

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 <div style="border: 1px solid black; text-align: center; padding: 5px; font-weight: bold; font-size: 1.2em;">2011</div> This Form is Open to Public Inspection
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Part I Annual Report Identification Information			
For calendar plan year 2011 or fiscal plan year beginning <u>01/01/2011</u> and ending <u>12/31/2011</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>	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>	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 (if same as plan sponsor, enter "Same") <u>ZIRCOA, INC.</u> <u>31501 SOLON ROAD</u> <u>SOLON, OH 44139-3526</u>	3b	Administrator's EIN <u>34-1570175</u>
		3c	Administrator's telephone number <u>440-248-0500</u>
4	If the name and/or EIN of the plan sponsor has changed since the last return/report filed for this plan, enter the name, EIN, and the plan number from the last return/report.	4b	EIN
a	Sponsor's name	4c	PN
5a	Total number of participants at the beginning of the plan year	5a	<u>94</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 6a or 6b, the plan cannot use Form 5500-SF and must instead use Form 5500.

Part III Financial Information			
7	Plan Assets and Liabilities		
a	Total plan assets	7a	<u>9176544</u>
b	Total plan liabilities	7b	<u>0</u>
c	Net plan assets (subtract line 7b from line 7a).....	7c	<u>9176544</u>
8	Income, Expenses, and Transfers for this Plan Year	(a) Amount	(b) Total
a	Contributions received or receivable from:		
	(1) Employers	8a(1)	<u>340000</u>
	(2) Participants	8a(2)	
	(3) Others (including rollovers).....	8a(3)	
b	Other income (loss).....	8b	<u>216157</u>
c	Total income (add lines 8a(1), 8a(2), 8a(3), and 8b)	8c	<u>556157</u>
d	Benefits paid (including direct rollovers and insurance premiums to provide benefits).....	8d	<u>487610</u>
e	Certain deemed and/or corrective distributions (see instructions)....	8e	
f	Administrative service providers (salaries, fees, commissions)	8f	<u>21180</u>
g	Other expenses.....	8g	
h	Total expenses (add lines 8d, 8e, 8f, and 8g).....	8h	<u>508790</u>
i	Net income (loss) (subtract line 8h from line 8c).....	8i	<u>47367</u>
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**

	Yes	No	Amount
10 During the plan year:			
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)		X	
b Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 10a.)		X	
c Was the plan covered by a fidelity bond?	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?		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.)		X	
f Has the plan failed to provide any benefit when due under the plan?		X	
g Did the plan have any participant loans? (If "Yes," enter amount as of year end.)		X	
h If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)			
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			

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)). ☒ Yes ☐ No

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 12a or 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?

Part VII Plan Terminations and Transfers of Assets

13a Has a resolution to terminate the plan been adopted in any plan year?

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?

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)

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.	10/10/2012	RONNE PROCH
	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

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 2011 This Form is Open to Public Inspection
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For calendar plan year 2011 or fiscal plan year beginning 01/01/2011 and ending 12/31/2011

▶ **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>2011</u>
2	Assets:
a	Market value 2a <u>9175762</u>
b	Actuarial value 2b <u>8581358</u>
3	Funding target/participant count breakdown:
	(1) Number of participants (2) Funding Target
a	For retired participants and beneficiaries receiving payment 3a <u>29</u> <u>4454784</u>
b	For terminated vested participants 3b <u>31</u> <u>1144713</u>
c	For active participants:
(1)	Non-vested benefits 3c(1) <u>135929</u>
(2)	Vested benefits 3c(2) <u>4458146</u>
(3)	Total active 3c(3) <u>34</u> <u>4594075</u>
d	Total 3d <u>94</u> <u>10193572</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>5.93 %</u>
6	Target normal cost 6 <u>16560</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>10/04/2012</u>
Signature of actuary	Date
<u>SETH H. PITASKY, EA, MAAA</u>	<u>11-07321</u>
Type or print name of actuary	Most recent enrollment number
<u>TEGRIT GROUP</u>	<u>330-983-0538</u>
Firm name	Telephone number (including area code)
<u>13680 CLEVELAND AVENUE NW</u> <u>UNIONTOWN, OH 44685</u>	
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) 2011
v.012611

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	588916
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	539947
9	Amount remaining (line 7 minus line 8)	0	48969
10	Interest on line 9 using prior year's actual return of <u>15.43</u> %	0	7556
11	Prior year's excess contributions to be added to prefunding balance:		
a	Present value of excess contributions (line 38 from prior year)		102503
b	Interest on (a) using prior year's effective rate of <u>6.60</u> % except as otherwise provided (see instructions)		15816
c	Total available at beginning of current plan year to add to prefunding balance		118319
d	Portion of (c) to be added to prefunding balance		118319
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	174844

Part III		Funding percentages	
14	Funding target attainment percentage	14	82.46 %
15	Adjusted funding target attainment percentage	15	82.46 %
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	82.45 %
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	
04/18/2011	340000	0	
Totals ▶		18(b)	340000
		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 334264
20	Quarterly contributions and liquidity shortfalls:	
a	Did the plan have a "funding shortfall" for the prior year?	☒ Yes ☐ No
b	If 20a is "Yes," were required quarterly installments for the current year made in a timely manner?	☐ Yes ☒ No
c	If 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: 2.94%	2nd segment: 5.82%	3rd segment: 6.46 %	☐ 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 eligible for (and is using) 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	16560	
b Excess assets, if applicable, but not greater than 31a	31b		
32 Amortization installments:	Outstanding Balance	Installment	
a Net shortfall amortization installment	1787058	313602	
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	330162	
	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	330162	
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	37	334264	
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)	38a	4102	
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 a shortfall amortization base is being amortized pursuant to an alternative amortization schedule:			
a Schedule elected	☐ 2 plus 7 years ☐ 15 years		
b Eligible plan year(s) for which the election in line 41a was made	☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011		
42 Amount of acceleration adjustment	42		
43 Excess installment acceleration amount to be carried over to future plan years	43		

Schedule SB, Line 26 – Schedule of Active Participant Data

[illegible]

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan
EIN: 34-1570175
Plan Number: 002
Schedule SB, Part V – Statement of Actuarial Assumptions/Methods

ACTUARIAL COST METHODS

Traditional Unit Credit

The actuarial cost method used in the valuation was the unit credit cost method.

The normal cost is the sum of all the individual normal costs for each participant. For active participants, the individual normal cost is the present value of the benefit earned during the year being valued. For active participants whose credited service equals or exceeds the plan maximum, if any, and for non-active participants, the normal cost is zero.

The actuarial accrued liability is the sum of the individual accrued liabilities for all participants. The individual accrued liability for an active participant is the present value of the accrued benefit as of the valuation date. The unfunded liability is the actuarial accrued liability less the valuation assets.

The total annual cost of the plan is the normal cost plus an amount to amortize the shortfall amount.

Projected Unit Credit

The actuarial cost method used in the development of the maximum contribution and the at-risk liabilities was the projected unit credit cost method.

Under this method, the normal cost is the sum of the individual normal costs for all participants. For an active participant, the individual normal cost is the present value at the current age of the projected benefit at the assumed retirement age, based on the actuarial assumptions, divided by the participant's expected years of credited service at that age. For a non-active participant, the normal cost is zero.

The actuarial accrued liability is the sum of the individual accrued liabilities for all plan participants. For an active participant, the individual accrued liability is the product of the normal cost and the total years of credited service at the current age. For non-active participants, the individual accrued liability is the present value at the current age of future benefits. The unfunded actuarial accrued liability equals the actuarial accrued liability less the valuation assets.

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan
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ACTUARIAL METHOD AND ASSUMPTIONS

A summary of the actuarial assumptions used in the valuation is presented below:

Valuation Assets - Assets averaged over a two-year period, adjusted for expected earnings and principal transactions, as prescribed under the Pension Protection Act of 2006.

Mandated Discount Rates

1. PPA funding - segment 1	2.940%
2. PPA funding - segment 2	5.820%
3. PPA funding - segment 3	6.460%

Plan's Effective Interest Rate: 5.930%

Financial Accounting Standards Board No. 35 Rates:

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:

<u>Age</u>	<u>Males</u>	<u>Females</u>
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 3.00% per annum.

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan
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Retirement Rates - Zircoa Reduced Early Retirement Rates - Employees were assumed to retire in accordance with the rates shown below:

<u>Age</u>	<u>Males</u>	<u>Females</u>
55	0.0100	0.0100
56	0.0100	0.0100
57	0.0100	0.0100
58	0.0100	0.0100
59	0.0100	0.0100
60	0.0250	0.0250
61	0.0250	0.0250
62	0.1500	0.1500
63	0.1500	0.1500
64	0.2000	0.2000
65	1.0000	1.0000

Termination - 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:

<u>Age</u>	<u>Males</u>	<u>Females</u>
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 2011 P.V. M Non-annuitants (1.430(h) and IRS 2011 P.V. F Non-annuitants (1.430(h) - Pre-retirement mortality was assumed in the valuation. Sample rates are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
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	0.0021
60	0.0032	0.0035

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan
EIN: 34-1570175
Plan Number: 002
Schedule SB, Part V – Statement of Actuarial Assumptions/Methods

Post-retirement Mortality - IRS 2011 P.V. M Annuitants (1.430(h)(3)- and IRS 2011 P.V. F Annuitants (1.430(h)(3)- - Post-retirement mortality was assumed in the valuation. Sample rates are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
65	0.0104	0.0095
70	0.0169	0.0153
75	0.0294	0.0243
80	0.0537	0.0404
85	0.0976	0.0695
90	0.1706	0.1247
95	0.2580	0.1876
100	0.3384	0.2332
105	0.3979	0.2931

Rates of Disablement - Rates of disablement were not assumed.

Post-Disablement Mortality - IRS 2011 P.V. M Annuitants (1.430(h)(3)- and IRS 2011 P.V. F Annuitants (1.430(h)(3)- - Post-disablement mortality was assumed in the valuation. Sample rates are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
65	0.0104	0.0095
70	0.0169	0.0153
75	0.0294	0.0243
80	0.0537	0.0404
85	0.0976	0.0695
90	0.1706	0.1247
95	0.2580	0.1876
100	0.3384	0.2332
105	0.3979	0.2931

Administrative Expenses - Expenses of \$ 16,560 per annum were assumed.

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.

SCHEDULE SB (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <hr/> <small>Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation</small>	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 2011 This Form is Open to Public Inspection
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For calendar plan year 2011 or fiscal plan year beginning 01/01/2011 and ending 12/31/2011

▶ **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>2011</u>			
2 Assets:			
a Market value	2a	9175762	
b Actuarial value	2b	8581358	
3 Funding target/participant count breakdown:			
		(1) Number of participants	(2) Funding Target
a For retired participants and beneficiaries receiving payment	3a	29	4454784
b For terminated vested participants	3b	31	1144713
c For active participants:			
(1) Non-vested benefits	3c(1)		135929
(2) Vested benefits	3c(2)		4458146
(3) Total active	3c(3)	34	4594075
d Total	3d	94	10193572
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	5.93%	
6 Target normal cost	6	16560	

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	SETH H. PITASKY, EA, MAAA <i>SH</i> _____ Signature of actuary SETH H. PITASKY, EA, MAAA _____ Type or print name of actuary Tegrit Group _____ Firm name 13680 CLEVELAND AVENUE NW UNIONTOWN OH 44685 _____ Address of the firm	<i>10/4/2012</i> _____ Date 1107321 _____ Most recent enrollment number 330-983-0538 _____ Telephone number (including area code)
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If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions ☐

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	588916
8 Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	539947
9 Amount remaining (line 7 minus line 8)	0	48969
10 Interest on line 9 using prior year's actual return of <u>15.43%</u>	0	7556
11 Prior year's excess contributions to be added to prefunding balance:		
a Present value of excess contributions (line 38 from prior year)		102503
b Interest on (a) using prior year's effective rate of <u>6.60%</u> except as otherwise provided (see instructions)		15816
c Total available at beginning of current plan year to add to prefunding balance		118319
d Portion of (c) to be added to prefunding balance		118319
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	174844

Part III Funding percentages		
14 Funding target attainment percentage	14	82.46 %
15 Adjusted funding target attainment percentage	15	82.46 %
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	82.45 %
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
04/18/2011	340000	0			
Totals ▶			18(b)	340000	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		334264
20 Quarterly contributions and liquidity shortfalls:			
a Did the plan have a "funding shortfall" for the prior year? ☒ Yes ☐ No			
b If 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ☐ Yes ☒ No			
c If 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: 2.94%	2nd segment: 5.82%	3rd segment: 6.46%
			☐ 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 eligible for (and is using) 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	16560	
b Excess assets, if applicable, but not greater than 31a	31b		
32 Amortization installments:	Outstanding Balance	Installment	
a Net shortfall amortization installment	1787058	313602	
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	330162	
	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	330162	
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	37	334264	
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)	38a	4102	
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 a shortfall amortization base is being amortized pursuant to an alternative amortization schedule:			
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		

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

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, 2011

Total Contributed: \$ 340,000.00

Total Discounted to Valuation
Date:

\$ 334,264.00

Date	Amount	Plan Year	Effective Rate of Interest	Amount Discounted	Penalty Rate of Interest	Additional Amount Discounted	Present Value on Date of Valuation
04/18/2011	340,000	2011	5.93%	334,306	10.93%	42	334,264

Plan Name: Zircoa, Inc. Salaried Employees' Pension Plan
EIN: 34-1570175
Plan Number: 002
Schedule SB, Part V – Summary of Plan Provisions

A summary of the major plan provisions used in the valuation is presented below:

Plan effective date: March 1, 1988.

Latest plan amendment: December 31, 2010. The plan was amended to freeze benefit accruals and to remove special Disability Retirement benefits for participants who become disabled after the amendment date.

Eligibility requirements: None.

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.

Accrued benefit: The accrued benefit is determined as follows:

Normal retirement eligibility: Upon the attainment of age 65 and completion of 5 years of participation service.

Normal retirement benefit: Unreduced accrued benefit payable immediately.

Normal form of benefit:

Married members - A pension payable for life with the first 6 years guaranteed. However, members are required by law to receive a reduced qualified joint and survivor benefit unless formally elected otherwise.

Single members - A pension payable for life with the first 6 years guaranteed.

Early retirement eligibility: Upon the attainment of age 55 and completion of 5 years of service.

Early retirement benefit: The accrued benefit is reduced 6.67% for each of the first 5 years and 3.33% for the next 5 years that commencement precedes age 65.

Death benefit eligibility: Upon death after completion of vesting eligibility criteria.

Death benefit: 50.000% of the accrued benefit reduced for early commencement and for form of payment. Said pension shall commence at normal retirement age.

Vesting eligibility: Accrued benefit is 100% vested upon completion of 5 years of service.

Vested benefit: The vested benefit is payable upon attainment of normal retirement age.

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

EIN: 34-1570175

Plan Number: 002

Schedule SB, Line 32 – Schedule of Amortization Bases

Type of base	Present Value of Remaining Installment	Valuation Date Established	Years Remaining in Amortization Period	Amortization Installment
Shortfall	\$ 606,044	1/1/2011	7	\$ 97,934
Shortfall	\$ 1,181,014	1/1/2010	6	\$ 215,668
Total	\$ 1,787,058			\$ 313,602