

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

2024

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

- A This return/report is for: [X] a single-employer plan [ ] a multiple-employer plan (not multiemployer) (Pension Plan filers checking this box must attach Schedule MEP. Other plans must attach a list of participating employer information in accordance with the form instructions.)
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)
D If the plan is a collectively-bargained plan, check here [ ]
E If this is a retroactively adopted plan permitted by SECURE Act section 201, check here [ ]

Part II Basic Plan Information—enter all requested information

1a Name of plan: EARTH SCIENCE ASSOCIATES DB PLAN
1b Three-digit plan number (PN): 001
1c Effective date of plan: 01/01/2007
2a Plan sponsor's name (employer, if for a single-employer plan): EARTH SCIENCE ASSOCIATES
2b Employer Identification Number (EIN): 75-2611283
2c Sponsor's telephone number: 562-428-3181
2d Business code (see instructions): 541990
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.
4b EIN
4d PN
5a Total number of participants at the beginning of the plan year: 3
5b Total number of participants at the end of the plan year: 3
5c(1) Number of participants with account balances as of the beginning of the plan year (only defined contribution plans complete this item)
5c(2) Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)
5d(1) Total number of active participants at the beginning of the plan year: 3
5d(2) Total number of active participants at the end of the plan year: 3
5e Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested: 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.

Table with 4 columns: SIGN HERE, Signature of plan administrator, Date, Enter name of individual signing as plan administrator. Row 1: Filed with authorized/valid electronic signature, 07/01/2025, JOHN GRACE. Row 2: 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 534222. (See instructions.)

<b>Part III Financial Information</b>			
<b>7</b> Plan Assets and Liabilities		<b>(a) Beginning of Year</b>	<b>(b) End of Year</b>
<b>a</b> Total plan assets .....	<b>7a</b>	2856338	3211640
<b>b</b> Total plan liabilities .....	<b>7b</b>	0	0
<b>c</b> Net plan assets (subtract line 7b from line 7a) .....	<b>7c</b>	2856338	3211640
<b>8</b> Income, Expenses, and Transfers for this Plan Year		<b>(a) Amount</b>	<b>(b) Total</b>
<b>a</b> Contributions received or receivable from:			
<b>(1)</b> Employers .....	<b>8a(1)</b>	0	
<b>(2)</b> Participants .....	<b>8a(2)</b>	0	
<b>(3)</b> Others (including rollovers) .....	<b>8a(3)</b>	0	
<b>b</b> Other income (loss) .....	<b>8b</b>	355302	
<b>c</b> Total income (add lines 8a(1), 8a(2), 8a(3), and 8b) .....	<b>8c</b>		355302
<b>d</b> Benefits paid (including direct rollovers and insurance premiums to provide benefits) .....	<b>8d</b>	0	
<b>e</b> Certain deemed and/or corrective distributions (see instructions) .	<b>8e</b>	0	
<b>f</b> Administrative service providers (salaries, fees, commissions) .....	<b>8f</b>	0	
<b>g</b> Other expenses .....	<b>8g</b>	0	
<b>h</b> Total expenses (add lines 8d, 8e, 8f, and 8g) .....	<b>8h</b>		0
<b>i</b> Net income (loss) (subtract line 8h from line 8c) .....	<b>8i</b>		355302
<b>j</b> Transfers to (from) the plan (see instructions) .....	<b>8j</b>	0	

<b>Part IV Plan Characteristics</b>	
<b>9a</b>	If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristic Codes in the instructions: 1A 1I 3D
<b>b</b>	If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristic Codes in the instructions:

<b>Part V Compliance Questions</b>				
<b>10</b> During the plan year:		<b>Yes</b>	<b>No</b>	<b>Amount</b>
<b>a</b> Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program) .....	<b>10a</b>		X	
<b>b</b> Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 10a.) .....	<b>10b</b>		X	
<b>c</b> Was the plan covered by a fidelity bond? .....	<b>10c</b>	X		385000
<b>d</b> Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty? .....	<b>10d</b>		X	
<b>e</b> 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.) .....	<b>10e</b>		X	
<b>f</b> Has the plan failed to provide any benefit when due under the plan? .....	<b>10f</b>		X	
<b>g</b> Did the plan have any participant loans? (If "Yes," enter amount as of year-end.) .....	<b>10g</b>		X	
<b>h</b> If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.) .....	<b>10h</b>		X	
<b>i</b> 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 .....	<b>10i</b>			

**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

**a** 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 IRS Compliance Questions**

**14a** Does the plan satisfy the coverage and nondiscrimination tests of Code sections 410(b) and 401(a)(4) by combining this plan with any other plans under the permissive aggregation rules?  Yes  No

**14b** If this is a Code section 401(k) plan, check all boxes that apply to indicate how the plan is intended to satisfy the nondiscrimination requirements for employee deferrals and employer matching contributions (as applicable) under Code sections 401(k)(3) and 401(m)(2).

Design-based safe harbor method

"Prior year" ADP test

"Current year" ADP test

N/A

**15** If the plan sponsor is an adopter of a pre-approved plan that received a favorable IRS Opinion Letter, enter the date of the Opinion Letter 02 / 28 / 2023 (MM/DD/YYYY) and the Opinion Letter serial number Q705055A.

<b>SCHEDULE SB</b> <b>(Form 5500)</b>  <small>Department of the Treasury Internal Revenue Service</small>  <small>Department of Labor Employee Benefits Security Administration</small>  <small>Pension Benefit Guaranty Corporation</small>	<b>Single-Employer Defined Benefit Plan</b> <b>Actuarial Information</b>  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).  <b>▶ File as an attachment to Form 5500 or 5500-SF.</b>	<small>OMB No. 1210-0110</small>  <b>2024</b>  <b>This Form is Open to Public Inspection</b>
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For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

▶ **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.

<b>A</b> Name of plan <u>EARTH SCIENCE ASSOCIATES DB PLAN</u>	<b>B</b> Three-digit plan number (PN) ▶	<u>001</u>
<b>C</b> Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF <u>EARTH SCIENCE ASSOCIATES</u>	<b>D</b> Employer Identification Number (EIN) <u>75-2611283</u>	
<b>E</b> Type of plan: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Multiple-A <input type="checkbox"/> Multiple-B	<b>F</b> Prior year plan size: <input checked="" type="checkbox"/> 100 or fewer <input type="checkbox"/> 101-500 <input type="checkbox"/> More than 500	

**Part I Basic Information**

<b>1</b> Enter the valuation date:	Month <u>01</u> Day <u>01</u> Year <u>2024</u>		
<b>2</b> Assets:			
<b>a</b> Market value .....	<b>2a</b>		<u>2854489</u>
<b>b</b> Actuarial value .....	<b>2b</b>		<u>2854489</u>
<b>3</b> Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
<b>a</b> For retired participants and beneficiaries receiving payment .....	<u>0</u>	<u>0</u>	<u>0</u>
<b>b</b> For terminated vested participants .....	<u>0</u>	<u>0</u>	<u>0</u>
<b>c</b> For active participants .....	<u>3</u>	<u>1797215</u>	<u>1797215</u>
<b>d</b> Total .....	<u>3</u>	<u>1797215</u>	<u>1797215</u>
<b>4</b> If the plan is in at-risk status, check the box and complete lines (a) and (b)..... <input type="checkbox"/>			
<b>a</b> Funding target disregarding prescribed at-risk assumptions .....	<b>4a</b>		
<b>b</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 .....	<b>4b</b>		
<b>5</b> Effective interest rate .....	<b>5</b>		<u>4.88 %</u>
<b>6</b> Target normal cost			
<b>a</b> Present value of current plan year accruals .....	<b>6a</b>		<u>0</u>
<b>b</b> Expected plan-related expenses .....	<b>6b</b>		<u>0</u>
<b>c</b> Target normal cost .....	<b>6c</b>		<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.

<b>SIGN HERE</b>			
	Signature of actuary	<u>06/02/2025</u>	Date
	<u>TODD BARTEL, ASA, MAAA</u>	<u>23-08448</u>	Most recent enrollment number
	Type or print name of actuary	<u>888-240-9145</u>	Telephone number (including area code)
	<u>SCHWAB RETIREMENT PLAN SVCS., INC.</u>		
	Firm name		
	<u>4150 KINROSS LAKES PARKWAY</u> <u>RICHFIELD, OH 44286</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

<b>Part II Beginning of Year Carryover and Prefunding Balances</b>		(a) Carryover balance	(b) Prefunding balance
<b>7</b>	Balance at beginning of prior year after applicable adjustments (line 13 from prior year) .....	0	0
<b>8</b>	Portion elected for use to offset prior year's funding requirement (line 35 from prior year) .....	0	0
<b>9</b>	Amount remaining (line 7 minus line 8) .....	0	0
<b>10</b>	Interest on line 9 using prior year's actual return of <u>17.40</u> % .....	0	0
<b>11</b>	Prior year's excess contributions to be added to prefunding balance:		
<b>a</b>	Present value of excess contributions (line 38a from prior year) .....		230861
<b>b(1)</b>	Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>4.90</u> % .....		11312
<b>b(2)</b>	Interest on line 38b from prior year Schedule SB, using prior year's actual return .....		0
<b>c</b>	Total available at beginning of current plan year to add to prefunding balance .....		242173
<b>d</b>	Portion of (c) to be added to prefunding balance .....		0
<b>12</b>	Other reductions in balances due to elections or deemed elections .....	0	0
<b>13</b>	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12) .....	0	0

<b>Part III Funding Percentages</b>			
<b>14</b>	Funding target attainment percentage .....	<b>14</b>	158.82 %
<b>15</b>	Adjusted funding target attainment percentage .....	<b>15</b>	158.82 %
<b>16</b>	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement .....	<b>16</b>	124.57 %
<b>17</b>	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage .....	<b>17</b>	%

<b>Part IV Contributions and Liquidity Shortfalls</b>							
<b>18</b> 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		
			<b>Totals ▶</b>	<b>18(b)</b>	0	<b>18(c)</b>	0

<b>19</b> Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:			
<b>a</b>	Contributions allocated toward unpaid minimum required contributions from prior years .....	<b>19a</b>	0
<b>b</b>	Contributions made to avoid restrictions adjusted to valuation date .....	<b>19b</b>	0
<b>c</b>	Contributions allocated toward minimum required contribution for current year adjusted to valuation date .....	<b>19c</b>	0
<b>20</b> Quarterly contributions and liquidity shortfalls:			
<b>a</b>	Did the plan have a "funding shortfall" for the prior year? .....	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>b</b>	If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>c</b>	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:

<b>a</b> Segment rates:	1st segment: 4.75 %	2nd segment: 4.96 %	3rd segment: 5.59 %	<input type="checkbox"/> N/A, full yield curve used
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**b** Applicable month (enter code) ..... **21b** 64

**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** Demographic and benefit information

**a** Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment.....  Yes  No

**b** Is the plan required to provide a projection of expected benefit payments? 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**

<b>28</b> Unpaid minimum required contributions for all prior years .....	<b>28</b>	0
<b>29</b> Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a).....	<b>29</b>	0
<b>30</b> Remaining amount of unpaid minimum required contributions (line 28 minus line 29).....	<b>30</b>	0

**Part VIII Minimum Required Contribution For Current Year**

**31** Target normal cost and excess assets (see instructions):

<b>a</b> Target normal cost (line 6c) .....	<b>31a</b>	0
<b>b</b> Excess assets, if applicable, but not greater than line 31a .....	<b>31b</b>	0

<b>32</b> Amortization installments:	Outstanding Balance	Installment
<b>a</b> Net shortfall amortization installment .....	0	0
<b>b</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**

<b>34</b> Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33).....	<b>34</b>	
	Carryover balance	Prefunding balance
<b>35</b> Balances elected for use to offset funding requirement .....	0	0
<b>36</b> Additional cash requirement (line 34 minus line 35) .....	<b>36</b>	0
<b>37</b> Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c) .....	<b>37</b>	0

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

<b>a</b> Total (excess, if any, of line 37 over line 36)	<b>38a</b>	0
<b>b</b> Portion included in line 38a attributable to use of prefunding and funding standard carryover balances.....	<b>38b</b>	0

**39** Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)..... **39**

**40** Unpaid minimum required contributions for all years..... **40**

**Part IX Pension Funding Relief Under the American Rescue Plan Act of 2021 (See Instructions)**

**41** If an election was made to use the extended amortization rule for a plan year beginning on or before December 31, 2021, check the box to indicate the first plan year for which the rule applies.  2019  2020  2021

Form 5500 for Plan Year Beginning 1/1/2024  
Schedule SB, Line 26 - Schedule of Active Participant Data  
EIN/PN:75-2611283 / 001  
Earth Science Associates DB Plan

Number of Participants in each age/service category

Attained Age	Years of Credited Service									
	Under1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	1	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	1	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	1	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0

Note: Average compensation is not reported as the plan has fewer than 1,000 active participants.

Form 5500 for Plan Year Beginning 1/1/2024  
Schedule SB, Part V - Statement of Actuarial Assumptions/Methods  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

**ACTUARIAL COST METHOD**

Funding Method	Unit Credit method in compliance with IRC Section 430, including salary projection if applicable
Asset Value	Market Value as of valuation date plus discounted accrued contributions
Valuation Date	First day of the Plan Year

**ASSUMPTIONS**

**INTEREST**

Pre-Retirement	ARPA Segment rates pursuant to IRC Section 430(h)(2)(C) for the month containing the valuation date. For 2024, those rates are 4.75% for the first five years; 4.96% for the next 15 years; 5.59% for the remaining years. For the purpose of the maximum deductible limit under Section 404(o), the Unadjusted Segment rates were used: 4.37% for the first five years; 4.96% for the next 15 years; 4.95% for the remaining years.
Post-Retirement	Same as Pre-Retirement

**MORTALITY**

Pre-Retirement	None
Post-Retirement	IRC Section 417(e)(3) Applicable Mortality Table pursuant to Revenue Ruling 2007-67, projected to 2024

**TURNOVER**

NONE

**RETIREMENT**

John Grace retires at age 71 (previously 70), all others retire at age 60

**FORM OF BENEFIT ELECTED AT RETIREMENT**

All participants elect lump sum payout at retirement

**ANNUAL SALARY INCREASES**

0.00%

**EXPENSE LOAD**

None, as expenses are assumed to be paid by plan sponsor

Form 5500 for Plan Year Beginning 1/1/2024  
Schedule SB, Part V - Rationale for Significant Assumptions  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

Below is the rationale for significant assumptions used in the 1/1/2024 valuation. The size of the Plan does not allow for detailed, plan level analysis for many assumptions. Additionally, the Plan has been in effect for a relatively short period of time, so there is little historical data. The actuary feels that each non-prescribed assumption is reasonable and that in combination the non-prescribed assumptions represent the actuary's best estimate of anticipated experience under the Plan, based on the information available at the time of the valuation.

<b>Segment Rate</b>	
Pre-Retirement	Use of segment rates prescribed by law. Lookback elected by plan sponsor, or by the IRC Section 430(h) default if not actively elected.
Post-Retirement	Use of segment rates prescribed by law. Lookback elected by plan sponsor, or by the IRC Section 430(h) default if not actively elected.
<b>Mortality Rates</b>	Tables prescribed by law. Combined, static table elected by plan sponsor, or by the IRC Section 430(h) default if not actively elected.
<b>Pre-Retirement Decrements</b>	In choosing to use no pre-retirement decrements, the actuary considered the following: <ul style="list-style-type: none"> <li>• All or most of the liabilities are attributed to the owner(s), expecting to work until the selected target retirement age.</li> <li>• There are no special disability benefits.</li> <li>• There are no special death benefits.</li> </ul>
<b>Salary Increase</b>	All or most of the liabilities are attributed to the owner(s). Based on the information currently available, the actuary concluded the most reasonable assumption is to assume 0.00% salary increase.
<b>Retirement Age</b>	In choosing the assumed retirement age(s), the actuary considered the following: <ul style="list-style-type: none"> <li>• All or most of the liabilities are attributed to the owner(s).</li> <li>• The target retirement age for owner(s) is assumed to match the ending of the business, as controlled by the owner(s), or at an age that the participant(s) may receive unreduced benefits.</li> </ul>
<b>Form of Benefit</b>	The actuary assumed that 100% of participants elect lump sum payments based on the following considerations: <ul style="list-style-type: none"> <li>• All or most of the liabilities are attributed to the owner(s) who expressed the intention to elect a lump sum benefit at time of distribution.</li> <li>• The actuary's experience with other similarly situated groups.</li> </ul>
<b>Expenses</b>	Based on information given by the plan sponsor, it is reasonable to assume expenses will be paid from the plan sponsor's general assets.

### Changes in Significant Assumptions

Based on new information provided by the Plan Sponsor, a change to the significant assumption as indicated in the Statement of Actuarial Assumptions above was deemed reasonable.

<b>SCHEDULE SB</b> <b>(Form 5500)</b>  <small>Department of the Treasury Internal Revenue Service</small>  <small>Department of Labor Employee Benefits Security Administration</small>  <small>Pension Benefit Guaranty Corporation</small>	<b>Single-Employer Defined Benefit Plan</b> <b>Actuarial Information</b>  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).  <b>▶ File as an attachment to Form 5500 or 5500-SF.</b>	<small>OMB No. 1210-0110</small>  <b>2024</b>  <b>This Form is Open to Public Inspection</b>
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For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

▶ **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.

<b>A</b> Name of plan Earth Science Associates DB Plan	<b>B</b> Three-digit plan number (PN) ▶	001
<b>C</b> Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF Earth Science Associates	<b>D</b> Employer Identification Number (EIN) 75-2611283	

**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 01 Day 01 Year 2024

<b>2</b> Assets:		
<b>a</b> Market value .....	<b>2a</b>	2854489
<b>b</b> Actuarial value .....	<b>2b</b>	2854489

<b>3</b> Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
<b>a</b> For retired participants and beneficiaries receiving payment .....	0	0	0
<b>b</b> For terminated vested participants .....	0	0	0
<b>c</b> For active participants .....	3	1797215	1797215
<b>d</b> Total .....	3	1797215	1797215

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

<b>a</b> Funding target disregarding prescribed at-risk assumptions .....	<b>4a</b>	
<b>b</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 .....	<b>4b</b>	

**5** Effective interest rate ..... **5** 4.88 %

<b>6</b> Target normal cost		
<b>a</b> Present value of current plan year accruals .....	<b>6a</b>	0
<b>b</b> Expected plan-related expenses .....	<b>6b</b>	0
<b>c</b> Target normal cost .....	<b>6c</b>	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.

<b>SIGN HERE</b>	Signature of actuary <b>TODD BARTEL, ASA, MAAA</b> Type or print name of actuary <b>SCHWAB RETIREMENT PLAN SVCS., INC.</b> Firm name <b>4150 KINROSS LAKES PARKWAY</b>  <b>RICHFIELD, OH 44286</b> Address of the firm	<b>6/2/2025</b> Date <b>23-08448</b> Most recent enrollment number <b>(888) 240-9145</b> 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

<b>Part II Beginning of Year Carryover and Prefunding Balances</b>		(a) Carryover balance	(b) Prefunding balance
<b>7</b>	Balance at beginning of prior year after applicable adjustments (line 13 from prior year) .....	0	0
<b>8</b>	Portion elected for use to offset prior year's funding requirement (line 35 from prior year) .....	0	0
<b>9</b>	Amount remaining (line 7 minus line 8) .....	0	0
<b>10</b>	Interest on line 9 using prior year's actual return of <u>17.40</u> %.....	0	0
<b>11</b>	Prior year's excess contributions to be added to prefunding balance:		
	<b>a</b> Present value of excess contributions (line 38a from prior year) .....		230861
	<b>b(1)</b> Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>4.90</u> % .....		11312
	<b>b(2)</b> Interest on line 38b from prior year Schedule SB, using prior year's actual return .....		0
	<b>c</b> Total available at beginning of current plan year to add to prefunding balance .....		242173
	<b>d</b> Portion of (c) to be added to prefunding balance .....		0
<b>12</b>	Other reductions in balances due to elections or deemed elections .....	0	0
<b>13</b>	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12) .....	0	0

<b>Part III Funding Percentages</b>			
<b>14</b>	Funding target attainment percentage.....	<b>14</b>	158.82 %
<b>15</b>	Adjusted funding target attainment percentage .....	<b>15</b>	158.82 %
<b>16</b>	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement.....	<b>16</b>	124.57 %
<b>17</b>	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.....	<b>17</b>	%

<b>Part IV Contributions and Liquidity Shortfalls</b>					
<b>18</b> 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
			<b>Totals ▶</b>	<b>18(b)</b>	0 <b>18(c)</b> 0

<b>19</b>	Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:	
	<b>a</b> Contributions allocated toward unpaid minimum required contributions from prior years.....	<b>19a</b> 0
	<b>b</b> Contributions made to avoid restrictions adjusted to valuation date.....	<b>19b</b> 0
	<b>c</b> Contributions allocated toward minimum required contribution for current year adjusted to valuation date.....	<b>19c</b> 0
<b>20</b>	Quarterly contributions and liquidity shortfalls:	
	<b>a</b> Did the plan have a "funding shortfall" for the prior year? .....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	<b>b</b> If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner?.....	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<b>c</b> 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		

<b>Part V Assumptions Used to Determine Funding Target and Target Normal Cost</b>			
<b>21</b> Discount rate:			
<b>a</b> Segment rates:	1st segment: 4.75 %	2nd segment: 4.96 %	<input type="checkbox"/> N/A, full yield curve used
<b>b</b> Applicable month (enter code) .....			<b>21b</b>
<b>22</b> Weighted average retirement age .....			<b>22</b> 64
<b>23</b> Mortality table(s) (see instructions)	<input checked="" type="checkbox"/> Prescribed - combined <input type="checkbox"/> Prescribed - separate <input type="checkbox"/> Substitute		

<b>Part VI Miscellaneous Items</b>			
<b>24</b> Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>25</b> Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>26</b> Demographic and benefit information			
<b>a</b> Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. .... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>b</b> Is the plan required to provide a projection of expected benefit payments? If "Yes," see instructions regarding required attachment ... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>27</b> If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment.....			<b>27</b>

<b>Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years</b>			
<b>28</b> Unpaid minimum required contributions for all prior years .....			0
<b>29</b> Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a).....			0
<b>30</b> Remaining amount of unpaid minimum required contributions (line 28 minus line 29) .....			0

<b>Part VIII Minimum Required Contribution For Current Year</b>			
<b>31</b> Target normal cost and excess assets (see instructions):			
<b>a</b> Target normal cost (line 6c) .....			0
<b>b</b> Excess assets, if applicable, but not greater than line 31a .....			0
<b>32</b> Amortization installments:	Outstanding Balance		Installment
<b>a</b> Net shortfall amortization installment .....	0		0
<b>b</b> Waiver amortization installment .....	0		0
<b>33</b> 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 .....			<b>33</b>
<b>34</b> Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)....			<b>34</b>
	Carryover balance	Prefunding balance	Total balance
<b>35</b> Balances elected for use to offset funding requirement .....	0	0	0
<b>36</b> Additional cash requirement (line 34 minus line 35) .....			<b>36</b> 0
<b>37</b> Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c) .....			<b>37</b> 0
<b>38</b> Present value of excess contributions for current year (see instructions)			
<b>a</b> Total (excess, if any, of line 37 over line 36)			<b>38a</b> 0
<b>b</b> Portion included in line 38a attributable to use of prefunding and funding standard carryover balances .....			<b>38b</b> 0
<b>39</b> Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37) .....			<b>39</b>
<b>40</b> Unpaid minimum required contributions for all years .....			<b>40</b>

<b>Part IX Pension Funding Relief Under the American Rescue Plan Act of 2021 (See Instructions)</b>			
<b>41</b> If an election was made to use the extended amortization rule for a plan year beginning on or before December 31, 2021, check the box to indicate the first plan year for which the rule applies. <input type="checkbox"/> 2019 <input type="checkbox"/> 2020 <input type="checkbox"/> 2021			

Form 5500 for Plan Year Beginning 1/1/2024  
Schedule SB, Line 22 - Description of Weighted Average Retirement Age  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

Added anticipated retirement ages (71.000, 60.000, 60.000). Divided sum by 3.  
Result rounded to nearest integer age (64).

Form 5500 for Plan Year Beginning 1/1/2024  
Schedule SB, Part V - Summary of Plan Provisions  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

**EFFECTIVE DATE**

January 1, 2007

**PARTICIPATION ELIGIBILITY**

Age 21 and 2 Years of Service

**NORMAL RETIREMENT DATE (and Early Retirement Date, if applicable)**

First day of the month coincident with or next following:

62 years of age, Unreduced early benefit available at age 60 with 0 years of participation

**NORMAL FORM OF BENEFIT**

Single life annuity

**NORMAL RETIREMENT BENEFIT**

Benefit Formula:

8.5% of highest consecutive 3-year Average Earnings multiplied by Participation Service starting September 1, 2014, plus 6.5% of 3-year Average Earnings multiplied by Participation Service from January 1, 2007 through freeze date of February 29, 2012. Benefits were restarted for participation service on and after September 1, 2014 and frozen effective December 31, 2017.

IRC415 maximum annual benefit: \$275,000 for 2024, actuarially adjusted under IRC415(b) for retirement age and normal form. Benefit limited to 100% of compensation. Annual salary up to \$345,000 considered for 2024.

**EARLY RETIREMENT BENEFIT**

Benefit accrued to early retirement date, unreduced for early commencement after reaching the early retirement eligibility requirements for age and service.

**PRE-RETIREMENT DEATH BENEFIT**

Monthly benefit for life of beneficiary

BENEFIT AMOUNT: Qualified 50% J&S Survivor Annuity plus the excess, if any, of the Present Value of the Accrued Benefit minus the Present Value of the qualified pre-retirement survivor annuity

ELIGIBILITY: Minimum months of service: None

**VESTED RETIREMENT BENEFIT**

Full and Immediate

**ACCRUED RETIREMENT BENEFIT**

Benefit accrued under benefit formula to date of termination

**DISABILITY BENEFIT**

None

**LATE RETIREMENT BENEFIT**

Benefit accrued to retirement date

**OPTIONAL FORMS**

Life annuity, lump sum, 50% and 75% joint and survivor

**SIGNIFICANT EVENTS**

None

Form 5500 for Plan Year Beginning 1/1/2024  
Significant Risks  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

A pension plan generally faces significant financial risks. Risk is the possibility of the plan's future funded status or other future metrics being different than current measures or different than expected. The risks listed below may reasonably be anticipated to significantly affect the plan's future financial condition. These risks should be understood and monitored by you as the Plan Sponsor, and the summary of the risks below is intended to assist in understanding these risks. Note that the risks faced by the plan may not be limited to these risks alone. Consult with your Actuary for further information.

**Investment Risk** – The return on assets differing from the assumed return is one of the most significant risks to the plan. Return on assets below/(above) the expected return could cause a decrease/(increase) in funded status and greater/(lesser) required contributions than originally expected.

**Interest Rate Risk** – The interest rates used in calculating the liability of the plan deviating from the assumption is a risk to the plan. The assumption for the interest rates used in this valuation are prescribed by IRS. We are not able to evaluate if this assumption is reasonable for the purpose of the measurement.

**Funding Relief Wear-away** – Interest rates used to calculate liability in this valuation include various relief measures. The rates based on a 25-year average corporate bond yield curve are expected to converge to the two-year average corporate bond yield curve, causing this funding relief to wear-away. The wear-away is expected to accelerate beginning in 2026. The liability calculated with the two-year average corporate bond yield curve is (or will be) provided in Page 4 of this year's Actuarial Valuation Report "Calculation of Maximum Tax Deductible Contribution Limits - Using Unadjusted Segment Rates", and can be used to help review this risk.

**Demographic Risk** – Demographic changes different than those assumed in this valuation brings risk to the plan. For example, if any of the plan participants retire earlier/(later) than expected or an eligible participant is inadvertently omitted, it may cause the plan's funded status to change significantly. It may also cause the plan's funding/contribution requirement to change significantly. The "Statement of Actuarial Assumptions/Methods" within this year's Actuarial Valuation Report describes the key demographic assumptions utilized.

**Maturity or Duration of the Plan** - For this defined benefit plan, most of the liabilities are attributed to the owner(s). This valuation assumes a lump sum form of benefit payment subject to IRC Section 417(e)(3), using other assumptions including post-retirement interest the same as pre-retirement interest.

Also, it is assumed that, upon plan termination, the majority owner(s) will forgo a portion of the plan benefit in case of a funding shortfall and the owner(s) will absorb the Overfunding Risk (see below) in case the plan is overfunded. The plan matures when the owner(s) retire. The duration of the plan is the time between current age and Target Retirement Age of the owner(s). Please refer to the "Statement of Actuarial Assumptions/Methods" within this year's Actuarial Valuation Report for the assumed Target Retirement Age.

**Contribution Risk** – Especially for underfunded plans and for plans with continuing benefit accruals, contributions could be required for a plan to maintain its current funded status. Contributions that are less/(greater) than this level will cause the plan's funded status to decrease/(increase). It may also cause the plan's future funding/contribution requirement to increase/(decrease).

Form 5500 for Plan Year Beginning 1/1/2024  
Significant Risks (continued)  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

**Form of Payment Risk** – All forms of payment are designed to be of approximately the same value, but there could be major differences. Participants electing the forms of payment with greater/(lesser) value will cause the plan's funded status to decrease/(increase). Included in this risk is the tendency of participants to factor their unique circumstances into their form of payment decision. For example, a participant may decide to choose a life annuity to be purchased from an insurance company (using the plan assets). In this event, the cost to the plan sponsor may be much more than if the participant elects to take a lump sum distribution from the plan, assuming the same annual benefit is being provided in both cases.

**Overfunding Risk** – Excess assets (after the maximum benefit permitted by IRS is paid at plan termination), if any, may be subject to a 50% excise tax (on top of the ordinary income taxation). Especially for plans that have a participant close to the targeted retirement (or terminates/retires earlier than expected) with a majority of the plan liability and for plans with a high funded status currently, a plan could be at risk of overfunding at plan termination.

**Asset/Liability Mismatch Risk** – Plan assets and actuarially calculated plan liability are both subject to risks (see Investment Risk and Interest Rate Risk). Plan assets can be structured to try and take advantage of correlated risks. Plan liability that is not able to be hedged or that is not currently being hedged could result in asset/liability mismatch risk.

To assess the significant risks listed in this summary as they apply to the plan, the plan-specific importance of each of these risks should be identified and understood by the plan sponsor. This includes the potential effects of the identified risks on the plan's future financial condition. While we did not perform a quantitative analysis of these risks, the ones likely to be most significant to the plan (taking into account circumstances specific to the plan) are Investment Risk, Demographic Risk, Contribution Risk and Overfunding Risk. Further assessment of the risk such as scenario tests, sensitivity tests, stochastic modeling, and stress tests can be studied for the plan upon request to quantitatively assess the significance of these risks. As of the date of this report, Schwab Retirement Plan Services, Inc. has not been engaged to provide any further assessment.

Form 5500 for Plan Year Beginning 1/1/2024  
Schedule SB Line 24 Changes in Actuarial Assumptions  
EIN/PN: 75-2611283 / 001  
Earth Science Associates DB Plan

The anticipated retirement age was changed from 70 to 71 for John Grace to reflect extended employment.