

Form 5500 Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Annual Return/Report of Employee Benefit Plan This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code). ▶ Complete all entries in accordance with the instructions to the Form 5500.	OMB Nos. 1210-0110 1210-0089 2018 This Form is Open to Public Inspection
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Part I	Annual Report Identification Information		
For calendar plan year 2018 or fiscal plan year beginning <u>01/01/2018</u> and ending <u>12/31/2018</u>			
A	This return/report is for:	☐ a multiemployer plan ☐ a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)	
	☒ a single-employer plan	☐ a DFE (specify) ____	
B	This return/report is:	☐ the first return/report ☐ the final return/report ☐ an amended return/report ☐ a short plan year return/report (less than 12 months)	
C	If the plan is a collectively-bargained plan, check here. ▶ ☐		
D	Check box if filing under:	☒ Form 5558 ☐ automatic extension ☐ the DFVC program	
	☐ special extension (enter description)		

Part II	Basic Plan Information —enter all requested information		
1a	Name of plan <u>ALERIS 401(K) PLAN</u>	1b	Three-digit plan number (PN) ▶ <u>001</u>
		1c	Effective date of plan <u>01/01/1971</u>
2a	Plan sponsor's name (employer, if for a single-employer plan) Mailing address (include room, apt., suite no. and street, or P.O. Box) City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions) <u>ALERIS OHIO MANAGEMENT, INC</u> <u>25825 SCIENCE PARK DRIVE</u> <u>STE 400</u> <u>BEACHWOOD, OH 44122-7392</u>	2b	Employer Identification Number (EIN) <u>27-1539961</u>
		2c	Plan Sponsor's telephone number <u>216-910-3400</u>
		2d	Business code (see instructions) <u>331310</u>

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE	Filed with authorized/valid electronic signature.	10/11/2019	ELLEN MATISKO
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Filed with authorized/valid electronic signature.	10/11/2019	ELLEN MATISKO
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Form 5500 (2018)
v. 171027

3a Plan administrator's name and address ☒ Same as Plan Sponsor	3b Administrator's EIN 3c Administrator's telephone number
4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report: a Sponsor's name c Plan Name	4b EIN 4d PN
5 Total number of participants at the beginning of the plan year	5 1282
6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines 6a(1) , 6a(2) , 6b , 6c , and 6d).	
a(1) Total number of active participants at the beginning of the plan year	6a(1) 936
a(2) Total number of active participants at the end of the plan year	6a(2) 939
b Retired or separated participants receiving benefits.....	6b 2
c Other retired or separated participants entitled to future benefits	6c 321
d Subtotal. Add lines 6a(2) , 6b , and 6c	6d 1262
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	6e 6
f Total. Add lines 6d and 6e	6f 1268
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	6g 1193
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested	6h 74
7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)	7

8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:

2E 2F 2G 2J 2K 2T 3H

b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:

9a Plan funding arrangement (check all that apply) (1) ☒ Insurance (2) ☐ Code section 412(e)(3) insurance contracts (3) ☒ Trust (4) ☐ General assets of the sponsor	9b Plan benefit arrangement (check all that apply) (1) ☒ Insurance (2) ☐ Code section 412(e)(3) insurance contracts (3) ☒ Trust (4) ☐ General assets of the sponsor
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10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)

a Pension Schedules

- (1)** ☒ **R** (Retirement Plan Information)
- (2)** ☐ **MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary
- (3)** ☐ **SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

b General Schedules

- (1)** ☒ **H** (Financial Information)
- (2)** ☐ **I** (Financial Information – Small Plan)
- (3)** ☒ 2 **A** (Insurance Information)
- (4)** ☒ **C** (Service Provider Information)
- (5)** ☒ **D** (DFE/Participating Plan Information)
- (6)** ☐ **G** (Financial Transaction Schedules)

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) ☐ Yes ☐ No

If "Yes" is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) ☐ Yes ☐ No

11c Enter the Receipt Confirmation Code for the 2018 Form M-1 annual report. If the plan was not required to file the 2018 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code _____

SCHEDULE A (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Insurance Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500. ▶ Insurance companies are required to provide the information pursuant to ERISA section 103(a)(2).	OMB No. 1210-0110 2018 This Form is Open to Public Inspection
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For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018	
A Name of plan ALERIS 401(K) PLAN	B Three-digit plan number (PN) ▶ 001
C Plan sponsor's name as shown on line 2a of Form 5500 ALERIS OHIO MANAGEMENT, INC	D Employer Identification Number (EIN) 27-1539961

Part I	Information Concerning Insurance Contract Coverage, Fees, and Commissions Provide information for each contract on a separate Schedule A. Individual contracts grouped as a unit in Parts II and III can be reported on a single Schedule A.
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1 Coverage Information:

(a) Name of insurance carrier PRINCIPAL LIFE INSURANCE COMPANY

(b) EIN	(c) NAIC code	(d) Contract or identification number	(e) Approximate number of persons covered at end of policy or contract year	Policy or contract year	
				(f) From	(g) To
42-0127290	61271	803664	1268	01/01/2018	12/31/2018

2 Insurance fee and commission information. Enter the total fees and total commissions paid. List in line 3 the agents, brokers, and other persons in descending order of the amount paid.
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(a) Total amount of commissions paid 0	(b) Total amount of fees paid 0
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3 Persons receiving commissions and fees. (Complete as many entries as needed to report all persons).

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

Part II Investment and Annuity Contract Information

Where individual contracts are provided, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

4 Current value of plan's interest under this contract in the general account at year end **4** 0**5** Current value of plan's interest under this contract in separate accounts at year end **5** 0**6** Contracts With Allocated Funds:**a** State the basis of premium rates ▶**b** Premiums paid to carrier **6b****c** Premiums due but unpaid at the end of the year **6c****d** If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, enter amount. **6d**
Specify nature of costs ▶**e** Type of contract: (1) ☐ individual policies (2) ☐ group deferred annuity(3) ☐ other (specify) ▶**f** If contract purchased, in whole or in part, to distribute benefits from a terminating plan, check here ▶ ☐**7** Contracts With Unallocated Funds (Do not include portions of these contracts maintained in separate accounts)**a** Type of contract: (1) ☐ deposit administration (2) ☐ immediate participation guarantee
(3) ☐ guaranteed investment (4) ☒ other ▶ **GUARANTEED FUND CONTRACT****b** Balance at the end of the previous year **7b** 15381010**c** Additions: (1) Contributions deposited during the year **7c(1)** 614912
(2) Dividends and credits **7c(2)**
(3) Interest credited during the year **7c(3)** 264093
(4) Transferred from separate account **7c(4)** 3252713
(5) Other (specify below) **7c(5)** 81564
▶ **LOAN PAYMENT**(6) Total additions **7c(6)** 4213282**d** Total of balance and additions (add lines **7b** and **7c(6)**) **7d** 19594292**e** Deductions:
(1) Disbursed from fund to pay benefits or purchase annuities during year **7e(1)** 1802383
(2) Administration charge made by carrier **7e(2)** 20879
(3) Transferred to separate account **7e(3)** 2119833
(4) Other (specify below) **7e(4)** 188105
▶ **LOAN WITHDRAWAL**(5) Total deductions **7e(5)** 4131200**f** Balance at the end of the current year (subtract line **7e(5)** from line **7d**) **7f** 15463092

Part III Welfare Benefit Contract Information

If more than one contract covers the same group of employees of the same employer(s) or members of the same employee organizations(s), the information may be combined for reporting purposes if such contracts are experience-rated as a unit. Where contracts cover individual employees, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

8 Benefit and contract type (check all applicable boxes)

- a** ☐ Health (other than dental or vision)
 b ☐ Dental
 c ☐ Vision
 d ☐ Life insurance
e ☐ Temporary disability (accident and sickness)
 f ☐ Long-term disability
 g ☐ Supplemental unemployment
 h ☐ Prescription drug
i ☐ Stop loss (large deductible)
 j ☐ HMO contract
 k ☐ PPO contract
 l ☐ Indemnity contract
m ☐ Other (specify) ▶

9 Experience-rated contracts:

a Premiums: (1) Amount received	9a(1)		
(2) Increase (decrease) in amount due but unpaid	9a(2)		
(3) Increase (decrease) in unearned premium reserve	9a(3)		
(4) Earned ((1) + (2) - (3))		9a(4)	
b Benefit charges (1) Claims paid	9b(1)		
(2) Increase (decrease) in claim reserves	9b(2)		
(3) Incurred claims (add (1) and (2))		9b(3)	
(4) Claims charged		9b(4)	
c Remainder of premium: (1) Retention charges (on an accrual basis) --			
(A) Commissions	9c(1)(A)		
(B) Administrative service or other fees	9c(1)(B)		
(C) Other specific acquisition costs	9c(1)(C)		
(D) Other expenses	9c(1)(D)		
(E) Taxes	9c(1)(E)		
(F) Charges for risks or other contingencies	9c(1)(F)		
(G) Other retention charges	9c(1)(G)		
(H) Total retention		9c(1)(H)	
(2) Dividends or retroactive rate refunds. (These amounts were ☐ paid in cash, or ☐ credited.)		9c(2)	
d Status of policyholder reserves at end of year: (1) Amount held to provide benefits after retirement		9d(1)	
(2) Claim reserves		9d(2)	
(3) Other reserves		9d(3)	
e Dividends or retroactive rate refunds due. (Do not include amount entered in line 9c(2).)		9e	

10 Nonexperience-rated contracts:

a Total premiums or subscription charges paid to carrier	10a	
b If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, other than reported in Part I, line 2 above, report amount	10b	

Specify nature of costs.

Part IV Provision of Information

11 Did the insurance company fail to provide any information necessary to complete Schedule A? ☐ Yes ☒ No

12 If the answer to line 11 is "Yes," specify the information not provided. ▶

SCHEDULE A (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Insurance Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500. ▶ Insurance companies are required to provide the information pursuant to ERISA section 103(a)(2).	OMB No. 1210-0110 2018 This Form is Open to Public Inspection
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For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018	
A Name of plan ALERIS 401(K) PLAN	B Three-digit plan number (PN) ▶ 001
C Plan sponsor's name as shown on line 2a of Form 5500 ALERIS OHIO MANAGEMENT, INC	D Employer Identification Number (EIN) 27-1539961

Part I	Information Concerning Insurance Contract Coverage, Fees, and Commissions Provide information for each contract on a separate Schedule A. Individual contracts grouped as a unit in Parts II and III can be reported on a single Schedule A.
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1 Coverage Information:

(a) Name of insurance carrier PRINCIPAL LIFE INSURANCE COMPANY
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(b) EIN	(c) NAIC code	(d) Contract or identification number	(e) Approximate number of persons covered at end of policy or contract year	Policy or contract year	
				(f) From	(g) To
42-0127290	61271	707844	1268	01/01/2018	12/31/2018

2 Insurance fee and commission information. Enter the total fees and total commissions paid. List in line 3 the agents, brokers, and other persons in descending order of the amount paid.

(a) Total amount of commissions paid 0	(b) Total amount of fees paid 0
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3 Persons receiving commissions and fees. (Complete as many entries as needed to report all persons).
(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

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	(c) Amount	(d) Purpose	

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	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

Part II Investment and Annuity Contract Information

Where individual contracts are provided, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

4 Current value of plan's interest under this contract in the general account at year end	4	0
5 Current value of plan's interest under this contract in separate accounts at year end	5	16230630

6 Contracts With Allocated Funds:**a** State the basis of premium rates ▶

b Premiums paid to carrier.....	6b	
c Premiums due but unpaid at the end of the year.....	6c	
d If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, enter amount. Specify nature of costs ▶	6d	

e Type of contract: (1) ☐ individual policies (2) ☐ group deferred annuity
(3) ☐ other (specify) ▶

f If contract purchased, in whole or in part, to distribute benefits from a terminating plan, check here ▶ ☐

7 Contracts With Unallocated Funds (Do not include portions of these contracts maintained in separate accounts)

a Type of contract: (1) ☐ deposit administration (2) ☐ immediate participation guarantee
(3) ☐ guaranteed investment (4) ☐ other ▶

b Balance at the end of the previous year.....	7b	
c Additions: (1) Contributions deposited during the year	7c(1)	
(2) Dividends and credits	7c(2)	
(3) Interest credited during the year	7c(3)	
(4) Transferred from separate account.....	7c(4)	
(5) Other (specify below)	7c(5)	
▶		
(6) Total additions.....	7c(6)	
d Total of balance and additions (add lines 7b and 7c(6))	7d	
e Deductions:		
(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1)	
(2) Administration charge made by carrier	7e(2)	
(3) Transferred to separate account.....	7e(3)	
(4) Other (specify below)	7e(4)	
▶		
(5) Total deductions.....	7e(5)	
f Balance at the end of the current year (subtract line 7e(5) from line 7d)	7f	0

Part III Welfare Benefit Contract Information

If more than one contract covers the same group of employees of the same employer(s) or members of the same employee organizations(s), the information may be combined for reporting purposes if such contracts are experience-rated as a unit. Where contracts cover individual employees, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

8 Benefit and contract type (check all applicable boxes)

- a** ☐ Health (other than dental or vision)
 b ☐ Dental
 c ☐ Vision
 d ☐ Life insurance
e ☐ Temporary disability (accident and sickness)
 f ☐ Long-term disability
 g ☐ Supplemental unemployment
 h ☐ Prescription drug
i ☐ Stop loss (large deductible)
 j ☐ HMO contract
 k ☐ PPO contract
 l ☐ Indemnity contract
m ☐ Other (specify) ▶

9 Experience-rated contracts:

a Premiums: (1) Amount received	9a(1)		
(2) Increase (decrease) in amount due but unpaid	9a(2)		
(3) Increase (decrease) in unearned premium reserve	9a(3)		
(4) Earned ((1) + (2) - (3))		9a(4)	
b Benefit charges (1) Claims paid	9b(1)		
(2) Increase (decrease) in claim reserves	9b(2)		
(3) Incurred claims (add (1) and (2))		9b(3)	
(4) Claims charged		9b(4)	
c Remainder of premium: (1) Retention charges (on an accrual basis) --			
(A) Commissions	9c(1)(A)		
(B) Administrative service or other fees	9c(1)(B)		
(C) Other specific acquisition costs	9c(1)(C)		
(D) Other expenses	9c(1)(D)		
(E) Taxes	9c(1)(E)		
(F) Charges for risks or other contingencies	9c(1)(F)		
(G) Other retention charges	9c(1)(G)		
(H) Total retention		9c(1)(H)	
(2) Dividends or retroactive rate refunds. (These amounts were ☐ paid in cash, or ☐ credited.)		9c(2)	
d Status of policyholder reserves at end of year: (1) Amount held to provide benefits after retirement		9d(1)	
(2) Claim reserves		9d(2)	
(3) Other reserves		9d(3)	
e Dividends or retroactive rate refunds due. (Do not include amount entered in line 9c(2).)		9e	

10 Nonexperience-rated contracts:

a Total premiums or subscription charges paid to carrier	10a	
b If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, other than reported in Part I, line 2 above, report amount	10b	

Specify nature of costs.

Part IV Provision of Information

11 Did the insurance company fail to provide any information necessary to complete Schedule A? ☐ Yes ☒ No

12 If the answer to line 11 is "Yes," specify the information not provided. ▶

SCHEDULE C (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Service Provider Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110
		2018
		This Form is Open to Public Inspection.

For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018		
A Name of plan ALERIS 401(K) PLAN	B Three-digit plan number (PN) ▶	001
C Plan sponsor's name as shown on line 2a of Form 5500 ALERIS OHIO MANAGEMENT, INC	D Employer Identification Number (EIN) 27-1539961	

Part I	Service Provider Information (see instructions)
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You must complete this Part, in accordance with the instructions, to report the information required for **each person** who received, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of monetary value) in connection with services rendered to the plan or the person's position with the plan during the plan year. If a person received **only** eligible indirect compensation for which the plan received the required disclosures, you are required to answer line 1 but are not required to include that person when completing the remainder of this Part.

1 Information on Persons Receiving Only Eligible Indirect Compensation

a Check "Yes" or "No" to indicate whether you are excluding a person from the remainder of this Part because they received only eligible indirect compensation for which the plan received the required disclosures (see instructions for definitions and conditions)..... ☒ Yes ☐ No

b If you answered line 1a "Yes," enter the name and EIN or address of each person providing the required disclosures for the service providers who received only eligible indirect compensation. Complete as many entries as needed (see instructions).

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation
PRINCIPAL LIFE INSURANCE COMPANY
42-0127290

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation
--

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(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

PRINCIPAL LIFE INSURANCE COMPANY

42-0127290

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
13 37 50 64	CONTRACT ADMINISTRATOR	173342	Yes ☒ No ☐	Yes ☒ No ☐	0	Yes ☐ No ☒

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

Part I Service Provider Information (continued)

3. If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received \$1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	
(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	
(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

Part II Service Providers Who Fail or Refuse to Provide Information

4 Provide, to the extent possible, the following information for each service provider who failed or refused to provide the information necessary to complete this Schedule.

(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide

Part III Termination Information on Accountants and Enrolled Actuaries (see instructions)
(complete as many entries as needed)

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

SCHEDULE D (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration	DFE/Participating Plan Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ► File as an attachment to Form 5500.	OMB No. 1210-0110 2018 This Form is Open to Public Inspection.
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For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018

A Name of plan <u>ALERIS 401(K) PLAN</u>	B Three-digit plan number (PN) ►	<u>001</u>
C Plan or DFE sponsor's name as shown on line 2a of Form 5500 <u>ALERIS OHIO MANAGEMENT, INC</u>	D Employer Identification Number (EIN) <u>27-1539961</u>	

Part I	Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs) (Complete as many entries as needed to report all interests in DFEs)
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a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN INTL SMALLCAP SEP ACCT-Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL LIFE INSURANCE COMPANY</u>				
c EIN-PN <u>42-0127290-014</u>	d Entity code <u>P</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>2575398</u>		
a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN CORE PLUS BOND SEP ACCT-Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL LIFE INSURANCE COMPANY</u>				
c EIN-PN <u>42-0127290-005</u>	d Entity code <u>P</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>3316378</u>		
a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN LGCP S&P 500 INDEX SA-Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL LIFE INSURANCE COMPANY</u>				
c EIN-PN <u>42-0127290-016</u>	d Entity code <u>P</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>10338855</u>		
a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN LIFETIME HYBR 2010 CIT Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL GLOBAL INVESTORS TRUST CO</u>				
c EIN-PN <u>26-6447574-001</u>	d Entity code <u>C</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>1822882</u>		
a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN LIFETIME HYBR 2020 CIT Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL GLOBAL INVESTORS TRUST CO</u>				
c EIN-PN <u>26-6447574-003</u>	d Entity code <u>C</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>10032876</u>		
a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN LIFETIME HYBR 2030 CIT Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL GLOBAL INVESTORS TRUST CO</u>				
c EIN-PN <u>26-6447574-005</u>	d Entity code <u>C</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>17700338</u>		
a Name of MTIA, CCT, PSA, or 103-12 IE: <u>PRIN LIFETIME HYBR 2040 CIT Z</u>				
b Name of sponsor of entity listed in (a): <u>PRINCIPAL GLOBAL INVESTORS TRUST CO</u>				
c EIN-PN <u>26-6447574-007</u>	d Entity code <u>C</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>11841682</u>		

a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN LIFETIME HYBR 2050 CIT Z

b Name of sponsor of entity listed in (a): PRINCIPAL GLOBAL INVESTORS TRUST CO

c EIN-PN 26-6447574-009	d Entity code C	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 4097182
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a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN LIFETIME HYBR INC CIT Z

b Name of sponsor of entity listed in (a): PRINCIPAL GLOBAL INVESTORS TRUST CO

c EIN-PN 26-6447574-011	d Entity code C	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 1714426
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a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN LIFETIME HYBR 2060 CIT Z

b Name of sponsor of entity listed in (a): PRINCIPAL GLOBAL INVESTORS TRUST CO

c EIN-PN 26-6447574-012	d Entity code C	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 323735
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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Part II Information on Participating Plans (to be completed by DFEs)

(Complete as many entries as needed to report all participating plans)

a Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
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plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN

SCHEDULE H (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Financial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code). ► File as an attachment to Form 5500.	OMB No. 1210-0110 2018 This Form is Open to Public Inspection
For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018		
A Name of plan ALERIS 401(K) PLAN	B Three-digit plan number (PN) ►	001
C Plan sponsor's name as shown on line 2a of Form 5500 ALERIS OHIO MANAGEMENT, INC	D Employer Identification Number (EIN) 27-1539961	

Part I Asset and Liability Statement			
1 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Report the value of the plan's interest in a commingled fund containing the assets of more than one plan on a line-by-line basis unless the value is reportable on lines 1c(9) through 1c(14). Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 1b(1), 1b(2), 1c(8), 1g, 1h, and 1i. CCTs, PSAs, and 103-12 IEs also do not complete lines 1d and 1e. See instructions.			
Assets		(a) Beginning of Year	(b) End of Year
a Total noninterest-bearing cash	1a		
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions.....	1b(1)	958867	1005573
(2) Participant contributions	1b(2)	0	0
(3) Other.....	1b(3)	0	0
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit).....	1c(1)		
(2) U.S. Government securities	1c(2)		
(3) Corporate debt instruments (other than employer securities):			
(A) Preferred	1c(3)(A)		
(B) All other.....	1c(3)(B)		
(4) Corporate stocks (other than employer securities):			
(A) Preferred	1c(4)(A)		
(B) Common.....	1c(4)(B)		
(5) Partnership/joint venture interests	1c(5)		
(6) Real estate (other than employer real property).....	1c(6)		
(7) Loans (other than to participants)	1c(7)		
(8) Participant loans.....	1c(8)	1685354	1773229
(9) Value of interest in common/collective trusts	1c(9)	48981900	47533120
(10) Value of interest in pooled separate accounts	1c(10)	18491092	16230630
(11) Value of interest in master trust investment accounts	1c(11)		
(12) Value of interest in 103-12 investment entities.....	1c(12)		
(13) Value of interest in registered investment companies (e.g., mutual funds).....	1c(13)	35768327	34480658
(14) Value of funds held in insurance company general account (unallocated contracts).....	1c(14)	15381010	15463092
(15) Other	1c(15)		

1d Employer-related investments:

		(a) Beginning of Year	(b) End of Year
(1) Employer securities	1d(1)		
(2) Employer real property	1d(2)		
e Buildings and other property used in plan operation	1e		
f Total assets (add all amounts in lines 1a through 1e)	1f	121266550	116486302

Liabilities

g Benefit claims payable	1g	0	
h Operating payables	1h	0	
i Acquisition indebtedness	1i	0	
j Other liabilities	1j	0	
k Total liabilities (add all amounts in lines 1g through 1j)	1k	0	0

Net Assets

l Net assets (subtract line 1k from line 1f)	1l	121266550	116486302
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Part II Income and Expense Statement

2 Plan income, expenses, and changes in net assets for the year. Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 2a, 2b(1)(E), 2e, 2f, and 2g.

Income

		(a) Amount	(b) Total
a Contributions:			
(1) Received or receivable in cash from: (A) Employers	2a(1)(A)	3907051	
(B) Participants	2a(1)(B)	6355926	
(C) Others (including rollovers)	2a(1)(C)	893910	
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines 2a(1)(A) , (B) , (C) , and line 2a(2)	2a(3)		11156887
b Earnings on investments:			
(1) Interest:			
(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)	0	
(B) U.S. Government securities	2b(1)(B)	0	
(C) Corporate debt instruments	2b(1)(C)	0	
(D) Loans (other than to participants)	2b(1)(D)	0	
(E) Participant loans	2b(1)(E)	81034	
(F) Other	2b(1)(F)	264093	
(G) Total interest. Add lines 2b(1)(A) through (F)	2b(1)(G)		345127
(2) Dividends: (A) Preferred stock	2b(2)(A)	0	
(B) Common stock	2b(2)(B)	0	
(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)	540003	
(D) Total dividends. Add lines 2b(2)(A) , (B) , and (C)	2b(2)(D)		540003
(3) Rents	2b(3)		0
(4) Net gain (loss) on sale of assets: (A) Aggregate proceeds	2b(4)(A)	0	
(B) Aggregate carrying amount (see instructions)	2b(4)(B)	0	
(C) Subtract line 2b(4)(B) from line 2b(4)(A) and enter result	2b(4)(C)		0
(5) Unrealized appreciation (depreciation) of assets: (A) Real estate	2b(5)(A)	0	
(B) Other	2b(5)(B)	0	
(C) Total unrealized appreciation of assets. Add lines 2b(5)(A) and (B)	2b(5)(C)		0

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		-3716408
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		-1215900
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		0
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		0
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds).....	2b(10)		-3288883
c Other income.....	2c		1198
d Total income. Add all income amounts in column (b) and enter total	2d		3822024

Expenses

e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	8427373	
(2) To insurance carriers for the provision of benefits	2e(2)	0	
(3) Other	2e(3)	0	
(4) Total benefit payments. Add lines 2e(1) through (3).....	2e(4)		8427373
f Corrective distributions (see instructions)	2f		0
g Certain deemed distributions of participant loans (see instructions)	2g		0
h Interest expense	2h		
i Administrative expenses: (1) Professional fees.....	2i(1)	0	
(2) Contract administrator fees.....	2i(2)	174899	
(3) Investment advisory and management fees.....	2i(3)	0	
(4) Other	2i(4)	0	
(5) Total administrative expenses. Add lines 2i(1) through (4).....	2i(5)		174899
j Total expenses. Add all expense amounts in column (b) and enter total	2j		8602272

Net Income and Reconciliation

k Net income (loss). Subtract line 2j from line 2d	2k		-4780248
l Transfers of assets:			
(1) To this plan.....	2l(1)		0
(2) From this plan.....	2l(2)		

Part III Accountant's Opinion

3 Complete lines 3a through 3c if the opinion of an independent qualified public accountant is attached to this Form 5500. Complete line 3d if an opinion is not attached.

a The attached opinion of an independent qualified public accountant for this plan is (see instructions):

(1) ☐ Unqualified (2) ☐ Qualified (3) ☒ Disclaimer (4) ☐ Adverse

b Did the accountant perform a limited scope audit pursuant to 29 CFR 2520.103-8 and/or 103-12(d)?

☒ Yes ☐ No

c Enter the name and EIN of the accountant (or accounting firm) below:

(1) Name: BDO USA, LLP

(2) EIN: 13-5381590

d The opinion of an independent qualified public accountant is **not attached** because:

(1) ☐ This form is filed for a CCT, PSA, or MTIA. (2) ☐ It will be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50.

Part IV Compliance Questions

4 CCTs and PSAs do not complete Part IV. MTIAs, 103-12 IEs, and GIAs do not complete lines 4a, 4e, 4f, 4g, 4h, 4k, 4m, 4n, or 5. 103-12 IEs also do not complete lines 4j and 4l. MTIAs also do not complete line 4l.

During the plan year:

a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.).....

b Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible? Disregard participant loans secured by participant's account balance. (Attach Schedule G (Form 5500) Part I if "Yes" is checked.)

	Yes	No	Amount
4a		X	0
4b		X	0

	Yes	No	Amount
c Were any leases to which the plan was a party in default or classified during the year as uncollectible? (Attach Schedule G (Form 5500) Part II if "Yes" is checked.)		X	0
d Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a. Attach Schedule G (Form 5500) Part III if "Yes" is checked.).....		X	0
e Was this plan covered by a fidelity bond?	X		10000000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?.....		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?.....		X	
i Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)	X		
j Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked, and see instructions for format requirements.)		X	
k Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?		X	
l Has the plan failed to provide any benefit when due under the plan?.....		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)		X	
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3.			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year?..... ☐ Yes ☒ No
If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.

5b If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)	5b(2) EIN(s)	5b(3) PN(s)

5c If the plan is a defined benefit plan, is it covered under the PBGC insurance program (See ERISA section 4021.)? ☐ Yes ☐ No ☐ Not determined
If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year _____. (See instructions.)

SCHEDULE R (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Retirement Plan Information This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110 2018 This Form is Open to Public Inspection.
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For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018

A Name of plan <u>ALERIS 401(K) PLAN</u>	B Three-digit plan number (PN) ▶ <u>001</u>
C Plan sponsor's name as shown on line 2a of Form 5500 <u>ALERIS OHIO MANAGEMENT, INC</u>	D Employer Identification Number (EIN) <u>27-1539961</u>

Part I	Distributions
---------------	----------------------

All references to distributions relate only to payments of benefits during the plan year.

1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions	1	<u>0</u>
2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits): EIN(s): <u>42-0127290</u>		
Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.		
3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year	3	

Part II	Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)
----------------	---

4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)?	☐ Yes	☐ No	☐ N/A
If the plan is a defined benefit plan, go to line 8.			
5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. Date: Month _____ Day _____ Year _____ If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.			
6 a Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived)	6a		
b Enter the amount contributed by the employer to the plan for this plan year	6b		
c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount)	6c		
If you completed line 6c, skip lines 8 and 9.			
7 Will the minimum funding amount reported on line 6c be met by the funding deadline?	☐ Yes	☐ No	☐ N/A
8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change?	☐ Yes	☐ No	☐ N/A

Part III	Amendments
-----------------	-------------------

9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box.....	☐ Increase	☐ Decrease	☐ Both	☐ No
--	-----------------------------------	-----------------------------------	-------------------------------	-----------------------------

Part IV	ESOPs (see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.
----------------	---

10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan?	☐ Yes	☐ No
11 a Does the ESOP hold any preferred stock?	☐ Yes	☐ No
b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.)	☐ Yes	☐ No
12 Does the ESOP hold any stock that is not readily tradable on an established securities market?	☐ Yes	☐ No

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Schedule R (Form 5500) 2018
v. 171027

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than 5% of total contributions to the plan during the plan year (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

- 14** Enter the number of participants on whose behalf no contributions were made by an employer as an employer of the participant for:

a The current year

b The plan year immediately preceding the current plan year

c The second preceding plan year

14a**14b****14c**

- 15** Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year

b The corresponding number for the second preceding plan year

15a**15b**

- 16** Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year

b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers

16a**16b**

- 17** If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

- 18** If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐

- 19** If the total number of participants is 1,000 or more, complete lines (a) through (c)

- a** Enter the percentage of plan assets held as:

Stock: _____ % Investment-Grade Debt: _____ % High-Yield Debt: _____ % Real Estate: _____ % Other: _____ %

- b** Provide the average duration of the combined investment-grade and high-yield debt:

☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more

- c** What duration measure was used to calculate line 19(b)?

☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify):



Aleris 401(k) Plan

Financial Statements
And Supplemental Schedule
As of December 31, 2018 and 2017
and for the Year Ended December 31, 2018

Aleris 401(k) Plan

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Independent Auditor's Report

To the Benefits Committee
Aleris 401(k) Plan
Beachwood, Ohio

Report on the Financial Statements

We were engaged to audit the accompanying financial statements of the Aleris 401(k) Plan (the Plan), which comprise the statements of net assets available for benefits as of December 31, 2018 and 2017, and the related statement of changes in net assets available for benefits for the year ended December 31, 2018, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on conducting the audits in accordance with auditing standards generally accepted in the United States of America. Because of the matter described in the *Basis for Disclaimer of Opinion* paragraph, however, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion.

Basis for Disclaimer of Opinion

As permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974, the plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information summarized in Note 3, which was certified by Delaware Charter Guarantee and Trust Company d/b/a Principal Trust Company, the trustee of the Plan, except for comparing such information with the related information included in the financial statements. We have been informed by the plan administrator that the trustee holds the Plan's investment assets and executes investment transactions. The plan administrator has obtained a certification from the trustee as of December 31, 2018 and 2017, and for the year ended December 31, 2018, that the information provided to the plan administrator by the trustee is complete and accurate.

Disclaimer of Opinion

Because of the significance of the matter described in the *Basis for Disclaimer of Opinion* paragraph, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. Accordingly, we do not express an opinion on these financial statements.

Other Matter - Supplemental Schedule

The supplemental Schedule of Assets (Held at End of Year) as of December 31, 2018 is required by the Department of Labor's (DOL) Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 and is presented for the purpose of additional analysis and is not a required part of the financial statements. Because of the significance of the matter described in the *Basis for Disclaimer of Opinion* paragraph, we do not express an opinion on this supplemental schedule.

Report on Form and Content in Compliance With DOL Rules and Regulations

The form and content of the information included in the financial statements and supplemental schedule, other than that derived from the information certified by the trustee, have been audited by us in accordance with auditing standards generally accepted in the United States of America and, in our opinion, are presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974.

BDO USA, LLP

Cleveland, Ohio
October 9, 2019

Aleris 401(k) Plan

Statements of Net Assets Available for Benefits

	December 31,	
	2018	2017
Assets		
Investments:		
Common / collective trusts	\$ 47,533,120	\$ 48,981,900
Pooled separate accounts	16,230,630	18,491,092
Registered investment companies	34,480,658	35,768,327
Investments, at fair value	98,244,408	103,241,319
Investments, at contract value	15,463,092	15,381,010
Total investments	113,707,500	118,622,329
Receivables:		
Employer contributions	1,005,573	958,867
Notes receivable from participants	1,773,229	1,685,354
Total receivables	2,778,802	2,644,221
Net assets available for benefits	\$ 116,486,302	\$ 121,266,550

See accompanying notes to financial statements.

Aleris 401(k) Plan

Statement of Changes in Net Assets Available for Benefits

For the Year Ended December 31, 2018

Additions:

Investment (loss) income:

Net depreciation in fair value of investments	\$ (8,219,993)
Interest and dividends	804,096
	<u>(7,415,897)</u>

Interest income on notes receivable from participants	81,034
--	--------

Contributions:

Employer	3,907,051
Employee	6,355,926
Rollover	893,910
	<u>11,156,887</u>

Total additions	3,822,024
-----------------	-----------

Deductions:

Benefit payments	8,427,373
Administrative expenses	174,899
	<u>8,602,272</u>

Total deductions	<u>8,602,272</u>
------------------	------------------

Net decrease	(4,780,248)
--------------	-------------

Net assets available for benefits:

Beginning of year	121,266,550
End of year	<u><u>\$ 116,486,302</u></u>

See accompanying notes to financial statements.

Aleris 401(k) Plan
Notes to Financial Statements
December 31, 2018 and 2017

1. Description of the Plan

The following description of the Aleris 401(k) Plan (the “Plan”) is provided for general information only. Participants should refer to the Plan document for a complete description of the Plan’s provisions.

General

The Plan is a defined contribution plan covering all eligible employees of Aleris Ohio Management, Inc. (the “Plan Sponsor”) and other adopting subsidiaries of Aleris International, Inc. (collectively, the “Company”), except for those employees classified as ineligible (as defined). The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”).

On July 26, 2018, Aleris Corporation, the Company’s parent, announced that a definitive agreement was finalized for Aleris Corporation to be acquired by Novelis Inc., a subsidiary of Hindalco Industries Limited. The transaction is expected to close within fifteen months from the date of the definitive agreement. There can be no assurance that the transaction will be consummated within the expected timing or at all. Plan management does not believe this transaction will have an impact on the Plan.

The Plan allows for participation immediately following an employee’s hire date.

Plan Administration

Overall responsibility for administering the Plan rests with the Company’s Benefits Committee, which is appointed by the Board of Directors of the Company. Delaware Charter Guarantee and Trust Company d/b/a Principal Trust Company (the “Trustee”) is the trustee of the Plan and is responsible for the management and control of the Plan’s assets.

Contributions

An employee’s pretax contributions to the Plan may not exceed certain Internal Revenue Service (“IRS”) maximum amounts. The maximum amount was \$18,500 in 2018 and \$18,000 in 2017. Employees who were 50 years of age or older by the end of the Plan year, and were making the maximum elective contribution for the year, were eligible to make additional pretax contributions of up to \$6,000 in 2018 and 2017. The Plan also provides that participants may roll over all or part of a qualified total distribution from another tax-qualified plan.

Matching contributions for participants are remitted to the Plan in an amount equal to 100% of the first 3% of an employee’s salary deferral contributions, plus 50% of the next 2% of an employee’s salary deferral contributions. This matching contribution is determined each payroll period.

The Company may make a discretionary contribution each Plan year, the amount of which is determined and authorized by resolution of the Board of Directors. The contribution is allocated to each participant based on the compensation of the participant. There was no discretionary contribution for 2018 and 2017.

The Plan also provides for an additional annual employer contribution (“Retirement Contribution”) based on a participant’s age as of the last day of the Plan year, as follows:

- Participant’s age less than 35 – 0.5% of annual compensation as defined by the Plan
- Participant’s age 35-49 – 1.0% of annual compensation as defined by the Plan
- Participant’s age 50 and older – 1.5% of annual compensation as defined by the Plan

Aleris 401(k) Plan

Notes to Financial Statements (continued)

The Retirement Contribution paid in 2019 and 2018 for the years ended December 31, 2018 and 2017 totaled \$1,005,573 and \$958,867, respectively.

Participant Accounts

Participants are immediately vested in that portion of their account equal to the value of the elective deferral contributions, Company matching contributions, rollover amounts in such participant's account, and actual earnings thereon. Upon death, disability, or attainment of normal retirement age, as defined by the Plan, a participant shall have a vested interest of 100% in the Retirement Contributions and discretionary contributions in their account. Each participant's account is credited with their contributions, Company contributions, and actual earnings thereon. Participants direct their accounts into various investment options offered by the Plan. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

Notes Receivable From Participants

The Plan permits participants to borrow from their account a minimum of \$1,000 and up to the lesser of \$50,000 or 50% of their vested account balance. Loans must be paid through payroll deductions over a period of time not to exceed five years, unless used for the purchase of a primary residence (in which case the loan repayment period will be the lesser of 10 years or a payment period consistent with commercial home loan practices). The loans are secured by the balance in the participant's account and the interest rate for all loans is equal to the prime interest rate published in the Wall Street Journal, plus 1%. Interest rates ranged from 4.25% to 7.50% on outstanding loans at December 31, 2018 and 2017. A loan is deemed to be in default if principal and interest are not paid 90 days after the loan payment is due.

Vesting Provisions

Retirement Contributions and discretionary contributions vest in accordance with the following:

Completed Years of Service	Less than 1	1	2	3	4	5 or more
Percentage of Vested Interest	0%	20%	40%	60%	80%	100%

Forfeited Accounts

Upon termination of employment, participants forfeit their nonvested balances. If a participant is rehired and becomes an eligible employee under the Plan, they may have their forfeited account balance reinstated subject to repayment of their distributed vested balance in accordance with Plan provisions. Forfeited balances are used: first, to restore participant's forfeitures; second, to reduce future Company contributions; and third, to reduce expenses of the Company incurred in the operation of the Plan. There was \$51,985 and \$39,015 remaining in the forfeiture account as of December 31, 2018 and 2017, respectively. For the year ended December 31, 2018, \$49,260 was used to reduce Company contributions or pay administrative expenses.

Withdrawals During Employment

A participant may withdraw any part of their vested account resulting from elective deferral contributions or rollover contributions during the year. A participant who has attained age 59 ½ may withdraw any part of their vested account that results from elective deferral contributions or matching contributions at any time. A participant may withdraw any part of their vested account that results from elective deferral contributions in the event of financial hardship due to an immediate and heavy financial need (as defined). Participants who applied for withdrawal of contributions due to financial hardship are suspended from making further contributions for the next six months.

Aleris 401(k) Plan
Notes to Financial Statements (continued)

Benefits Provision

Upon termination of service, death, or retirement, a participant (or beneficiary) could elect to receive their vested balance in a rollover, lump-sum distribution, or installments (as provided by the Plan).

Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA. In the event of a termination, all participant accounts shall be fully vested and nonforfeitable.

2. Summary of Significant Accounting Policies

Basis of Accounting

The accompanying financial statements of the Plan have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

Notes Receivable From Participants

Notes receivable from participants are recorded at their unpaid principal balance plus any accrued but unpaid interest. Interest income on notes receivable from participants is recorded when it is earned. Related fees are recorded as administrative expenses when they are incurred. No allowance for credit losses has been recorded as of December 31, 2018 or 2017. Delinquent notes receivable from participants are reclassified as distributions based on the terms of the Plan document.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes and supplemental schedule. Actual results could differ from those estimates.

Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market volatility and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the Statements of Net Assets Available for Benefits.

Investment Valuation and Income Recognition

Investments held by the Plan are stated at fair value except for fully benefit-responsive investment contracts, which are stated at contract value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

In conformity with Accounting Standards Codification ("ASC") 820, *Fair Value Measurement*, assets and liabilities measured at fair value are categorized into the following fair value hierarchy:

Level 1 – Fair value is based on unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Aleris 401(k) Plan
Notes to Financial Statements (continued)

Level 2 – Fair value is based on quoted prices in markets that are not active, quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.

Level 3 – Fair value is based on prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable. These inputs reflect management’s judgment about the assumptions that a market participant would use in pricing the investment and are based on the best available information, some of which may be internally developed.

The Plan invests in a fully benefit-responsive guaranteed investment contract (“GIC”) with Principal Life Insurance Company (“Principal”) (the “Principal Contract”). Principal maintains a general account, which is credited with contributions and earnings on the underlying investments and charged for participant withdrawals and administrative expenses. Principal Contract investments are recorded at contract value. The contract value represents contributions plus earnings, less participant withdrawals and administrative expenses. A 90-day notice is required in order for the Plan to liquidate (surrender) this investment (see Note 5).

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded as earned. Dividends are recorded on the ex-dividend date. Net appreciation (depreciation) includes the Plan’s gains and losses on investments bought and sold as well as held during the year.

Benefit Payments

Benefits are recorded when paid.

Evaluation of Subsequent Events

Plan management has evaluated subsequent events through October 9, 2019, which is the date the financial statements were available to be issued and has determined that there were no subsequent events that have occurred through that date that have not already been reflected in the financial statements and / or disclosed in the notes.

3. Investments and Notes Receivable from Participants (unaudited)

All investment information disclosed in the accompanying financial statements and supplemental schedule, including investments held and notes receivable from participants at December 31, 2018 and 2017, and net depreciation in fair value of investments, interest and dividends and interest income on notes receivable from participants for the year ended December 31, 2018, was obtained or derived from information provided to the plan administrator and certified as complete and accurate by the Trustee.

4. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity’s own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy in ASC 820 are described in Note 2.

Aleris 401(k) Plan
Notes to Financial Statements (continued)

The level in the fair value hierarchy within which the fair value measurement is classified is determined based on the lowest level input that is significant to the fair value measure in its entirety. Following is a description of the valuation techniques and inputs used for each major class of assets measured at fair value:

Registered investment companies (mutual funds): Valued at quoted prices from an active market which represents the net asset value (NAV) of shares held by the Plan at year-end.

Pooled separate accounts: Valued at fair value estimated by the issuer, which has been determined based on the unit values of the fund which are determined by dividing the fund's net assets at fair value by its units outstanding at the valuation date.

Common / collective trusts: Valued using the NAV provided by the trustee as a practical expedient, and are therefore not classified within the fair value hierarchy. The NAV is based on the value of the underlying assets held by the fund, less its liabilities. This practical expedient is not used when it is deemed probable that the fund will sell the investment for an amount different than the reported NAV.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables set forth by level, within the fair value hierarchy, the Plan's assets carried at fair value as of December 31, 2018 and 2017:

Assets at Fair Value as of December 31, 2018				
	Total	Level 1	Level 2	Level 3
Mutual funds:				
Large U.S. equity	\$ 17,469,789	\$ 17,469,789	\$ -	\$ -
Small/Mid U.S. equity	10,229,013	10,229,013	-	-
International equity	4,926,743	4,926,743	-	-
Fixed income	1,855,113	1,855,113	-	-
Total assets in the fair value hierarchy	34,480,658	34,480,658	-	-
Investments measured at NAV (a)	63,763,750			
Total assets	<u>\$ 98,244,408</u>	<u>\$ 34,480,658</u>	<u>\$ -</u>	<u>\$ -</u>

Assets at Fair Value as of December 31, 2017				
	Total	Level 1	Level 2	Level 3
Mutual funds:				
Large U.S. equity	\$ 17,553,025	\$ 17,553,025	\$ -	\$ -
Small/Mid U.S. equity	10,724,208	10,724,208	-	-
International equity	5,739,496	5,739,496	-	-
Fixed income	1,751,598	1,751,598	-	-
Total assets in the fair value hierarchy	35,768,327	35,768,327	-	-
Investments measured at NAV (a)	67,472,992			
Total assets	<u>\$ 103,241,319</u>	<u>\$ 35,768,327</u>	<u>\$ -</u>	<u>\$ -</u>

Aleris 401(k) Plan
Notes to Financial Statements (continued)

- (a) In accordance with ASC 820-10, certain investments that were measured at NAV (or its equivalent) have not been classified in the fair value hierarchy. The fair value amounts presented in the tables are intended to permit reconciliation of the fair value hierarchy to the line items presented in the Statements of Net Assets Available for Benefits.

The following table summarizes investments measured at fair value based on NAV per share as of December 31, 2018 and 2017:

	As of December 31,	
	2018	2017
Pooled separate accounts:		
Large U.S. equity (a)	\$ 10,338,855	\$ 11,698,308
International equity (b)	2,575,398	3,597,652
Fixed income (c)	3,316,377	3,195,132
Common / collective trusts		
Balanced funds (d)	47,533,120	48,981,900
Total assets measured at fair value based on NAV	<u>\$ 63,763,750</u>	<u>\$ 67,472,992</u>

- (a) **Large U.S. equity:** This asset class is generally comprised of investment options that invest in stocks, or shares of ownership in large, well-established, U.S. companies. These investment options typically carry more risk than fixed income investment options but have the potential for higher returns over longer time periods. They may be an appropriate choice for long-term investors who are seeking the potential for growth. There are no redemption restrictions or unfunded commitments on this investment. The Plan has the ability to redeem the investment at the NAV (or its equivalent) in the near term.
- (b) **International equity:** This asset class is comprised of investment options that invest in stocks, or shares of ownership in companies with their principal place of business or office outside the United States. These investment options often carry more risk than U.S. equity investment options but may have the potential for higher returns. They may be an appropriate choice for long-term investors who are seeking the potential for growth. There are no redemption restrictions or unfunded commitments on this investment. The Plan has the ability to redeem the investment at the NAV (or its equivalent) in the near term.
- (c) **Fixed income:** This asset class is generally comprised of investment options that invest in bonds, or debt of a company or government entity (including U.S. and Non-U.S.). It may also include real estate investment options that directly own property. These investment options typically carry more risk than short-term fixed income investment options (including, for real estate investment options, liquidity risk), but less overall risk than equities. There are no redemption restrictions or unfunded commitments on these investments. The Plan has the ability to redeem these investments at the NAV (or its equivalent) in the near term.
- (d) **Balanced funds:** This asset class is generally comprised of a combination of fixed income and equity investment options. These investment options may include balanced, asset allocation, target-date, and target-risk investment options. There are no redemption restrictions or unfunded commitments on this investment. The Plan has the ability to redeem the investment at the NAV (or its equivalent) in the near term.

The Company's Benefits Committee is responsible for determining the Plan's valuation policies and analyzing information provided by the Trustee that is used to determine the fair value of the Plan's investments. The Company's Benefits Committee is comprised of various members of the Company's management (including the

Aleris 401(k) Plan
Notes to Financial Statements (continued)

Company's Chief Financial Officer, General Counsel and Executive Vice President, and Chief Human Resources Officer) and reports to the Company's Board of Directors. The Company also has established policies and procedures that relate to the approval of all new Level 3 assets in which the Plan is permitted to invest.

5. Investment Contract With Insurance Company

The Principal Contract is included in the financial statements at contract value as reported to the Plan by the Trustee. Contract value represents contributions made to the contract, plus earnings, less participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. The guaranteed investment contract issuer is contractually obligated to repay the principal and interest based on a specified interest rate that is guaranteed to the Plan. As described in Note 2, because the guaranteed investment contract is fully benefit-responsive, contract value is the relevant measurement attribute for the guaranteed investment contract. The Principal Contract's total gains, including interest credited, are reported within the "interest and dividends" line item in the Statement of Changes in Net Assets Available for Benefits.

There are no reserves against contract value for credit risk of the contract issuer or otherwise. The crediting interest rate is based on a formula agreed upon with the issuer, but it may not be less than 0.0 percent. Such interest rates are reviewed on a quarterly basis for resetting.

Certain events limit the ability of the Plan to transact at contract value with the issuer. Such events include the following: (1) amendments to the Plan documents (including complete or partial Plan termination or merger with another plan), (2) changes to the Plan's prohibition on competing investment options or deletion of equity wash provisions, (3) bankruptcy of the Plan Sponsor or other Plan Sponsor events (for example, divestitures or spin-offs of a subsidiary), either of which cause a significant withdrawal from the Plan, or (4) the failure of the trust to qualify for exemption from federal income taxes or any required prohibited transaction exemption under ERISA. The Plan administrator does not believe that any events which would limit the Plan's ability to transact at contract value with participants are probable of occurring.

The Principal Contract does not permit Principal to terminate the agreement prior to the scheduled maturity date.

The table below sets forth the average yield earned by the Plan for the Principal Contract:

Average yields:	December 31,	
	2018	2017
Based on the interest rate credited to participants	1.71%	1.39%

6. Administrative Expenses

All administrative expenses are paid by the Plan, except for audit fees that are paid by the Plan Sponsor.

7. Tax Status

The IRS determined and informed the Company by a letter dated June 12, 2013, that the Plan and related trust were designed in accordance with applicable sections of the Internal Revenue Code (the "Code"). The Plan was amended since the date of the determination letter. Once qualified, the Plan is required to operate in conformity with the Code to maintain its qualification. The plan administrator and the Plan's tax counsel believe the Plan is being operated in compliance with the applicable requirements of the Code and, therefore, believe the Plan, as amended and restated, is qualified and the related trust is tax-exempt.

Aleris 401(k) Plan
Notes to Financial Statements (continued)

Accounting principles generally accepted in the United States require Plan management to evaluate uncertain tax positions taken by the Plan. The financial statement effects of a tax position are recognized when the position is more likely than not, based on the technical merits, to not be sustained upon examination by the IRS. The plan administrator has analyzed the tax positions taken by the Plan, and has concluded that as of December 31, 2018 and 2017, there are no uncertain tax positions taken or expected to be taken. The Plan has recognized no interest or penalties related to uncertain tax positions. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

8. Transactions With Parties-in-Interest

Several investments of the Plan are investment funds managed by the Trustee. Purchases and sales of investment units of such funds qualify as party-in-interest transactions, as defined by ERISA. Loans to participants are also considered party-in-interest transactions as such participants are employed by the Plan Sponsor. These party-in-interest transactions are exempt from the prohibited rules under ERISA.

Aleris 401(k) Plan

EIN # 27-1539961 Plan # 001

Schedule H, Line 4i – Schedule of Assets (Held at End of Year)

December 31, 2018

(a)	(b)	(c)	(d)	(e)
Identity of Issue, Borrower, Lessor, or Similar Party	Description of Investment, Including Maturity Date, Rate of Interest, Collateral, Par, or Maturity Value	Cost**	Current Value	
<u>Pooled Separate Accounts</u>				
* Principal Life Insurance Company	Large Cap S&P 500 Index Separate Account – 80,526 units		\$	10,338,855
* Principal Life Insurance Company	International Small Cap Separate Account – 23,015 units			2,575,398
* Principal Life Insurance Company	Bond and Mortgage Separate Account – 25,114 units			3,316,377
Total Pooled Separate Accounts				16,230,630
<u>Common/Collective Trusts</u>				
* Principal Life Insurance Company	Lifetime 2030 Separate Account – 714,011 units			17,700,337
* Principal Life Insurance Company	Lifetime 2040 Separate Account – 451,800 units			11,841,682
* Principal Life Insurance Company	Lifetime 2020 Separate Account – 440,812 units			10,032,876
* Principal Life Insurance Company	Lifetime 2050 Separate Account – 152,709 units			4,097,182
* Principal Life Insurance Company	Lifetime 2010 Separate Account – 91,099 units			1,822,882
* Principal Life Insurance Company	Lifetime STR Inc. Separate Account – 104,538 units			1,714,426
* Principal Life Insurance Company	Lifetime 2060 Separate Account – 25,038 units			323,735
Total Common / Collective Trusts				47,533,120
<u>Registered Investment Companies</u>				
The American Funds	AM FDS Growth Fund of AM R6 Fund – 232,729 shares			9,949,146
Vanguard Group	Windsor II ADM Fund – 136,244 shares			7,520,643
Vanguard Group	Small Cap Investor Index ADM Fund – 89,652 shares			5,668,715
The American Funds	AM FDS Europacific Growth R6 Fund – 109,507 shares			4,926,743
Vanguard Group	Mid Cap Growth Index ADM Fund – 88,584 shares			4,560,298
Vanguard Group	Total Bond Market Index Instl Fund – 177,523 shares			1,855,113
Total Registered Investment Companies				34,480,658
<u>Insurance Company General</u>				
* Principal Life Insurance Company	Guaranteed Investment Contract – 1,206,932 units			15,463,092
* Participant Loans	Interest rates ranging from 4.25% to 7.50%			1,773,229
				\$ 115,480,729

*Denotes a party-in-interest to the Plan.

**Cost is not required to be presented as all of the investments are participant-directed.

SCHEDULE H, line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

SCHEDULE H, line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

ALERIS 401(K) PLAN

EIN 27 1539961
 PLAN NUMBER 001
 PLAN YEAR 01/01/2018 TO 12/31/2018

(A)	(B) Identity of issuer, borrower, lessor or similar party.	(C) Description of investment including maturity date, rate of interest, collateral, par or maturity value.	(D) Cost	(E) Current Value
	The American Funds	Registered Investment Company Am Fds EuroPacific Grth R6 Fd	\$ 0.00	\$ 4,926,743.03
	The American Funds	Registered Investment Company Am Fds Grth Fd of Am R6 Fund	\$ 0.00	\$ 9,949,146.25
*	Principal Life Insurance Company	Insurance Company General Guaranteed Fund	\$ 0.00	\$ 15,463,092.04
*	Principal Life Insurance Company	Pooled Separate Accounts Prin Core Plus Bond Sep Acct-Z	\$ 0.00	\$ 3,316,377.98
*	Principal Life Insurance Company	Pooled Separate Accounts Prin Intl SmallCap Sep Acct-Z	\$ 0.00	\$ 2,575,397.54
*	Principal Life Insurance Company	Pooled Separate Accounts Prin LgCp S&P 500 Index SA-Z	\$ 0.00	\$ 10,338,854.88
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr Inc CIT Z	\$ 0.00	\$ 1,714,426.25
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr 2010 CIT Z	\$ 0.00	\$ 1,822,882.18
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr 2020 CIT Z	\$ 0.00	\$ 10,032,876.15
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr 2030 CIT Z	\$ 0.00	\$ 17,700,337.51
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr 2040 CIT Z	\$ 0.00	\$ 11,841,681.68
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr 2050 CIT Z	\$ 0.00	\$ 4,097,181.63
*	Principal Global Investors Trust Co	Common/Collective Trust Prin LifeTime Hybr 2060 CIT Z	\$ 0.00	\$ 323,735.08
	Vanguard Group	Registered Investment Company Vanguard MidCp Grth Idx Adm Fd	\$ 0.00	\$ 4,560,298.04
	Vanguard Group	Registered Investment Company Vanguard Sm Cap Index Adm Fund	\$ 0.00	\$ 5,668,715.38

SCHEDULE H, line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

ALERIS 401(K) PLAN
EIN 27 1539961
PLAN NUMBER 001
PLAN YEAR 01/01/2018 TO 12/31/2018

(A)	(B) Identity of issuer, borrower, lessor or similar party.	(C) Description of investment including maturity date, rate of interest, collateral, par or maturity value.	(D) Cost	(E) Current Value
	Vanguard Group	Registered Investment Company Vanguard Ttl Bd Mkt Idx Inst	\$ 0.00	\$ 1,855,112.27
	Vanguard Group	Registered Investment Company Vanguard Windsor II Adm Fund	\$ 0.00	\$ 7,520,642.79
*	Participant Loans	Range of Interest Rates Rates Range From 4.25% To 7.50%	\$ 0.00	\$ 1,773,229.00