

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 2012 This Form is Open to Public Inspection
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Part I	Annual Report Identification Information
For calendar plan year 2012 or fiscal plan year beginning <u>01/01/2012</u> and ending <u>12/31/2012</u>	
A This return/report is for:	☒ a single-employer plan ☐ a multiple-employer plan (not multiemployer) ☐ a one-participant 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:	☒ Form 5558 ☐ automatic extension ☐ DFVC program ☐ special extension (enter description)

Part II	Basic Plan Information —enter all requested information						
1a Name of plan <u>ZIRCOA, INC. SALARIED EMPLOYEES PENSION PLAN</u>	<table border="1"> <tr> <td>1b Three-digit plan number (PN) ▶</td> <td><u>002</u></td> </tr> <tr> <td>1c Effective date of plan</td> <td><u>03/01/1988</u></td> </tr> </table>	1b Three-digit plan number (PN) ▶	<u>002</u>	1c Effective date of plan	<u>03/01/1988</u>		
1b Three-digit plan number (PN) ▶	<u>002</u>						
1c Effective date of plan	<u>03/01/1988</u>						
2a Plan sponsor's name and address; include room or suite number (employer, if for a single-employer plan) <u>ZIRCOA, INC.</u> <u>31501 SOLON ROAD</u> <u>SOLON, OH 44139-3526</u>	<table border="1"> <tr> <td>2b Employer Identification Number (EIN)</td> <td><u>34-1570175</u></td> </tr> <tr> <td>2c Sponsor's telephone number</td> <td><u>440-248-0500</u></td> </tr> <tr> <td>2d Business code (see instructions)</td> <td><u>327100</u></td> </tr> </table>	2b Employer Identification Number (EIN)	<u>34-1570175</u>	2c Sponsor's telephone number	<u>440-248-0500</u>	2d Business code (see instructions)	<u>327100</u>
2b Employer Identification Number (EIN)	<u>34-1570175</u>						
2c Sponsor's telephone number	<u>440-248-0500</u>						
2d Business code (see instructions)	<u>327100</u>						
3a Plan administrator's name and address ☒ Same as Plan Sponsor Name ☐ Same as Plan Sponsor Address	<table border="1"> <tr> <td>3b Administrator's EIN</td> <td></td> </tr> <tr> <td>3c Administrator's telephone number</td> <td></td> </tr> </table>	3b Administrator's EIN		3c Administrator's telephone number			
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. a Sponsor's name	<table border="1"> <tr> <td>4b EIN</td> <td></td> </tr> <tr> <td>4c PN</td> <td></td> </tr> </table>	4b EIN		4c PN			
4b EIN							
4c PN							
5a Total number of participants at the beginning of the plan year	5a <u>95</u>						
b Total number of participants at the end of the plan year.....	5b <u>95</u>						
c Number of participants with account balances as of the end of the plan year (defined benefit plans do not complete this item).....	5c						
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.							

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	<u>Filed with authorized/valid electronic signature.</u>	<u>10/11/2013</u>	<u>RONNE PROCH</u>
	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 (optional)			Preparer's telephone number (optional)

Part III Financial Information			
7	Plan Assets and Liabilities		
		(a) Beginning of Year	(b) End of Year
a	Total plan assets	7a	9223911
b	Total plan liabilities	7b	9933357
c	Net plan assets (subtract line 7b from line 7a)	7c	9223911
8	Income, Expenses, and Transfers for this Plan Year		
		(a) Amount	(b) Total
a	Contributions received or receivable from:		
	(1) Employers	8a(1)	330400
	(2) Participants	8a(2)	
	(3) Others (including rollovers)	8a(3)	
b	Other income (loss)	8b	991693
c	Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c	1322093
d	Benefits paid (including direct rollovers and insurance premiums to provide benefits)	8d	571299
e	Certain deemed and/or corrective distributions (see instructions)	8e	
f	Administrative service providers (salaries, fees, commissions)	8f	
g	Other expenses	8g	41348
h	Total expenses (add lines 8d, 8e, 8f, and 8g)	8h	612647
i	Net income (loss) (subtract line 8h from line 8c)	8i	709446
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 1G 3H
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	500000
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 amount from Schedule SB line 39	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 0
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 (optional)

14a Name of trust	14b Trust's EIN

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 2012 This Form is Open to Public Inspection
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For calendar plan year 2012 or fiscal plan year beginning 01/01/2012 and ending 12/31/2012

▶ **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>ZIRCOA, INC. SALARIED EMPLOYEES PENSION 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>ZIRCOA, INC.</u>	D Employer Identification Number (EIN) <u>34-1570175</u>
E Type of plan: ☒ Single ☐ Multiple-A ☐ Multiple-B	F Prior year plan size: ☒ 100 or fewer ☐ 101-500 ☐ More than 500

Part I	Basic Information
1	Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2012</u>
2	Assets:
a	Market value 2a <u>9223911</u>
b	Actuarial value 2b <u>9240996</u>
3	Funding target/participant count breakdown:
a	For retired participants and beneficiaries receiving payment..... 3a <u>33</u> <u>5449351</u>
b	For terminated vested participants..... 3b <u>32</u> <u>1197154</u>
c	For active participants:
(1)	Non-vested benefits..... 3c(1) <u>97419</u>
(2)	Vested benefits..... 3c(2) <u>3599968</u>
(3)	Total active 3c(3) <u>29</u> <u>3697387</u>
d	Total 3d <u>94</u> <u>10343892</u>
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 <u>7.01</u> %
6	Target normal cost..... 6 <u>0</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>10/10/2013</u> Date
<u>RICHARD F MCCLEARY, EA, MAAA</u> Signature of actuary	<u>11-06309</u> Most recent enrollment number
<u>TEGRIT GROUP</u> Type or print name of actuary	<u>330-644-2044</u> Telephone number (including area code)
<u>13680 CLEVELAND AVENUE NW</u> <u>UNIONTOWN, OH 44685</u> Firm name	
<u>Address of the firm</u>	

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 and OMB Control Numbers, see the instructions for Form 5500 or 5500-SF.

Schedule SB (Form 5500) 2012
v. 120126

Part II Beginning of Year Carryover Prefunding Balances		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	174844
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	174844
10	Interest on line 9 using prior year's actual return of <u>2.13</u> %	0	3724
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		4102
	b Interest on (a) using prior year's effective interest rate of <u>5.93</u> % except as otherwise provided (see instructions)		243
	c Total available at beginning of current plan year to add to prefunding balance		4345
	d Portion of (c) to be added to prefunding balance		4345
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	182913

Part III Funding Percentages			
14	Funding target attainment percentage	14	87.56 %
15	Adjusted funding target attainment percentage	15	87.56 %
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	82.46 %
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
04/10/2012	82600	0			
07/11/2012	82600	0			
10/12/2012	82600	0			
01/15/2013	82600	0			
			Totals ►	18(b)	330400
				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	316138
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
0	0	0	0

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

21 Discount rate:				
a Segment rates:	1st segment: 5.54%	2nd segment: 6.85%	3rd segment: 7.52 %	☐ N/A, full yield curve used
b Applicable month (enter code).....				21b 0
22 Weighted average retirement age				22 64
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:			
a Net shortfall amortization installment	Outstanding Balance	Installment	
b Waiver amortization installment	1285809	280282	
	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	280282	
	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	280282	
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	37	316138	
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)	38a	35856	
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 ATTACHMENT

Line 26 – Schedule of Active Participant Data

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan

EIN/PN: 34-1570175/002

Valuation Date: January 1, 2012[illegible]

Section X

SUMMARY of ASSUMPTIONS

Census Date 1/1/2012

Valuation Interest Rates IRS-Prescribed Three-Segment Rates, for the month that includes the valuation date (Jan).

Segment I: 5.54%

Segment II: 6.85%

Segment III: 7.52%

The effective rate for the 2012 Plan Year was 7.01%.

Valuation Assets Two-Year smoothing using a long-term rate of return of 6.76%, limited by the prior year third segment rate of 6.46%, per IRS Notice 2009-22. Actuarial Assets are held to a minimum of 90% and a maximum of 110% of Market Value.

Expenses Expenses of \$0 were assumed.

ASC 960 Assumptions N/A

Salary Scale Salary Scale - A constant increase of 3.50% was assumed. Shown below are the salaries at age 65 expressed as a percent of the salary at sample ages as follows:

Age	Males	Females
20	470%	470%
25	396%	396%
30	333%	333%
35	281%	281%
40	236%	236%
45	199%	199%
50	168%	168%
55	141%	141%
60	119%	119%

Taxable Wage Base Increase Assumption Increases to the taxable wage base were assumed to be 3% per year.

Cost Method The Unit Credit cost method was used to determine the liabilities and normal costs.

Section X

SUMMARY of ASSUMPTIONS

Retirement Rates

Employees were assumed to retire in accordance with the rates shown below:

Age	Males	Females
55	0.0100	0.0100
56	0.0100	0.0100
57	0.0100	0.0100
58	0.0500	0.0100
59	0.0500	0.0100
60	0.0500	0.0250
61	0.0500	0.0250
62	0.3000	0.1500
63	0.3000	0.1500
64	1.0000	1.0000

Withdrawal Rates

ESTIMATED SOA 1971-1975 for Zircoa - Termination rates were assumed in the valuation. Employees were assumed to terminate in accordance with the rates shown below:

Age	Males	Females
20	0.1750	0.1750
25	0.1750	0.1750
30	0.0850	0.0850
35	0.0850	0.0850
40	0.0580	0.0580
45	0.0400	0.0400
50	0.0100	0.0100
55	0.0100	0.0100
60	0.0100	0.0100

Pre-retirement Mortality

IRS 2012 P.V. M Non-annuitants (1.430(h) IRS 2012 P.V. M Non-annuitants (1.430(h) and IRS 2012 P.V. F Non-annuitants (1.430(h) - Pre-retirement mortality was assumed in the valuation. Sample rates are as follows:

Age	Males	Females
20	0.0002	0.0001
25	0.0003	0.0001
30	0.0004	0.0002
35	0.0007	0.0004
40	0.0009	0.0005
45	0.0011	0.0007
50	0.0013	0.0011
55	0.0018	0.0020
60	0.0032	0.0034

Section X

SUMMARY of ASSUMPTIONS

Post-retirement Mortality

IRS 2012 P.V. M Annuitants (1.430(h)(3)- and IRS 2012 P.V. F Annuitants (1.430(h)(3)- - Post-retirement mortality was assumed in the valuation. Sample rates are as follows:

Age	Males	Females
65	0.0103	0.0094
70	0.0167	0.0152
75	0.0289	0.0241
80	0.0532	0.0401
85	0.0969	0.0691
90	0.1700	0.1244
95	0.2575	0.1872
100	0.3381	0.2330
105	0.3979	0.2931

Disability Rates

None assumed.

Disability Mortality

None assumed. Below is a sample of representative rates:

Age	Males	Females
65	0.0103	0.0094
70	0.0167	0.0152
75	0.0289	0.0241
80	0.0532	0.0401
85	0.0969	0.0691
90	0.1700	0.1244
95	0.2575	0.1872
100	0.3381	0.2330
105	0.3979	0.2931

Percent Married

85% of males and 65% of females were assumed to be married.

Age of Spouse

The female spouse is assumed to be 3 years younger than the male spouse.

Changes in non-prescribed assumptions since the last valuation

None.

**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

2012**This Form is Open to Public
Inspection**For calendar plan year 2012 or fiscal plan year beginning 01/01/2012 and ending 12/31/2012▶ **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 ZIRCOA, INC. SALARIED EMPLOYEES PENSION PLAN		B Three-digit plan number (PN) ▶ 002
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF ZIRCOA, INC.		D Employer Identification Number (EIN) 34-1570175
E Type of plan: ☒ Single ☐ Multiple-A ☐ Multiple-B		F Prior year plan size: ☒ 100 or fewer ☐ 101-500 ☐ More than 500

Part I Basic Information

1 Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2012</u>			
2 Assets:			
a Market value		2a	9223911
b Actuarial value		2b	9240996
3 Funding target/participant count breakdown:		(1) Number of participants	(2) Funding Target
a For retired participants and beneficiaries receiving payment.....		3a	33 5449351
b For terminated vested participants.....		3b	32 1197154
c For active participants:			
(1) Non-vested benefits		3c(1)	97419
(2) Vested benefits		3c(2)	3599968
(3) Total active.....		3c(3)	29 3697387
d Total.....		3d	94 10343892
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	7.01%
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	RICHARD F MCCLEARY, EA, MAAA <i>RFM</i>	10/10/2013
Signature of actuary		Date
RICHARD F MCCLEARY, EA, MAAA		1106309
Type or print name of actuary		Most recent enrollment number
TEGRIT GROUP		330-644-2044
Firm name		Telephone number (including area code)
13680 CLEVELAND AVENUE NW		
UNIONTOWN OH 44685		
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 ☐

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

Schedule SB (Form 5500) 2012
v. 120126

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

21 Discount rate:			
a Segment rates:	1st segment: 5.54%	2nd segment: 6.85%	3rd segment: 7.52%
			☐ N/A, full yield curve used
b Applicable month (enter code).....			21b 0
22 Weighted average retirement age			22 64
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.....		1285809	280282
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	280282
		Carryover balance	Prefunding balance
35 Balances elected for use to offset funding requirement.....		0	0
36 Additional cash requirement (line 34 minus line 35).....		36	280282
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c).....		37	316138
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)		38a	35856
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 ATTACHMENT

Line 19 - Discounted Employer Contributions

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan

EIN/PN: 34-1570175/002

Valuation Date: January 1, 2012

Total Contributed: \$ 330,400.00

Total Discounted to Valuation Date: \$ 316,138.00

Date	Amount	Plan Year	Effective Rate of Interest	Amount Discounted	Penalty Rate of Interest	Additional Amount Discounted	Present Value on Date of Valuation
04/10/2012	82,600	2012	7.01%	81,085	0.00%	-	81,085
07/11/2012	82,600	2012	7.01%	79,716	0.00%	-	79,716
10/12/2012	82,600	2012	7.01%	78,355	0.00%	-	78,355
01/15/2013	82,600	2012	7.01%	76,982	0.00%	-	76,982

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan
Plan EIN: 34-1570175
Plan Number: 002
Schedule SB, Line 22 – Description of Weighted Average Retirement Age

The average retirement age for Line 22 was computed by creating a hypothetical life table decremented only with retirement, and then calculating table's average retirement age.

Age	Weight	Weighted Retirement Age
55	1.00%	0.55
56	0.99%	0.55
57	0.98%	0.56
58	0.97%	0.56
59	0.96%	0.57
60	2.38%	1.43
61	2.32%	1.41
62	13.56%	8.41
63	11.53%	7.26
64	13.06%	8.36
65	52.25%	33.96
Average Retirement Age		63.63
Line 22, Rounded		64

Section XI SUMMARY of PLAN BENEFITS

Plan Effective Date	March 1, 1988. The plan was recently amended effective December 31, 2010.
Vesting	100% vesting upon earning 5 Years of Vesting Service.
Accrued Benefit Formula	Each Participant's monthly Accrued Benefit will be an amount equal to the Accrued Benefit as of December 31, 2010 based on the terms of Plan in effect prior to this amendment. No additional benefits will accrue after December 31, 2010.
Average Compensation	The average of the pensionable earnings during all years of service of the participant. In no event shall pensionable earnings exceed the limitation specified in Section 401(a)(17) of the Internal Revenue Code.
Normal Retirement Age	Upon attainment of 65 and five Years of Service.
Early Retirement	<p><u>Eligibility:</u> Upon attainment of age 55 and completion of 5 Years of Service.</p> <p><u>Benefit:</u> The accrued benefit is reduced $1/180^{\text{th}}$ for each of the first 60 complete calendar months and $1/360^{\text{th}}$ for each additional month that commencement precedes age 65.</p> <p><u>Eligibility:</u> Upon attainment of age 55 and 30 Years of Benefit Service.</p> <p><u>Benefit:</u> Unreduced Normal Retirement Benefit.</p>
Disability Retirement	<p><u>Eligibility:</u> Upon completion of 10 Years of Benefit Service and eligible to receive disability benefits under the Federal Social Security Act.</p> <p><u>Benefit:</u> Accrued Normal Retirement Benefit as of date of Disability.</p>

Section XI SUMMARY of PLAN BENEFITS

Pre-Retirement Death

Eligibility: Upon completion of vesting eligibility

Benefit: The spouse is eligible for 50% of the benefit that would have been payable, if the Participant had lived to Early Retirement Eligibility and elected a 50% Qualified Joint and Survivor Annuity. The benefit is payable upon the Participant's Early Retirement Eligibility date.

Normal Form of Payment

Unless otherwise elected, the benefit payable for a married participant is an actuarially equivalent 50% Joint and Survivor benefit with the first 6 years guaranteed. For unmarried participants, the Normal Form is a straight-life annuity with the first 6 years guaranteed.

Optional Forms

Benefits may be elected from:

- 50%, 75% and 100% Joint and Survivor with the first 6 years guaranteed
- Social Security Level Income
- Straight Life Annuity with the first 6 years guaranteed

Changes in Plan Benefits recognized since the last valuation

None.

SCHEDULE SB ATTACHMENT

Line 32 - Amortization Bases Used in the Valuation

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan

EIN/PN: 34-1570175/002

Valuation Date: January 1, 2012

Original Valuation	Remaining Years	Amortization Type	Outstanding Balance	Current Year Amortization
1/1/2012	7.00	7 year	(196,319)	(33,320)
1/1/2011	6.00	7 year	511,208	97,934
1/1/2010	5.00	7 year	970,920	215,668

SCHEDULE SB ATTACHMENT
Line 25 - Change in Funding Method

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan

EIN/PN: 34-1570175/002

Valuation Date: January 1, 2012

The Valuation Software used to value the Plan for the current year has been changed, causing a change in the funding method. The changes meet the criteria for automatic approval specified in Announcement 2010-3.