principal financial officer)	May 18, 2016
/s/ Michael D. Sauer Michael D. Sauer	Vice President, Controller & Chief Accounting Officer (Principal accounting officer)	May 18, 2016
* Paul L.H. Olson	Director, Chairman of the Board	May 18, 2016
* Michael A. Bradley	Director	May 18, 2016
* Marvin D. Burkett	Director	May 18, 2016
* R. Nicholas Burns	Director	May 18, 2016
* Daniel W. Christman	Director	May 18, 2016
* James F. Gentilcore	Director	May 18, 2016
James P. Lederer	Director	May 18, 2016
* Brian F. Sullivan	Director	May 18, 2016
*By /s/ Sue Lee		

Sue Lee, ATTORNEY-IN-FACT

EXHIBIT INDEX

Exhibit No.	Description
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5.1	Opinion of Sue Lee, Senior Vice President, Secretary and General Counsel of the Registrant
23.1	Consent of Sue Lee, Senior Vice President, Secretary and General Counsel of the Registrant (included in Exhibit 5.1)
23.2	Consent of KPMG LLP, Independent Registered Public Accounting Firm
24.1	Power of Attorney

ENTEGRIS, INC. Amended and Restated EMPLOYEE STOCK PURCHASE PLAN

SECTION 1. ESTABLISHMENT AND PURPOSE

1.1 *Establishment.* Entegris, Inc., a Delaware corporation (hereinafter called "the Company"), hereby amends and restates the stock purchase plan for employees adopted by a predecessor corporation effective March 1, 2000, which shall continue to be known as the ENTEGRIS, INC. EMPLOYEE STOCK PURCHASE PLAN (hereinafter called the "Plan").

1.2 *Purpose*. The purpose of this Plan is to permit employees to purchase Stock from the Company at the price specified in Section 5. The Plan is intended to be an "employee stock purchase plan" under Section 423 of the Internal Revenue Code of 1986, as amended, and shall be interpreted and administered in a manner consistent with such intent.

SECTION 2. DEFINITIONS

2.1 Definitions. Whenever used in the Plan, the following terms shall have the meanings set forth below:

- (a) "Affiliate" means any U.S. corporation, a majority of the voting stock of which is directly or indirectly owned by the Company and whose participation in the Plan the Board has expressly approved.
- (b) "Recognized Compensation" means wages within the meaning of Section 3401(a) of the Code for purposes of federal income tax withholding at the source but determined without regard to any rules that limit the remuneration included in wages based on the nature or location of the employment or the services performed (such as the exception for agricultural labor in Section 3401(a)(2) of the Code) and paid to the Participant by the Employer for the applicable period; subject, however, to the following:
 - (i) Included Items. In determining a Participant's Recognized Compensation there shall be included elective contributions made by the Employer on behalf of the Participant that are not includable in gross income under Sections 125, 132(f), 402(e)(3), 402(h), 403(b), 414(h)
 (2) and 457 of the Code including elective contributions authorized by the Participant under a Retirement Savings Election, a cafeteria plan or any other qualified cash or deferred arrangement under Section 401(k) of the Code.
 - (ii) Excluded Items. In determining a Participant's Recognized Compensation there shall be excluded all of the following: (A) incentive compensation, discretionary, or signing bonuses and commissions, (B) reimbursements or other expense allowances (including all living and other expenses paid on account of the Participant being on foreign assignment), (C) welfare and fringe benefits (both cash and non-cash) including third-party sick pay (i.e., short-term and long-term disability insurance benefits), income imputed from Insurance coverages and premiums, employee discounts and other similar amounts, payments for vacation or sick leave accrued but not taken, final payments on account of termination of employment (i.e., severance payments), except that final payments on account of settlement for accrued but unused paid time off shall be taken into account in determining a Participant's Recognized Compensation, (D) moving expenses, (E) deferred compensation (both when deferred and when received), and (F) the value of a qualified or a non-qualified stock option granted to a Participant by the Employer to the extent such value is includable in the Participant's taxable income.
 - (iii) Pre-Participation Employment. Remuneration paid by the Employer attributable to periods prior to the date the Participant became a Participant in the Plan shall not be taken into account in determining the Participant's Recognized Compensation.

- (iv) Attribution to Periods. A Participant's Recognized Compensation shall be considered attributable to the period in which it is actually paid and not when earned or accrued.
- (v) Excluded Periods. Amounts received after the Participant's termination of employment shall not be taken into account in determining a Participant's Recognized Compensation.
- (vi) Multiple Employers. If a Participant is employed by more than one Employer in a Plan Year, a separate amount of Recognized Compensation shall be determined for each Employer.
- (c) "Board" means the Board of Directors of the Company.
- (d) "Code" means the Internal Revenue Code of 1986, as amended.
- (e) "Committee" means a committee of at least three persons appointed by the Board empowered to take actions as stated in this Plan. Each member of the Committee will remain a member for the duration of the Plan unless such member resigns or is removed earlier by majority vote of the Board.
- (f) "Eligible Employee" means an Employee who meets the requirements set forth in Subsection 4.1 below for eligibility to participate in the Plan.
- (g) "Employee" means any employee (including officers and directors who are also employees) of the Company or its Affiliates. Neither service as a Director nor payment of a director's fee shall be sufficient to constitute "employment" by the Company or the Affiliate.
- (h) "Fair Market Value" means the value of a share of Stock as determined in good faith by the Board. If the security is listed on any established stock exchange or traded on the NASDAQ Global Select Market, then the Fair Market Value of the security shall be the closing sales price (rounded up where necessary to the nearest whole cent) for such security as quoted on such exchange or market as reported on the official Nasdaq website or reported in The Wall Street Journal or such other source as the Board deems reliable. If there is no closing sales price quoted for such day, then Fair Market Value shall be equal to the average of the closing bid and ask prices for such day. If neither closing sale nor closing bid nor ask prices are quoted, then Fair Market Value shall be determined based upon such information for the previous trading day.
- (i) "Interest" means interest as determined pursuant to Section 5.2.
- (j) "Participant" means an Eligible Employee who has elected to participate in the Plan pursuant to Section 4.1.
- (k) "Purchase Period" means a six-month period beginning on January 1 or July 1 of each calendar year during which Stock may be purchased in accordance with the Plan.
- (I) "Stock" means the common stock, \$.01 par value, of the Company.

SECTION 3. STOCK SUBJECT TO THE PLAN

3.1 *Number*. The total number of shares of Stock available for distribution under this Plan shall be 6,000,000 plus any shares available under the employee stock purchase plan of a company acquired by the Company and converted into Stock in accordance with and subject to the provisions of NASDAQ Marketplace Rules. These shares may consist, in whole or in part, of authorized but unissued Stock not reserved for any other purpose.

3.2 Adjustment in Capitalization. In the event of any change in the outstanding shares of Stock by reason of a Stock dividend or split, combination, recapitalization, or reclassification, the shares of Stock issuable and the price payable therefor under this Plan shall be appropriately adjusted by the Committee, whose determination shall be conclusive. Except as provided above, no adjustment shall be made in connection with the issuance by the Company of any Stock or any warrants, rights, or options to acquire shares of Stock or of securities convertible into Stock.

SECTION 4. PARTICIPATION

4.1 *Eligibility*. Rights to participate hereunder shall be granted to employees of the Company and, as approved by the Board, its Affiliates, provided, however, that employees whose customary employment is twenty (20) hours or less per week or whose customary employment is for not more than five (5) months in any calendar year shall have no right to participate and shall not qualify as Eligible Employees. An Eligible Employee may elect to become a Participant on the first day of any Purchase Period, provided such Participant was an Eligible Employee on the day immediately preceding the first day of such Purchase Period. Any election to participate shall be made in accordance with rules adopted by the Committee. However, in no event shall an Eligible Employee be granted the right to purchase Stock under the Plan if after the purchase such Eligible Employee would own Stock possessing 5% or more of the total combined voting power or value of all classes of stock of the Company. Also, an Eligible Employee may not become or remain a Participant at any time when such Eligible Employee owns stock possessing 5% or more of the total combined voting power or value of all classes of stock of the Code shall apply in determining the stock ownership of an individual, and stock which an Employee may purchase under outstanding options shall be treated as stock owned by the Employee.

4.2 The Board may provide that each person who, during the course of a Purchase Period first becomes an Eligible Employee will, on a date or dates specified by or under the authority of the Committee which coincides with the day on which such person becomes an Eligible Employee or which occurs thereafter, receive a right to participate during that Purchase Period, which right to participate shall thereafter be deemed to be a part of that Purchase Period. Such right to participate shall have the same characteristics as an rights to participate originally granted with respect to that Purchase Period, as described herein, except that:

- (a) the date on which such right to participate is granted shall be the "Offering Date" of such right for all purposes, including determination of the exercise price of such right;
- (b) the period of the Offering with respect to such right to participate shall begin on its Offering Date and end coincident with the end of such Offering; and
- (c) the Board may provide that if such person first becomes an Eligible Employee within a specified period of time before the end of the Offering, he or she will not receive any right to participate under that Offering.

SECTION 5. PURCHASE OF STOCK

5.1 *Contributions for Purchase of Stock.* At the time an Eligible Employee elects to become a Participant in the Plan, such Eligible Employee shall also elect the form and manner of contributing funds for the purchase of Stock. A Participant may elect to contribute funds for the purchase of Stock by directing his or her employer to withhold any whole percentage less than or equal to 10% of his or her Recognized Compensation for the purchasing Stock from the Company. In no event shall the aggregate contributions for the purchase of Stock exceed 10% of a Participant's Recognized Compensation. A Participant may modify the rate of withholding from such Participant's Recognized Compensation only in accordance with the following:

- (a) A Participant may at any time direct reduction of the rate of withholding to a rate lower than that previously in effect. However, only one such direction to continue withholding at a rate lower than that previously in effect may be made in any one Purchase Period.
- (b) A Participant may at any time direct discontinuance of withholding. If a Participant directs discontinuance of withholding, such Participant may direct resumption of withholding only as of the first day of any subsequent Purchase Period.
- (c) Except as provided in subsection (a) or (b) above, a Participant may direct modification of the rate of withholding only as of the first day of any Purchase Period. The modified rate may be any whole percentage less than or equal to 10% of the Participant's Recognized Compensation. Unless



otherwise elected by the Participant, the rate of withholding such Participant has elected will remain in effect for subsequent Purchase Periods.

Any election or direction under this section shall be made in writing pursuant to rules adopted by the Committee and shall become effective at a time specified by the Committee.

5.2 *Disposition of Contributions*. Amounts withheld pursuant to Section 5.1 shall be held by the Employer until the end of the Purchase Period during which they were withheld, subject to the following:

- (a) A Participant who elects pursuant to Section 5.1(b) to discontinue withholding may at any time withdraw all or any part of the amounts previously withheld or otherwise contributed. Any such withdrawal shall be paid to the Participant by his or her employer in cash with Interest.
- (b) During the last calendar month of each Purchase Period, each Participant shall be permitted to elect to have all or any part of the amounts withheld paid to such Participant in cash with Interest.
- (c) Any withdrawal under (a) or (b) above shall be deemed to be on a first-in-first-out basis. Interest shall be applied to the average amount in the Participant's account at the end of each full calendar month during the completed portion of the Purchase Period. Prior to the first day of any Purchase Period, the Committee shall determine the rate of Interest with respect to such Purchase Period. The Committee shall give such publicity to said Interest rate as it deems appropriate.
- (d) Any portion of the amounts withheld that is not paid to the Participant in cash shall be automatically applied to purchase Stock under Section 5.3.
- (e) Any election or direction under this section shall be made in writing pursuant to rules adopted by the Committee.

5.3 *Purchases of Stock.* Amounts withheld from a Participant during a Purchase Period (except any amounts refunded to such Participant in cash under Section 5.2) shall be used as of the last business day of such Purchase Period to purchase Stock from the Company for a price equal to the lesser of (a) or (b).

- (a) 85% of the Fair Market Value of a share of Stock on the first business day of the Purchase Period; or
- (b) 85% of the Fair Market Value of a share of Stock on the last business day of the Purchase Period.

5.4 *Issuance of Stock.* Promptly after the end of each Purchase Period, the number of shares of Stock purchased by all Participants shall be issued and transferred to an agent selected by the Company. The agent will hold such shares of Stock for the benefit of all Participants who have purchased shares of Stock and will maintain an account for each Participant reflecting the number of shares (including fractional shares, if any) credited to the account of each Participant. Each Participant will be entitled to direct the voting of all shares credited to such Participant's account by the agent and may also direct the agent to sell such shares and distribute the net proceeds of the sale to the Participant. At any time, a Participant may either request that the agent transfer the shares of Stock credited to the Participant's account to another custodian or request from the agent a physical certificate representing the shares of Stock credited to the Participant's account; *provided, however*, that the agent shall not be required to issue a certificate representing a fractional share and may instead pay the Participant a cash amount representing the fair market value of such fractional share.

5.5 *Privileges of a Stockholder*. A Participant shall not have stockholder privileges with respect to any Stock until the date of issuance of shares of Stock to such Participant.

5.6 *Limitation on Stock Purchases.* As required by Section 423 of the Code, no Participant may purchase Stock under this Plan and all other employee stock purchase plans of the Company and its Affiliates at a rate in excess of \$25,000 in Fair Market Value of such Stock (determined at the time the option to purchase Stock is granted) for each calendar year in which any such option to purchase Stock granted to such Participant is outstanding at any time. Notwithstanding the foregoing, the Fair Market Value (determined on the first day of any Purchase Period) of shares of Stock that may be purchased by a Participant during such Purchase Period shall

not exceed the excess, if any, of (i) \$25,000 over (ii) the Fair Market Value (determined on the first day of the relevant Purchase Period) of shares of Stock previously acquired by the Participant in any prior Purchase Period during such calendar year.

SECTION 6. TERMINATION OF EMPLOYMENT

6.1 *Termination of Employment*. A Participant whose termination of employment occurs more than three months prior to the close of a Purchase Period will not be eligible to purchase any shares of Stock pursuant to this Plan with respect to such Purchase Period. Any amount withheld from such a Participant during the Purchase Period in which his or her termination of employment occurs shall be paid to such Participant in cash with Interest calculated under Section 5.2(c) as soon as administratively feasible after such Participant's termination of employment. Any Participant whose termination of employment occurs within three months prior to the last day of a Purchase Period may direct Stock purchases or withdrawals with respect to that Purchase Period pursuant to Sections 5.2 and 5.3. However, if a Participant's death occurred at any time during the Purchase Period, any amount withheld from the Participant during such Purchase Period shall be paid to the Participant's personal representative in cash with Interest determined under Section 5.2(c), and no portion thereof shall be applied to purchase Stock.

SECTION 7. RIGHTS OF EMPLOYEES; PARTICIPANTS

7.1 *Employment*. Nothing in this Plan shall interfere with or limit in any way the right of the Company or any of its Affiliates to terminate any Employee's, Eligible Employee's, or Participant's employment at any time, nor confer upon any such person any right to continue in the employ of the Company or any of its Affiliates.

7.2 *Nontransferability.* No right or interest of any Participant in this Plan shall be assignable, transferable, or subject to any lien, directly or indirectly, by operation of law, or otherwise, including execution, levy, garnishment, attachment, pledge, or bankruptcy. Any attempted assignment, transfer, pledge or other disposition of any rights under the Plan shall be null and void and shall automatically terminate all rights of a Participant under the Plan.

SECTION 8. ADMINISTRATION

8.1 *Administration.* The Committee shall be responsible for the administration of the Plan. The Committee, by majority action thereof, is authorized to interpret the Plan, to prescribe, amend, and rescind rules and regulations relating to the Plan, to provide for conditions and assurances deemed necessary or advisable to protect the interests of the Company and to make all other determinations necessary or advisable for the administration of the Plan, but only to the extent not contrary to the express provisions of the Plan. The determination of the Committee, interpretation or other action made or taken pursuant to the provisions of the Plan shall be binding and conclusive for all purposes and upon all persons.

SECTION 9. AMENDMENT, MODIFICATION, AND TERMINATION OF PLAN

9.1 *Amendment, Modification, and Termination of the Plan.* The Board, upon recommendation of the Committee, at any time may terminate, and at any time and from time to time and in any respect, may amend or modify the Plan, provided, however, that no such action of the Board, without approval of the stockholders of the Company, may:

- (a) increase the total amount of Stock that may be awarded under the Plan, except as provided in Section 3.2 of the Plan;
- (b) change the class of Employees eligible to participate in the Plan;

- (c) withdraw the administration of the Plan from the Committee;
- (d) permit any person, while a member of the Committee, to be eligible to participate in the Plan; or
- (e) extend the duration of the Plan.

SECTION 10. REQUIREMENTS OF LAW

10.1 *Requirements of Law.* The issuance of Stock and the payment of cash pursuant to this Plan shall be subject to all applicable laws, rules, and regulations, and shares of Stock shall not be issued nor cash payments made except upon approval of proper government agencies or stock exchanges as may be required.

10.2 Governing Law. The Plan, and all agreements hereunder, shall be construed in accordance with and governed by the laws of the State of Delaware.

SECTION 11. EFFECTIVE DATE OF THE PLAN

11.1 *Effective Date.* The original effective date of the Plan was March 15, 2000; the effective date of this amended and restated Plan shall be the next business day following the date on which the stockholders of the Company approve this amended and restated Plan.

11.2 *Duration of the Plan.* Unless the Board terminates the Plan earlier, the Plan shall remain in effect until all Stock subject to it shall have been distributed pursuant to the Plan.

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May 18, 2016

Entegris, Inc. 129 Concord Road Billerica, MA 01821

Ladies and Gentlemen:

I am Senior Vice President, Secretary and General Counsel to Entegris, Inc., a Delaware corporation (the "Company"), and am issuing this opinion in connection with the registration statement on Form S-8 (the "Registration Statement") being filed by the Company with the Securities and Exchange Commission (the "Commission") on the date hereof for the purpose of registering under the Securities Act of 1933, as amended (the "Securities Act"), an aggregate of 2,000,000 shares (the "Shares") of common stock, par value \$0.01 per share, of the Company, which may be issued under the Entegris, Inc. Amended and Restated Employee Stock Purchase Plan (the "Plan").

In this connection, I have examined and am familiar with originals or copies, certified or otherwise identified to my satisfaction, of (i) the Registration Statement; (ii) the Company's Amended and Restated Certificate of Incorporation, as amended; (iii) such records of the corporate proceedings of the Company as I have deemed necessary or appropriate as a basis for the opinions set forth herein; and (iv) such certificates of officers of the Company and others and such other records and documents as I have deemed necessary or appropriate as a basis for the opinion set forth herein.

In my examination, I have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to me as originals, the conformity to original documents of all documents submitted to me as certified, conformed or photostatic copies and the authenticity of the originals of such copies. As to any facts material to the opinion expressed herein which I have not independently established or verified, I have relied upon statements and representations of other officers and representatives of the Company and others.

I am admitted to the Bar of the Commonwealth of Massachusetts and the State of New York and do not purport to be an expert on, or express any opinion concerning, any law other than the substantive law of the Commonwealth of Massachusetts, the State of New York and the Delaware General Corporation Law.

Based upon and subject to the foregoing, I am of the opinion that the Shares have been duly authorized for issuance and, when issued and sold by the Company pursuant to and in accordance with the Plan will be validly issued, fully paid and nonassessable.

I hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. In giving this consent, I do not thereby admit that I am in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

This opinion is furnished by me as Senior Vice President, Secretary and General Counsel to the Company in connection with the filing of the Registration Statement and is not to be used, circulated or quoted for any other purpose or otherwise referred to or relied upon by any other person without the prior express written permission of the Company other than in connection with the offer and sale of Shares while the Registration Statement is in effect.

Very truly yours,

/s/ Sue Lee Sue Lee Senior Vice President, Secretary and General Counsel The Board of Directors Entegris, Inc.:

We consent to the use of our reports dated February 26, 2016, with respect to the consolidated balance sheets of Entegris, Inc. and subsidiaries as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive (loss) income, equity, and cash flows for each of the years in the three-year period ended December 31, 2015, and the effectiveness of internal control over financial reporting as of December 31, 2015, incorporated herein by reference.

/s/ KPMG LLP

Minneapolis, Minnesota May 18, 2016

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that Entegris, Inc., a Delaware corporation (the "Corporation"), and each of the undersigned Officers and Directors of the Corporation, do hereby constitute and appoint Bertrand Loy, Gregory B. Graves, and Sue Lee, and each of them individually (with full power to each of them to act alone) as its and his true and lawful attorney-in-fact and agent, for and on its and his behalf and in its and his name, place and stead, in any and all capacities, to sign, execute and affix its and his seal thereto and file any of the following documents: **[A]** one or more Registration Statements on Form S-8 registering with the U.S. Securities and Exchange Commission an aggregate of 2,000,000 shares of the Common Stock, \$0.01 par value per share, of the Corporation to be issued under the Entegris, Inc. Amended and Restated Employee Stock Purchase Plan, including any and all Pre-Effective and Post-Effective Amendments to any such Registration Statement, whether increasing the amount of securities for which registration is being sought or otherwise; and/or **[B]** any Registration Statement, consent to service of process, or other document which may be required by state securities administrators or other regulatory authorities in order to qualify the securities to be registered as aforesaid, for sale in any state in which it is desired to offer such securities; together with all exhibits and any and all documents required to be filed with respect to any of the foregoing with any regulatory authority, granting unto said attorney and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises in order to effectuate the same as fully to all intents and purposes as it and he might or could do if personally present, hereby ratifying and confirming all its and his said attorneys-in-fact and agents or any of them may lawfully do or cause to be done by virtue hereof.

SIGNATURE	TITLE	DATE
/s/ Bertrand Loy Bertrand Loy	President, Chief Executive Officer and Director (Principal executive officer)	May 17, 2016
/s/ Gregory B. Graves Gregory B. Graves	Executive Vice President, Chief Financial Officer & Treasurer (Principal financial officer)	May 17, 2016
/s/ Michael D. Sauer Michael D. Sauer	Vice President, Controller & Chief Accounting Officer (Principal accounting officer)	May 17, 2016
/s/ Paul L.H. Olson Paul L.H. Olson	Director, Chairman of the Board	May 17, 2016
/s/ Michael A. Bradley Michael A. Bradley	Director	May 17, 2016
/s/ Marvin D. Burkett Marvin D. Burkett	Director	May 17, 2016
/s/ R. Nicholas Burns R. Nicholas Burns	Director	May 17, 2016
/s/ Daniel W. Christman Daniel W. Christman	Director	May 17, 2016
/s/ James F. Gentilcore James F. Gentilcore	Director	May 17, 2016
/s/ James P. Lederer James P. Lederer	Director	May 17, 2016
/s/ Brian F. Sullivan Brian F. Sullivan	Director	May 17, 2016