

Popowich James L.  
Form 4  
October 12, 2010

**FORM 4**

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

OMB APPROVAL

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

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
Popowich James L.

(Last) (First) (Middle)

C/O THE MOSAIC  
COMPANY, 3033 CAMPUS  
DRIVE, SUITE E490

(Street)

PLYMOUTH, MN 55441

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
MOSAIC CO [MOS]

3. Date of Earliest Transaction  
(Month/Day/Year)  
10/07/2010

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)

Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

**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 Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)
Common Stock				(A) or (D)	5,000	D	

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

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SEC 1474  
(9-02)

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

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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 Underlying Securities (Instr. 3 and 4)	8. Filing Date
Restricted Stock Units	\$ 0 <sup>(2)</sup>					01/14/2011	Common Stock	297
Restricted Stock Units	\$ 0 <sup>(2)</sup>					<sup>(3)</sup>	Common Stock	2,327
Restricted Stock Units	\$ 0 <sup>(2)</sup>					<sup>(4)</sup>	Common Stock	1,712
Restricted Stock Units	\$ 0 <sup>(2)</sup>	10/07/2010		A	1,381	<sup>(5)</sup>	Common Stock	1,381

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Popowich James L. C/O THE MOSAIC COMPANY 3033 CAMPUS DRIVE, SUITE E490 PLYMOUTH, MN 55441	X			

## Signatures

s/ Richard L. Mack, Attorney-in-Fact for James L. Popowich  
10/12/2010

\*\*Signature of Reporting Person Date

## Explanation of Responses:

- \* 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).
- (1) Not applicable.
- (2) One-for-One
- (3) The restricted stock units vested on October 9, 2009. Vested shares will be delivered to the reporting person on October 9, 2011.

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- (4) The restricted stock units vest on October 8, 2010. Vested shares will be delivered to the reporting person on October 8, 2012.
- (5) The restricted stock units vest on October 7, 2011. Vested shares will be delivered to the reporting person on October 7, 2013.

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

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