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

2016

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

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
ASHLAND HERCULES PENSION PLAN

1b Three-digit plan number (PN) ▶ 001

1c Effective date of plan 01/01/1913

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)
VALVOLINE LLC

100 VALVOLINE WAY
LEXINGTON, KY 40509-2714

2b Employer Identification Number (EIN)
61-1782197

2c Plan Sponsor's telephone number
859-357-7777

2d Business code (see instructions)
325600

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.	07/08/2019	EIVIND KOLEMAINEN
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE			
	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

Preparer's name (including firm name, if applicable) and address (include room or suite number)

Preparer's telephone number

3a Plan administrator's name and address [X] Same as Plan Sponsor	**3b** Administrator's EIN	
	3c Administrator's telephone number	
4 If the name and/or EIN of the plan sponsor has changed since the last return/report filed for this plan, enter the name, EIN and the plan number from the last return/report:	**4b** EIN	
a Sponsor's name	**4c** PN	

5 Total number of participants at the beginning of the plan year	**5**	22855
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)**	2497
a(2) Total number of active participants at the end of the plan year	**6a(2)**	906
b Retired or separated participants receiving benefits	**6b**	4459
c Other retired or separated participants entitled to future benefits	**6c**	9645
d Subtotal. Add lines **6a(2)**, **6b**, and **6c**.	**6d**	15010
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	**6e**	1186
f Total. Add lines **6d** and **6e**.	**6f**	16196
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	**6g**	
h Number of participants that terminated employment during the plan year with accrued benefits that were less than 100% vested	**6h**	0
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:

1A 3H 1I

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)** [X] Trust
- **(4)** [ ] General assets of the sponsor

9b Plan benefit arrangement (check all that apply)

- **(1)** [X] Insurance
- **(2)** [ ] Code section 412(e)(3) insurance contracts
- **(3)** [X] Trust
- **(4)** [ ] General assets of the sponsor

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

b General Schedules

- **(1)** [X] **H** (Financial Information)
- **(2)** [ ] **I** (Financial Information – Small Plan)
- **(3)** [ ] 0 **A** (Insurance Information)
- **(4)** [X] **C** (Service Provider Information)
- **(5)** [X] **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 2016 Form M-1 annual report. If the plan was not required to file the 2016 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 SB (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Single-Employer Defined Benefit Plan Actuarial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500 or 5500-SF.**

OMB No. 1210-0110

2016

This Form is Open to Public Inspection

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

▶ **Round off amounts to nearest dollar.**

▶ **Caution:** A penalty of $1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan
ASHLAND HERCULES PENSION PLAN

B Three-digit plan number (PN) ▶ 001

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
VALVOLINE LLC

D Employer Identification Number (EIN)
61-1782197

E Type of plan: [X] Single [ ] Multiple-A [ ] Multiple-B

F Prior year plan size: [ ] 100 or fewer [ ] 101-500 [X] More than 500

Part I Basic Information

1 Enter the valuation date: Month 10 Day 01 Year 2016

2 Assets:

a Market value	**2a**	2253413692
b Actuarial value	**2b**	2239211651

3 Funding target/participant count breakdown

	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	11055	1550639125	1550639125
b For terminated vested participants	9715	402819222	402819222
c For active participants	2497	242856852	250837319
d Total	23267	2196315199	2204295666

4 If the plan is in at-risk status, check the box and complete lines (a) and (b) [ ]

a Funding target disregarding prescribed at-risk assumptions	**4a**	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	**4b**	
5 Effective interest rate	**5**	5.98 %
6 Target normal cost	**6**	17490652

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE

Signature of actuary

06/08/2017
Date

DENNIS L STONE, FSA
Type or print name of actuary

17-03271
Most recent enrollment number

MERCER
Firm name

502-561-4500
Telephone number (including area code)

400 WEST MARKET STREET
LOUISVILLE, KY 40202-3415
Address of the firm

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions [ ]

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	458936978
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)		75292321
9	Amount remaining (line 7 minus line 8)	0	383644657
10	Interest on line 9 using prior year's actual return of 10.96%	0	42047454
11	Prior year's excess contributions to be added to prefunding balance:		
a	Present value of excess contributions (line 38a from prior year)		0
b(1)	Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 6.18 %		0
b(2)	Interest on line 38b from prior year Schedule SB, using prior year's actual return		
c	Total available at beginning of current plan year to add to prefunding balance		0
d	Portion of (c) to be added to prefunding balance		
12	Other reductions in balances due to elections or deemed elections		
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	425692111

Part III Funding Percentages

14	Funding target attainment percentage	14	82.27%
15	Adjusted funding target attainment percentage	15	101.35%
16	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	88.88%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage	17	%

Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
06/14/2017	343163	0			
06/16/2017	705328	0			
08/08/2017	394414500	0			
			Totals ► 18(b)	395462991	18(c) 0

19 Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:

a	Contributions allocated toward unpaid minimum required contributions from prior years.	19a	0
b	Contributions made to avoid restrictions adjusted to valuation date	19b	0
c	Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c	376377421

20 Quarterly contributions and liquidity shortfalls:

a Did the plan have a "funding shortfall" for the prior year? [X] Yes [ ] No

b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? [X] Yes [ ] No

c If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year

(1) 1st	(2) 2nd	(3) 3rd	(4) 4th
0	0	0	0

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	
4.43%	5.91%	6.65%	☐ N/A, full yield curve used

b Applicable month (enter code)	**21b**	4
22 Weighted average retirement age	**22**	61

23 Mortality table(s) (see instructions) ☐ Prescribed - combined ☒ Prescribed - separate ☐ Substitute

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment	☒ Yes	☐ No
25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment	☐ Yes	☒ No
26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment	☒ Yes	☐ No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment	**27**	

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	**28**	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a)	**29**	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	**30**	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

a Target normal cost (line 6)	**31a**	17490652
b Excess assets, if applicable, but not greater than line 31a	**31b**	0

32 Amortization installments:

	Outstanding Balance	Installment
a Net shortfall amortization installment	390776126	72527220
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	**33**	
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)	**34**	90017872

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement		55420749	55420749

36 Additional cash requirement (line 34 minus line 35)	**36**	34597123
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	376377421
38 Present value of excess contributions for current year (see instructions)		
a Total (excess, if any, of line 37 over line 36)	**38a**	341780298
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	**38b**	55420749
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	**39**	0
40 Unpaid minimum required contributions for all years	**40**	0

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:

a Schedule elected ☐ 2 plus 7 years ☐ 15 years

b Eligible plan year(s) for which the election in line 41a was made ☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011

42 Amount of acceleration adjustment	**42**	
43 Excess installment acceleration amount to be carried over to future plan years	**43**	

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

2016

This Form is Open to Public Inspection.

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

A Name of plan
ASHLAND HERCULES PENSION PLAN

B Three-digit plan number (PN) ▶ 001

C Plan sponsor's name as shown on line 2a of Form 5500
VALVOLINE LLC

D Employer Identification Number (EIN)
61-1782197

Part I Service Provider Information (see instructions)

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). . . . . [X] 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

BASSO INVESTORS LTD
1266 EAST MAIN STREET
STAMFORD, CT 06902

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

BNY MELLON MANAGEMENT NORTH AMERICA

25-6078093

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

TACONIC CAPITAL ADVISORS, L.P.

20-5826144

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

BREVAN HOWARD CAPITAL MANAGEMENT LP
4TH FLOOR ONE ESPLANADEST HELIER
JERSEY, CHANNEL ISLANDS JE2 JE

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

BRIDGEWATER ASSOCIATES, LP

ONE GLENDINNING PLACE
WESTPORT, CT 06680

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

BAIN CAPITAL PUBLIC EQUITY, LP

200 CLARENDON STREET
BOSTON, MA 02116

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

DAVIDSON KEMPNER ADVISERS, INC.

13-3594751

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

DAVIDSON KEMPNER CAPITAL MANAGEMENT

13-3863161

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

DIMENSIONAL FUND ADVISORS LP

30-0447847

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

SILVER CREEK CAPITAL MANAGEMENT LLC

RAINIER SQUARE BLDG.
1301 FIFTH AVE, 40TH FLOOR
SEATTLE, WA 98101

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

ETON PARK CAPITAL MANAGEMENT, L.P.

11-3719116

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

FIR TREE , L.L.C.

20-2556936

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

FIR TREE INC.

13-3745261

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

INDUS CAPITAL PARTNERS, LLC

13-4129229

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

LUXOR CAPITAL GROUP, LP

20-1394199

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

MARSHALL WACE LLP

98-0430284

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

MILLENNIUM MANAGEMENT, LLC

666 FIFTH AVENUE
NEW YORK, NY 10103

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

OMEGA ADVISORS, INC.

13-3628307

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

OZ MANAGEMENT LP

13-3980578

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

STEADFAST CAPITAL MANAGEMENT LP

450 PARK AVENUE 21ST FLOOR
NEW YORK, NY 10022

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

PARTNER FUND MANAGEMENT, L.P.

26-2000428

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

PORTFOLIO ADVISORS, LLC

06-1487853

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

SAMLYN CAPITAL, LLC

20-5854094

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

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

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

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

(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)

TOWERS WATSON DELAWARE

53-0181291

(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?
15 50 65	NONE	2789244	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

PACIFIC INVESTMENT MANAGEMENT CO

33-0629048

(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?
28 51 52	NONE	1029815	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [ ] No [X]

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

NISA INVESTMENT ADVISORS, L.L.C.

48-1140940

(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?
28 51	NONE	969617	Yes [ ] No [X]	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)

WESTERN ASSET MANAGEMENT CO

95-2705767

(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?
28 51	NONE	910418	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

THE BANK OF NEW YORK MELLON

13-5160382

(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?
18 19 50	NONE	600604	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [ ] No [X]

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

BLACKROCK INTERNATIONAL LIMITED

06-1543710

(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?
28 51 52	NONE	482437	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [ ] No [X]

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)

ALBOURNE AMERICA LLC

91-2164625

(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?
16 50	NONE	433333	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

JOHNSON INVESTMENT COUNSEL

31-1801770

(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?
28 51	NONE	265271	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

MPS COMMUNICATION GRAPHICS

23-2808727

(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?
15 36 99	NONE	237741	Yes [ ] No [X]	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)

STANDISH MELLON ASSET MANAGEMENT

25-1890416

(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?
28 51	NONE	233410	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

MERCER (US) INC.

13-2834414

(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?
11 50	NONE	225025	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

MELLON CAPITAL MANAGEMENT

25-1442864

(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?
28 51	NONE	176976	Yes [ ] No [X]	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)

CONDUENT HUMAN RESOURCE SERVICES

20-2185976

(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?
15 50	NONE	76086	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

BLUE AND COMPANY LLC

35-1178661

(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?
10 50	NONE	43137	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

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

ALIRT INSURANCE RESEARCH

20-3957224

(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?
49 50	NONE	8500	Yes [ ] No [X]	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: GARY D DICKSON
b EIN: 13-2834414
c Position: ACTUARY
d Address: MERCER
525 VINE STREET, SUITE 1600
CINCINNATI, OH 45202-3124
e Telephone: 513-632-2600

Explanation: GARY TERMINATED FORM MERCER AND DENNIS STONE OF MERCER REPLACED GARY.

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

2016

This Form is Open to Public Inspection.

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

A Name of plan
ASHLAND HERCULES PENSION PLAN

B Three-digit plan number (PN) ▶ 001

C Plan or DFE sponsor's name as shown on line 2a of Form 5500
VALVOLINE LLC

D Employer Identification Number (EIN)
61-1782197

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)

a Name of MTIA, CCT, PSA, or 103-12 IE: DB MASTER PENSIONS TRUST

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

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)
61-1782197-004	M	2026586548

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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 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

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)

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

2016

This Form is Open to Public Inspection

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

A Name of plan
ASHLAND HERCULES PENSION PLAN

B Three-digit plan number (PN) ▶ 001

C Plan sponsor's name as shown on line 2a of Form 5500
VALVOLINE LLC

D Employer Identification Number (EIN)
61-1782197

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)		
(2) Participant contributions	1b(2)		
(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)		
(9) Value of interest in common/collective trusts	1c(9)		
(10) Value of interest in pooled separate accounts	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)	2253413691	2026586548
(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)		
(14) Value of funds held in insurance company general account (unallocated contracts)	1c(14)		
(15) Other	1c(15)		

			(a) Beginning of Year	(b) End of Year
1d	Employer-related investments:			
	(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	2253413691	2026586548
	Liabilities			
g	Benefit claims payable	1g		
h	Operating payables	1h		
i	Acquisition indebtedness	1i		
j	Other liabilities	1j		
k	Total liabilities (add all amounts in lines 1g through1j)	1k	0	0
	Net Assets			
l	Net assets (subtract line 1k from line 1f)	1l	2253413691	2026586548

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)	395462991	
	(B) Participants	2a(1)(B)		
	(C) Others (including rollovers)	2a(1)(C)		
	(2) Noncash contributions	2a(2)		
	(3) Total contributions. Add lines **2a(1)(A), (B), (C),** and line **2a(2)**	2a(3)		395462991
b	**Earnings on investments:**			
	(1) Interest:			
	(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)		
	(B) U.S. Government securities	2b(1)(B)		
	(C) Corporate debt instruments	2b(1)(C)		
	(D) Loans (other than to participants)	2b(1)(D)		
	(E) Participant loans	2b(1)(E)		
	(F) Other	2b(1)(F)		
	(G) Total interest. Add lines **2b(1)(A)** through **(F)**	2b(1)(G)		0
	(2) Dividends: **(A)** Preferred stock	2b(2)(A)		
	(B) Common stock	2b(2)(B)		
	(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)		
	(D) Total dividends. Add lines **2b(2)(A)**, **(B)**, and **(C)**	2b(2)(D)		0
	(3) Rents	2b(3)		
	(4) Net gain (loss) on sale of assets: **(A)** Aggregate proceeds	2b(4)(A)		
	(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
	(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)		
	(B) Other	2b(5)(B)		
	(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)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		151978919
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds)	2b(10)		
c Other income	2c		
d Total income. Add all **income** amounts in column (b) and enter total	2d		547441910
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	186657761	
(2) To insurance carriers for the provision of benefits	2e(2)	575526546	
(3) Other	2e(3)		
(4) Total benefit payments. Add lines **2e(1)** through **(3)**	2e(4)		762184307
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Interest expense	2h		
i Administrative expenses: **(1)** Professional fees	2i(1)	234914	
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)	18409738	
(5) Total administrative expenses. Add lines **2i(1)** through **(4)**	2i(5)		18644652
j Total expenses. Add all **expense** amounts in column (b) and enter total	2j		780828959
Net Income and Reconciliation			
k Net income (loss). Subtract line **2j** from line **2d**	2k		-233387049
l Transfers of assets:			
(1) To this plan	2l(1)		6559906
(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: BLUE AND COMPANY, LLC **(2)** EIN: 35-1178661

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:

		Yes	No	Amount
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.)	4a		X	
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.)	4b		X	

			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.)	4c		X	
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.)	4d		X	
e	Was this plan covered by a fidelity bond?	4e	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?	4f		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?	4g		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?	4h		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.)	4i		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.)	4j		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?	4k		X	
l	Has the plan failed to provide any benefit when due under the plan?	4l		X	
m	If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	4m		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	4n			
o	Defined Benefit Plan or Money Purchase Pension Plan Only: Were any distributions made during the plan year to an employee who attained age 62 and had not separated from service?	4o			

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

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 4057591. (See instructions.)

Part V Trust Information

6a Name of trust	**6b** Trust's EIN

6c Name of trustee or custodian	**6d** Trustee's or custodian's telephone number

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

2016

This Form is Open to Public Inspection.

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

A Name of plan
ASHLAND HERCULES PENSION PLAN

B Three-digit plan number (PN) ▶ 001

C Plan sponsor's name as shown on line 2a of Form 5500
VALVOLINE LLC

D Employer Identification Number (EIN)
61-1782197

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** 0

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): 13-5160382

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** 845

Part II Funding Information (If the plan is not subject to the minimum funding requirements of section of 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**

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	**14a**	
b The plan year immediately preceding the current plan year	**14b**	
c The second preceding plan year	**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	**15a**	
b The corresponding number for the second preceding plan year	**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	**16a**	
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	**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: 15.0 % Investment-Grade Debt: 52.0 % High-Yield Debt: 0.0 % Real Estate: 0.0 % Other: 33.0 %

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):

Part VII IRS Compliance Questions

20a Is the plan a 401(k) plan? If "No," skip b	☐ Yes ☐ No
20b How did the plan satisfy the nondiscrimination requirements for employee deferrals under section 401(k)(3) for the plan year? Check all that apply:	☐ Design-based safe harbor ☐ "Prior year" ADP test ☐ "Current year" ADP test ☐ N/A
21a What testing method was used to satisfy the coverage requirements under section 410(b) for the plan year? Check all that apply:	☐ Ratio percentage test ☐ Average benefit test ☐ N/A
21b Did the plan satisfy the coverage and nondiscrimination requirements of sections 410(b) and 401(a)(4) for the plan year by combining this plan with any other plan under the permissive aggregation rules?	☐ Yes ☐ No

22a If the plan is a master and prototype plan (M&P) or volume submitter plan that received a favorable IRS opinion letter or advisory letter, enter the date of the letter ____/____/____ and the serial number _____.

22b If the plan is an individually-designed plan that received a favorable determination letter from the IRS, enter the date of the most recent determination letter ____/____/____.

Ashland Hercules Pension Plan

Financial Statements

Years ended September 30, 2017 and 2016
with Report of Independent Auditors

Ashland Hercules Pension Plan

Financial Statements

Years ended September 30, 2017 and 2016

CONTENTS

	Page
Report of Independent Auditors	2
Financial Statements	
Statements of Net Assets Available for Benefits	4
Statements of Changes in Net Assets Available for Benefits	5
Notes to Financial Statements	6

Supplemental Schedules*

* Supplemental schedules required by Section 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

CPAs / ADVISORS
blue
Blue & Co., LLC / 250 West Main Street, Suite 2900 / Lexington, KY 40507
main 859.253.1100 fax 859.253.1384 email blue@blueandco.com

Report of Independent Auditors

To the Plan Administrator, Valvoline LLC
Ashland Hercules Pension Plan

We were engaged to audit the accompanying financial statements of the Ashland Hercules Pension Plan (the Plan), which comprise the statements of net assets available for benefits as of September 30, 2017 and 2016, and the related statements of changes in net assets available for benefits for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Plan 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 audit 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 (DOL) 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 The Bank of New York Mellon, 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 and for the years ended September 30, 2017 and 2016, 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.

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

The form and content of the information included in the financial statements, 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.

Blue & Co., LLC

Lexington, Kentucky
July 13, 2018

Statements of Net Assets Available for Benefits

(in thousands)	September 30 2017	2016
Assets		
Investments, at fair value:		
Participating units in the Valvoline LLC Defined Benefit Trust	$ 2,026,587	$ 2,253,414
Net assets available for benefits	$ 2,026,587	$ 2,253,414

See accompanying notes to financial statements.

Statements of Changes in Net Assets Available for Benefits

(in thousands)	Years Ended September 30 2017	2016
Additions:		
Plan interest in the Valvoline LLC Defined Benefit Trust investment income (loss)	$ 151,979	$ (20,874)
Plan interest in the Ashland Inc. Pension Trust investment income	—	283,430
Employer contributions	395,463	—
Total additions	547,442	262,556
Deductions:		
Benefits paid to participants	186,658	199,164
Administrative expenses	18,645	11,659
Total deductions	205,303	210,823
Transfers:		
From Ashland Inc. Leveraged Employee Stock Ownership Plan	6,560	2,502
From Ashland Inc. Pension Trust	—	2,669,406
To Valvoline LLC Defined Benefit Trust	—	(2,669,406)
To Chemical Hourly Pension Plan	—	(28,057)
To Insurers	(575,526)	(371,741)
Net change in assets	(226,827)	(345,563)
Net assets available for benefits, beginning of year	2,253,414	2,598,977
Net assets available for benefits, end of year	$ 2,026,587	$ 2,253,414

See accompanying notes to financial statements.

1. Description of Plan

The following brief description of the Ashland Hercules Pension Plan (the Plan) is provided for general information purposes only. The information in this Note is not a Summary Plan Description or Plan document, as these terms are defined under the Employee Retirement Income Security Act of 1974 (ERISA). Instead, this information merely summarizes selected aspects of the Plan. Read the Summary Plan Description or the Plan document for more information about the Plan. The Plan document controls the terms of the Plan and supersedes any inconsistencies contained herein or in the Summary Plan Description. The Plan sponsorship transferred from Ashland Global Holdings Inc. (Ashland) to Valvoline LLC (Valvoline or the Company) on September 1, 2016. As Plan Administrator, Valvoline retains all rights to determine, interpret and apply the Plan's terms to factual matters and matters of law. This retained discretionary authority is more particularly described in the Summary Plan Description and in the Plan document.

Separation from Ashland

On September 22, 2015, Ashland announced that the Board of Directors approved proceeding with a plan to separate Ashland into two independent, publicly traded companies comprising of the new Ashland and Valvoline . The initial step of the separation, the initial public offering (IPO) of Valvoline Inc. closed on September 28, 2016. After the IPO, Ashland owned 83% of the total outstanding shares of Valvoline Inc.'s common stock. Substantially all of the historical Valvoline business reported by Ashland, as well as certain other legacy Ashland assets and liabilities, were transferred to Valvoline, including the Ashland Hercules Pension Plan liabilities and assets which transferred on September 1, 2016. As part of the plan sponsor transition, certain union participants' liability and asset balances of the Plan were transferred to the Chemical Hourly Pension Plan which remained with Ashland and within the Ashland Inc. Master Trust (Ashland Trust). This transfer of $28,057 thousand is included in the Transfer to Chemical Hourly Plan caption within the Statements of Change in Net Assets Available for Benefits for the year ended September 30, 2016.

In April 2017, the Ashland Board of Directors authorized the distribution to Ashland stockholders of all 83% of Valvoline Inc.'s 170 million shares of common stock on May 12, 2017 as a pro rata dividend on shares of Ashland common stock outstanding at the close of business on the record date of May 5, 2017.

General

The Plan is a non-contributory defined benefit pension plan covering most U.S. employees of historical Ashland. The Plan is subject to the current provisions of the Employee Retirement Income Security Act of 1974 (ERISA). The Plan is administered by the Company and maintained by The Bank of New York Mellon (the Trustee).

Effective January 1, 2011, the Plan was amended affecting Non-Grandfathered employees who participated in the Plan's Retirement Growth Account. A Non-Grandfathered employee is defined as an employee who was hired on or after July 1, 1993. Beginning January 1, 2011, Non-Grandfathered employees will no longer receive contribution and transition credits in their Retirement Growth Accounts. However, they will continue to receive interest credits as long as they have a Retirement Growth Account in the Plan. Starting January 1, 2011, eligible Non-Grandfathered employees will begin earning new company base and transition contributions in the Ashland Employee Savings Plan. The actuarial present value of accumulated plan benefits at October 1, 2011 reflects the effect of this plan amendment. Effective January 1, 2011, no additional employees are eligible to become members in the plan.

1. Description of Plan (continued)

In July 2010, Ashland and Süd-Chemie AG (Süd-Chemie) signed an agreement for the formation of an expanded global joint venture serving the foundry chemical sector. The transaction closed on November 30, 2010 and combined three businesses: (i) Ashland's Casting Solutions business group, (ii) Süd-Chemie's Foundry-Products and Specialty Resins business unit, and (iii) Ashland-Südchemie-Kernfest GmbH (ASK), the then existing 50% owned European-based joint venture between Ashland and Süd-Chemie. On March 31, 2012, Ashland completed the sale to Nexeo Solutions, LLC (formerly known as TPG Accolade, LLC (Nexeo)) of substantially all of the assets and certain liabilities of its global distribution business which previously comprised the Ashland Distribution (Distribution) segment. As a result of these transactions, the Company has determined that the loss of active Plan participants caused the Plan to experience a partial termination. All active and affected Plan participants were appropriately vested in their accrued benefits in accordance with Section 411(d) of the Internal Revenue Code.

On March 16, 2016, the Personnel and Compensation Committee of the Board of Directors of Ashland authorized the amendment to freeze the accrual of benefits under the Ashland Hercules Pension Plan, effective as of September 30, 2016.

Pension annuity programs

During September 2016, Valvoline used pension assets to purchase a non-participating annuity contract from an insurer that will pay and administer future pension benefits for 14,800 participants within the Plan. Valvoline transferred approximately $378 million of the outstanding pension benefit obligation in exchange for pension trust assets whose value approximated the liability value.

During September 2017, Valvoline used pension assets to purchase a non-participating annuity contract from an insurer that will pay and administer future pension benefits for approximately 6,000 participants within the Plan. Valvoline transferred approximately $585 million of the outstanding pension benefit obligation in exchange for pension trust assets whose value approximated the liability value. During 2017, Valvoline made discretionary contributions of $394 million which was used to help fund the annuity purchase.

The transfer of pension trust assets to the insurers is included in the Transfers to Insurers caption within the Statement of Change in Net Assets Available for Benefits for the years ended September 30, 2017 and 2016. The insurers have unconditionally and irrevocably guaranteed the full payment of benefits to plan participants associated with the annuity purchase and benefit payments will be in the same form that was in effect under the Plan. The insurers have also assumed all investment risk associated with the pension assets that were delivered as annuity contract premiums.

Pension Benefits
The following schedules and descriptions pertain to the Plan document:

Schedule A
Represents wage employees with five or more years of service that are fully vested and entitled to monthly pension benefits beginning at normal retirement age (65) equal to 1.15% of their average monthly earnings for the highest five consecutive calendar years during the last ten calendar years of service (limited to the average Social Security earnings base) multiplied by the years and months of credited service.

For earnings in excess of the average Social Security earnings base, the multiplication factor increases from 1.15% to 1.35%, but the earnings will not exceed the maximum limits under section 401(a)(17) of the Internal Revenue Code (the IRC).

1. Description of Plan (continued)

The Plan permits a participant to elect unreduced early retirement at ages 55 through 64 if the participant meets the minimum years of credited service requirements as detailed in the Plan agreement. A participant who reaches age 50 and has at least 10 years of credited service may elect reduced early retirement benefits. The amount of the reduced benefit will be computed in the same manner as a normal retirement pension except that it will be actuarially reduced for each month from the date of early retirement to the month of eligibility for unreduced early retirement.

Schedule B

Generally, salaried, non-represented wage, and certain represented wage employees who participate in accordance with collective bargaining agreements, who were employed by the Company as of December 31, 2004, with five or more years of service are fully vested and entitled to monthly pension benefits beginning at normal retirement age (65) equal to 1.2% of their average monthly earnings (limited to the Social Security integration point, which is one-half of the Social Security tax base divided by twelve) for the highest five consecutive years during the last ten years of service multiplied by the years and months of credited service. For earnings in excess of the Social Security integration point, the multiplication factor increases from 1.2% to 1.6%, but the earnings will not exceed the maximum limits under section 401(a)(17) of the IRC. The Plan permits a participant to elect unreduced early retirement at age 60 if the participant meets a minimum of ten years of credited service. A participant who reaches age 55 and has at least ten years of credited service may elect reduced early retirement benefits. The amount of the reduced benefit will be computed as follows: the reduction percentage is based on years of service formula limited to a maximum of .417% per month. In 2005, this Plan was amended to provide for future accruals based on career average earnings (see Schedule D below).

Schedule C

On January 1, 1999, former employees of BetzDearborn Inc. became participants (BetzDearborn Participants) in the Plan. Generally, former BetzDearborn salaried and wage employees with five or more years of service are fully vested and entitled to minimum monthly pension benefits based on their accrued service beginning at normal retirement age (65) equal to the "Basic Benefit" plus the "Excess Benefit," reduced by any "W. R. Grace Benefit," as follows:

Basic Benefit: 1.2% of final average compensation (the average of the highest consecutive three years' compensation up to the maximum limits under section 401(a)(17) multiplied by years of service up to a maximum of 35 years).

Excess Benefit: 0.6% of final average compensation in excess of covered compensation, multiplied by years of service up to a maximum of 35 years.

W. R. Grace Benefit: the vested accrued pension benefit earned as an employee of the Dearborn division of W. R. Grace & Co.

The Plan permits a BetzDearborn participant to elect reduced early retirement benefits at the age of 55 if the participant meets a minimum of ten years of service. The amount of the reduced benefit will be computed in the same manner as a normal retirement pension except that it will be reduced 1/180 for each of the first 60 months and 1/300 for each of the next 60 months the early retirement date (commencement) precedes the normal retirement date. If a participant elects the reduced early retirement benefit and his age plus service equals at least 85 years, then the amount of the reduced benefit will be computed in the same manner as a normal retirement pension except that the basic benefit will be unreduced for each of the first 60 months and reduced 1/240 for each month commencement precedes 60 months. The excess benefit will be reduced 1/180 for each of the first 60 months and 1/300 for each of the next 60 months commencement precedes normal retirement date. In 2005, this Plan was amended to provide for future accruals based on career average earnings (see Schedule D below).

1. Description of Plan (continued)

Schedule D

Generally, certain represented wage employees who participate in accordance with collective bargaining agreements, who were employed by the Company as of December 31, 2004, with five or more years of service are fully vested and entitled to monthly pension benefits beginning at normal retirement age (65) equal to 1.2% of their average monthly earnings (limited to the Social Security integration point, which is one-half of the Social Security tax base divided by twelve) for their final average earnings multiplied by the years and months of credited service. For earnings in excess of the Social Security integration point, the multiplication factor increases from 1.2% to 1.6%, but the earnings will not exceed the maximum limits under section 401(a)(17) of the IRC. Final average earnings is the highest consecutive number of years of earnings determined by the sum of (1) the period from January 1, 2005 until termination and (2) five years or three years depending on previous participation in Schedule B or C, respectively. The Plan permits a participant to elect unreduced early retirement at age 60 if the participant meets a minimum of ten years of credited service. A participant who reaches age 55 and has at least ten years of credited service may elect reduced early retirement benefits. The amount of the reduced benefit will be computed as follows: the reduction percentage is based on years of service formula limited to a maximum of .417% per month.

Schedule E

Generally, salaried, non-represented wage, and certain represented wage employees who participate in accordance with collective bargaining agreements, who were employed by the Company as of December 31, 2004, with five or more years of service are fully vested and entitled to monthly pension benefits beginning at normal retirement age (65) equal to 1.2% of their average monthly earnings (limited to the Social Security integration point, which is one-half of the Social Security tax base divided by twelve) for their final average earnings multiplied by the years and months of credited service. For earnings in excess of the Social Security integration point, the multiplication factor increases from 1.2% to 1.6%, but the earnings will not exceed the maximum limits under section 401(a)(17) of the IRC. Final average earnings is the highest consecutive number of years of earnings determined by the sum of (1) the period from January 1, 2005 until termination and (2) five years or three years depending on previous participation in Schedule B or C, respectively. The Plan permits a participant to elect unreduced early retirement at age 60 if the participant meets a minimum of ten years of credited service. A participant who reaches age 55 and has at least ten years of credited service may elect reduced early retirement benefits.

AIA Plan

The Ashland & Affiliates Pension Plan (AIA Plan) is a non-contributory defined benefit pension plan established as of October 1, 1986, to provide defined pension benefits on and after that date to eligible employees (or their beneficiaries) of the Company and various subsidiaries meeting certain age and employment requirements. Benefits earned by those employees through September 30, 1986, under previous plans were covered through the purchase of nonparticipating annuities.

Effective July 1, 2003, the AIA Plan was amended and restated. The amendment and restatement changed the benefit formula for participants that were employees with less than 10 years of service on June 30, 2003. The new formula also applied to new hires who became eligible for the AIA Plan after June 30, 2003. Participants who terminated before June 30, 2003 and who were rehired after that date and again participated in the AIA Plan had their benefits accrued from the time they again actively participated in the Plan calculated under the new formula. The new formula is a cash balance plan design referred to as the Retirement Growth Account.

Participants in the Retirement Growth Account formula receive contribution credits as a percentage of base pay. Interest credits are allocated to each Retirement Growth Account. Participants who have both a benefit in the Ashland Inc. Leveraged Employee Stock Ownership Plan (LESOP) and in the Retirement Growth Account have their Retirement Growth Accounts reduced by one-half of the value in their LESOP accounts, unless they elect to transfer one-half of their LESOP accounts to the Plan.

1. Description of Plan (continued)

Benefits under the AIA Plan that are not under the Retirement Growth Account formula are based on an employee's years of service and compensation for periods up to ten years before retirement. For certain covered employees, such benefits are expected to come in part from one-half of their accounts in the LESOP.

The AIA Plan provided for 100% vesting after an employee satisfied the early retirement requirements or completed five years of service, including service through September 30, 1986, under the previous plans. The Plan has been amended effective September 30, 2008, so that employees with at least 1 hour of service after September 30, 2008 must complete at least three years of continuous service under the Plan in order to have a non-forfeitable benefit.

Death Benefits
Upon completing age and service requirements for pension eligibility, a participant may make an election to provide a pension benefit for a designated beneficiary in the event the participant dies prior to retirement. The beneficiary's benefit shall be computed based on the participant's service and earnings accrued to the date of death and then reduced in accordance with the Plan provisions based on the payment option elected. Other death benefits are described in the Plan document.

Fees
Fees for administration, investment advice, actuarial and other third party services are paid by the Ashland Trust or the Valvoline LLC Defined Benefit Trust (Valvoline Trust) after the September 1, 2016 transfer to Valvoline (collectively the Trusts). The Trust is not charged for administrative services performed on its behalf by Valvoline.

2. Summary of Significant Accounting Policies

Basis of Accounting
The accompanying financial statements are prepared on the accrual basis of accounting.

Master Trust
For the eleven months ended September 1, 2016, the Plan's investments were held in the Ashland Trust, a master trust fund for three Company sponsored pension benefit plans. Trustee allocated the earnings from the Ashland Trust investments to participating plans based on each plan's participation in separate investment pools within the Ashland Trust.

Accordingly, the Plan's investment gain or loss represents its allocable share of the Ashland Trust's investment income and appreciation (depreciation) in fair value of investments.

On September 1, 2016, the pension plan assets were transferred from the Ashland Trust to the Valvoline Trust, a master trust fund. The Ashland Hercules Pension Plan is the only plan within the Valvoline Trust and the Plan's investment gain or loss represents all the Valvoline Trust's investment income and appreciation (depreciation) in fair value of investments after the transfer.

Investment Valuation
The Plan's investment in the Trusts are reported at fair value. The fair value of the Plan's interest in the Trusts are based on the beginning of the year value of its interest in the Trust plus actual contributions, transfers and allocated investment income less actual distributions and allocated administrative expenses (see Note 3). Investments in the Trusts include cash and cash equivalents, government securities and obligations, debt instruments, corporate stocks, private equity and hedge funds. See Note 4 for a discussion of fair value measurements within the Trusts.

2. Summary of Significant Accounting Policies (continued)

Purchases and sales of securities are reflected on a trade date basis. Gains or losses on sales of securities are based on average cost. Dividend income is recorded on the ex-dividend date. Income from other investments is recorded as earned on an accrual basis. The Plan presents in the Statements of Changes in Net Assets Available for Benefits the Plan's interest in the Trusts' investment income (loss).

Actuarial Present Value of Accumulated Plan Benefits
Accumulated plan benefits (see Note 5) are those estimated future periodic payments, including lump-sum distributions, which are attributable under the Plan's provisions for services rendered by the employees to the valuation date.

Accumulated plan benefits include benefits expected to be paid to retired or terminated employees or their beneficiaries, beneficiaries of deceased employees, and active employees or their beneficiaries. Benefits payable under all circumstances are included to the extent they are deemed attributable to employee service rendered to the valuation date. The actuarial present value of these accumulated plan benefits, as determined by the Plan's actuary, is the result from applying actuarial assumptions to reflect the time value of money (through discounts for interest) and the probability of payment between the valuation date and the expected date of payment.

During 2016, Ashland changed the method used to estimate the service and interest cost components of net periodic benefit costs for pension and other postretirement benefits. This change compared to the previous method resulted in a decrease in the service and interest cost components for pension and other postretirement benefit costs during 2016. Historically, Ashland estimated these service and interest cost components utilizing a single weighted-average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. Ashland has elected to utilize a full yield curve approach in the estimation of these components by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows. Ashland made this change to provide a more precise measurement of service and interest costs by improving the correlation between projected benefit cash flows to the corresponding spot yield curve rates. This change does not affect the measurement of Ashland's total benefit obligations or annual net periodic benefit costs as the change in the service and interest costs will be offset in the actuarial gain or loss reported, which typically occurs during the fourth fiscal quarter. Ashland has accounted for this change as a change in accounting estimate that is inseparable from a change in accounting principle and accordingly has accounted for it prospectively. Valvoline will continue this accounting treatment for the transferred plans.

The significant actuarial assumptions used in the valuations were as follows:

Discount rate	3.77% weighted average split discount rate for 2017 (3.56% in 2016 using split discount rate)
Mortality	RP-2014 generational employee/ annuitant mortality table for males and females with no color adjustments, projected to follow 2017 Trustees Report of the Social Security Administration Intermediate Alternative as reflected in the MSS-2017 improvement scale. (RP-2014 generational employee/annuitant mortality table, with no collar adjustments, projected using combined scale MP-2015 and 2016 in 2016)
Inflation	2.5% per year increase in IRC Section 415 and 401(a)(17) limitations (2.5% per year increase in 2016)

2. Summary of Significant Accounting Policies (continued)

Benefit Payments
Benefit payments to participants are recorded upon distribution.

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

Date of Management's Review
The Plan evaluates events occurring subsequent to the date of the financial statements in determining the accounting for and disclosure of transactions and events that affect the financial statements. Subsequent events have been evaluated through July 13, 2018, which is the date the financial statements were available to be issued.

Recent Accounting Pronouncements
During 2017, the Plan adopted Accounting Standards Update (ASU) 2015-07, *Fair Value Measurement (Topic 820) - Disclosures for Investments in Certain Entities that Calculate Net Asset Value per Share (or Its Equivalent)*. This guidance removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value (NAV) per share practical expedient. This guidance also removes the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. The Notes to the Financial Statements have been retroactively restated as required by the standard.

In February 2017, the FASB issued accounting ASU 2017-06, *Plan Accounting: Defined Benefit Pension Plans (Topic 960) Defined Contribution Pension Plans (Topic 962) Health and Welfare Benefit Plans (Topic 965)* that requires an employee benefit plan to report an interest in a master trust and the change in the value of that interest as separate line items on the statement of net assets available for benefits and the statement of changes in net assets available for benefits, respectively. Additionally, an employee benefit plan is required to disclose the master trust's investments and other assets and liabilities, as well as the dollar amount of its interest in these balances. This guidance must be applied retrospectively and will become effective for Valvoline on October 1, 2019. Early adoption is permitted. Plan management is currently evaluating the impact of adopting this guidance on the financial statements.

3. Investments

The Plan Administrator has elected the method of compliance as permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. Accordingly, The Bank of New York Mellon, the trustee of the Plan, has certified to the completeness and accuracy of all investments reflected on the accompanying Statements of Net Assets Available for Benefits as of September 30, 2017 and 2016, and the related investment activity reflected in the Statements of Changes in Net Assets Available for Benefits for the years ended September 30, 2017 and 2016, respectively. At September 30, 2017 and 2016, the Plan's interest in the net assets of the Valvoline Trust was 100%.

The following table presents the assets including investments and liabilities of the Valvoline Trust at September 30, 2017 and 2016:

3. Investments (continued)

	September 30	
	2017	2016
Investments at fair value as determined by quoted market prices		
Cash and cash equivalents	$ 72,210	$ 109,412
Government securities	206,125	—
Corporate debt instruments	923,283	868,259
Corporate stocks	106	133,891
	1,201,724	1,111,562
Investments at estimated fair value		
Government securities	187,616	126,974
Corporate debt instruments	260,404	196,487
Corporate stocks	69	88,318
Private equity and hedge funds		
Other investments	16,327	22,532
	464,416	434,311
Investments at NAV per share practical expedient		
Private equity and hedge funds	412,982	725,449
Total investments	2,079,122	2,271,322
Receivables	99,957	29,333
Total assets	2,179,079	2,300,655
Payables	(152,492)	(47,241)
Net assets	$ 2,026,587	$ 2,253,414

The following table presents the net appreciation (depreciation) in investments (including gains and losses on investments bought and sold, as well as held during the year) and investment income in the Trusts for the periods ended:

	Year Ended September 30	One Month Ended September 30	Eleven Months Ended August 31
	2017	2016	2016
Net appreciation (depreciation) in fair value of investments:	$ 90,121	$ (23,054)	$ 221,814
Investment income:			
Interest	63,044	3,233	73,943
Dividends	2,984	125	3,070
Total**	$ 156,149	$ (19,696)	$ 298,827

** The above total excludes investment related expenses of $4,170, $1,178, and $10,011 for the year ended September 30, 2017, one month ended September 30, 2016, the eleven months ended August 31, 2016, respectively.

3. Investments (continued)

The Trusts, through the activities of certain of its investment managers, uses derivative financial instruments in connection with its normal trading activities in an effort to improve investment return or control risk. Derivative financial instruments generally are viewed as a more cost effective and efficient means of providing liquidity than owning the underlying security. They can also provide unique risk/return structures for the Trusts. The derivative financial instruments used in the Trusts include futures contracts, options, and interest rate and credit default swaps which expose the Trusts to favorable and unfavorable effects of market risk. The Trusts do not take on any leverage at the Trust level, and futures positions are covered by short-term marketable securities.

Futures contracts provide for the delivery or purchase of financial instruments on a specified future date at a specified price or yield. The Trusts purchase futures contracts principally for exposure to fixed income securities, which generally are settled in the market prior to delivery of the underlying securities. Additionally, the Trusts issue options which obligate the Trusts to either buy or sell the underlying fixed income instruments at a specific price if the options are exercised. The Trusts receive a premium upon issuance of the options.

The Trusts are exposed to risks from unfavorable changes in interest rates or market values of the securities underlying the futures and option contracts. Changes in interest rates on outstanding futures contracts are settled on a daily basis thereby minimizing the Trusts' exposure to credit loss. The Trusts are also exposed to credit risk in the event of nonperformance by the counterparties to the futures and options contracts. The Trusts do not anticipate nonperformance by the counterparties and generally do not require counterparty collateral.

The fair value of these derivative contracts and related appreciation (depreciation), as noted below, are included in Government securities and obligations or Debt instruments in the tables above. The following table presents a summary of the open derivative contracts as of September 30:

	2017		2016	
	Contracts	Fair Value	Contracts	Fair Value
Derivative assets				
Government securities and obligations:				
U.S. Treasury futures	5	$ 581	3	$ 247
Debt instruments:				
S&P 500 Index futures	—	—	1	1,142
Interest rate swaps	12	1,959	4	517
Credit default swaps	25	10,657	5	1,393
Derivative liabilities				
Government securities and obligations:				
U.S. Treasury futures obligations	13	(2,411)	9	(2,306)
Debt instruments:				
Interest rate swaps obligations	10	(2,508)	6	(1,777)
Credit default swaps obligations	21	(1,503)	4	(7)

For the year ended September 30, 2017 and for the eleven months ended August 31, 2016, the Valvoline and Ashland Trusts, respectively, realized a net trading loss on futures, options and swap contract of approximately $17,429 and $31,727, respectively, and for the one month ended September 30, 2016 the Valvoline Trust realized a net trading gain of approximately $2,215.

4. Fair Value

Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 820, Fair Value Measurements and Disclosures, provides the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). An instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the instrument's fair value measurement. The three levels within the fair value hierarchy are described as follows:

Level 1 - Observable inputs such as unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs, other than quoted prices included in Level 1, which are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3 - Unobservable inputs for the asset or liability for which there is little, if any, market activity at the measurement date.

Following is a description of the valuation methodologies used for investments measured at fair value:

Cash and cash equivalents - The carrying value of cash approximates fair value and is classified within Level 1 of the fair value hierarchy.

Government securities and obligations, debt instruments and corporate stocks - U.S. Treasury, U.S. Government securities, certain debt instruments, and corporate stocks are valued based on quoted market prices that are readily and regularly available and are classified within Level 1 of the fair value hierarchy. Others are valued based on quoted prices in markets that are not active or for which significant inputs are observable either directly or indirectly and are classified within Level 2 of the fair value hierarchy. Certain investments have values that are determined using the net asset value per share or equivalent and are classified within Level 3 of the fair value hierarchy.

Private equity and hedge funds - The fair value of the investments in this class have been estimated using the NAV per share or its equivalent of the investments.

Other investments - For those investments which are not traded on an open exchange, values are based on quoted prices in markets that are not active or for which significant inputs are observable either directly or indirectly and are classified within Level 2 of the fair value hierarchy. Certain investments have values that are determined using the discounted cash flows method and are classified within Level 3 of the fair value hierarchy.

As of September 30, 2017 and 2016, the Plan held no investments outside its interest in the Valvoline Trust. The Plan's policy is to recognize transfers between levels as of the end of the reporting period. During the years ended September 30, 2017 and 2016, there were no transfers of investments between levels.

4. Fair Value (continued)

The following table sets forth by level, within the fair value hierarchy, the Valvoline Trust's investments at fair value as of September 30, 2017:

	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	$ 141,102	$ —	$ —	$ 141,102
Government securities	208,536	191,262	—	399,798
Corporate debt instruments	923,283	260,794	—	1,184,077
Corporate stocks	106	54	15	175
Other investments	—	—	16,327	16,327
Total assets	1,273,027	452,110	16,342	1,741,479
Liabilities				
Cash and cash equivalents	(68,892)	—	—	(68,892)
Government securities	(2,411)	(3,646)	—	(6,057)
Corporate debt instruments	—	(390)	—	(390)
Total liabilities	(71,303)	(4,036)	—	(75,339)
Total assets in fair value hierarchy	$ 1,201,724	$ 448,074	$ 16,342	$ 1,666,140
Investments measured at net asset value:				
Private equity and hedge funds[(a)]				$ 412,982
Total investments measured at net asset value	$ —	$ —	$ —	$ 412,982
Total assets at fair value	$ 1,201,724	$ 448,074	$ 16,342	$ 2,079,122

(a) Private equity and hedge funds that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented as investments in the Statement of Net Assets Available for Benefits.

4. Fair Value (continued)

The following table sets forth by level, within the fair value hierarchy, the Valvoline Trust's investments at fair value as of September 30, 2016:

	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	$ 109,501	$ —	$ —	$ 109,501
Government securities	—	129,280	—	129,280
Corporate debt instruments	868,259	198,271	—	1,066,530
Corporate stocks	133,891	88,318	14	222,223
Other investments	—	—	22,518	22,518
Total assets	1,111,651	415,869	22,532	1,550,052
Liabilities				
Cash and cash equivalents	(89)	—	—	(89)
Government securities	—	(2,306)	—	(2,306)
Corporate debt instruments	—	(1,784)	—	(1,784)
Total liabilities	(89)	(4,090)	—	(4,179)
Total assets in fair value hierarchy	$ 1,111,562	$ 411,779	$ 22,532	$ 1,545,873
Investments measured at net asset value:				
Private equity and hedge funds[(a)]				$ 725,449
Total investments measured at net asset value	$ —	$ —	$ —	$ 725,449
Total assets at fair value	$ 1,111,562	$ 411,779	$ 22,532	$ 2,271,322

(a) Private equity and hedge funds that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented as investments in the Statement of Net Assets Available for Benefits.

4. Fair Value (continued)

Changes in the fair value of the Master Trust's Level 3 investments during the years ended September 30, 2017 and 2016 were as follows:

	Total Level 3 assets
Balance at September 30, 2015[(a)]	$ 28,196
Transfers out[(a)]	(22,429)
Transfers in[(a)]	22,429
Actual return on plan assets related to asset held at September 30, 2016[(a)]	(5,664)
Balance at September 30, 2016	$ 22,532
Actual return on plan assets related to asset held at September 30, 2017	(6,190)
Balance at September 30, 2017	$ 16,342

(a) The above table includes one month of activity in the Valvoline Trust after the transfer of assets from the Ashland Trust. The transfer in and the actual return on plan assets relating to assets held at September 30, 2016 of $102 were under the Valvoline Trust. The remaining activity occurred in the Ashland Trust prior to the transfer to Valvoline.

Investments Measured Using the NAV per Share Practical Expedient

The following table summarizes investments for which fair value is measured using the NAV per share practical expedient as of September 30, 2017:

	Fair Value	Contracts	Redemption Frequency (if currently eligible)	Redemption Notice Period
Long/Short hedge funds	129,536	—	None (a)	
Relative Value hedge funds	130,296	—	None (a)	
Event Driven hedge funds	140,870	—	None (a)	
Private equity	12,280	5,950	None (b)	
	$ 412,982	$ 5,950		

(a) The underlying investments in these hedge funds are in the process of liquidation.

(b) It is estimated that the underlying investments in these private equity instruments will be liquidated over the next 1 to 5 years.

4. Fair Value (continued)

The following table summarizes investments for which fair value is measured using the NAV per share practical expedient as of September 30, 2016:

	Fair Value	Contracts	Redemption Frequency (if currently eligible)	Redemption Notice Period
Directional hedge funds	$ 133,816	$ —	Monthly	5 days
	16,353	—	None (a)	
Long/Short hedge funds	43,404	—	Monthly	30 days
	59,117	—	Quarterly	45-90 days
	24,168	—	Semi-annually	45 days
	35,539		Annually	30-90 days
	52,590	—	None (a)	
Relative Value hedge funds	65,690	—	Monthly	5 days
	66,145	—	Quarterly	45-90 days
	70,234		None (a)	
Event Driven hedge funds	100,129	—	Quarterly	45-90 days
	644	—	Biennial	90 days
	41,873	—	None (a)	
Private equity	15,747	5,950	None (b)	
	$ 725,449	$ 5,950		

(a) The underlying investments in these hedge funds are in the process of liquidation.

(b) It is estimated that the underlying investments in these private equity instruments will be liquidated over the next 1 to 5 years.

In developing an investment strategy for the Plan, Valvoline has considered the following factors: the nature of the Plan's liabilities, the allocation of liabilities between active, deferred, and retired members, the funded status of the Plan, the applicable investment horizon, the respective size of the Plan and historical and expected investment returns. The Plan's assets are managed by outside investment managers, which are monitored against investment return benchmarks and Valvoline's established investment strategy. Investment managers are selected based on an analysis of, among other things, their investment process, historical investment results, frequency of management turnover, cost structure and assets under management. Assets are periodically reallocated between investment managers to maintain an appropriate asset mix, diversification of investments and to optimize returns.

Investment decisions and review of investment performance for the Plan are made by the Valvoline Retirement Committee (VRC), which includes members of Valvoline senior management. The VRC meets on a quarterly basis.

5. Actuarial Present Value of Accumulated Plan Benefits

The actuarial present value of accumulated plan benefits is shown below as of the beginning of each plan year.

	October 1	
	2016	2015
Vested benefits:		
Participants currently receiving benefits	$ 1,982,123	$ 2,255,219
Other participants	951,401	882,545
	2,933,524	3,137,764
Nonvested benefits	10,162	18,652
Total actuarial present value of accumulated plan benefits	$ 2,943,686	$ 3,156,416

The changes in the actuarial present value of accumulated plan benefits from the previous valuation date were as follows:

Actuarial present value of accumulated plan benefits at October 1, 2015	$ 3,156,416
Increase (decrease) during the plan year attributable to:	
Benefits accumulated and (gains) losses	67,257
Interest due to decrease in discount period	122,694
Benefits paid to participants and transfer to insurer	(571,719)
Change in actuarial assumptions	194,724
Change in plan provisions	(10,676)
Hopewell transfers out of plan	(15,010)
Actuarial present value of accumulated plan benefits at October 1, 2016	$ 2,943,686

6. Funding Policy and Plan Termination

The Plan meets the Employee Retirement Income Security Act of 1974 (ERISA) minimum funding requirements. Valvoline seeks a long run funding level of 100% on a projected benefit obligation basis, but recognizes that year-to-year funding levels may vary widely.

The Company has the right to discontinue its contributions and to terminate the Plan at any time. In the event of termination, the net assets of the Plan shall be first used to pay expenses of administration, and then to provide benefits to participants in accordance with Section 4044 of ERISA, generally to provide the following benefits in the order indicated:

1. Annuity benefits that former employees or their beneficiaries have been receiving for at least three years or that employees eligible to retire for that three-year period would have been receiving if they had retired with benefits in the normal form of annuity under the Plan. The priority amount is limited to the lowest benefit that was payable (or would have been payable) during those three years. The amount is further limited to the lowest benefit that would be payable under Plan provisions in effect at any time during the five years preceding Plan termination.

6. Funding Policy and Plan Termination (continued)

2. Other vested benefits insured by the Pension Benefit Guaranty Corporation (PBGC) (a United States government agency) up to the applicable limitations (discussed below).

3. All other vested benefits (that is, vested benefits not insured by the PBGC).

4. All nonvested benefits.

Any residual assets remaining after all liabilities are satisfied would be returned to the Company.

If the Plan's net assets are inadequate, the PBGC generally guarantees the payment of vested normal age retirement benefits, early retirement benefits, and certain disability and survivor's pensions. However, the PBGC does not guarantee all types of benefits under the Plan, and the amount of benefit protection is subject to certain limitations. Vested benefits under the Plan are guaranteed at the level in effect on the date of the Plan's termination. However, there is a statutory ceiling, which is adjusted periodically, on the amount of an individual's monthly benefit that the PBGC guarantees. For Plan terminations during 2017 and 2016 that ceiling was $5,369 and $5,011 per month, respectively. That ceiling applies to those pensioners who elect to receive their benefits in the form of a single-life annuity and are at least 65 years old at the time of retirement or plan termination (whichever comes later). For younger annuitants or for those who elect to receive their benefits in some form more valuable than a single-life annuity, the corresponding ceilings are actuarially adjusted downward.

Whether a particular participant's accumulated plan benefits will be paid should the Plan terminate at some future time will depend on the sufficiency, at that time, of the Plan's net assets to provide for accumulated benefit obligations, and may also depend on the financial condition of the Plan sponsor and the level of benefits guaranteed by the PBGC.

7. Tax Status of Plan

On February 7, 2017, the United States Treasury Department advised the Company that the Plan as amended through September 25, 2015, is tax exempt under 401(a) of the Internal Revenue Code (IRC). The Plan has been amended since receiving the determination letter. However, the Plan Administrator and the Plan's tax counsel believe that the Plan is designed and is currently operating in compliance with the applicable requirements of the IRC. Accordingly, no provision for Federal income taxes is required.

Accounting principles generally accepted in the United States of America require Plan management to evaluate tax positions taken by the Plan and recognize a tax liability (or asset) if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the Internal Revenue Service. The Plan Administrator has analyzed the tax positions taken by the Plan, and has concluded that as of September 30, 2017 and 2016, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The Plan Administrator believes it is no longer subject to income tax examinations for the plan years prior to 2014.

8. Risks and Uncertainties

The Trust invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, 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 the amounts reported in the Statements of Net Assets Available for Benefits.

8. Risks and Uncertainties (continued)

Plan contributions are made and the actuarial present value of accumulated plan benefits are reported based on certain assumptions pertaining to interest rates, inflation rates and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimation and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near term would be material to the financial statements.

9. Commitments

As of September 30, 2017 and 2016, the Trusts had subscription agreements to invest in various private equity funds of $35,000 . Capital calls as of September 30, 2017 and 2016 totaled $29,050. There were no capital calls during the years ended September 30, 2017 and 2016.

10. Subsequent Events

Voluntary Correction Program

During the year ended September 30, 2016, Ashland determined that certain participants were not receiving a required minimum distribution from the Plan. Valvoline filed a Voluntary Correction Program (VCP) submission with the IRS in January 2017, which further detailed this matter and Valvoline's plan for correcting it. Valvoline received approval from the IRS for the VCP correction methodology on June 28th, 2017 and corrections were completed by March 2018.

Plan Name	**Ashland Hercules Pension Plan**
Plan Sponsor EIN	**61-1782197**
ERISA Plan #	**001**
Plan Year Ending	**9/30/2017**

The required attachment marked with an "X" in the Attachment column is included within the "Signed Schedule MB or Schedule SB" attachment to Schedule SB location which consists of the entire Schedule SB and its attachments.

Form / Schedule	Line#	Description	Attachment Title (if different from Description)	Attach-ment
5500 Sch. SB	**None**	Statement by Enrolled Actuary		
5500 Sch. SB	**Line 27**	Actuarial Information Based on Pre-PPA Funding Rules		
5500 Sch. SB	**Line E**	Information for Each Individual Employer		
5500 Sch. SB	**Line 4**	Additional Information for Plans in At-Risk Status		
5500 Sch. SB	**Line 7**	Explanation of Discrepancy in Prior Year Funding Standard Carryover Balance or Prefunding		
5500 Sch. SB	**Line 8**	Late Election to Apply Balances to Quarterly Installments		
5500 Sch. SB	**Line 9**	Explanation of Credit Balance Discrepancy		
5500 Sch. SB	**Line 18**	Contributions Made to the Plan for the Plan Year		
5500 Sch. SB	**Line 19**	Discounted Employer Contributions		
5500 Sch. SB	**Line 20c**	Liquidity Requirement Certification		
5500 Sch. SB	**Line 22**	Description of Weighted Average Retirement Age		**X**
5500 Sch. SB	**Line 23**	Information on Use of Multiple Mortality Tables		
5500 Sch. SB	**Line 23**	Information on Use of Substitute Mortality Tables		
5500 Sch. SB	**Part V**	Statement of Actuarial Assumptions/Methods		**X**
5500 Sch. SB	**Part V**	Summary of Plan Provisions		**X**
5500 Sch. SB	**Line 24**	Change in Actuarial Assumptions		**X**
5500 Sch. SB	**Line 25**	Change in Method		
5500 Sch. SB	**Line 26**	Schedule of Active Participant Data		**X**
5500 Sch. SB	**Line 27**	Balances Subject to Binding Agreement with PBGC		
5500 Sch. SB	**Line 27**	Alternative 17-Year Funding Schedule of Airlines		
5500 Sch. SB	**Line 32**	Schedule of Amortization Bases		**X**
5500 Sch. SB	**Line 15**	Other Attachment [Enter Description]	Line 15 Val AFTAP Differences	**X**

Plan Name	**Ashland Hercules Pension Plan**
Plan Sponsor EIN	**61-1782197**
ERISA Plan #	**001**
Plan Year Ending	**9/30/2017**

The required attachment marked with an "X" in the Attachment column is included within the "Signed Schedule MB or Schedule SB" attachment to Schedule SB location which consists of the entire Schedule SB and its attachments.

Form / Schedule	Line#	Description	Attachment Title (if different from Description)	Attach-ment
5500 Sch. SB	**None**	Statement by Enrolled Actuary		
5500 Sch. SB	**Line 27**	Actuarial Information Based on Pre-PPA Funding Rules		
5500 Sch. SB	**Line E**	Information for Each Individual Employer		
5500 Sch. SB	**Line 4**	Additional Information for Plans in At-Risk Status		
5500 Sch. SB	**Line 7**	Explanation of Discrepancy in Prior Year Funding Standard Carryover Balance or Prefunding		
5500 Sch. SB	**Line 8**	Late Election to Apply Balances to Quarterly Installments		
5500 Sch. SB	**Line 9**	Explanation of Credit Balance Discrepancy		
5500 Sch. SB	**Line 18**	Contributions Made to the Plan for the Plan Year		
5500 Sch. SB	**Line 19**	Discounted Employer Contributions		
5500 Sch. SB	**Line 20c**	Liquidity Requirement Certification		
5500 Sch. SB	**Line 22**	Description of Weighted Average Retirement Age		**X**
5500 Sch. SB	**Line 23**	Information on Use of Multiple Mortality Tables		
5500 Sch. SB	**Line 23**	Information on Use of Substitute Mortality Tables		
5500 Sch. SB	**Part V**	Statement of Actuarial Assumptions/Methods		**X**
5500 Sch. SB	**Part V**	Summary of Plan Provisions		**X**
5500 Sch. SB	**Line 24**	Change in Actuarial Assumptions		**X**
5500 Sch. SB	**Line 25**	Change in Method		
5500 Sch. SB	**Line 26**	Schedule of Active Participant Data		**X**
5500 Sch. SB	**Line 27**	Balances Subject to Binding Agreement with PBGC		
5500 Sch. SB	**Line 27**	Alternative 17-Year Funding Schedule of Airlines		
5500 Sch. SB	**Line 32**	Schedule of Amortization Bases		**X**
5500 Sch. SB	**Line 15**	Other Attachment [Enter Description]	Line 15 Val AFTAP Differences	**X**

SCHEDULE SB (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Single-Employer Defined Benefit Plan Actuarial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ File as an attachment to Form 5500 or 5500-SF.

OMB No. 1210-0110

2016

This Form is Open to Public Inspection

For calendar plan year 2016 or fiscal plan year beginning 10/01/2016 and ending 09/30/2017

▶ **Round off amounts to nearest dollar.**

▶ **Caution:** A penalty of $1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan
ASHLAND HERCULES PENSION PLAN

B Three-digit plan number (PN) ▶ 001

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
ASHLAND INC.

D Employer Identification Number (EIN)
61-1782197

E Type of plan: [X] Single [ ] Multiple-A [ ] Multiple-B

F Prior year plan size: [ ] 100 or fewer [ ] 101-500 [X] More than 500

Part I Basic Information

1 Enter the valuation date: Month 10 Day 01 Year 2016

2 Assets:

a Market value	**2a**	2,253,413,692
b Actuarial value	**2b**	2,239,211,651

3 Funding target/participant count breakdown

	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	11,055	1,550,639,125	1,550,639,125
b For terminated vested participants	9,715	402,819,222	402,819,222
c For active participants	2,497	242,856,852	250,837,319
d Total	23,267	2,196,315,199	2,204,295,666

4 If the plan is in at-risk status, check the box and complete lines (a) and (b) [ ]

a Funding target disregarding prescribed at-risk assumptions	**4a**	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	**4b**	
5 Effective interest rate	**5**	5.98%
6 Target normal cost	**6**	17,490,652

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE DENNIS STONE DLS — 6/8/2018

Signature of actuary — Date

DENNIS L STONE, FSA — 1703271

Type or print name of actuary — Most recent enrollment number

MERCER — 502-561-4500

Firm name — Telephone number (including area code)

400 West Market Street

LOUISVILLE KY 40202-3415

Address of the firm

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions [ ]

Part II Beginning of Year Carryover and Prefunding Balances

	(a) Carryover balance	(b) Prefunding balance
7 Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	458,936,978
8 Portion elected for use to offset prior year's funding requirement (line 35 from prior year)		75,292,321
9 Amount remaining (line 7 minus line 8)	0	383,644,657
10 Interest on line 9 using prior year's actual return of 10.96%	0	42,047,454
11 Prior year's excess contributions to be added to prefunding balance:		
a Present value of excess contributions (line 38a from prior year)		0
b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 6.18%		0
b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		
c Total available at beginning of current plan year to add to prefunding balance		0
d Portion of (c) to be added to prefunding balance		
12 Other reductions in balances due to elections or deemed elections		
13 Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	425,692,111

Part III Funding Percentages

14 Funding target attainment percentage	14	82.27%
15 Adjusted funding target attainment percentage	15	101.35%
16 Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	88.88%
17 If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
06/14/2017	343,163	0			
06/16/2017	705,328	0			
08/08/2017	394,414,500	0			
			Totals ► 18(b)	395,462,991	18(c) 0

19 Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:

a Contributions allocated toward unpaid minimum required contributions from prior years	19a	0
b Contributions made to avoid restrictions adjusted to valuation date	19b	0
c Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c	376,377,421

20 Quarterly contributions and liquidity shortfalls:

a Did the plan have a "funding shortfall" for the prior year? [X] Yes [ ] No

b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? [X] Yes [ ] No

c If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year

(1) 1st	(2) 2nd	(3) 3rd	(4) 4th
0	0	0	0

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	☐ N/A, full yield curve used
4.43 %	5.91 %	6.65%	

b Applicable month (enter code) — **21b**: 4

22 Weighted average retirement age — **22**: 61

23 Mortality table(s) (see instructions) ☐ Prescribed - combined ☒ Prescribed - separate ☐ Substitute

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment. ☐ Yes ☒ No

26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment — **27**:

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	**28**	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a)	**29**	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	**30**	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

a Target normal cost (line 6)	**31a**	17,490,652
b Excess assets, if applicable, but not greater than line 31a	**31b**	0

32 Amortization installments:

	Outstanding Balance	Installment
a Net shortfall amortization installment	390,776,126	72,527,220
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount — **33**:

34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33) — **34**: 90,017,872

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement		55,420,749	55,420,749

36 Additional cash requirement (line 34 minus line 35)	**36**	34,597,123
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	376,377,421

38 Present value of excess contributions for current year (see instructions)

a Total (excess, if any, of line 37 over line 36)	**38a**	341,780,298
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	**38b**	55,420,749
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	**39**	0
40 Unpaid minimum required contributions for all years	**40**	0

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:

a Schedule elected ☐ 2 plus 7 years ☐ 15 years

b Eligible plan year(s) for which the election in line 41a was made ☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011

42 Amount of acceleration adjustment	**42**	
43 Excess installment acceleration amount to be carried over to future plan years	**43**	

Schedule SB, Line 15 — Reconciliation of Differences Between Valuation Results and Amounts Used to Calculate AFTAP

The AFTAP shown in Schedule SB, Line 15 of 101.35% is derived as follows:

1) Actuarial value of plan assets as of October 1, 2016 (Line 2b) 2,239,211,651
2) Funding Target as of October 1, 2016 (Line 3d) 2,204,295,666
3) Annuity purchases for non-highly compensated employees in the 2014 and 2015 plan years 372,868,509
4) AFTAP of 101.35%: [(1) + (3)] / [(2) + (3)]

Schedule SB, line 22 — Description of Weighted Average Retirement Age

Each employee is assumed to retire in accordance with the table of retirement rates. The proportion of employees expected to retire at each potential retirement age is shown below. The average retirement age is 60.

Retirement Rates for Affiliates actives as of 6/30/2003 with 10+ years of service on that date

(1) Age	(2) Number of Lives	(3) Probability of Retirement	(4) Expected Number of Retirees	(5) = (1) x (3)
55	1,000,000	10%	100,000	5,500,000
56	900,000	10%	90,000	5,040,000
57	810,000	10%	81,000	4,617,000
58	729,000	10%	72,900	4,228,200
59	656,100	10%	65,610	3,870,990
60	590,490	20%	118,098	7,085,880
61	472,392	20%	94,478	5,763,182
62	377,914	30%	113,374	7,029,193
63	264,540	20%	52,908	3,333,198
64	211,632	20%	42,326	2,708,885
65	169,305	60%	101,583	6,602,906
66	67,722	30%	20,317	1,340,898
67	47,405	30%	14,222	952,850
68	33,184	30%	9,955	676,950
69	23,229	30%	6,969	480,834
70	16,260	100%	16,260	1,138,206
			1,000,000	60,369,172
Wtd. Avg. Retirement Age = sum of column (5) ÷ sum of column (4) =				60.37

Schedule SB, line 22 — Description of Weighted Average Retirement Age

Retirement Rates for Affiliates actives on 6/30/2003 with less than 10 years of service on that date

(1) Age	(2) Number of Lives	(3) Probability of Retirement	(4) Expected Number of Retirees	(5) = (1) x (3)
55	1,000,000	5%	50,000	2,750,000
56	950,000	5%	47,500	2,660,000
57	902,500	5%	45,125	2,572,125
58	857,375	5%	42,869	2,486,388
59	814,506	5%	40,725	2,402,793
60	773,781	7%	54,165	3,249,880
61	719,616	7%	50,373	3,072,761
62	669,243	15%	100,386	6,223,961
63	568,857	15%	85,328	5,375,695
64	483,528	15%	72,529	4,641,870
65	410,999	30%	123,300	8,014,479
66	287,699	30%	86,310	5,696,445
67	201,389	30%	60,417	4,047,929
68	140,973	30%	42,292	2,875,842
69	98,681	30%	29,604	2,042,693
70	69,077	100%	69,077	4,835,361
			1,000,000	62,948,224
Wtd. Avg. Retirement Age = sum of column (5) ÷ sum of column (4) =				62.95

Schedule SB, line 22 — Description of Weighted Average Retirement Age

Retirement Rates for Affiliates members hired after 6/30/2003

(1) Age	(2) Number of Lives	(3) Probability of Retirement	(4) Expected Number of Retirees	(5) = (1) x (3)
55	1,000,000	15%	150,000	8,250,000
56	850,000	15%	127,500	7,140,000
57	722,500	15%	108,375	6,177,375
58	614,125	15%	92,119	5,342,888
59	522,006	15%	78,301	4,619,755
60	443,705	15%	66,556	3,993,348
61	377,150	20%	75,430	4,601,224
62	301,720	35%	105,602	6,547,316
63	196,118	35%	68,641	4,324,396
64	127,477	35%	44,617	2,855,474
65	82,860	70%	58,002	3,770,119
66	24,858	30%	7,457	492,187
67	17,401	30%	5,220	349,751
68	12,180	30%	3,654	248,480
69	8,526	30%	2,558	176,494
70	5,968	100%	5,968	417,787
			1,000,000	59,306,593
Wtd. Avg. Retirement Age = sum of column (5) ÷ sum of column (4) =				59.31

Schedule SB, line 22 — Description of Weighted Average Retirement Age

Retirement Rates for Hercules members

(1) Age	(2) Number of Lives	(3) Probability of Retirement	(4) Expected Number of Retirees	(5) = (1) x (3)
50	1,000,000	5%	50,000	2,500,000
51	950,000	5%	47,500	2,422,500
52	902,500	5%	45,125	2,346,500
53	857,375	5%	42,869	2,272,044
54	814,506	5%	40,725	2,199,167
55	773,781	10%	77,378	4,255,795
56	696,403	15%	104,460	5,849,784
57	591,942	15%	88,791	5,061,108
58	503,151	15%	75,473	4,377,414
59	427,678	17%	72,705	4,289,614
60	354,973	17%	60,345	3,620,725
61	294,628	17%	50,087	3,055,289
62	244,541	22%	53,799	3,335,539
63	190,742	22%	41,963	2,643,683
64	148,779	25%	37,195	2,380,459
65	111,584	25%	27,896	1,813,241
66	83,688	50%	41,844	2,761,705
67	41,844	50%	20,922	1,401,774
68	20,922	50%	10,461	711,348
69	10,461	50%	5,231	360,905
70	5,231	100%	5,231	366,135
			1,000,000	58,024,729
Wtd. Avg. Retirement Age = sum of column (5) ÷ sum of column (4) =				58.02

Overall Weighted Average Retirement Age for Entire Plan = 61

Schedule SB, Line 24 — Changes in Non-Prescribed Actuarial Assumptions

- LESOP share price was updated from September 30, 2015 market price of $100.62 to the September 30, 2016 market price of $115.95.
- The expected expenses increased from $15,633,940 to $17,490,652
- The salary scale increase assumption, the Social Security Taxable Wage Base assumption and the LESOP Stock Appreciation assumption are no longer applicable, because plan benefits were frozen as of September 30, 2016.

Schedule SB, line 26 — Schedule of Active Participant Data

Ashland Hercules – Annuity Benefits

Attained age	Years of credited service										
	Under 1	**1–4**	**5–9**	**10–14**	**15–19**	**20–24**	**25–29**	**30–34**	**35–39**	**40 & up**	**Total**
Under 25											
25–29											
30–34			1	2							3
35–39			1	3		2					6
40–44				2	16 1,336	28 3,044	8				54
45–49			1	5	18 1,803	73 7,129	108 19,334	17			222
50–54		1		2	9	49 8,612	177 22,066	127 26,957	16		381
55–59				3	11	41 10,119	87 25,050	147 26,189	157 25,164	23 30,435	469
60–64				4	8	23 2,303	48 20,593	34 28,156	97 24,788	73 24,828	287
65–69					2	5	11	4	7	17	46
70 & up					1	1	1			2 10,912	5
Total		1	3	21	65	222	440	329	277	115	1,473

In each cell, the top number is the count of active participants for each age/service combination and the bottom number is the average annual accrued benefit. The average benefit is not shown for cells with fewer than 20 participants.

Schedule SB, line 26 — Schedule of Active Participant Data

Ashland Hercules – RGA Benefits

Attained age	Years of credited service										
	Under 1	**1–4**	**5–9**	**10–14**	**15–19**	**20–24**	**25–29**	**30–34**	**35–39**	**40 & up**	**Total**
Under 25											
25–29											
30–34			37 3,882	29 8,402	3						69
35–39			36 4,614	76 12,483	41 22,479	6					159
40–44			26 5,749	73 18,042	51 27,506	36 22,127	1				187
45–49			26 6,604	54 21,770	74 31,813	45 21,014	5	1			205
50–54			31 7,877	34 21,390	62 45,305	37 26,497	7	6			177
55–59			21 11,836	31 29,897	41 54,042	33 34,591	3	4	3	1	137
60–64			9	13	21 66,295	16	6	2	4	7	78
65–69			1	3	4	6	1		1	1	17
70 & up				1						1	2
Total			187	314	297	179	23	13	8	10	1,031

In each cell, the top number is the count of active participants for each age/service combination and the bottom number is the average cash balance account. The average cash balance account is not shown for cells with fewer than 20 participants.

Schedule SB, Line 32 – Schedule of Amortization Bases

The total shortfall amortization charge is the sum of the individual shortfall amortization installment for each plan year covered under PPA. Although an individual shortfall amortization installment can be negative, the combined shortfall amortization charge cannot be less than $0.

	Shortfall bases		
Year established	**Outstanding balance**	**Years remaining**	**2016 Installment**
2013	$ 49,683,171	4	$ 13,239,666
2014	(43,003,858)	5	(9,362,077)
2015	236,805,648	6	44,313,678
2016	147,291,165	7	24,335,953
Total	$ 390,776,126		$ 72,527,220

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

Actuarial Assumptions

Discount rate sponsor elections

• Segment rates or full yield curve	Segment	
• Look-back months	4	
	Stabilized	**Nonstabilized**
• First 5 years	4.43%	1.50%
• Next 15 years	5.91%	3.88%
• Over 20 years	6.65%	4.89%

Mortality sponsor elections

• Healthy participants	Section 430(h)(3) prescribed separate static annuitant and non-annuitant mortality tables. These tables are based on the RP-2000 mortality tables projected with mortality improvement to the valuation year plus 7 and 15 years based on Scale AA.

Other economic assumptions

• Salary increases	Not applicable
• Social Security wage base	Not applicable
• Inflation	2.50% per year
• Expected investment return	7.00% for 2016 7.00% for 2015
• Expenses	$17,490,652 added to current year normal cost (prior year administrative expense).
• Cash Balance Interest Credit	4.25% compounded annually.
• LESOP Stock Appreciation	Not applicable
• LESOP Share Price	Market price as of valuation date of $115.95.
• LESOP Conversion rate	5.40% and section 430(h)(3) prescribed mortality

Demographic assumptions

• Withdrawal - Affiliates

Age at Beginning of Year	Turnover Rate*
22	0.160
27	0.140
32	0.115
37	0.090
42	0.065
47	0.060
52	0.055
57	0.050
62	0.045

**Rates linearly interpolated between above ages.*

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

- Withdrawal - Hercules

Experience rates – sample rates as follows:

Age	Turnover Rate
25	0.100
30	0.100
35	0.100
40	0.100
45	0.100
50	0.070
55	0.050
60	0.050

- Disability incidence

Experience rates for Hercules and Affiliates:

Age	Disability Rate
20	0.0012
30	0.0012
35	0.0013
40	0.0015
45	0.0020
50	0.0036
55	0.0068

- Retirement age - Affiliates

Age	Active on 6/30/03 with 10+ yrs of service	Active on 6/30/03 under 10 yrs of service	Hired or rehired after 6/30/03
54 and under	0.05*	0.00	0.00
55-59	0.10	0.05	0.15
60	0.20	0.07	0.15
61	0.20	0.07	0.20
62	0.30	0.15	0.35
63-64	0.20	0.15	0.35
65	0.60	0.30	0.70
66-69	0.30	0.30	0.30
70+	1.00	1.00	1.00

**If meets rule of 80 prior to age 55 then 0.05 rate will be applied at each age up to age 55.*

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

- Retirement age - Hercules

Age	Retirement rate
50-54	0.05
55	0.10
56-58	0.15
59-61	0.17
62-63	0.22
64-65	0.25
66-69	0.50
70	1.00

- Benefit commencement age for current and future vested
  - Affiliates: Age 62 with the following exceptions:
    RGA participants: Age 55
  - Hercules: Age 62

• Spouse assumptions	**Male participants**	**Female participants**
– Percentage married	80%	80% - Affiliates 50% - Hercules
– Spouse age difference	3 years younger	3 years older

Form of payment	
• Active retirements	Grandfathered Affiliates participants and Hercules not eligible for 51% lump sum: 55% joint & survivor annuity. RGA participants and Hercules eligible for 51% lump sum: 100% of available lump sum.
• Future disability	Grandfathered participants and all Hercules: 100% single life annuity. RGA participants: 100% lump sum.
• Future death	Grandfathered participants and all Hercules: 100% single life annuity. RGA participants: 100% lump sum.
• Future vested deferred	Grandfathered participants and all Hercules: 55% joint & survivor annuity. RGA participants: 100% lump sum.
• Current vested deferred	Grandfathered participants and Hercules: 55% joint & survivor annuity. RGA participants: 100% lump sum.
Lump sum conversion	5.40% and 417(e) applicable mortality
Unpredictable contingent event assumptions	Non applicable
Additional at-risk assumptions	N/A

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

Actuarial Methods

Asset Methods

The asset valuation method is an average of the adjusted market value for each year during the last 2 years preceding the valuation date. The adjusted market value is the market value at each determination date adjusted to the valuation date based on actual cash flows and expected interest at the lesser of the expected rate of return and the third segment rate. This amount is adjusted to be no greater than 110 percent and no less than 90 percent of the fair market value, as defined in IRC Section 430.

A characteristic of this asset method is that, over time, it is slightly more likely to produce an actuarial value of assets that is less than the market value of assets than an actuarial value that is greater than the market value.

Participant Methods

Participants or former participants are included or excluded from the valuation as described below:

- **Participants included:** The plan sponsor provides us with data on all employees as of the valuation date, but only those employees who have completed the plan's eligibility requirements are included in the valuation of liabilities.
- **Participants excluded:** No actuarial liability is included for nonvested participants who terminated prior to the valuation date. For this purpose, participants with a break in service on the valuation date are treated as terminated participants.
- **Insurance contracts:** The plan does not have any insurance contracts.

Minimum Funding Methods

The funding target for minimum funding calculations is computed using the traditional unit credit method of funding. The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, the total pension to which each participant is expected to become entitled at retirement is broken down into units, each associated with a year of past or future credited service.

A detailed description of the calculation follows:

- The plan's valuation date is the beginning of the plan year.
- An individual's **funding target** is the present value of future benefits based on credited service and average pay as of the beginning of the plan year, and an individual's **target normal cost** is the present value of the benefit expected to accrue in the plan year. If multiple decrements are used, the funding target and the target normal cost for an individual is the sum of the component funding targets and target normal costs associated with the various anticipated separation dates.
- The plan's **target normal cost** is the sum of the individual target normal costs, and the plan's **funding target** is the sum of the individual funding targets for all participants under the plan.

Schedule SB, Part V — Summary of Plan Provisions

Summary of Major Plan Provisions
Affiliates Members

Effective date and plan year	Original plan: March 1, 1951 Restated plan: July 1, 2003
Status of the plan	The plan has ongoing benefit accruals. Effective January 1, 2011 no new entrants are allowed into the plan and RGA cash balance accruals have been frozen.
Significant events that occurred during the year	The plan was frozen effective September 30, 2016. Also, the plan purchased an annuity contract September 22, 2016 and transferred liabilities for certain retirees to Prudential.
Definitions	
• Participation	One year of service and age 21. Effective January 1, 2011 no new entrants are allowed into the plan.
• Employee contributions	None
• Employer contributions	Entire cost of the Plan
• Credited service	Continuous service from most recent date of hire
• Final average compensation	Average of highest 3 years earnings during last 10 years of service, limited as required by the Tax Reform Act of 1986. Effective January 1, 2011, the final average compensation began transitioning from a 3-year average to a 4-year average, and effective January 1, 2016, the final average compensation begins transitioning from a 4-year average to a 5-year average for grandfathered annuity participants.
Normal retirement	
• Eligibility	Age 65
• Benefit	**For members with 10 or more years of service on July 1, 2003 (referred to as Annuity Participants):** Greatest of (1) and (2) offset by annuity purchased as of October 1, 1986 and the benefit attributable to 50% of the LESOP balance 1. A. Prior to 4/1/1976 – Benefit accrued to 3/31/1976 in accordance with terms of plan in effect on that date B. Beginning 4/1/1976 through 9/30/1989 - 1.50% of annual compensation under $12,000 plus 2.25% of annual compensation over $12,000. C. Beginning 10/1/1989 – no further accruals under this formula. 2. 1.08% of final average compensation up to $10,700 plus 1.50% of such average compensation in excess of $10,700 multiplied by years of credited service (maximum of 35). Effective September 30, 2016 accrued benefits were frozen.

Schedule SB, Part V — Summary of Plan Provisions

For members with less than 10 years of service on July 1, 2003 (referred to as RGA Participants), cash balance benefit formula defined as follows:

1. Opening Balance – Present value of accrued benefit as of 6/30/2003 (present value based on 5.5% interest and GATT 2003 mortality).
2. Interest Credits – Average of United States 1 yr Treasury Constant Maturity Rates for August preceding the beginning of the plan year plus 1%, the rate shall never be less than 4% or more than 7%.
3. Contribution Credits – As determined from the following table:

Age + continuous service at end of plan year	Contribution credit
Less than 30	3%
30 – 39	4%
40 – 49	5%
50 – 59	6%
60 – 69	7%
70 – 79	9%
80 or more	11%

4. Additional transition credits for those age 45 or older on 6/30/2003 in accordance with the following table:

Age on June 30, 2003	Transition credit percentage
45 to 49	3%
50 to 54	4%
55 and Over	5%

The account balance is reduced for any applicable LESOP offset.

Effective January, 2011, both contribution credits and transition credits are frozen, and only interest credits continue to accrue on cash balance accounts going forward for RGA participants.

Early retirement

- Eligibility

Eligible for early retirement if either:

5. Age 55 and 3 years of vesting service.
6. Age plus years of vesting service equal to 80 or more.

Schedule SB, Part V — Summary of Plan Provisions

• Benefit	Annuity Participants receive a percentage of their accrued benefit as specified in the following table:

Retirement age	Percentage of accrued benefit
50	46%
51	51%
52	56%
53	62%
54	68%
55	75%
56	80%
57	84%
58	88%
59	91%
60	94%
61	97%
62 or older	100%

RGA Participants receive an early retirement benefit equal to the value of their RGA account less any LESOP offset.

Deferred retirement benefit	
• Benefit	Participants working past their Normal Retirement Date shall continue to accrue benefits up to their actual date of retirement.
Deferred vested	
• Eligibility	Three or more years of vesting service

Schedule SB, Part V — Summary of Plan Provisions

• Benefit	100% vested, reduced based on the following table: **Retirement age** / **Percentage of accrued benefit** 55 / 50% 56 / 54% 57 / 58% 58 / 62% 59 / 66% 60 / 70% 61 / 76% 62 / 82% 63 / 88% 64 / 94% 65 / 100% For terminations after September 30,2016, reductions are the same as for Early Retirement.
Disability	
• Eligibility	Total and permanent disability
• Benefit	Benefits continue to accrue until Normal Retirement Date. Future service benefits after disability will accrue based on the member's compensation rate on October 1 of the year prior to his disability.
Pre-retirement death	
• Benefit	Annuity Participants – A member is eligible if vested and survived by a spouse. His spouse will receive a survivor annuity equal to 50% of the pension the Member would have received had he retired under the qualified Joint and Survivor option on his date of death. RGA Participants – Value of RGA account reduced by any LESOP offset
Post-retirement death	
• Benefit	In accordance with annuity form elected by Member.
Form of benefits	
• Automatic form for unmarried participants	Life annuity
• Automatic form for married participants	Joint and 50% Survivor annuity in amount actuarially equivalent to single life annuity.
• Optional forms	50%, 66-2/3%, 75% and 100% contingent annuities, life with 10 years guaranteed, and single life annuity with no guarantee. A lump sum option is also available for RGA participants.
• Optional form conversion	6% and GAM 1971 Male mortality, set back 5 years for the spouse

Schedule SB, Part V — Summary of Plan Provisions

Miscellaneous	
• Maximum compensation	Compensation for any 12-month period used to determine accrued benefits may not exceed the limits in IRC Section 401(a)(17) for the calendar year in which the 12-month period begins. This limit is indexed annually. For 2016, the limit is $265,000.
• Maximum benefits	Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2016, the limit is $210,000.

Schedule SB, Part V — Summary of Plan Provisions

Hercules Members

Represented Employees of Heritage Hercules

Effective date and plan year	Original plan: 1913 Restated plan: January 1, 2005
Status of the plan	The plan has no future benefit accruals and new employees are not eligible to participate in the plan.
Significant events that occurred during the year	The plan was frozen effective September 30, 2016. Also, the plan purchased an annuity contract September 22, 2016 and transferred liabilities for certain retirees to Prudential.
Definitions	
• Participation	All regular full-time represented employees.
• Employee contributions	None
• Credited service	Continuous service from most recent date of hire.
• Pensionable earnings	Salary and wages including overtime, holidays, vacations, commissions and non-occupational and temporary occupational disability benefits.
• Final average earnings	Average of highest five years' earnings during the last ten years of service, limited as required by the Tax Reform Act of 1986.
• Social security earnings base	Twelve times the 35-year average monthly compensation used under the Social Security Act to calculate a maximum unreduced primary Social Security benefit in the calendar year prior to the year in which retirement or termination occurs.
• Normal retirement date	First of the month following attainment of age 65.
Normal retirement	
• Eligibility	Age 65

Schedule SB, Part V — Summary of Plan Provisions

- Benefit

7. Except as noted below: 1.15% of final average earnings up to the Social Security earnings base plus 1.35% of final average earnings in excess of such base multiplied by years of service.
8. Bacchus wage employees:

From June 1, 1996 — $33.75 per month for each year of service.

At no time shall the benefit be less than the benefit as described in (1) above, with earnings frozen as of
October 31, 1986

9. McGregor wage employees:

From September 15, 1994 — $23.00 per month for each year of service.

At no time shall the benefit be less than the benefit as described in (1) above, with both earnings and service frozen as of June 30, 1989.

McGregor employees age 55 and older as of July 1, 1989 will receive the benefit as described in (1) above.

10. Hattiesburg, Jefferson, MCW, Gibbstown, Savannah, Parlin Powerhouse, and Milwaukee employees:

The benefits available to non-represented participants covered by this plan. All employees who were represented participants in this plan on the effective date maintain rights to the benefits determined in accordance with their representation immediately preceding the effective date.

Location	Effective Date
Hattiesburg	January 1, 1995
Jefferson	January 1, 1995
MCW	July 1, 1996
Gibbstown	October 1, 1996
Savannah	July 1, 1998
Parlin Powerhouse	July 1, 1998
Milwaukee	November 11, 2000

Schedule SB, Part V — Summary of Plan Provisions

<table>
<tr><td colspan="2">Early retirement</td></tr>
<tr><td>• Eligibility</td><td>Unreduced Benefits: Eligibility for unreduced early retirement is as follows:
<table><tr><th>Age</th><th>Service</th></tr><tr><td>55</td><td>35</td></tr><tr><td>56</td><td>32</td></tr><tr><td>57</td><td>29</td></tr><tr><td>58</td><td>26</td></tr><tr><td>59</td><td>23</td></tr><tr><td>60</td><td>20</td></tr><tr><td>61</td><td>18</td></tr><tr><td>62</td><td>16</td></tr><tr><td>63</td><td>14</td></tr><tr><td>64</td><td>12</td></tr></table>Reduced Benefits: Eligibility for reduced early retirement benefits is age 50 and 10 years of service (except in cases of dishonesty, misconduct, etc.).</td></tr>
<tr><td>• Benefit</td><td>Unreduced Benefits: As described in normal retirement benefits.
Reduced Benefits: Actuarial reduction (6% and 1971 TPF&C) from the earliest date that the employee would have been eligible for unreduced benefits.</td></tr>
<tr><td colspan="2">Deferred vested</td></tr>
<tr><td>• Eligibility</td><td>11. Five years of service where one year of vesting service is granted by any anniversary computation period in which an employee receives compensation for any six months.
12. Prior disability pensioner whose disability has terminated and who has not been offered suitable work.
13. Attainment of age 65.</td></tr>
<tr><td>• Benefit</td><td>Same as early retirement benefit</td></tr>
<tr><td colspan="2">Disability</td></tr>
<tr><td>• Eligibility</td><td>Ten years of service and unable to perform the employee’s normal work.</td></tr>
<tr><td>• Benefit</td><td>14. For employees receiving Social Security disability benefits, benefit as described in normal retirement benefits.
15. For employees who fail to qualify or remain qualified for Social Security disability benefits, 1.15% of final average earnings multiplied by years of service or any other pension payable under this plan.</td></tr>
</table>

Schedule SB, Part V — Summary of Plan Provisions

<table>
<tr><td>Pre-retirement death</td><td></td></tr>
<tr><td>• Eligibility</td><td>Spousal or nonspousal beneficiaries of active participants who are vested and who have elected this coverage; also, spousal beneficiaries of vested terminated participants who have elected this coverage.</td></tr>
<tr><td>• Benefit</td><td>Benefit that would have been payable to beneficiary under the 50% contingent annuity option if the participant had elected retirement on his date of death (or if the participant had terminated employment on his date of death and commenced benefits on the earliest possible date). In addition, active employees who are eligible for retirement benefit may elect the 100% contingent annuity option.</td></tr>
<tr><td>• Cost of benefit</td><td>All benefits under the plan reduced as follows:
16. 50% contingent annuity option — See table below. There is no charge for active employees at the Hopewell and Parlin locations who elect this coverage for spousal beneficiaries.
<table><tr><th></th><th colspan="2">Charge per month of coverage</th></tr><tr><th>Age at coverage</th><th>For active employees</th><th>Coverage for vested terminated employees</th></tr><tr><td>Up to age 45</td><td>.00083%</td><td>.00833%</td></tr><tr><td>45 to 50</td><td>.00833</td><td>.02083</td></tr><tr><td>50 and over</td><td>.04167</td><td>.04167</td></tr></table>17. 100% contingent annuity option—.075% for each month option is in effect.</td></tr>
<tr><td>Postretirement death</td><td>None except as elected by optional forms of benefits.</td></tr>
<tr><td>Postponed retirement</td><td></td></tr>
<tr><td>• Eligibility</td><td>Employee option.</td></tr>
<tr><td>• Benefit</td><td>Benefit as described in normal retirement benefits based on earnings and service at actual retirement date.</td></tr>
<tr><td>Form of benefits</td><td></td></tr>
<tr><td>• Automatic form for unmarried participants</td><td>Life annuity.</td></tr>
<tr><td>• Automatic form for married participants</td><td>50% joint and survivor annuity, actuarially reduced.</td></tr>
<tr><td>• Optional forms</td><td>50%, 75% and 100% contingent annuities; also, Bacchus wage, Jefferson, Hattiesburg, Gibbstown, Milwaukee, Savannah, Parlin Powerhouse, and MCW employees and employees at the Parlin location may select a 51% lump sum combined with a 49% annuity.</td></tr>
<tr><td>• Optional form conversion</td><td>5% and 417(e) applicable mortality</td></tr>
<tr><td>Benefits for former CPD employees (now Hexcel)</td><td>Accrued benefit as of July 1, 1996 based on service and benefit level in effect on that date, increased by 4.25% for each year employee remains employed by Hexcel.</td></tr>
</table>

Schedule SB, Part V — Summary of Plan Provisions

Miscellaneous	
• Maximum compensation	Compensation for any 12-month period used to determine accrued benefits may not exceed the limits in IRC Section 401(a)(17) for the calendar year in which the 12-month period begins. This limit is indexed annually. For 2016, the limit is $265,000.
• Maximum benefits	Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2016, the limit is $210,000.

Schedule SB, Part V — Summary of Plan Provisions

Hercules Members

Non-Represented Employees of Heritage Hercules

Effective date and plan year	Original plan: January 1, 2005
Status of the plan	The plan has no future benefit accruals and new employees are not eligible to participate in the plan.
Significant events that occurred during the year	The plan was frozen effective September 30, 2016. Also, the plan purchased an annuity contract September 22, 2016 and transferred liabilities for certain retirees to Prudential.
Definitions	
• Participation	Any person not represented by a union, who is employed either at a location at which the Predecessor Plan was in effect or at a location to which this Plan has been extended by the Board. For represented employees participating in Schedule D (the career average pay formula) and for all non-represented employees, individuals hired on or after January 1, 2005 will not become participants in this plan.
• Employee contributions	None
• Vesting service	At least six months of Earnings are required for one year of vesting service. Prior service under Hercules Incorporated's Pension Plan is included.
• Credited service	Each month in which Earnings are accrued. The total months of Credited Service divided by 12 are the years of Credited Service, whether or not consecutive. Prior service under Hercules Incorporated's Pension Plan is included. For former employees of SP Microwave, Inc., no Credited Service is granted prior to January 1, 1968.
• Pensionable earnings	Salary or wages including overtime, holidays, vacations, commissions, sales incentives, MICP bonuses and nonoccupational and temporary occupational disability benefits paid to an employee up to the first day of the calendar month following date of retirement or termination. Effective January 1, 2011, variable pay is added and overtime is excluded going forward.
• Final average earnings	Average monthly earnings for the highest five consecutive years during the last ten years of service, limited as required by the Tax Reform Act of 1986. Effective January 1, 2005, the averaging period of five years extends one additional month for each month that the individual is employed beyond January 1, 2005. (Note that the extended averaging period does not apply to the represented employees at MCW).
• Social security integration point	One-half of the Social Security tax base in effect for 12 months immediately prior to the effective date of retirement or termination month.

Schedule SB, Part V — Summary of Plan Provisions

Normal retirement	
• Eligibility	Age 65
• Benefit	Prospective Monthly Benefit: 1.20% of Final Average Earnings up to the Social Security Integration Point plus 1.60% of Final Average Earnings in excess of such integration point multiplied by years and months of Credited Service. Predecessor Plan: All participants who participated in the Predecessor Plan in effect on December 31, 1984 maintain rights to the benefits determined in accordance with such Plan. Former Employees of SP Microwave, Inc.: The minimum benefit under this plan is the benefit accrued as of June 30, 1987 under the SP Microwave, Inc. Plan. Former Employees of Aqualon Company Pension Plan (Kenedy): The minimum benefit under this plan is the accrued benefit as of December 31, 1992 under the Aqualon Company Pension Plan (Kenedy).
Early retirement	
• Eligibility	Unreduced Benefits: Eligibility: Attainment of age 62. Reduced Benefits: Attainment of age 55 and completion of ten years of Service.
• Benefit	Unreduced Benefits: As described in normal retirement benefits. Reduced Benefits: As described in normal retirement benefits (Prospective Monthly Benefit), but reduced for each month by which the date of retirement precedes age 60, minimum of benefit based on Predecessor Plan. The reduction is equal to 150% divided by an individual's Service for each year prior to age 60. The maximum annual reduction is 5%. Effective January 1, 2011, the early retirement factors described above are replaced with the following early retirement factors:

Retirement age	Percentage of accrued benefit
55	75%
56	80%
57	84%
58	88%
59	91%
60	94%
61	97%
62 or older	100%

This change in early retirement factors is being made using a “wear-away” approach, whereby the early retirement benefit determined after this change in reduction factors cannot be less than the early retirement benefit determined using the December 31, 2010 accrued benefit and the early retirement factors in effect prior to 2011.

Schedule SB, Part V — Summary of Plan Provisions

<table>
<tr><td colspan="2">Deferred vested</td></tr>
<tr><td>• Eligibility</td><td>Five years of vesting service.</td></tr>
<tr><td>• Benefit</td><td>As described in normal retirement. A participant may elect to receive payment of a vested benefit as early as age 55 by proper application. The benefit that would have been payable at age 65 will be actuarially reduced as described in the following table:
<table>
<tr><th>Retirement age</th><th>Percentage of accrued benefit</th></tr>
<tr><td>55</td><td>50%</td></tr>
<tr><td>56</td><td>54%</td></tr>
<tr><td>57</td><td>58%</td></tr>
<tr><td>58</td><td>62%</td></tr>
<tr><td>59</td><td>66%</td></tr>
<tr><td>60</td><td>70%</td></tr>
<tr><td>61</td><td>76%</td></tr>
<tr><td>62</td><td>82%</td></tr>
<tr><td>63</td><td>88%</td></tr>
<tr><td>64</td><td>94%</td></tr>
<tr><td>65 or older</td><td>100%</td></tr>
</table>
For terminations after September 30,2016, the reductions are the same as for early retirement.</td></tr>
<tr><td colspan="2">Disability</td></tr>
<tr><td>• Eligibility</td><td>Not applicable</td></tr>
<tr><td>• Benefit</td><td>None (continued service credit while receiving benefits under Company long-term disability plan).</td></tr>
<tr><td colspan="2">Pre-retirement death</td></tr>
<tr><td>• Eligibility</td><td>Spousal or nonspousal beneficiaries of active participants who are vested and who have elected this coverage; also, spousal beneficiaries of vested terminated participants who have elected this coverage.</td></tr>
<tr><td>• Benefit</td><td>Benefit that would have been payable to beneficiary under the 50% contingent annuity option if the participant elected retirement on his date of death (or if the participant had terminated employment on his date of death and commenced benefits on the earliest possible date). In addition, active employees who are eligible for retirement benefits may elect the 100% contingent annuity option.</td></tr>
</table>

Schedule SB, Part V — Summary of Plan Provisions

<table>
<tr><td>• Cost of benefit</td><td>All benefits under the plan reduced as follows:
1. 50% contingent annuity option — See table below. There is no charge for active employees at the Hopewell and Parlin locations who elect this coverage for spousal beneficiaries.
<table>
<tr><th></th><th colspan="2">Charge per month of coverage</th></tr>
<tr><th>Age at coverage</th><th>For active employees</th><th>Coverage for vested terminated employees</th></tr>
<tr><td>Up to age 45</td><td>.00083%</td><td>.00833%</td></tr>
<tr><td>45 to 50</td><td>.00833</td><td>.02083</td></tr>
<tr><td>50 and over</td><td>.04167</td><td>.04167</td></tr>
</table>
1. 100% contingent annuity option—.0333% for each month option is in effect.</td></tr>
<tr><td>Postretirement Death</td><td>None except as elected by optional forms of benefits.</td></tr>
<tr><td>Postponed retirement</td><td></td></tr>
<tr><td>• Eligibility</td><td>Employee option.</td></tr>
<tr><td>• Benefit</td><td>Benefit as described in normal retirement benefit based on earnings and service at actual retirement date.</td></tr>
<tr><td>Form of benefits</td><td></td></tr>
<tr><td>• Automatic form for unmarried participants</td><td>Life annuity.</td></tr>
<tr><td>• Automatic form for married participants</td><td>50% joint and survivor annuity, actuarially reduced.</td></tr>
<tr><td>• Optional forms</td><td>50%, 75% and 100% joint and survivor annuities, 51% lump sum combined with a 49% annuity. As of January 1, 2005, the 51% lump sum is only applicable to benefits earned through the end of 2004.</td></tr>
<tr><td>• Optional form conversion</td><td>5% and 417(e) applicable mortality</td></tr>
<tr><td>July 1, 1993 Pension Adjustment</td><td>For all pensioners and beneficiaries receiving benefits pursuant to a joint and survivor option who were receiving benefits as of April 1, 1993 (and in addition, all 1992 curtailed employees who were retirement eligible, even if they are not in payment status as of April 1, 1993) the pension benefits were increased as follows: 0.125% per month of retirement from January 1, 1985 through December 31, 1992. Minimum increase was equal to the greater of (i) $20 per month of retirement or (ii) 3% of the pension benefit being paid. The increase is not payable to individuals (or beneficiaries) in pay status who started to receive benefits from status as vested terminated participants with a right to a deferred benefit.</td></tr>
<tr><td>Benefits for former E&PD employees (now MacDermid)</td><td>Accrued benefit as of January 1, 1996 based on Credited Service and Final Average Earnings at that date, increased by 4.25% for each year the employee remains employed by MacDermid.</td></tr>
<tr><td>Benefits for former CPD employees (now Hexcel)</td><td>Accrued benefit as of July 1, 1996 based on Credited Service and Final Average Earnings at that date, increased by 4.25% for each year the employee remains employed by Hexcel, with a maximum of five years applied.</td></tr>
</table>

Schedule SB, Part V — Summary of Plan Provisions

Benefits for employees of the FiberVisions Joint Venture	Accrued benefit as of July 1, 1997 based on Credited Service and Final Average Earnings at that date, increased by 4.25% for each year the employee remains employed by FiberVisions, with a maximum of five years applied.
Miscellaneous	
• Maximum compensation	Compensation for any 12-month period used to determine accrued benefits may not exceed the limits in IRC Section 401(a)(17) for the calendar year in which the 12-month period begins. This limit is indexed annually. For 2016, the limit is $265,000.
• Maximum benefits	Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2016, the limit is $210,000.

Schedule SB, Part V — Summary of Plan Provisions

Hercules Members

Heritage BetzDearborn Employees

Key provisions	• Averaging period for pay of three years extends one additional month for each month that the individual is employed beyond January 1, 2005. • The 51% lump sum provision is available to new retirees based on benefits earned through the end of 2004. • Employees hired on or after January 1, 2005 do not become participants in the plan.
Effective date and plan year	Original plan: January 1, 1953. Merged into Hercules Pension Plan January 1, 1999. Restated plan: January 1, 2002
Status of the plan	The plan has no future benefit accruals and new employees are not eligible to participate in the plan.
Significant events that occurred during the year	The plan was frozen effective September 30, 2016.
Definitions	
• Participation	January 1 or July 1 following attainment of age 21 and completion of one year of service.
• Employee contributions	None
• Credited service	Each year in which a participant completes 1,000 hours. Effective January 1, 2005, each month in which earnings are accrued.
• Pensionable earnings	Salary or wages including shift premium, overtime, incentive, commissions, bonuses, holidays, vacations and nonoccupational and temporary occupational disability benefits paid to an employee up to the first day of the calendar month following date of retirement or termination.
• Final average earnings	Average annual earnings for the highest three consecutive years excluding those years in which the participant did not complete a year of service. Effective January 1, 2005, average monthly earnings for each year of service from the later of January 1, 2002 or date of hire.
• Covered Compensation	35-year average of Social Security wage bases ending with the year the participant attains Social Security Retirement Age.
• Social security integration point	One-half of the Social Security tax base in effect for 12 months immediately prior to the effective date of retirement or termination month.
Normal retirement	
• Eligibility	Attain age 65 with five years of participation.

Schedule SB, Part V — Summary of Plan Provisions

• Benefit	Prior to January 1, 2005: (1) + (2) − (3): 1.2% of Final Average Earnings multiplied by Credited Service up to a maximum of 35 years. 1. 0.6% of Final Average Earnings exceeding Covered Compensation multiplied by Credited Service up to a maximum of 35 years. 2. W.R. Grace Benefit Effective January 1, 2005: (1) − (2): 2. 1.20% of Final Average Earnings up to the Social Security Integration Point plus 1.60% of Final Average Earnings in excess of such integration point multiplied by years and months of Credited Service. 2. W.R. Grace Benefit
Early Retirement (Prior to January 1, 2005)	
• Eligibility	Attainment of age 55 and completion of ten years of service.
• Benefit	As described normal retirement benefit, but reduced 1/180 for each of the first 60 months and 1/300 for each of the next 60 months commencement precedes Normal Retirement Date.
Rule-of-85 early retirement	
• Eligibility	Attainment of age 55 and age plus service equals at least 85 years; also, certain individuals who terminate by October 2000 are deemed to have satisfied Rule of 85.
• Benefit	As described in normal retirement benefit, but (1) is reduced 1/240 for each month commencement precedes age 60, and in (2) is reduced 1/180 for each of the first 60 months and 1/300 for each of the next 60 months commencement precedes Normal Retirement Date.
Early Retirement (effective January 1, 2005)	
• Eligibility	Unreduced: Attainment of age 60 and completion of ten years of Service. Reduced: Attainment of age 55 and completion of ten years of Service.
• Benefit	Unreduced: As described in normal retirement benefit with no adjustment. Reduced: As described normal retirement benefit, but reduced for each month by which the date of retirement precedes age 60. The reduction is equal to 150% divided by an individual's Service for each year prior to age 60. The maximum annual reduction is 5%.
Rule-of-85 Minimum	
• Eligibility	Attainment of age 55 and age plus service equals at least 85 years; also, certain individuals who terminate by October 2000 are deemed to have satisfied Rule of 85.

Schedule SB, Part V — Summary of Plan Provisions

• Benefit	As described normal retirement benefit using earnings and service as of December 31, 2004, but (1) is reduced 1/240 for each month commencement precedes age 60, and in (2) is reduced 1/180 for each of the first 60 months and 1/300 for each of the next 60 months commencement precedes Normal Retirement Date.
Deferred vested	
• Eligibility	Five years of service.
• Benefit	As described in normal retirement benefit.
Disability	
• Eligibility	Not applicable
• Benefit	None (continued service credit while receiving benefits under Company long-term disability plan).
Pre-retirement death	
• Eligibility	Spousal beneficiaries of active participants who are vested; also, spousal beneficiaries of vested terminated participants.
• Benefit	Benefit that would have been payable to beneficiary under the 50% contingent annuity option if the participant elected retirement on his date of death (or if the participant had terminated employment on his date of death and commenced benefits on the earliest possible date).
Postretirement death	None except as elected by optional forms of benefits.
Postponed retirement	
• Eligibility	Employee option
• Benefit	As described normal retirement benefit based on earnings and service at actual retirement date.
Form of benefits	
• Automatic form for unmarried participants	Life annuity.
• Automatic form for married participants	50% joint and survivor annuity, actuarially reduced.
• Optional forms	50%, 75% and 100% joint and survivor annuities and a 5-year certain and continuous annuity. A 51% lump sum combined with 49% annuity is available on the benefits earned through the end of 2004.
• Optional form conversion	5% and 417(e) applicable mortality
Miscellaneous	
• Maximum compensation	Compensation for any 12-month period used to determine accrued benefits may not exceed the limits in IRC Section 401(a)(17) for the calendar year in which the 12-month period begins. This limit is indexed annually. For 2016, the limit is $265,000.
• Maximum benefits	Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2016, the limit is $210,000.

Schedule SB, Part V — Summary of Plan Provisions

Benefits Included or Excluded

Unless noted below, all benefits provided by the plan, as restated and amended through September 30, 2010, are included in this valuation.

- **Most recent plan amendments included (Ashland Hercules Plan):** The Ashland Hercules Plan document as amended through September 30, 2016
- **Plan amendments excluded:** None
- **Internal Revenue Code limitations:** The limitations of Internal Revenue Code Sections 415(b) and 401(a)(17) have been incorporated into our calculations.
- **IRC Section 416 rules for top-heavy plans:** We did not test whether the Merged plan is top-heavy (when the present value of benefits for key employees equals or exceeds 60 percent of the present value for all participants). However, we expect that the plan is not top-heavy due to the large number of rank-and-file participants; therefore, the funding target and target normal cost do not reflect any liability for top-heavy benefit accruals.
- **IRC Section 436 benefit restrictions:**
  - *Unpredictable contingent event benefits:* This valuation excludes restricted contingent event benefits that occurred before the valuation date but includes contingent event benefits which are expected to occur on or after the valuation date regardless of anticipated funding-based limitations.
  - *Plan amendments:* See above.
  - *Prohibited payments:* Limitations on prohibited benefits (if any) are reflected for annuity starting dates before the valuation date but are ignored for annuity starting dates on or after the valuation date.
  - *Benefit accruals:* The plan's funding target does not reflect any limitation on benefit accruals. The target normal cost does not reflect any limitation on benefit accruals.
- **Unpredictable contingent event benefits:** The plan does not have any unpredictable contingent event benefits.

Plan Provision Changes Since Prior Valuation

- Maximum compensation amounts and maximum benefit amounts under IRS rules were updated from 2015 to 2016.
- Ashland Hercules plan was frozen as of September 30, 2016.
- Ashland Hercules plan subsidized early retirement reduction factors were extended to all participants affected by the freeze to be available even if they terminated prior to retirement eligibility.

Plan Name	**Ashland Hercules Pension Plan**
Plan Sponsor EIN	**61-1782197**
ERISA Plan #	**001**
Plan Year Ending	**9/30/2017**

The required attachment marked with an "X" in the Attachment column is included within the "Signed Schedule MB or Schedule SB" attachment to Schedule SB location which consists of the entire Schedule SB and its attachments.

Form / Schedule	Line#	Description	Attachment Title (if different from Description)	Attach-ment
5500 Sch. SB	**None**	Statement by Enrolled Actuary		
5500 Sch. SB	**Line 27**	Actuarial Information Based on Pre-PPA Funding Rules		
5500 Sch. SB	**Line E**	Information for Each Individual Employer		
5500 Sch. SB	**Line 4**	Additional Information for Plans in At-Risk Status		
5500 Sch. SB	**Line 7**	Explanation of Discrepancy in Prior Year Funding Standard Carryover Balance or Prefunding		
5500 Sch. SB	**Line 8**	Late Election to Apply Balances to Quarterly Installments		
5500 Sch. SB	**Line 9**	Explanation of Credit Balance Discrepancy		
5500 Sch. SB	**Line 18**	Contributions Made to the Plan for the Plan Year		
5500 Sch. SB	**Line 19**	Discounted Employer Contributions		
5500 Sch. SB	**Line 20c**	Liquidity Requirement Certification		
5500 Sch. SB	**Line 22**	Description of Weighted Average Retirement Age		**X**
5500 Sch. SB	**Line 23**	Information on Use of Multiple Mortality Tables		
5500 Sch. SB	**Line 23**	Information on Use of Substitute Mortality Tables		
5500 Sch. SB	**Part V**	Statement of Actuarial Assumptions/Methods		**X**
5500 Sch. SB	**Part V**	Summary of Plan Provisions		**X**
5500 Sch. SB	**Line 24**	Change in Actuarial Assumptions		**X**
5500 Sch. SB	**Line 25**	Change in Method		
5500 Sch. SB	**Line 26**	Schedule of Active Participant Data		**X**
5500 Sch. SB	**Line 27**	Balances Subject to Binding Agreement with PBGC		
5500 Sch. SB	**Line 27**	Alternative 17-Year Funding Schedule of Airlines		
5500 Sch. SB	**Line 32**	Schedule of Amortization Bases		**X**
5500 Sch. SB	**Line 15**	Other Attachment [Enter Description]	Line 15 Val AFTAP Differences	**X**

Plan Name	**Ashland Hercules Pension Plan**
Plan Sponsor EIN	**61-1782197**
ERISA Plan #	**001**
Plan Year Ending	**9/30/2017**

The required attachment marked with an "X" in the Attachment column is included within the "Signed Schedule MB or Schedule SB" attachment to Schedule SB location which consists of the entire Schedule SB and its attachments.

Form / Schedule	Line#	Description	Attachment Title (if different from Description)	Attach-ment
5500 Sch. SB	**None**	Statement by Enrolled Actuary		
5500 Sch. SB	**Line 27**	Actuarial Information Based on Pre-PPA Funding Rules		
5500 Sch. SB	**Line E**	Information for Each Individual Employer		
5500 Sch. SB	**Line 4**	Additional Information for Plans in At-Risk Status		
5500 Sch. SB	**Line 7**	Explanation of Discrepancy in Prior Year Funding Standard Carryover Balance or Prefunding		
5500 Sch. SB	**Line 8**	Late Election to Apply Balances to Quarterly Installments		
5500 Sch. SB	**Line 9**	Explanation of Credit Balance Discrepancy		
5500 Sch. SB	**Line 18**	Contributions Made to the Plan for the Plan Year		
5500 Sch. SB	**Line 19**	Discounted Employer Contributions		
5500 Sch. SB	**Line 20c**	Liquidity Requirement Certification		
5500 Sch. SB	**Line 22**	Description of Weighted Average Retirement Age		**X**
5500 Sch. SB	**Line 23**	Information on Use of Multiple Mortality Tables		
5500 Sch. SB	**Line 23**	Information on Use of Substitute Mortality Tables		
5500 Sch. SB	**Part V**	Statement of Actuarial Assumptions/Methods		**X**
5500 Sch. SB	**Part V**	Summary of Plan Provisions		**X**
5500 Sch. SB	**Line 24**	Change in Actuarial Assumptions		**X**
5500 Sch. SB	**Line 25**	Change in Method		
5500 Sch. SB	**Line 26**	Schedule of Active Participant Data		**X**
5500 Sch. SB	**Line 27**	Balances Subject to Binding Agreement with PBGC		
5500 Sch. SB	**Line 27**	Alternative 17-Year Funding Schedule of Airlines		
5500 Sch. SB	**Line 32**	Schedule of Amortization Bases		**X**
5500 Sch. SB	**Line 15**	Other Attachment [Enter Description]	Line 15 Val AFTAP Differences	**X**

Plan Name	**Ashland Hercules Pension Plan**
Plan Sponsor EIN	**61-1782197**
ERISA Plan #	**001**
Plan Year Ending	**9/30/2017**

The required attachment marked with an "X" in the Attachment column is included within the "Signed Schedule MB or Schedule SB" attachment to Schedule SB location which consists of the entire Schedule SB and its attachments.

Form / Schedule	Line#	Description	Attachment Title (if different from Description)	Attach-ment
5500 Sch. SB	**None**	Statement by Enrolled Actuary		
5500 Sch. SB	**Line 27**	Actuarial Information Based on Pre-PPA Funding Rules		
5500 Sch. SB	**Line E**	Information for Each Individual Employer		
5500 Sch. SB	**Line 4**	Additional Information for Plans in At-Risk Status		
5500 Sch. SB	**Line 7**	Explanation of Discrepancy in Prior Year Funding Standard Carryover Balance or Prefunding		
5500 Sch. SB	**Line 8**	Late Election to Apply Balances to Quarterly Installments		
5500 Sch. SB	**Line 9**	Explanation of Credit Balance Discrepancy		
5500 Sch. SB	**Line 18**	Contributions Made to the Plan for the Plan Year		
5500 Sch. SB	**Line 19**	Discounted Employer Contributions		
5500 Sch. SB	**Line 20c**	Liquidity Requirement Certification		
5500 Sch. SB	**Line 22**	Description of Weighted Average Retirement Age		**X**
5500 Sch. SB	**Line 23**	Information on Use of Multiple Mortality Tables		
5500 Sch. SB	**Line 23**	Information on Use of Substitute Mortality Tables		
5500 Sch. SB	**Part V**	Statement of Actuarial Assumptions/Methods		**X**
5500 Sch. SB	**Part V**	Summary of Plan Provisions		**X**
5500 Sch. SB	**Line 24**	Change in Actuarial Assumptions		**X**
5500 Sch. SB	**Line 25**	Change in Method		
5500 Sch. SB	**Line 26**	Schedule of Active Participant Data		**X**
5500 Sch. SB	**Line 27**	Balances Subject to Binding Agreement with PBGC		
5500 Sch. SB	**Line 27**	Alternative 17-Year Funding Schedule of Airlines		
5500 Sch. SB	**Line 32**	Schedule of Amortization Bases		**X**
5500 Sch. SB	**Line 15**	Other Attachment [Enter Description]	Line 15 Val AFTAP Differences	**X**