

FORM 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Form 3 Holdings Reported.

Form 4 Transactions Reported.

ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL

OMB Number: 3235-0362

Estimated average burden

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1. Name and Address of Reporting Person* DEZWIREK PHILLIP			2. Issuer Name and Ticker or Trading Symbol CECO ENVIRONMENTAL CORP [CECE]			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Chairman		
(Last) (First) (Middle) 2300 YONGE STREET, SUITE 1710			3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) 12/31/2010			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person		
(Street) TORONTO A6 M4P 1E4			4. If Amendment, Date of Original Filed (Month/Day/Year)					
(City) (State) (Zip)								

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
				Amount	(A) or (D)	Price			
Common Stock	09/16/2008		P4	1,100	A	\$4.5 ⁽¹⁾	435,915	D	
Common Stock	09/23/2008		P4	4,000	A	\$4.51 ⁽²⁾	439,915	D	
Common Stock	09/24/2008		P4	4,900	A	\$4.5 ⁽³⁾	444,815	D	
Common Stock	09/26/2008		P4	13,657	A	\$4.14 ⁽⁴⁾	458,472	D	
Common Stock	09/29/2008		P4	12,767	A	\$3.88 ⁽⁵⁾	471,239	D	
Common Stock	09/30/2008		P4	38,070	A	\$3.83 ⁽⁶⁾	509,309	D	
Common Stock	10/01/2008		P4	2,000	A	\$4.03 ⁽⁷⁾	511,309	D	
Common Stock	10/02/2008		P4	500	A	\$4.14	511,809	D	
Common Stock	11/21/2008		P4	15,000	A	\$1.95 ⁽⁸⁾	526,809	D	
Common Stock	12/09/2008		P4	5,000	A	\$2.47 ⁽⁹⁾	531,809	D	
Common Stock	12/19/2008		P4	100	A	\$2.57	531,909	D	
Common Stock	01/15/2009		P4	2,500	A	\$2.58	534,409	D	
Common Stock	05/11/2009		P4	2,000	A	\$3.93 ⁽¹⁰⁾	536,409	D	
Common Stock	05/29/2009		P4	6,000	A	\$3.32 ⁽¹¹⁾	542,409	D	
Common Stock	05/29/2009		S4	4,000	D	\$3.52 ⁽¹²⁾⁽¹³⁾	538,409	D	
Common Stock	06/03/2009		S4	5,000	D	\$3.4 ⁽¹³⁾	533,409	D	
Common Stock	06/04/2009		S4	2,500	D	\$3.58 ⁽¹³⁾	530,909	D	
Common Stock	03/29/2010		P4	10,095	A	\$3.49 ⁽¹⁴⁾	571,004	D	
Common Stock	04/08/2010		P4	3,996	A	\$3.73 ⁽¹⁵⁾	575,000	D	
Common Stock	05/17/2010		P4	9,878	A	\$4.74 ⁽¹⁶⁾	584,878	D	
Common Stock	06/11/2010		P4	500	A	\$4.6	585,378	D	
Common Stock	06/14/2010		P4	434	A	\$4.83	585,812	D	
Common Stock	06/15/2010		P4	1,000	A	\$5 ⁽¹⁷⁾	586,812	D	
Common Stock	06/16/2010		P4	1,100	A	\$5.03 ⁽¹⁸⁾	587,912	D	
Common Stock	08/18/2010		P4	1,000	A	\$5.85 ⁽¹⁹⁾	588,912	D	
Common Stock	08/23/2010		P4	600	A	\$5.83 ⁽²⁰⁾	589,512	D	
Common Stock	08/25/2010		P4	500	A	\$5.63	590,012	D	
Common Stock	08/27/2010		P4	500	A	\$5.88 ⁽²¹⁾	590,512	D	
Common Stock	08/30/2010		P4	200	A	\$5.81 ⁽²²⁾	590,712	D	

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
					(A)	(D)	Date Exercisable	Expiration Date					

Explanation of Responses:

1. The price reported in column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$4.48 to \$4.53, inclusive. The reporting person undertakes to provide to CECO Environmental Corp., any security holder of CECO Environmental Corp., or the staff of the Securities Exchange Commission, upon request, full information regarding the number of shares sold or purchased, as applicable, at each separate price within the ranges set forth in footnotes 1 through 12 and footnotes 14 through 22 in this Form 5.
2. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$4.50 to \$4.55, inclusive.
3. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$4.35 to \$4.75, inclusive.
4. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$4.08 to \$4.18, inclusive.
5. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.75 to \$3.90, inclusive.
6. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.72 to \$3.98, inclusive.
7. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.97 to \$4.07, inclusive.
8. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$1.79 to \$2.00, inclusive.
9. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$2.45 to \$2.53, inclusive.
10. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.91 to \$3.94, inclusive.
11. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.30 to 3.41, inclusive.
12. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$3.45 to \$3.59, inclusive.
13. In connection with this transaction, filer has voluntarily remitted appropriate profits to CECO Environmental Corp., pursuant to Section 16(b) of the Securities Exchange Act of 1934.
14. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.41 to \$3.55, inclusive.
15. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$3.50 to \$4.30, inclusive.
16. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$4.65 to \$4.85, inclusive.
17. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$5.00 to \$5.01, inclusive.
18. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$4.98 to \$5.03, inclusive.
19. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$5.82 to \$5.89, inclusive.
20. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$5.70 to \$5.86, inclusive.
21. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$5.87 to \$5.88, inclusive.
22. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$5.80 to \$5.83, inclusive.

Remarks:

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/s/ Phillip DeZwirek

05/31/2011

** Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.