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

This form is required to be filed under sections 104 and 4065 of the Employee Retiremen Income Security Act of 1974 (ERISA), and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code).

2016

This Form is Open to Public Inspection

OMB Nos. 1210-0110

1210-0089

▶ Complete all entries in accordance with the instructions to the Form 5500-SF.

For calenda	1 0040	e 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/2046	0	0/20/2047					
	ar plan year 2016 or	fiscal plan year beginning 10/01			9/30/2017					
A		a single-employer plan	a multiple-employer p			-				
A This ret	urn/report is for:	a one-participant plan		nployer information in a	ccordance v	vith the form	n instructions.)			
		a one participant plan	a foreign plan							
B This retu	ırn/report is	X the first return/report	the final return/report							
		an amended return/report	a short plan year retui	rn/report (less than 12 m	nonths)					
				myroport (1000 triair 12 fr	2 monuto,					
C Check b	oox if filing under:	× Form 5558	automatic extension		DFVC p	rogram				
		special extension (enter des	cription)							
Part II	Basic Plan Inf	ormation—enter all requested i	information							
1a Name	•				1b Thre	e-digit				
	DEFINED BENEFIT	PLAN				number				
					(PN)	•	002			
					1c Effec	ctive date of 10/01	f plan 1/2016			
2a Plan sp	oonsor's name (empl	oyer, if for a single-employer plan)		2b Emp	lover Identif	ication Number			
		om, apt., suite no. and street, or P			(EIN		326503			
		ice, country, and ZIP or foreign po- _ SIMULATIONS & OPERATIONS		ructions)	2c Spor	nsor's telepl	hone number			
MESUSCALI	EENVIRONMENTAL	SIMULATIONS & OPERATIONS	, INC		'	518-283				
					2d Busi	ness code (see instructions)			
185 JORDAN						5417	00			
TROY, NY 12	2100									
0					01					
3a Plan ad	dministrator's name a	and address 🛚 Same as Plan Sp	onsor.		3D Adm	inistrator's E	EIN			
					3c Adm	iniatratar'a t	elephone number			
					JC Aum	illistrator s t	elephone number			
/ If the										
		ne plan sponsor has changed sinc	e the last return/report filed	for this plan, enter the	4b EIN					
name,	EIN, and the plan n	ne plan sponsor has changed sinc umber from the last return/report.	e the last return/report filed	for this plan, enter the						
name, a Sponso	, EIN, and the plan no or's name	umber from the last return/report.		·	4c PN		2			
name, a Sponso 5a Total r	EIN, and the plan nor's name	umber from the last return/report.	·		4c PN 5a		3			
name, a Sponso 5a Total r b Total r	EIN, and the plan not be not b	umber from the last return/report. s at the beginning of the plan year			4c PN		3 3			
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	Were all of the plan's assets during the plan year invested in eligib		` ,					X Yes N	lo
b	Are you claiming a waiver of the annual examination and report of under 29 CFR 2520.104-46? (See instructions on waiver eligibility							X Yes □ N	lo
	If you answered "No" to either line 6a or line 6b, the plan cann		,						
С	If the plan is a defined benefit plan, is it covered under the PBGC in	nsurance p	orogram (see ERISA se	ection 4	021)?	X	Yes	No Not determined	b
Pa	rt III Financial Information								
7	Plan Assets and Liabilities		(a) Beginning	of Year			((b) End of Year	
<u>a</u>	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) Amour	nt				(b) Total	
а	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					
	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							
<u>e</u>	Certain deemed and/or corrective distributions (see instructions).	8e		0					
_ <u>f</u>	Administrative service providers (salaries, fees, commissions)	8f							
<u>g</u>	Other expenses	8g		0				0	
<u>h</u>	Total expenses (add lines 8d, 8e, 8f, and 8g)	8h						784259	_
-	Net income (loss) (subtract line 8h from line 8c)	8i						764259	
J	Transfers to (from) the plan (see instructions)	8j							
	rt IV Plan Characteristics			01		0			
9a	If the plan provides pension benefits, enter the applicable pension 1A 3D	teature co	ides from the List of Pl	an Cha	racteri	stic Co	ides in	the instructions:	
b	If the plan provides welfare benefits, enter the applicable welfare f	eature cod	des from the List of Pla	n Chara	acterist	ic Cod	les in t	he instructions:	_
Par	t V Compliance Questions								
10	During the plan year:				Yes	No	N/A	Amount	
а									
	described in 29 CFR 2510.3-102? (See instructions and DOL's \ Program)	-	-	10a		X			
b						Χ			
-	reported on line 10a.)			10b	X			4000	
	Was the plan covered by a fidelity bond?			10c	^			4600)UC
d	Did the plan have a loss, whether or not reimbursed by the plan's by fraud or dishonesty?	•		10d		X			
—е				100					
	carrier, insurance service, or other organization that provides son	ne or all of	the benefits under			X			
	the plan? (See instructions.)			10e		X			
f	Has the plan failed to provide any benefit when due under the plan		10f		X				
9			10g		^				
h	If this is an individual account plan, was there a blackout period? 2520.101-3.)	•		10h					
i	If 10h was answered "Yes," check the box if you either provided t	he require	d notice or one of the						
	exceptions to providing the notice applied under 29 CFR 2520.10	1-3		10i					

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Part	VI	Pension Funding Compliance						
11		s a defined benefit plan subject to minimum funding requirements? (If "Yes," see instructions and c n 5500) and line 11a below)					X	'es No
	Ente	r the unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40			11a			0
12		is a defined contribution plan subject to the minimum funding requirements of section 412 of the Co A?					Y	′es X No
	(If "	es," complete line 12a or lines 12b, 12c, 12d, and 12e below, as applicable.)						
a		raiver of the minimum funding standard for a prior year is being amortized in this plan year, see insing the waiver		s, and	l enter t Day		of the lette Year _	r ruling
If	you c	ompleted line 12a, complete lines 3, 9, and 10 of Schedule MB (Form 5500), and skip to line 1	13.			I		
b	Enter	the minimum required contribution for this plan year			12b			
С	Enter	the amount contributed by the employer to the plan for this plan year			12c			
d		ract the amount in line 12c from the amount in line 12b. Enter the result (enter a minus sign to the l tive amount)		12d				
		he 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	a resolution to terminate the plan been adopted in any plan year?				Yes	x N	0
	If "Y€	es," enter the amount of any plan assets that reverted to the employer this year			13a			
b		e all the plan assets distributed to participants or beneficiaries, transferred to another plan, or brougout of the PBGC?					Yes X	No
С		ring this plan year, any assets or liabilities were transferred from this plan to another plan(s), identinassets or liabilities were transferred. (See instructions.)	fy the p	lan(s)	to			
	13c(1)	Name of plan(s):	1	3c(2)	EIN(s)		13c(3) PN(s)
Part	VIII	Trust Information		ı				
14a	Name	of trust			14b ⁻	Trust's E	EIN	
14c	Name	of trustee or custodian					s or custod ne number	ian's
Par	t IX	IRS Compliance Questions						
15a	Is the	plan a 401(k) plan? If "No," skip b		Yes			No	
		did the plan satisfy the nondiscrimination requirements for employee deferrals under section (3) for the plan year? Check all that apply:	L		n-based arbor	j [] "Prior ye test	ear" ADP
			- □ □ □	Curre ADP t	ent year est	"	N/A	
16a 		testing method was used to satisfy the coverage requirements under section 410(b) for the plan Check all that apply:	🔲	Ratio perce test	entage		verage enefit test	N/A
	for the	be plan satisfy the coverage and nondiscrimination requirements of sections 410(b) and 401(a)(4) be plan year by combining this plan with any other plan under the permissive aggregation rules?	Ш	Yes			No	
	the le							
	letter	plan is an individually-designed plan that received a favorable determination letter from the IRS, er	nter the	date	of the m	nost rece	ent determi	nation
18	Were	ed Benefit Plan or Money Purchase Pension Plan Only: any distributions made during the plan year to an employee who attained age 62 and had not sepa e?		om	Ye	s	No	
19	Was	any plan participant a 5% owner who had attained at least age 70 $\frac{1}{2}$ during the prior plan year?			Ye	s	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

F	or calendar plan year 2016 or fiscal plan year beginning	10/01/2016		and endin	ig <mark>09/</mark> 3	30/2017		
	Round off amounts to nearest dollar. Caution: A penalty of \$1,000 will be assessed for late filing	of this report unless reason	abla caus	co is ostablisho	d			
	Name of plan MESO, INC. DEFINED BENEFIT PLAN	MESO, INC. DEFINED BENEFIT PLAN						
С	Plan sponsor's name as shown on line 2a of Form 5500 or 55 MESOSCALE ENVIRONMENTAL SIMULATIONS & OPERA			D Employer	Identific	ation Number (E 26503	EIN)	
Е	Type of plan: X Single Multiple-A Multiple-B	F Prior year pla	an size: X	100 or fewer	101-	-500 More th	an 500	
ı	Part I Basic Information			•				
1	Enter the valuation date: Month09	Day Year _20)17			_		
2					20			
	a Market value				. 2a		0	
_	b Actuarial value				. 2b		0	
3	Funding target/participant count breakdown		` ,	lumber of ticipants	(2) Ve	sted Funding Target	(3) Total Funding Target	
	a For retired participants and beneficiaries receiving paym	ent		0		0	0	
	b For terminated vested participants			0		0	0	
	C For active participants			3		312979	312979	
	d Total			3		312979	312979	
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 assumption	ons			4a			
	b Funding target reflecting at-risk assumptions, but disregations status for fewer than five consecutive years and disregative years.							
5	Effective interest rate				5		5.42%	
6	Target normal cost				6		108775	
Sta	To the best of my knowledge, the information supplied in this schedule and acco accordance with applicable law and regulations. In my opinion, each other assur combination, offer my best estimate of anticipated experience under the plan.							
	SIGN HERE			_		05/02/201	8	
	Signature of actuary					Date		
	MARK VIDAL, EA					17-05069)	
	Type or print name of actuary	•			Most	recent enrollmer	nt number	
	THE HILB GROUP OF NEW ENGLAND, LLC			_		800-678-17		
	931 JEFFERSON BLVD., SUITE 3001 WARWICK, RI 02886			Tε	elephone	e number (includ	ing area code)	
	Address of the firm			_				
	ne actuary has not fully reflected any regulation or ruling promo	ulgated under the statute in	completi	ng this schedul	e, check	the box and see	e [

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uu			

P	art II	Begin	ning of Year	Carryov	ver and Prefunding	Bala	nces						
	u		9 01 104	<u> </u>	or and resonanting			(a) C	arryover balance		(b) F	refundir	ng balance
7		•	0 , ,		able adjustments (line 13					0			0
8			•	•	nding requirement (line 3					0			0
9	Amount	remaining	g (line 7 minus line	e 8)						0			0
10	Interest	on line 9 ı	using prior year's	actual retu	rn of%					0			0
11	Prior yea	ar's exces	s contributions to	be added	to prefunding balance:								
	a Preser	nt value o	f excess contribut	tions (line 3	38a from prior year)								0
					a over line 38b from prior interest rate of5.2								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
	_				-								0
	d Portio	n of (c) to	be added to pref	unding bala	ance								0
12	Other re	ductions i	n balances due to	elections	or deemed elections					0			0
13	Balance	at beginn	ing of current yea	ır (line 9 +	line 10 + line 11d – line 1	2)				0			0
Ρ	art III	Fun	ding Percenta	ages									
14	Funding	target att	ainment percenta	ge								14	0.00%
										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												
17	If the cur	rent valu	e of the assets of	the plan is	less than 70 percent of the	ne fund	ding target	, enter suc	ch percentage			17	%
Р	art IV	Con	tributions an	d Liquid	lity Shortfalls								
18					ar by employer(s) and em	nploye							
(1	(a) Date MM-DD-Y		(b) Amount p employer		(c) Amount paid by employees		(a) Da '-MM-DD)		aid by (s)	by (c) Amount paid by employees			
1	0/02/2017	7		250000		0							
1	2/01/2017	7		250000		0							
1	1/01/2017	7		250000		0							
1	2/05/2017	7		34259		0							
								40(1)			40()	1	
40							otals ►	18(b)		78425	9 18(c)		0
19		•	-		uctions for small plan with								
	_				mum required contribution				—	19a			0
				•	usted to valuation date					19b			0
20					ired contribution for current	year a	adjusted to	valuation d	ate	19c			780477
20			tions and liquidity		ne prior year?					L		П	Yes X No
			_									□	片
b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? C If line 20a is "Yes," see instructions and complete the following table as applicable:									Yes No				
	• ir iinė	20a IS Y	es, see instructio	ns and cor	Liquidity shortfall as of			f this plan v	vear				
		(1) 1s	t		(2) 2nd		7		3rd			(4) 4th	

P	art V	Assumption	ns Used to De	termine	Funding Target a	nd Targ	et Normal Cost						
21	Discount	rate:											
	a Segm	ent rates:	1st segmer 4.43		2nd segment: 5.91%		3rd segment: 6.65 %			N/A, full yie	eld cui	rve used	Ł
	b Applic	able month (ente	er code)					21b			0		
22	Weighted	d average retiren	nent age					22			67		
23	Mortality	table(s) (see ins	structions)	X Pres	cribed - combined	Presc	ribed - separate	Substit	ute				
Pa	art VI	Miscellaneou	us Items					_					
				ihed actus	arial assumptions for the	current nl	an year? If "Ves " see i	netruction	ne red	nardina requir	-pd		
		-			anai assumptions for the		-				_	es 🛚 N	No
25	Has a me	ethod change be	en made for the cu	urrent plar	n year? If "Yes," see insti	ructions re	egarding required attach	nment			Ye	es 🛚 N	No
26	Is the pla	in required to pro	ovide a Schedule c	of Active P	articipants? If "Yes," see	instructio	ns regarding required a	attachmer	nt		X Ye	es 🗌 N	No
27		•			r applicable code and see		0 0	27					
P	art VII				um Required Contr								
28					ears			28				0	
29	Discount	ed employer con	tributions allocated	d toward ι	unpaid minimum required	contributi	ons from prior years	29					
30					ributions (line 28 minus lii			30				0	
	art VIII	Ĭ .		- 00									
		1	excess assets (see		For Current Year								
			·					31a				108775	
					ne 31a			31b				0	
32		tion installments:					Outstanding Bala	l		Insta	llment		
	a Net she	ortfall amortization	on installment				;	312979				51711	
	b Waive	r amortization ins	stallment					0				0	
33			•		er the date of the ruling le	-	•	33				0	
34	Total fun	ding requirement	t before reflecting	carryover/	prefunding balances (line	es 31a - 3°	1b + 32a + 32b - 33)	34			•	160486	
					Carryover balance	е	Prefunding balar	nce		Total b	alanc	e	
35		elected for use	to offset funding			0		0				0	
36								36				160486	
37					ntribution for current year								
	19c)							37			-	780477	
38					r (see instructions)			20-				240004	
	_							38a			(519991	
20					efunding and funding sta			38b 39				0	
39	•	•		•	er (excess, if any, of line 3		,	40				0	
40 Pai	rt IX				Pension Relief Act			l				0	
			o use PRA 2010 fu			01 2010	(Occ manachons	<u>''</u>					
								Γ	72 r	olus 7 vears		5 years	
					la was made				008	2009 2		2011	
42					a was made			<u> </u> 20	J J J	<u> </u>	010		
			-		over to future plan years			43					
75	-vocoo II	iolaiii iioi ii accele	ration amount to L	o oameu	oron to rature plan years			1 70	1				

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 section 6057(b) and 6058(a) of the Internal Revenue Code (the Code).

Pension Benefit Guaranty Corporation

Complete all entries in accordance with the instructions to the Form 5500-SF.

Part Annual Report Identification Information

OMB Nos. 1210-0110 1210-0089

2016

This Form is Open to Public Inspection

For calen		scal plan year beginning	10/01/2016	and ending	09/30/2017			
A This r	return/report is for:		a list of participating	olan (not multiemployer) employer information in a				
D This		a one-participant plan	a foreign plan					
D Inist	return/report is:	x the first return/report	the final return/report					
		an amended return/report	a short plan year retu	ırn/report (less than 12 m	nonths)			
C Check	k box if filing under:	x Form 5558 special extension (enter descri	automatic extension	•	DFVC pro	gram		
Part II	Basic Plan Info	ormation enter all requested i	·					
	ne of plan	offination enter an requested t	mormation		1b Three-digit			
MES	SO, Inc. Defined	Benefit Plan			plan number (PN) ▶ 002			
			1c Effective date 10/01/20:	•				
Mail	n sponsor's name (emplo ling Address (include roo or town, state or provin		entification Number					
		ental Simulations & Open	· · · · · ·	•	2c Sponsor's tel	•		
					(518) 283 2d Business con	le (see instructions)		
185	Jordan Road				541700	io (coo monacaana,		
	Troy NY 12180							
3a Plan	n administrator's name a	and address X Same as Plan Spo	onsor		3b Administrato	r's EIN		
					2			
					3C Administrato	's telephone number		
4 If the	a name and/or FINI of th		Ales Is at active for a set filed	Southing and a starthy	Ah ru			
		e plan sponsor has changed since to mber from the last return/report.	ine iast return/report illed	for this plan, enter the	4b EIN			
a Spo	nsor's name				4c PN			
		at the beginning of the plan year			5a	3		
		at the end of the plan year			5b	3		
		account balances as of the end of t			5c			
		rticipants at the beginning of the pla			5d(1)	3		
d(2) To	otal number of active par	rticipants at the end of the plan year			5d(2)	3		
e Num less	nber of participants that than 100% vested	terminated employment during the p	plan year with accrued be	nefits that were	5e	0		
Caution	: A penalty for the late	or incomplete filing of this return	n/report will be assesse	d uniess reasonable ca	use is established			
SB or So		other penalties set forth in the instrue and signed by an enrolled actuary, a nplete.						
SIGN	Dein	, Zen	5/30/18	John Zack	_			
A	Signature of plan adn	ninistrator	Date	Enter name of individua	al signing as plan ac	ministrator		
SIGN	Sur	3/1	5/30/18	John Zack				
	Signature of employe	Enter name of individua	al signing as employ	er or plan sponsor				
	r's name (including firm his question	name, if applicable) and address (in	nclude room or suite num	oer)	Preparer's telepho Skip this que			
OKip ti	mo questivii				Only and que	Juon		

	Form 5500-SF 2016		Page 2			-			
 6а	Were all of the plan's assets during the plan year invested in eligible	assets?	(See instructions.)					X Yes	ΠNo
	Are you claiming a waiver of the annual examination and report of a		,						
	under 29 CFR 2520.104-46? (See instructions on waiver eligibility a	•	• •		•			X Yes	□No
	If you answered "No" to either line 6a or line 6b, the plan canno	t use For	m 5500-SF and must ins	tead	use F	orm	5500.		
C	If the plan is a defined benefit plan, is it covered under the PBGC in	surance p	rogram (see ERISA section	n 40	21)?	•••••	X Yes	NoNot d	etermined
Pa	rt III Financial Information								
7	Plan Assets and Liabilities		(a) Beginning o	f Yea	r		(b)	End of Year	
а	Total plan assets	7a						784,	259
b	Total plan liabilities	7b							
С	Net plan assets (subtract line 7b from line 7a)	7c			0			784,	259
8	Income, Expenses, and Transfers for this Plan Year	ME S	(a) Amount					(b) Total	
а	Contributions received or receivable from:	90(4)	76	34,2	50				
	(1) Employers	8a(1)	,,	74,2	0	1000 E			in and the second
	(2) Participants	8a(2) 8a(3)				17 15 E	Mary water Mary water		
b	Other income (loss)	8b			0	\$ CENT			
	Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c		(1) (1)		**************************************	4.144468064364	784,	259
d	Benefits paid (including direct rollovers and insurance premiums		Strate District and the second some sing state	gunig:::	25 22 3480	74 Table			
	to provide benefits)	8d				100 cm			
<u>e</u>	Certain deemed and/or corrective distributions (see instructions)	8e				14-75 A			<u> </u>
<u>f</u>	Administrative service providers (salaries, fees, commissions)	8f			0	Z-125	je ilki		
<u>g</u>	Other expenses	8g	es un el un el francisco de la constanta de la	5219tb17	0	73.9 7			
<u>h</u>	Total expenses (add lines 8d, 8e, 8f, and 8g)	8h				(1) (1)			0
<u>_</u>	Net income (loss) (subtract line 8h from line 8c)	8i				(1) 2) 2) (2) (2) (3)	40 47 Bes (10 30 8)	784,	259
<u>)</u> 1920	Transfers to (from) the plan (see instructions)	8				(37			Temes 1
	rt IV Plan Characteristics								
9a	If the plan provides pension benefits, enter the applicable pension for	eature cod	les from the List of Plan C	harad	teristi	ic Cod	tes in the i	nstructions:	
-	1A 3D								
b	If the plan provides welfare benefits, enter the applicable welfare fea	ature code	s from the List of Plan Ch	aract	eristic	Code	es in the in	structions:	
120.02							-		
	rt V Compliance Questions		· · · · · · · · · · · · · · · · · · ·			1	Internal	·····	
<u>10</u>	During the plan year:				Yes	No	N/A	Amount	
а			•						
	described in 29 CFR 2510.3-102? (See instructions and DOL's Vo	•	•	10a		x	TAX STATE		
b				100			E. S. S.		
	reported on line 10a.)	•		10b		х			
C	Was the plan covered by a fidelity bond?	***********	•••••••	10c		х	17 Table 18 2 K 11 K		
d	Did the plan have a loss, whether or not reimbursed by the plan's by fraud or dishonesty?	-	•	10d		х			
е	carrier, insurance service, or other organization that provides som	e or all of	the benefits under	40-		x			
	the plan? (See instructions.)			10e			160000 160000		
f	Has the plan failed to provide any benefit when due under the plan			10f		Х	105015 175415		
<u>g</u>			·	10g		Х	XXX		
h	If this is an individual account plan, was there a blackout period? (2520.101-3.)	•		10h					
i	If 10h was answered "Yes," check the box if you either provided the exceptions to providing the notice applied under 29 CFR 2520.101			10i					
						•,••,••,	,		

	Form 5500-SF 2016		Page 3 -						
Par	Vi Pension Funding Complian	000							
11	Is this a defined benefit plan subject to minin		see instructions ar	nd complete S	Schedule	SB			1
	(Form 5500 and line 11a below)	***************************************					X Ye	;s []] No
	Enter the unpaid minimum required contribut				11a				0
12	Is this a defined contribution plan subject to ERISA?	• .					□ Ye	es X	No
	(If "Yes," complete line 12a or lines 12b, 12								•
а	If a waiver of the minimum funding standard							tter ruli	ing
If y	granting the waiverou completed lines 3, 9,	, and 10 of Schedule MB (Form 550			Da	<u>.y</u>	Year_		
b	Enter the minimum required contribution for t				12b				
С	Enter the amount contributed by the employe	er to the plan for the plan year			12c				
d	Subtract the amount in line 12c from the amount	······································	er a minus sign to	the left of a	12d				
е	Will the minimum funding amount reported o					Yes [No [] N/A	Α
Par	VII Plan Terminations and Trar	nsfers of Assets							
	Has a resolution to terminate the plan been a		***********************			Yes	x i	No.	************
	If "Yes," enter the amount of any plan assets				13a				
b	Were all the plan assets distributed to partici control of the PBGC?	pants or beneficiaries, transferred to		_	he		Yes X] No	
С	If, during this plan year, any assets or liabilitie which assets or liabilities were transferred. (\$		another plan(s), ide	entify the plar	ı(s) to				
1:	Sc(1) Name of plan(s):			13c(2) E	IN(s)		13c(3	3) PN(s	;)
Part	VIII Trust Information - Skip Th	ese Questions							
14a	Name of trust				14b	Trust's E	IN		
14c	Name of trustee or custodian						or custodia e number	an's	
Pari	IX IRS Compliance Questions	- Skip These Questions			.1				
	Is the plan a 401(k) plan? If "No," skip b				'es		☐ No)	
15b	How did the plan satisfy the nondiscriminatio 401(k)(3) for the plan year? Check all that ap			1 —	Design-barb		"P		ar" ADF
	To the first the plant years of the same ap				Current y			I/A	
16a	What testing method was used to satisfy the year? Check all that apply:			p	Ratio ercentaç	је 🗌	Average benefit to		N//
16b	Did the plan satisfy the coverage and nondisfor the plan year by combining this plan with		• • • • • • • • • • • • • • • • • • • •	4) 🗆 🔾	'es		□ No)	
17a	If the plan is a master and prototype plan (Mathe letter/	&P) or volume submitter plan that rec all number	eived a favorable I	RS opinion le	tter or a	dvisory le	tter, ente	r the da	ate of
17b	If the plan is an individually-designed plan the	at received a favorable determination	letter from the IRS	S, enter the da	ate of the	most re	cent deter	minatio	on

Yes No

Yes No

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?

19 Was any plan participant a 5% owner who had attained at least age 70 ½ during the prior plan year?

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

Employer: 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

Eligibility: 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

Retirement: 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

Average Compensation: Highest 3 consecutive years of service

Top Heavy Minimum Benefit - Highest 5 consecutive top heavy years of participation

Plan Benefits: 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

Top Heavy Minimum: 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

IRS Limitations: 415 Limits - Percent: 100 Dollar: \$215,000

Maximum 401(a)(17) compensation - \$265,000

Normal Form: Life Annuity

Optional Forms: Lump Sum
Life Annuity Guaranteed for 10 Years

Joint with 50%, 75% or 100% Survivor Benefit

Vesting Schedule: 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

<u>Present Value of Accrued Benefit:</u> 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 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).

2016

OMB No. 1210-0110

This Form is Open to Public Inspection

	ient to i onn 3300 or	0000-3F.			
For calendar plan year 2016 or fiscal plan year beginning 10/01	L/2016	and endin	g 09/30/	2017	
▶ Round off amounts to nearest dollar.					
▶ Caution: A penalty of \$1,000 will be assessed for late filing of this repor	t unless reasonable ca	use is establishe	d.	WALL .	
A Name of plan		B Three-digi	it		
MESO, Inc. Defined Benefit Plan		plan numb	er (PN)	002	
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF		D Employer Id	entification N	umber (EIN)	
Mesoscale Environmental Simulations & Operations,	Inc. d/b/a MES		4-1326503	•	
E Type of plan: ▼ Single Multiple-A Multiple-B F	Prior year plan size:	100 or fewer]101-500 [More than 500	
Basic Information					
1 Enter the valuation date: Month 09 Day 30	Year 2017				
2 Assets:			37.60		
a Market value	•••••		2a	C	
b Actuarial value			2b	<u> </u>	
3 Funding target/participant count breakdown:	(1) Number of participants	(2) Vested	-	(3) Total Funding Target	
a For retired participants and beneficiaries receiving payment	. 0		(0	
b For terminated vested participants	0		0		
C For active participants	3	' 1	312,97	312,97	
d Total	3		312,97		
4 If the plan is in at-risk status, check the box and complete lines (a) and	·L				
a Funding target disregarding prescribed at-risk assumptions	• •		4a		
b Funding target reflecting at-risk assumptions, but disregarding transi			4a		
at-risk status for fewer than five consecutive years and disregarding		nave been in	4b		
5 Effective interest rate	<u> </u>		5	5.42 %	
6 Target normal cost			6		
Statement by Enrolled Actuary				108,775	
To the best of my knowledge, the information supplied in this schedule and accompanying schedule accordance with applicable law and regulations. In my opinion each other assumption is reasonable combination, offer my best estimate of anticipated experience under the plan.	es, statements and attachmen e (taking into account the exp	ts, if any, is complete a erience of the plan and	nd accurate. Eac reasonable expe	h presribed assumption was applied in ctations) and such other assumptions, in	
			05/0	02/2018	
Signature of actuary		^		Date	
Mark Vidal, EA			17-0	5069	
Type or print name of actuary			Most recent	enrollment number	
The HILB Group of New England, LLC			(800)	678-1700	
Firm name		Tele	ephone numb	per (including area code)	
931 Jefferson Blvd., Suite 3001					
US Warwick RI 02886				•	
Address of the firm					
If the actuary has not fully reflected any regulation or ruling promulgated under	er the statute in comple	eting this schedul	e, check the l	box and see	

Schedule SB (Form 5500) 2016	Page 2

Pa	rt II Be	ginning of Year	· Carryov	er and Prefunding Bal	ances						
						(a)	Carryover balance	е	(b)	Prefunc	ling balance
7				licable adjustments (line 13 fr				0			C
8				funding requirement (line 35 t				0			C
9	Amount rem	aining (line 7 minus	line 8)	•••••			0			O	
10	Interest on li	ne 9 using prior yea	r's actual re	eturn of0.00%				0			C
11	Prior year's	excess contributions	to be adde	ed to prefunding balance:							
	a Present v	alue of excess conti	ributions (li	ne 38a from prior year)			terreside de				0
	b(1) Interes	st on the excess, if a	ny, of line 3	38a over line 38b from prior ye	ar						
	Sched	ule SB, using prior y	ear's effec	tive interest rate of5.24	%						0
			-	chedule SB, using prior year's		71-					0
				an year to add to prefunding b			444				0
			•	balance				5			
12				ns or deemed elections				45,			0
				+ line 10 + line 11d - line 12)				0			0
1/4/25/19/4/20	ruhaulahadaustraha			· mie ro · mie rru · mie rz) i	*********			- 0		····	
		unding Percent									
				••••••						14	0.00 %
				age						15	185.05 %
10	current years	unaing percentage t s fundina reauireme	or purpose nt	s of determining whether carry	over/pret	unding bala	ances may be use	d to red	uce	16	180.99 %
17				is less than 70 percent of the						17	<u> </u>
100.95255.50	10000000000000000000000000000000000000	ontributions ar	***************************************								
				year by employer(s) and empl	OVOOR:						
	(a) Date	(b) Amount p		(c) Amount paid by) Date	(b) Amoun	t paid b	v T	(c) Amo	ount paid by
(MI	VÌ-ÓD-YYYY)	employer		employees		D-YYYY)	employ		,		loyees
	02/2017	2	250,000		11/01	/2017		250,	000		
12/	01/2017	2	250,000		12/05	/2017		34,	259		
			· · · · · · · · · · · · · · · · · · ·								
	197	1400			Totals	► 18(b)		784,	₂₅₉ 18(c		0
19	Discounted e	mployer contribution	ns see in	structions for small plan with a	valuation	date after	the beginning of t	he year	:		
	a Contributio	ons allocated toward	unpaid mi	nimum required contributions t	rom prior	years		19a			0
	b Contribution	ons made to avoid re	estrictions a	adjusted to valuation date				19b			0
	C Contribution	ons allocated toward	minimum i	required contribution for currer	it year ad	justed to va	aluation date	19c			780,477
		ntributions and liquid					· · · · · · · · · · · · · · · · · · ·		15 14 15 15 15 15 15 15 15 15 15 15 15 15 15		
	a Did the pla	ın have a "funding s	hortfall" for	the prior year?	• • • • • • • • •					[Yes X No
	b If line 20a	is "Yes," were requi	red quarter	ly installments for the current	ear made	e in a timel	y manner?			<u> </u>	Yes No
				complete the following table as		-	-		2.5		
		,		Liquidity shortfall as of end			n year		en er en en tre del Bright delle in i		and the second s
	(1)	1st		(2) 2nd		(3)	3rd			(4) 4t	h

3 1 1 2 1 7 6	100/200									
	· · · · · · · · · · · · · · · · · · ·	ons Used To Determine	Funding Target and Targ	et Normal Cost						
21	Discount rate:	f								
	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 re	tirement age			22	6				
23	Mortality table(s) (see	e instructions) X Pi	rescribed - combined Pre	scribed - separate	Substitu	ıte				
Pa	rt VI Miscellane	ous items								
24			ctuarial assumptions for the current							
25	Has a method chang	e been made for the current p	lan year? If "Yes," see instructions	regarding required atta	chment .	Yes 🗓 No				
26	Is the plan required t	o provide a Schedule of Active	Participants? If "Yes," see instruc	tions regarding required	d attachme	nt X Yes No				
27	If the plan is subject	to alternative funding rules, er	nter applicable code and see instru	ctions regarding	27					
Pai	1507036575		um Required Contribution							
28			years		28					
29	Discounted employer	r contributions allocated towar	d unpaid minimum required contrib	outions from prior years	29					
30					30					
#3050550X	30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)									
31		nd excess assets (see instruc			····					
<u> </u>	<u> </u>	·····			24.5	100 77				
			ino 210		31a	108,775				
	b Excess assets, if applicable, but not greater than line 31a									
	32 Amortization installments: Outstanding Balance Installment									
	a Net shortfall amortization installment 312,979 51,71 b Waiver amortization installment 0									
					0	(
33			nter the date of the ruling letter gra) and the waived amount .		33					
34	Total funding requiren	nent before reflecting carryover	/prefunding balances (lines 31a - 3	1b + 32a + 32b - 33)	34	160,486				
			Carryover balance	Prefunding Bala	ance	Total balance				
35	Balances elected for requirement	use to offset funding	0		0	(
36					36	160,486				
	Contributions allocate	ed toward minimum required c	ontribution for current year adjuste	d to valuation date	37	780,477				
38						760,477				
		ess contributions for current ye			38a					
	-					619,991				
			prefunding and funding standard c		38b					
	Unpaid minimum requ	39								
<u>40</u>	\$7550 GF 3.5050		S		40	(
Par	t IX Pension	Funding Relief Under F	Pension Relief Act of 2010	(See Instructions))					
		le to use PRA 2010 funding re								
	a Schedule elected.				[2 plus 7 years 15 years				
	b Eligible plan year(s) for which the election in line	41a was made		. 200	0820092010 2011				
42	Amount of acceleration	n adjustment			42					
43	Excess installment acc	celeration amount to be carried	d 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)

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) -

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

None

Early Retirement Table - None

Turnover Table -

Disability Table -None

Salary Scale -None

Expense Load -None

Ancillary Ben Load -None

Post-Retirement -Mortality Table - 17C - 2017 Combined

Cost of Living -

Lump Sum -

None

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

G94 - 1994 Group Annuity Reserving Proj 2002, Scale AA (unisex) at 5%

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

Schedule SB, line 26 - Schedule of Active Participant Data

MESO, Inc. Defined Benefit Plan

54-1326503/002

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

Years of Credited Service

Attained	nder 1		5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Age Under 25	No.	No.	No	No.	No.	No.	No.	No.	No.	No.		
25 to 29												
30 to 34			1									
35 to 39												
40 to 44												
45 to 49												
50 to 54												
55 to 59		***************************************	1									
60 to 64												
65 to 69			1									
70 & up												