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

2019

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2019 or fiscal plan year beginning 01/01/2019 and ending 12/31/2019

A This return/report is for:
- [X] a single-employer plan
- [ ] a multiple-employer plan (not multiemployer) (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
- [ ] a one-participant plan
- [ ] a foreign plan

B This return/report is
- [ ] the first return/report
- [ ] the final return/report
- [ ] an amended return/report
- [ ] a short plan year return/report (less than 12 months)

C Check box if filing under:
- [X] Form 5558
- [ ] automatic extension
- [ ] DFVC program
- [ ] special extension (enter description)

Part II Basic Plan Information—enter all requested information

1a Name of plan
RETIREMENT PLAN FOR EMPLOYEES OF QUARTZ SCIENTIFIC, INC.

1b Three-digit plan number (PN) ▶ 001

1c Effective date of plan 01/01/1974

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)
QUARTZ SCIENTIFIC INC.

819 EAST ST.
FAIRPORT HARBOR, OH 44077

2b Employer Identification Number (EIN) 34-0907959

2c Sponsor's telephone number 440-354-2186

2d Business code (see instructions) 327210

3a Plan administrator's name and address [X] Same as Plan Sponsor.

3b Administrator's EIN

3c Administrator's telephone number

4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report.
a Sponsor's name
c Plan Name

4b EIN

4d PN

5a Total number of participants at the beginning of the plan year	5a	66
b Total number of participants at the end of the plan year	5b	60
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)	8
d(2) Total number of active participants at the end of the plan year	5d(2)	8
e Number of participants who 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.	10/09/2020	CHRISTOPHER ATWELL
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Filed with authorized/valid electronic signature.		
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor

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

6a Were all of the plan's assets during the plan year invested in eligible assets? (See instructions.) [X] 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.) [X] 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)? [X] Yes [ ] No [ ] Not determined

If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year 4226434. (See instructions.)

Part III Financial Information

7 Plan Assets and Liabilities		(a) Beginning of Year	(b) End of Year
a Total plan assets	7a	1302847	1475082
b Total plan liabilities	7b		
c Net plan assets (subtract line 7b from line 7a)	7c	1302847	1475082

8 Income, Expenses, and Transfers for this Plan Year		(a) Amount	(b) Total
a Contributions received or receivable from: (1) Employers	8a(1)	68045	
(2) Participants	8a(2)		
(3) Others (including rollovers)	8a(3)		
b Other income (loss)	8b	277041	
c Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c		345086
d Benefits paid (including direct rollovers and insurance premiums to provide benefits)	8d	172851	
e Certain deemed and/or corrective distributions (see instructions)	8e		
f Administrative service providers (salaries, fees, commissions)	8f		
g Other expenses	8g		
h Total expenses (add lines 8d, 8e, 8f, and 8g)	8h		172851
i Net income (loss) (subtract line 8h from line 8c)	8i		172235
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 1I

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	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		340000
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 lines 11a and b below.) If this is a defined contribution pension plan, leave line 11 blank and complete line 12 below. ☒ Yes ☐ No

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

b **PBGC missed contribution reporting requirements.** If the plan is covered by PBGC and the amount reported on line 11a is greater than $0, has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box:

☐ Yes.

☐ No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date.

☐ No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date.

☐ No. Other. Provide explanation _____

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.) If this is a defined benefit pension plan, leave line 12 blank and complete line 11 above. ☐ Yes ☒ 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 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)

SCHEDULE SB (Form 5500)	Single-Employer Defined Benefit Plan Actuarial Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	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.**	**2019** **This Form is Open to Public Inspection**

For calendar plan year 2019 or fiscal plan year beginning 01/01/2019 and ending 12/31/2019

▶ **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
RETIREMENT PLAN FOR EMPLOYEES OF QUARTZ SCIENTIFIC, INC.

B Three-digit plan number (PN) ▶ 001

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

D Employer Identification Number (EIN)
34-0907959

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

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

Part I Basic Information

1 Enter the valuation date: Month 01 Day 01 Year 2019

2 Assets:

a Market value	**2a**	1302745
b Actuarial value	**2b**	1302745

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	1	188235	188235
b For terminated vested participants	57	1224381	1224381
c For active participants	8	332577	332577
d Total	66	1745193	1745193

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

a Funding target disregarding prescribed at-risk assumptions	**4a**	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	**4b**	
5 Effective interest rate	**5**	5.62 %
6 Target normal cost	**6**	0

Statement by Enrolled Actuary

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

SIGN HERE

Signature of actuary	Date: 10/06/2020
MICHAEL L. LIBMAN, FCA Type or print name of actuary	20-02940 Most recent enrollment number
THE LIBMAN ACTUARIAL GROUP, INC. Firm name	216-398-3888 Telephone number (including area code)
5755 GRANGER RD., SUITE 501 INDEPENDENCE, OH 44131-1442 Address of the firm	

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

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	51749
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)		
9	Amount remaining (line 7 minus line 8)	0	51749
10	Interest on line 9 using prior year's actual return of -8.63 %	0	-4466
11	Prior year's excess contributions to be added to prefunding balance:		
a	Present value of excess contributions (line 38a from prior year)		21160
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 5.80 %		1227
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		22387
d	Portion of (c) to be added to prefunding balance		15341
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	62624

Part III Funding Percentages

14	Funding target attainment percentage	14	71.05 %
15	Adjusted funding target attainment percentage	15	71.05 %
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	85.62 %
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
07/30/2019	12612	0			
10/25/2019	12612	0			
01/17/2020	12612	0			
04/03/2020	30209	0			
			Totals ► 18(b)	68045	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	63821

20 Quarterly contributions and liquidity shortfalls:

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

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

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

Liquidity shortfall as of end of quarter of this plan year			
(1) 1st	(2) 2nd	(3) 3rd	(4) 4th

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

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	☐ N/A, full yield curve used
3.74 %	5.35 %	6.11 %	

b Applicable month (enter code) **21b** 3

22 Weighted average retirement age **22** 65

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**	0
b Excess assets, if applicable, but not greater than line 31a	**31b**	0

32 Amortization installments:

	Outstanding Balance	Installment
a Net shortfall amortization installment	505072	120834
b Waiver amortization installment	0	0

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

34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33) **34** 120834

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	0	57013	57013

36 Additional cash requirement (line 34 minus line 35)	**36**	63821
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	63821

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

a Total (excess, if any, of line 37 over line 36)	**38a**	0
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

AGE, SALARY AND SERVICE DISTRIBUTION OF ACTIVE PARTICIPANTS

Attachment to Sch. SB

Line 26 – Schedule of Active Participant Data

Retirement Plan for Employees of Quartz Scientific, Inc.

EIN / PN: 34-0907959 / 001

Attained Age at 1/1/2019	Years of Participation 0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
Under 25	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
50-54	0	0	2	0	0	0	0	2
55-59	0	1	1	0	0	0	0	2
60-64	0	0	2	1	2	0	0	5
Over 64	0	0	0	0	0	0	0	0
Total	0	1	5	1	2	0	0	9

Since there are fewer than 1,000 active participants, salary averages and cash balance account information are not required.

ACTUARIAL ASSUMPTIONS

Actuarial assumptions

Mortality

Healthy Participants * Static 2019 Optional Combined Morality Table for Small Plans for valuation dates occuring during 2019 per IRS Notice 2018-02.

Disabled Participants * In accordance with IRS Notice 2008-29, the mortality rates for disabled individuals are the rates specified in Rev. Rul. 96-7.

Rate of Retirement: 100% at age 65

Weighted Average Retirement Age: Age 65

Rate of Disability: None

Salary Scale: None

Rate of Employee Turnover: Based on Age and Gender as foolows:

Age	Males	Females
25	9.60%	17.40%
30	7.20%	14.10%
35	5.50%	11.30%
40	4.10%	8.60%
45	2.80%	6.10%
50	1.50%	3.60%
55	0.50%	0.90%

Provision for Expenses: None, as expenses are assumed to be paid directly by the Plan sponsor

Form of Benefit Payments: Life Annuity

Discount Rates

	PPA	HATFA
* Segment 1	2.35%	3.74%
* Segment 2	3.85%	5.35%
* Segment 3	4.47%	6.11%
Applicable Month	10/1/2018	10/1/2018
FAS 35	4.11%	n/a
Effective Rate	4.11%	5.62%

* The discount segment rates and mortality assumptions are prescribed by the IRC and IRS Regulations.

ACTUARIAL ASSUMPTIONS (continued)

Actuarial Methods

Actuarial Cost Method	The actuarial cost method used to determine the actuarial Target Liability and Target Normal cost is the Unit Credit Actuarial Cost Method, as required under IRC Section 430. The actuarial valuation date is the first day of the plan year.
Asset Valuation Method	Market value of all Trust Investments, plus any accrued but unpaid contributions to the Trust discounted to the Valuation Date.

Other Facts Relevant To The Valuation Of This Plan

Employee Data	An employee census as of the Valuation Date was supplied by the Company and included all employees in the Eligible Class. We did not audit the census.
Asset Data	Asset data as of the Valuation Date and contribution amounts and dates were supplied by the Company. We did not audit the asset data.
Changes in Actuarial Assumption or Methods	The valuation interest rates are the rates required per IRC Section 430. The mortality assumptions used are those mandated by the Internal Revenue Service for this valuation, per IRC Section 430, as elected by the Plan Sponsor. Since this plan has fewer than 500 participants, we use the combined annuitant / non-annuitant mortality.
Events and Trends Which Have Not Been Taken Into Account	To the best of our knowledge, there has been no event or trend which has not been taken into account and which may require a material change in plan costs or required contribution rates. In addition, no Plan amendments adopted and effective after the valuation date of January 1, 2019 were considered for this Valuation, nor do any exist of which we are aware except statutory CPI increases in maximum benefits and considered compensation.

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

2019

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For calendar plan year 2019 or fiscal plan year beginning 01/01/2019 and ending 12/31/2019

A This return/report is for:
- [X] a single-employer plan
- [ ] a multiple-employer plan (not multiemployer) (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
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- [ ] a foreign plan

B This return/report is
- [ ] the first return/report
- [ ] the final return/report
- [ ] an amended return/report
- [ ] a short plan year return/report (less than 12 months)

C Check box if filing under:
- [X] Form 5558
- [ ] automatic extension
- [ ] DFVC program
- [ ] special extension (enter description)

Part II Basic Plan Information—enter all requested information

1a Name of plan
RETIREMENT PLAN FOR EMPLOYEES OF QUARTZ SCIENTIFIC, INC.

1b Three-digit plan number (PN) ▶ 001

1c Effective date of plan 01/01/1974

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)
QUARTZ SCIENTIFIC INC.

819 EAST ST.

FAIRPORT HARBOR OH 44077

2b Employer Identification Number (EIN) 34-0907959

2c Sponsor's telephone number 440-354-2186

2d Business code (see instructions) 327210

3a Plan administrator's name and address [X] Same as Plan Sponsor.

3b Administrator's EIN

3c Administrator's telephone number

4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report.
a Sponsor's name
c Plan Name

4b EIN

4d PN

5a Total number of participants at the beginning of the plan year	5a	66
b Total number of participants at the end of the plan year	5b	60
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)	8
d(2) Total number of active participants at the end of the plan year	5d(2)	8
e Number of participants who 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	Christopher R Atwell	10-9-2020	CHRISTOPHER ATWELL
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Christopher R Atwell	10-9-2020	CHRISTOPHER ATWELL
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor

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

If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year 4226434. (See instructions.)

Part III Financial Information

7 Plan Assets and Liabilities		(a) Beginning of Year	(b) End of Year
a Total plan assets	7a	1,302,847	1,475,082
b Total plan liabilities	7b		
c Net plan assets (subtract line 7b from line 7a)	7c	1,302,847	1,475,082

8 Income, Expenses, and Transfers for this Plan Year		(a) Amount	(b) Total
a Contributions received or receivable from: (1) Employers	8a(1)	68,045	
(2) Participants	8a(2)		
(3) Others (including rollovers)	8a(3)		
b Other income (loss)	8b	277,041	
c Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c		345,086
d Benefits paid (including direct rollovers and insurance premiums to provide benefits)	8d	172,851	
e Certain deemed and/or corrective distributions (see instructions)	8e		
f Administrative service providers (salaries, fees, commissions)	8f		
g Other expenses	8g		
h Total expenses (add lines 8d, 8e, 8f, and 8g)	8h		172,851
i Net income (loss) (subtract line 8h from line 8c)	8i		172,235
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 1I

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	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		340,000
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 lines 11a and b below.) If this is a defined contribution pension plan, leave line 11 blank and complete line 12 below. ☒ Yes ☐ No

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

b **PBGC missed contribution reporting requirements.** If the plan is covered by PBGC and the amount reported on line 11a is greater than $0, has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box:

☐ Yes.

☐ No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date.

☐ No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date.

☐ No. Other. Provide explanation _____

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.) If this is a defined benefit pension plan, leave line 12 blank and complete line 11 above. ☐ Yes ☒ 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 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.

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

SCHEDULE SB (Form 5500)	Single-Employer Defined Benefit Plan Actuarial Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	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.**	**2019** **This Form is Open to Public Inspection**

For calendar plan year 2019 or fiscal plan year beginning 01/01/2019 and ending 12/31/2019

▶ **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
RETIREMENT PLAN FOR EMPLOYEES OF QUARTZ SCIENTIFIC, INC.

B Three-digit plan number (PN) ▶ 001

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

D Employer Identification Number (EIN)
34-0907959

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

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

Part I Basic Information

1 Enter the valuation date: Month 01 Day 01 Year 2019

2 Assets:

a Market value	**2a**	1,302,745
b Actuarial value	**2b**	1,302,745

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	1	188,235	188,235
b For terminated vested participants	57	1,224,381	1,224,381
c For active participants	8	332,577	332,577
d Total	66	1,745,193	1,745,193

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

a Funding target disregarding prescribed at-risk assumptions	**4a**	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	**4b**	
5 Effective interest rate	**5**	5.62%
6 Target normal cost	**6**	0

Statement by Enrolled Actuary

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

SIGN HERE

Signature of actuary: MLL

Date: 10/06/2020

Type or print name of actuary: MICHAEL L. LIBMAN, FCA

Most recent enrollment number: 2002940

Firm name: THE LIBMAN ACTUARIAL GROUP, INC.

Telephone number (including area code): 216-398-3888

Address of the firm:
5755 GRANGER RD., SUITE 501
INDEPENDENCE OH 44131-1442

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

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	51,749
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)		
9	Amount remaining (line 7 minus line 8)	0	51,749
10	Interest on line 9 using prior year's actual return of -8.63%	0	-4,466
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		21,160
	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 5.80%		1,227
	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		22,387
	d Portion of (c) to be added to prefunding balance		15,341
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	62,624

Part III Funding Percentages

14	Funding target attainment percentage	14	71.05%
15	Adjusted funding target attainment percentage	15	71.05%
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	85.62%
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
07/30/2019	12,612	0			
10/25/2019	12,612	0			
01/17/2020	12,612	0			
04/03/2020	30,209	0			
			Totals ► 18(b)	68,045	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	63,821

20 Quarterly contributions and liquidity shortfalls:

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

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

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

Liquidity shortfall as of end of quarter of this plan year			
(1) 1st	(2) 2nd	(3) 3rd	(4) 4th

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

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	
3.74 %	5.35 %	6.11%	☐ N/A, full yield curve used

b Applicable month (enter code)	**21b**	3
22 Weighted average retirement age	**22**	65

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**	0
b Excess assets, if applicable, but not greater than line 31a	**31b**	0

32 Amortization installments:	Outstanding Balance	Installment
a Net shortfall amortization installment	505,072	120,834
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	**33**	
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)	**34**	120,834

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	0	57,013	57,013

36 Additional cash requirement (line 34 minus line 35)	**36**	63,821
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	63,821

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

a Total (excess, if any, of line 37 over line 36)	**38a**	0
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

Retirement Plan for Employees of Quartz Scientific, Inc.
EIN / PN: 34-0907959 / 001

Each participant is assumed to retire at his/her Normal Retirement Age as shown on the Schedule SB, Line 22. Any participant who has already reached Normal Retirement Age is assumed to retire on the valuation date.

Attachment to Sch SB Line 19 – Discounted Employer Contributions

Retirement Plan for Employees of Quartz Scientific, Inc.
EIN / PN: 34-0907959/001

Date	Amount of Contribution	Plan Year Applied	Effective Interest Rate	Increased Rate for Late Quarterly Installments	Discounted Amount as of 1/1/19
07/30/19	$12,612.00	2019	5.62%	10.62%	$12,054.22
10/25/19	$12,612.00	2019	5.62%	10.62%	$11,907.25
01/17/20	$12,612.00	2019	5.62%	10.62%	$11,771.96
04/03/20	$30,209.00	2019	5.62%	10.62%	$28,087.30
Totals	$68,045.00				$63,820.73

Retirement Plan for Employees of Quartz Scientific, Inc.

EIN / PN: 34-0907959 / 001

SUMMARY OF PRINCIPAL PLAN PROVISIONS

Effective Date: January 1, 1974

Employees Covered: All employees are eligible after completing one year of service and attaining age 21. **No new participants enter the Plan after April 30, 2002.**

Normal Retirement: Age 65 or the 5th anniversary of plan participation if later.

Early Retirement: Anytime within 10 years preceding Normal Retirement Date.

Normal Retirement Benefit: The total of (a) plus (b) plus (c):

(a) For each year of membership after 1/1/89 and before 4/30/2002: Plan year compensation times 1.25%.

(b) For each year of membership from 1/1/74 to 1/1/89: 0.50% of the first $7,200 of plan year compensation, plus 1.25% of plan year compensation that exceeds $7,200.

(c) For service before 1/1/74 - item (i) times item (ii): (i) 0.50% of the first $7,200 of average compensation for the five years preceding 1/1/74; plus 1.25% of average compensation for the five years preceding 1/1/74 that exceeds $7,200.

(ii) the number of whole years of continuous service during the period ending immediately before 1/1/74 and beginning on the later of age 23 or the completion of one year of service.

Early Retirement Benefit: The accrued benefit based on service and compensation as of the early retirement date, reduced by the appropriate early retirement factor as follows:

Number of Years Early	Percent	Number of Years Early	Percent
1	92.1%	6	63.6%
2	85.1%	7	59.4%
3	78.8%	8	55.7%
4	73.2%	9	52.2%
5	68.1%	10	49.1%

SUMMARY OF PRINCIPAL PLAN PROVISIONS (continued)

Accrued Benefit	The greater of (a) the Normal Retirement Benefit based on service and compensation as of termination, and (b) the top-heavy minimum accrued benefit. **Benefits were frozen as of April 30, 2002.**
Top-Heavy Minimum Benefit	For plan years in which the plan is top-heavy, the plan provides a minimum benefit of 2% of highest five year average compensation times years of top-heavy service with a maximum of ten years. Only top-heavy years after 1983 are included. The top-heavy minimum benefit is available only to non-key employees.
Termination of Employment	A vested deferred benefit will be paid to any participant according to the following scale: 100% after five years of service. If the plan is top-heavy, the vesting schedule becomes 100% after 3 years of service.
Normal Form	Benefits are payable for the lifetime of the participant. However, each participant who is married at retirement will receive a reduced Qualified 50% Joint and Survivor Annuity unless another option is elected by the participant with the spouse's consent.
Death Benefit	Vested active participants who have been married for one year are eligible for a pre-retirement spouse's benefit equal to 50% of the Qualified 50% Joint and Survivor Annuity unless another option is elected by the participant with the spouse's consent.
Significant Events	**The Plan Sponsor adopted an amendment to freeze benefit accruals and plan participation effective April 30, 2002.**
Contributions	The Company pays the actuarially determined cost of the Plan.

Plan Amendments	Most Recent Signed	Effective Date
	9/1/2007	7/1/2008

There was no IRC 412(d)(2) election for this year.

EXHIBIT II

SHORTFALL AMORTIZATION BASE AS OF JANUARY 1, 2019 (HATFA Basis)

Target Funding Liability	$	1,745,193
Assets	$	1,302,745
Prefunding Balance	$	62,624
Adjusted Assets	$	1,240,121
Shortfall Percentage		71.05%
Carryover Balance	$	0
2019 Funding Target Shortfall (100% of Target Liability)	$	505,072
2013 Amortization Base	$	36,501
2014 Amortization Base	$	(26,523)
2015 Amortization Base	$	11,824
2016 Amortization Base	$	115,438
2017 Amortization Base	$	71,044
2018 Amortization Base	$	(9,680)
2019 Amortization Base	$	306,468

The Shortfall Percentage is less than 100%, therefore a Shortfall Amortization base is required.

Date Established		Payment	Annuity Factor	Years Remaining		Balance
1/1/2019	$	49,797	6.1543	7	$	306,468
1/1/2018	$	(1,785)	5.4228	6	$	(9,680)
1/1/2017	$	15,271	4.6522	5	$	71,044
1/1/2016	$	30,468	3.7888	4	$	115,438
1/1/2015	$	4,087	2.8931	3	$	11,824
1/1/2014	$	(13,505)	1.9639	2	$	(26,523)
1/1/2013	$	36,501	1.0000	1	$	36,501
Totals	$	120,834			$	505,072