

Form 5500-SF Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation		Short Form Annual Return/Report of Small Employee Benefit Plan This form is required to be filed 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-SF.		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:		<input checked="" type="checkbox"/> a single-employer plan <input type="checkbox"/> a multiple-employer plan (not multiemployer) (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.) <input type="checkbox"/> a one-participant plan <input type="checkbox"/> a foreign plan			
B This return/report is		<input checked="" type="checkbox"/> the first return/report <input type="checkbox"/> the final return/report <input type="checkbox"/> an amended return/report <input type="checkbox"/> a short plan year return/report (less than 12 months)			
C Check box if filing under:		<input checked="" type="checkbox"/> Form 5558 <input type="checkbox"/> automatic extension <input type="checkbox"/> DFVC program <input type="checkbox"/> special extension (enter description)			
Part II Basic Plan Information —enter all requested information					
1a Name of plan MESO, INC. DEFINED BENEFIT PLAN		1b Three-digit plan number (PN) ▶		002	
		1c Effective date of plan		10/01/2016	
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) MESOSCALE ENVIRONMENTAL SIMULATIONS & OPERATIONS, INC 185 JORDAN ROAD TROY, NY 12180		2b Employer Identification Number (EIN)		54-1326503	
		2c Sponsor's telephone number		518-283-5169	
		2d Business code (see instructions)		541700	
3a Plan administrator's name and address <input checked="" type="checkbox"/> 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			
5a Total number of participants at the beginning of the plan year		5a		3	
b Total number of participants at the end of the plan year.....		5b		3	
c Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item).....		5c			
d(1) Total number of active participants at the beginning of the plan year.....		5d(1)		3	
d(2) Total number of active participants at the end of the plan year		5d(2)		3	
e Number of participants that terminated employment during the plan year with accrued benefits that were less than 100% vested		5e		0	
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, if applicable, a Schedule SB or Schedule MB completed and signed by an enrolled actuary, 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.	05/30/2018	JOHN ZACK		
	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		
Preparer's name (including firm name, if applicable) and address (include room or suite number)				Preparer's telephone number	

- 6a** Were all of the plan's assets during the plan year invested in eligible assets? (See instructions.) ☒ Yes ☐ No
- b** Are you claiming a waiver of the annual examination and report of an independent qualified public accountant (IQPA) under 29 CFR 2520.104-46? (See instructions on waiver eligibility and conditions.) ☒ Yes ☐ No
- If you answered "No" to either line 6a or line 6b, the plan cannot use Form 5500-SF and must instead use Form 5500.**
- c** If the plan is a defined benefit plan, is it covered under the PBGC insurance program (see ERISA section 4021)? ☒ Yes ☐ No ☐ Not determined

Part III Financial Information

7 Plan Assets and Liabilities		(a) Beginning of Year	(b) End of Year
a Total plan assets	7a		784259
b Total plan liabilities	7b		
c Net plan assets (subtract line 7b from line 7a)	7c	0	784259
8 Income, Expenses, and Transfers for this Plan Year		(a) Amount	(b) Total
a Contributions received or receivable from:			
(1) Employers	8a(1)	784259	
(2) Participants	8a(2)	0	
(3) Others (including rollovers)	8a(3)		
b Other income (loss)	8b	0	
c Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c		784259
d Benefits paid (including direct rollovers and insurance premiums to provide benefits)	8d		
e Certain deemed and/or corrective distributions (see instructions) .	8e		
f Administrative service providers (salaries, fees, commissions)	8f	0	
g Other expenses	8g	0	
h Total expenses (add lines 8d, 8e, 8f, and 8g)	8h		0
i Net income (loss) (subtract line 8h from line 8c)	8i		784259
j Transfers to (from) the plan (see instructions)	8j		

Part IV Plan Characteristics

- 9a** If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristic Codes in the instructions:
1A 3D
- b** If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristic Codes in the instructions:

Part V Compliance Questions

10 During the plan year:		Yes	No	N/A	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? (See instructions and DOL's Voluntary Fiduciary Correction Program)	10a		X		
b Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 10a.)	10b		X		
c Was the plan covered by a fidelity bond?	10c	X			460000
d Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	10d		X		
e Were any fees or commissions paid to any brokers, agents, or other persons by an insurance carrier, insurance service, or other organization that provides some or all of the benefits under the plan? (See instructions.)	10e		X		
f Has the plan failed to provide any benefit when due under the plan?	10f		X		
g Did the plan have any participant loans? (If "Yes," enter amount as of year-end.)	10g		X		
h If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	10h				
i If 10h was answered "Yes," check the box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3	10i				

Part VI Pension Funding Compliance

11 Is this a defined benefit plan subject to minimum funding requirements? (If "Yes," see instructions and complete Schedule SB (Form 5500) and line 11a below) ☒ Yes ☐ No

11a Enter the unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 **11a** 0

12 Is this a defined contribution plan subject to the minimum funding requirements of section 412 of the Code or section 302 of ERISA? ☐ Yes ☒ No
(If "Yes," complete line 12a or lines 12b, 12c, 12d, and 12e below, as applicable.)

a 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 letter ruling granting the waiver. Month Day Year

If you completed line 12a, complete lines 3, 9, and 10 of Schedule MB (Form 5500), and skip to line 13.

b Enter the minimum required contribution for this plan year **12b**

c Enter the amount contributed by the employer to the plan for this plan year **12c**

d Subtract the amount in line 12c from the amount in line 12b. Enter the result (enter a minus sign to the left of a negative amount) **12d**

e Will the minimum funding amount reported on line 12d be met by the funding deadline? ☐ Yes ☐ No ☐ N/A

Part VII Plan Terminations and Transfers of Assets

13a Has a resolution to terminate the plan been adopted in any plan year? ☐ Yes ☒ No

If "Yes," enter the amount of any plan assets that reverted to the employer this year **13a**

b Were all the plan assets distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC? ☐ Yes ☒ No

c 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.)

13c(1) Name of plan(s):	13c(2) EIN(s)	13c(3) PN(s)

Part VIII Trust Information

14a Name of trust	14b Trust's EIN
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14c Name of trustee or custodian	14d Trustee's or custodian's telephone number
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Part IX IRS Compliance Questions

15a Is the plan a 401(k) plan? If "No," skip b. ☐ Yes ☐ No

15b 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

16a 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

16b 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

17a 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 .

17b 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 / / .

18 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? ☐ Yes ☐ No

19 Was any plan participant a 5% owner who had attained at least age 70 ½ during the prior plan year? ☐ Yes ☐ No

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
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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 <u>MESO, INC. DEFINED BENEFIT PLAN</u>	B Three-digit plan number (PN) ▶ <u>002</u>
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF <u>MESOSCALE ENVIRONMENTAL SIMULATIONS & OPERATIONS, INC</u>	D Employer Identification Number (EIN) <u>54-1326503</u>
E Type of plan: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Multiple-A <input type="checkbox"/> Multiple-B	F Prior year plan size: <input checked="" type="checkbox"/> 100 or fewer <input type="checkbox"/> 101-500 <input type="checkbox"/> More than 500

Part I	Basic Information
1 Enter the valuation date: Month <u>09</u> Day <u>30</u> Year <u>2017</u>	
2 Assets:	
a Market value	2a <u>0</u>
b Actuarial value	2b <u>0</u>
3 Funding target/participant count breakdown	
a For retired participants and beneficiaries receiving payment	(1) Number of participants <u>0</u> (2) Vested Funding Target <u>0</u> (3) Total Funding Target <u>0</u>
b For terminated vested participants	<u>0</u> <u>0</u> <u>0</u>
c For active participants	<u>3</u> <u>312979</u> <u>312979</u>
d Total	<u>3</u> <u>312979</u> <u>312979</u>
4 If the plan is in at-risk status, check the box and complete lines (a) and (b)..... <input type="checkbox"/>	
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 <u>5.42 %</u>
6 Target normal cost	6 <u>108775</u>

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		<u>05/02/2018</u>
	Signature of actuary	Date
<u>MARK VIDAL, EA</u>	Type or print name of actuary	<u>17-05069</u>
<u>THE HILB GROUP OF NEW ENGLAND, LLC</u>	Firm name	Most recent enrollment number
<u>931 JEFFERSON BLVD., SUITE 3001</u>		<u>800-678-1700</u>
<u>WARWICK, RI 02886</u>	Address of the firm	Telephone number (including area code)

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 ☐

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

Schedule SB (Form 5500) 2016
v. 160205

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	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8)	0	0
10	Interest on line 9 using prior year's actual return of _____%	0	0
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 <u>5.24</u> %		0
b(2)	Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
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		0
12	Other reductions in balances due to elections or deemed elections	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	0

Part III Funding Percentages			
14	Funding target attainment percentage	14	0.00%
15	Adjusted funding target attainment percentage	15	185.05%
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	180.99%
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
10/02/2017	250000	0			
12/01/2017	250000	0			
11/01/2017	250000	0			
12/05/2017	34259	0			
Totals ►			18(b)	784259	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	780477
20 Quarterly contributions and liquidity shortfalls:		
a Did the plan have a "funding shortfall" for the prior year?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner?	<input type="checkbox"/> Yes <input type="checkbox"/> 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

Part V	Assumptions Used to Determine Funding Target and Target Normal Cost		
21 Discount rate:			
a Segment rates:		1st segment: 4.43%	2nd segment: 5.91%
		3rd segment: 6.65%	<input type="checkbox"/> N/A, full yield curve used
b Applicable month (enter code)			21b 0
22 Weighted average retirement age			22 67
23 Mortality table(s) (see instructions) <input checked="" type="checkbox"/> Prescribed - combined <input type="checkbox"/> Prescribed - separate <input type="checkbox"/> 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. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 108775
b Excess assets, if applicable, but not greater than line 31a			31b 0
32 Amortization installments:		Outstanding Balance	Installment
a Net shortfall amortization installment		312979	51711
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 0
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)			34 160486
	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	0	0	0
36 Additional cash requirement (line 34 minus line 35)			36 160486
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)			37 780477
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)			38a 619991
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances			38b 0
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 <input type="checkbox"/> 2 plus 7 years <input type="checkbox"/> 15 years			
b Eligible plan year(s) for which the election in line 41a was made <input type="checkbox"/> 2008 <input type="checkbox"/> 2009 <input type="checkbox"/> 2010 <input type="checkbox"/> 2011			
42 Amount of acceleration adjustment			42
43 Excess installment acceleration amount to be carried over to future plan years			43

Form 5500-SF Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Short Form Annual Return/Report of Small Employee Benefit Plan This form is required to be filed under sections 104 and 4085 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6057(b) and 6058(a) of the Internal Revenue Code (the Code). ► Complete all entries in accordance with the instructions to the Form 5500-SF.	OMB Nos. 1210-0110 1210-0089 <div style="text-align: center; border: 1px solid black; padding: 5px;"> 2016 </div> This Form is Open to Public Inspection
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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:	<input checked="" type="checkbox"/> a single-employer plan	<input type="checkbox"/> a multiple-employer plan (not multiemployer) (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)		
B This return/report is:	<input type="checkbox"/> a one-participant plan <input checked="" type="checkbox"/> the first return/report <input type="checkbox"/> an amended return/report	<input type="checkbox"/> a foreign plan <input type="checkbox"/> the final return/report <input type="checkbox"/> a short plan year return/report (less than 12 months)		
C Check box if filing under:	<input checked="" type="checkbox"/> Form 5558 <input type="checkbox"/> special extension (enter description)	<input type="checkbox"/> automatic extension <input type="checkbox"/> DFVC program		

Part II Basic Plan Information --- enter all requested information			
1a Name of plan	MESO, Inc. Defined Benefit Plan	1b Three-digit plan number (PN) ►	002
		1c Effective date of plan	10/01/2016
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) Mesoscale Environmental Simulations & Operations, Inc. d/b/a MESO, In 185 Jordan Road US Troy NY 12180		2b Employer Identification Number (EIN)	54-1326503
		2c Sponsor's telephone number (518)	283-5169
		2d Business code (see instructions)	541700
3a Plan administrator's name and address <input checked="" type="checkbox"/> 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	
5a Total number of participants at the beginning of the plan year		5a	3
b Total number of participants at the end of the plan year		5b	3
c Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)		5c	
d(1) Total number of active participants at the beginning of the plan year		5d(1)	3
d(2) Total number of active participants at the end of the plan year		5d(2)	3
e Number of participants that terminated employment during the plan year with accrued benefits that were less than 100% vested		5e	0

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, if applicable, a Schedule SB or Schedule MB completed and signed by an enrolled actuary, 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		5/30/18	John Zack
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE		5/30/18	John Zack
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
Preparer's name (including firm name, if applicable) and address (include room or suite number) Skip this question			Preparer's telephone number Skip this question

- 6a** Were all of the plan's assets during the plan year invested in eligible assets? (See instructions.) ☒ Yes ☐ No
- b** Are you claiming a waiver of the annual examination and report of an independent qualified public accountant (IQPA) under 29 CFR 2520.104-46? (See instructions on waiver eligibility and conditions.) ☒ Yes ☐ No
- If you answered "No" to either line 6a or line 6b, the plan cannot use Form 5500-SF and must instead use Form 5500.
- c** If the plan is a defined benefit plan, is it covered under the PBGC insurance program (see ERISA section 4021)? ☒ Yes ☐ No ☐ Not determined

Part III Financial Information

7 Plan Assets and Liabilities		(a) Beginning of Year	(b) End of Year
a Total plan assets	7a		784,259
b Total plan liabilities	7b		
c Net plan assets (subtract line 7b from line 7a)	7c	0	784,259
8 Income, Expenses, and Transfers for this Plan Year		(a) Amount	(b) Total
a Contributions received or receivable from:			
(1) Employers	8a(1)	784,259	
(2) Participants	8a(2)	0	
(3) Others (including rollovers)	8a(3)		
b Other income (loss)	8b	0	
c Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c		784,259
d Benefits paid (including direct rollovers and insurance premiums to provide benefits)	8d		
e Certain deemed and/or corrective distributions (see instructions) ...	8e		
f Administrative service providers (salaries, fees, commissions)	8f	0	
g Other expenses	8g	0	
h Total expenses (add lines 8d, 8e, 8f, and 8g)	8h		0
i Net income (loss) (subtract line 8h from line 8c)	8i		784,259
j Transfers to (from) the plan (see instructions)	8j		

Part IV Plan Characteristics

- 9a** If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristic Codes in the instructions:
1A 3D
- b** If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristic Codes in the instructions:

Part V Compliance Questions

10 During the plan year:		Yes	No	N/A	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? (See instructions and DOL's Voluntary Fiduciary Correction Program)	10a		X		
b Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 10a.)	10b		X		
c Was the plan covered by a fidelity bond?	10c		X		
d Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	10d		X		
e Were any fees or commissions paid to any brokers, agents, or other persons by an insurance carrier, insurance service, or other organization that provides some or all of the benefits under the plan? (See instructions.)	10e		X		
f Has the plan failed to provide any benefit when due under the plan?	10f		X		
g Did the plan have any participant loans? (If "Yes," enter amount as of year end.)	10g		X		
h If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	10h				
i If 10h was answered "Yes," check the box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3	10i				

Part VI Pension Funding Compliance

11 Is this a defined benefit plan subject to minimum funding requirements? (If "Yes," see instructions and complete Schedule SB (Form 5500 and line 11a below)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
11a Enter the unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40	11a 0
12 Is this a defined contribution plan subject to the minimum funding requirements of section 412 of the Code or section 302 of ERISA? (If "Yes," complete line 12a or lines 12b, 12c, 12d, and 12e below, as applicable.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
a 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 letter ruling granting the waiver Month _____ Day _____ Year _____	
If you completed line 12a, complete lines 3, 9, and 10 of Schedule MB (Form 5500), and skip to line 13.	
b Enter the minimum required contribution for this plan year.....	12b
c Enter the amount contributed by the employer to the plan for the plan year	12c
d Subtract the amount in line 12c from the amount in line 12b. Enter the result (enter a minus sign to the left of a negative amount)	12d
e Will the minimum funding amount reported on line 12d be met by the funding deadline?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Part VII Plan Terminations and Transfers of Assets

13a Has a resolution to terminate the plan been adopted in any plan year?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If "Yes," enter the amount of any plan assets that reverted to the employer this year	13a
b Were all the plan assets distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
c 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.)	
13c(1) Name of plan(s):	13c(2) EIN(s)
	13c(3) PN(s)

Part VIII Trust Information - Skip These Questions

14a Name of trust	14b Trust's EIN
14c Name of trustee or custodian	14d Trustee or custodian's telephone number

Part IX IRS Compliance Questions - Skip These Questions

15a Is the plan a 401(k) plan? If "No," skip b.	<input type="checkbox"/> Yes <input type="checkbox"/> No
15b How did the plan satisfy the nondiscrimination requirements for employee deferrals under section 401(k)(3) for the plan year? Check all that apply:	<input type="checkbox"/> Design-based safe harbor <input type="checkbox"/> "Prior year" ADP test <input type="checkbox"/> "Current year" ADP test <input type="checkbox"/> N/A
16a What testing method was used to satisfy the coverage requirements under section 410(b) for the plan year? Check all that apply:	<input type="checkbox"/> Ratio percentage test <input type="checkbox"/> Average benefit test <input type="checkbox"/> N/A
16b 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
17a 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 serial number _____.	
17b 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 ____/____/____.	
18 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
19 Was any plan participant a 5% owner who had attained at least age 70 ½ during the prior plan year?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Schedule SB, line 19 -
Discounted Employer Contributions
MESO, Inc. Defined Benefit Plan
54-1326503 / 002
For the plan year 10/01/2016 through 09/30/2017
Valuation Date: 09/30/2017

	Date	Amount	Adjusted Contribution	Adjusted Prior Year Contribution	Adjusted Quarterly	Effective Rate	Penalty Rate
Deposited Contribution	10/02/2017	\$250,000					
Applied to Additional Contribution	09/30/2017	89,468	89,442	0	0	5.42	0
Applied to MRC	09/30/2017	160,532	160,486	0	0	5.42	0
Deposited Contribution	11/01/2017	\$250,000					
Applied to Additional Contribution	09/30/2017	250,000	248,846	0	0	5.42	0
Deposited Contribution	12/01/2017	\$250,000					
Applied to Additional Contribution	09/30/2017	250,000	247,769	0	0	5.42	0
Deposited Contribution	12/05/2017	\$34,259					
Applied to Additional Contribution	09/30/2017	34,259	33,934	0	0	5.42	0
Totals for Deposited Contribution		\$784,259	\$780,477	\$0	\$0		

**Schedule SB, line 22 -
Description of Weighted Average Retirement Age**

MESO, Inc. Defined Benefit Plan

54-1326503 / 002

For the plan year 10/01/2016 through 09/30/2017

The age reported is the weighted average of the assumed retirement ages for all active participants as of the valuation date based on their funding target or target normal cost should the funding target of the plan be zero rounded to the nearest whole age. For an active late retiree, the assumed retirement age may be later than the Plan's normal retirement age. Each participant's rate of retirement is assumed to be 100% of his/her assumed retirement age.

Schedule SB, line 32 -
Schedule of Amortization Bases
MESO, Inc. Defined Benefit Plan
54-1326503 / 002
For the plan year 10/01/2016 through 09/30/2017

Date Base Established	Original Base Amount	Type of Base	Present Value of Remaining Installments	Years Remaining Amortization Period	Amortization Installment
09/30/2017	312,979	Shortfall	312,979	7	51,711
Totals:			\$312,979		\$51,711

Schedule SB, Part V

Summary of Plan Provisions

MESO, Inc. Defined Benefit Plan
54-1326503 / 002

For the plan year 10/01/2016 through 09/30/2017

<u>Employer:</u>	Mesoscale Environmental Simulations & Operations, Inc. d/b/a MESO, Inc.														
Type of Entity -	S Corporation														
EIN: 54-1326503	TIN: Plan #: 002 Plan Type: Defined Benefit														
<u>Dates:</u>	Effective - 10/01/2016 Year end - 09/30/2017 Valuation - 09/30/2017														
	Top Heavy Years - 2016														
<u>Eligibility:</u>	All employees excluding non-resident aliens, members of an excluded class and union														
	Minimum age - 21 Months of service - 12														
Hours Required for -	Eligibility - 1000 Benefit accrual - 500 Vesting - 1000														
Plan Entry -	10/01 or 04/01 the plan year on or next following eligibility satisfaction														
<u>Retirement:</u>	Normal - Attainment of age 65 and completion of the 5th anniversary of the 1st day of the initial plan year of participation														
	Early - Not provided														
<u>Average Compensation:</u>	Highest 3 consecutive years of service														
Top Heavy Minimum Benefit -	Highest 5 consecutive top heavy years of participation														
<u>Plan Benefits:</u>	Retirement - Derived from the unit credit benefit formula below:														
	2% of average compensation per year of service after 10/01/2011														
Accrued Benefit -	Unit credit based on service. Service prior to 10/01/2011 is excluded														
	Minimum Benefit - None														
	Maximum Benefit - None														
	Maximum allowable distribution is lump sum equivalent of normal form not to exceed 415 maximum allowable distribution, which is the lesser amount computed using a) 5.5% interest and the Applicable Mortality Table or b) the greater of plan actuarial equivalence interest and mortality or 417(e) Minimum														
Early Retirement -	None														
Death Benefit -	Face Amount														
Disability Benefit -	None														
<u>Top Heavy Minimum:</u>	2% of average compensation per top heavy year of participation excluding years prior to the adoption date of the plan and 1984 (if earlier), limited to 10 years														
<u>IRS Limitations:</u>	415 Limits - Percent: 100 Dollar: \$215,000														
	Maximum 401(a)(17) compensation - \$265,000														
<u>Normal Form:</u>	Life Annuity														
<u>Optional Forms:</u>	Lump Sum														
	Life Annuity Guaranteed for 10 Years														
	Joint with 50%, 75% or 100% Survivor Benefit														
<u>Vesting Schedule:</u>	<table> <tr> <th>Years</th><th>Percent</th></tr> <tr> <td>0-1</td><td>0%</td></tr> <tr> <td>2</td><td>20%</td></tr> <tr> <td>3</td><td>40%</td></tr> <tr> <td>4</td><td>60%</td></tr> <tr> <td>5</td><td>80%</td></tr> <tr> <td>6</td><td>100%</td></tr> </table>	Years	Percent	0-1	0%	2	20%	3	40%	4	60%	5	80%	6	100%
Years	Percent														
0-1	0%														
2	20%														
3	40%														
4	60%														
5	80%														
6	100%														
	Service is calculated using all years of service														

Schedule SB, Part V

Summary of Plan Provisions

MESO, Inc. Defined Benefit Plan
54-1326503 / 002

For the plan year 10/01/2016 through 09/30/2017

Present Value of Accrued Benefit: Based on the greater of 417(e) or Actuarial Equivalence

417(e):

Interest Rates -	Segment #	Years	Rate %
	Segment 1	0 - 5	1.44
	Segment 2	6 - 20	3.46
	Segment 3	> 20	4.48

Mortality Table - 16E - 2016 Applicable Mortality Table for 417(e) (unisex)

Actuarial Equivalence:

Pre-Retirement -	Interest -	5%
	Mortality Table -	None
Post-Retirement -	Interest -	5%
	Mortality Table -	G94 - 1994 Group Annuity Reserving Proj 2002, Scale AA (unisex)

**SCHEDULE SB
(Form 5500)**Department of the Treasury
Internal Revenue ServiceDepartment 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.

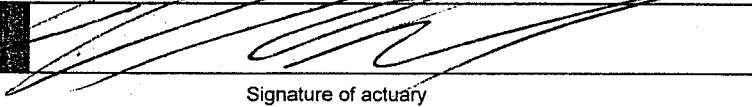
A Name of plan MESO, Inc. Defined Benefit Plan		B Three-digit plan number (PN) ▶ 002
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF Mesoscale Environmental Simulations & Operations, Inc. d/b/a MES		D Employer Identification Number (EIN) 54-1326503
E Type of plan: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Multiple-A <input type="checkbox"/> Multiple-B <input type="checkbox"/> Other F Prior year plan size: <input checked="" type="checkbox"/> 100 or fewer <input type="checkbox"/> 101-500 <input type="checkbox"/> More than 500		

Basic Information

1 Enter the valuation date: Month <u>09</u> Day <u>30</u> Year <u>2017</u>			
2 Assets:			
a Market value	2a	0	
b Actuarial value	2b	0	
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	0	0	0
b For terminated vested participants	0	0	0
c For active participants	3	312,979	312,979
d Total	3	312,979	312,979
4 If the plan is in at-risk status, check the box and complete lines (a) and (b) <input type="checkbox"/>			
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	5.42 %	
6 Target normal cost	6	108,775	

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.

 Signature of actuary Mark Vidal, EA Type or print name of actuary The HILB Group of New England, LLC Firm name 931 Jefferson Blvd., Suite 3001 US Warwick RI 02886 Address of the firm	05/02/2018 Date 17-05069 Most recent enrollment number (800) 678-1700 Telephone number (including area code)
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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 ☐

For Paperwork Reduction Act Notice, see the instructions for Form 5500 or 5500-SF.

Schedule SB (Form 5500) 2016
v. 160205

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	0
8 Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9 Amount remaining (line 7 minus line 8)	0	0
10 Interest on line 9 using prior year's actual return of <u>0.00</u> %	0	0
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 <u>5.24</u> %		0
b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
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		0
12 Other reductions in balances due to elections or deemed elections	0	0
13 Balance at beginning of current year (line 9 + line 10 + line 11d - line 12)	0	0

Part III Funding Percentages

14 Funding target attainment percentage	14	0.00 %
15 Adjusted funding target attainment percentage	15	185.05 %
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	180.99 %
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

(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
10/02/2017	250,000		11/01/2017	250,000	
12/01/2017	250,000		12/05/2017	34,259	
Totals ▶			18(b)	784,259	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	780,477

20 Quarterly contributions and liquidity shortfalls:

a Did the plan have a "funding shortfall" for the prior year? ☐ Yes ☒ No

b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ☐ 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

Part V Assumptions Used To Determine Funding Target and Target Normal Cost**21** Discount rate:**a** Segment rates:1st segment:
4.43 %2nd segment:
5.91 %3rd segment:
6.65 %☐ N/A, full yield curve used**b** Applicable month (enter code)**21b**

0

22 Weighted average retirement age**22**

67

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**

108,775

b Excess assets, if applicable, but not greater than line 31a**31b**

0

32 Amortization installments:**a** Net shortfall amortization installment

Outstanding Balance

Installment

312,979

51,711

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**

0

34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)**34**

160,486

Carryover balance

Prefunding Balance

Total balance

35 Balances elected for use to offset funding requirement

0

0

0

36 Additional cash requirement (line 34 minus line 35)**36**

160,486

37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)**37**

780,477

38 Present value of excess contributions for current year (see instructions)**a** Total (excess, if any, of line 37 over line 36)**38a**

619,991

b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances**38b**

0

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, Part V

Statement of Actuarial Assumptions/Methods

MESO, Inc. Defined Benefit Plan
54-1326503 / 002

For the plan year 10/01/2016 through 09/30/2017

Valuation Date: 09/30/2017

Funding Method: As prescribed in IRC Section 430
Age - Eligibility age at last birthday and other ages at nearest birthday

Retrospective Compensation - Highest 3 consecutive years of service

Form of Payment - Assumed form of payment for funding is lump sum equivalent of normal form. Funding Target for lump sum is the greater of the present value of accrued benefit computed using funding segment rates and 417(e) Applicable Mortality Table or lump sum at the assumed retirement date of accrued benefit using plan actuarial equivalence discounted using appropriate segment rate. Lump sum on plan actuarial equivalence rates will not exceed 415 maximum allowable distribution, which is the lesser amount computed using a) 5.5% interest and the Applicable Mortality Table or b) the greater of plan actuarial equivalence interest and mortality or 417(e) Minimum

Interest Rates -

Segment rates for the Valuation Date as permitted under IRC 430(h)(2)(C)

Segment #	Year	Rate %
Segment 1	0 - 5	1.75
Segment 2	6 - 20	3.76
Segment 3	> 20	4.66

Segment rates as of September 30, 2015 As permitted under IRC 430(h)(2)(C)(iv)(II) - HATFA

Segment #	Year	Rate %
Segment 1	0 - 5	4.43
Segment 2	6 - 20	5.91
Segment 3	> 20	6.65

Pre-Retirement - Mortality Table - None
Early Retirement Table - None
Turnover Table - None
Disability Table - None
Salary Scale - None
Expense Load - None
Ancillary Ben Load - None

Post-Retirement - Mortality Table - 17C - 2017 Combined
Cost of Living - None
Lump Sum - G94 - 1994 Group Annuity Reserving Proj 2002, Scale AA (unisex) at 5%
or
16E - 2016 Applicable Mortality Table for 417(e) (unisex)

Asset Valuation Method: Fair market value of assets adjusted for contributions under IRC 430(g)(4)

Discrimination Test Assumptions:

HCE Determination - Based on all employees

Otherwise Excludable - Otherwise Excludable HCEs are included with the Not Otherwise Excludable employees

Schedule SB, Part V
Statement of Actuarial Assumptions/Methods

MESO, Inc. Defined Benefit Plan
54-1326503 / 002

For the plan year 10/01/2016 through 09/30/2017

410(b)/401(a)(4) Testing:

Pre-Retirement - Interest - 8.5%

Post-Retirement - Interest - 8.5%

Mortality Table - G71M - 1971 Group Annuity (male)

Permissively Aggregated Plans - Not tested As Single Plan

Compensation - Use current compensation to calculate the benefit accrual rate (annual method)

Testing Age - Normal retirement age or attained age, if older

Testing Service - Separate benefiting service for DC and for DB for Accrued-to-Date Method

Normal Form for MVAR - Joint with 50% Survivor Benefits

401(a)(26) Testing:

Compensation - Use current compensation to calculate the benefit accrual rate for 401(a)(26)

Testing Age - Normal retirement age or attained age, if older

[illegible]