Form 5500

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Annual Return/Report of Employee Benefit Plan

This form is required to be filed for employee benefit plans 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.**

OMB Nos. 1210-0110
1210-0089

2021

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2021 or fiscal plan year beginning 01/01/2021 and ending 12/31/2021

A This return/report is for:
- [ ] a multiemployer plan
- [ ] a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
- [X] a single-employer plan
- [ ] a DFE (specify) ____

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 If the plan is a collectively-bargained plan, check here. . . . . ▶ [ ]

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

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
LLNS DEFINED BENEFIT PENSION PLAN

1b Three-digit plan number (PN) ▶ 003

1c Effective date of plan
10/01/2007

2a Plan sponsor's name (employer, if for a single-employer plan)
Mailing address (include room, apt., suite no. and street, or P.O. Box)
City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions)

Lawrence Livermore National Security LLC

7000 East Avenue L640

Livermore CA 94550

2b Employer Identification Number (EIN)
20-5624386

2c Plan Sponsor's telephone number
925-422-9955

2d Business code (see instructions)
541700

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 accompanying schedules, statements and attachments, 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	[signature]	10/06/2022	Carol Christopher
	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
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

3a Plan administrator's name and address ☐ Same as Plan Sponsor

LLNS BENEFITS AND INVESTMENT COMMITTEE

7000 EAST AVENUE
MAIL STOP L-640
LIVERMORE CA 94550

3b Administrator's EIN: 20-5624386

3c Administrator's telephone number: 925-423-8452

4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report:

a Sponsor's name

c Plan Name

4b EIN

4d PN

5	Total number of participants at the beginning of the plan year	5	3,636
6	Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines **6a(1), 6a(2), 6b, 6c,** and **6d**).		
a(1)	Total number of active participants at the beginning of the plan year	6a(1)	1,843
a(2)	Total number of active participants at the end of the plan year	6a(2)	1,653
b	Retired or separated participants receiving benefits	6b	1,596
c	Other retired or separated participants entitled to future benefits	6c	255
d	Subtotal. Add lines **6a(2)**, **6b**, and **6c**.	6d	3,504
e	Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	6e	78
f	Total. Add lines **6d** and **6e**.	6f	3,582
g	Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	6g	
h	Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested	6h	0
7	Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)	7	

8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:

1A 3F

b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:

9a Plan funding arrangement (check all that apply)
- (1) ☐ Insurance
- (2) ☐ Code section 412(e)(3) insurance contracts
- (3) ☒ Trust
- (4) ☐ General assets of the sponsor

9b Plan benefit arrangement (check all that apply)
- (1) ☐ Insurance
- (2) ☐ Code section 412(e)(3) insurance contracts
- (3) ☒ Trust
- (4) ☐ General assets of the sponsor

10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)

a Pension Schedules
- (1) ☒ **R** (Retirement Plan Information)
- (2) ☐ **MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary
- (3) ☒ **SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

b General Schedules
- (1) ☒ **H** (Financial Information)
- (2) ☐ **I** (Financial Information – Small Plan)
- (3) ☐ ___ **A** (Insurance Information)
- (4) ☐ **C** (Service Provider Information)
- (5) ☒ **D** (DFE/Participating Plan Information)
- (6) ☐ **G** (Financial Transaction Schedules)

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) .... ☐ Yes ☐ No

If “Yes” is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) .... ☐ Yes ☐ No

11c Enter the Receipt Confirmation Code for the 2021 Form M-1 annual report. If the plan was not required to file the 2021 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code_____________________

SCHEDULE D (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration	DFE/Participating Plan Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110 **2021** This Form is Open to Public Inspection.

For calendar plan year 2021 or fiscal plan year beginning 01/01/2021 and ending 12/31/2021

A Name of plan LLNS DEFINED BENEFIT PENSION PLAN	**B** Three-digit plan number (PN) ▶ 003
C Plan or DFE sponsor's name as shown on line 2a of Form 5500 Lawrence Livermore National Security LLC	**D** Employer Identification Number (EIN) 20-5624386

Part I Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs)
(Complete as many entries as needed to report all interests in DFEs)

a Name of MTIA, CCT, PSA, or 103-12 IE: LLNS & TRIAD NS DB PLAN GROUP TRUST

b Name of sponsor of entity listed in (a): LLNS, LLC & TRIAD NATIONAL SECURITY, LLC

c EIN-PN 26-6431956 001	**d** Entity code E	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	4,798,333,210

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)	

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

Part II Information on Participating Plans (to be completed by DFEs)
(Complete as many entries as needed to report all participating plans)

a Plan name	
b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN
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b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN
a Plan name	
b Name of plan sponsor	**c** EIN-PN

SCHEDULE H (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	**Financial Information** This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code). ▶ **File as an attachment to Form 5500.**	OMB No. 1210-0110 **2021** **This Form is Open to Public Inspection**

For calendar plan year 2021 or fiscal plan year beginning 01/01/2021 and ending 12/31/2021

A Name of plan
LLNS DEFINED BENEFIT PENSION PLAN

B Three-digit plan number (PN) ▶ 003

C Plan sponsor's name as shown on line 2a of Form 5500
Lawrence Livermore National Security LLC

D Employer Identification Number (EIN)
20-5624386

Part I Asset and Liability Statement

1 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Report the value of the plan's interest in a commingled fund containing the assets of more than one plan on a line-by-line basis unless the value is reportable on lines 1c(9) through 1c(14). Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. **Round off amounts to the nearest dollar.** MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 1b(1), 1b(2), 1c(8), 1g, 1h, and 1i. CCTs, PSAs, and 103-12 IEs also do not complete lines 1d and 1e. See instructions.

Assets		**(a)** Beginning of Year	**(b)** End of Year
a Total noninterest-bearing cash	1a		
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions	1b(1)	85,000,000	70,000,000
(2) Participant contributions	1b(2)		
(3) Other	1b(3)		
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit)	1c(1)		
(2) U.S. Government securities	1c(2)		
(3) Corporate debt instruments (other than employer securities):			
(A) Preferred	1c(3)(A)		
(B) All other	1c(3)(B)		
(4) Corporate stocks (other than employer securities):			
(A) Preferred	1c(4)(A)		
(B) Common	1c(4)(B)		
(5) Partnership/joint venture interests	1c(5)		
(6) Real estate (other than employer real property)	1c(6)		
(7) Loans (other than to participants)	1c(7)		
(8) Participant loans	1c(8)		
(9) Value of interest in common/collective trusts	1c(9)		
(10) Value of interest in pooled separate accounts	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)		
(12) Value of interest in 103-12 investment entities	1c(12)	4,392,625,803	4,798,333,210
(13) Value of interest in registered investment companies (e.g., mutual funds)	1c(13)		
(14) Value of funds held in insurance company general account (unallocated contracts)	1c(14)		
(15) Other	1c(15)		

		(a) Beginning of Year	(b) End of Year
1d Employer-related investments:			
(1) Employer securities	1d(1)		
(2) Employer real property	1d(2)		
e Buildings and other property used in plan operation	1e		
f Total assets (add all amounts in lines 1a through 1e)	1f	4,477,625,803	4,868,333,210
Liabilities			
g Benefit claims payable	1g		
h Operating payables	1h	2,185,480	2,463,880
i Acquisition indebtedness	1i		
j Other liabilities	1j		
k Total liabilities (add all amounts in lines 1g through1j)	1k	2,185,480	2,463,880
Net Assets			
l Net assets (subtract line 1k from line 1f)	1l	4,475,440,323	4,865,869,330

Part II Income and Expense Statement

2 Plan income, expenses, and changes in net assets for the year. Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 2a, 2b(1)(E), 2e, 2f, and 2g.

Income		(a) Amount	(b) Total
a **Contributions:**			
(1) Received or receivable in cash from: **(A)** Employers	2a(1)(A)	70,000,000	
(B) Participants	2a(1)(B)	19,678,847	
(C) Others (including rollovers)	2a(1)(C)		
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines **2a(1)(A), (B), (C),** and line **2a(2)**	2a(3)		89,678,847
b **Earnings on investments:**			
(1) Interest:			
(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)		
(B) U.S. Government securities	2b(1)(B)		
(C) Corporate debt instruments	2b(1)(C)		
(D) Loans (other than to participants)	2b(1)(D)		
(E) Participant loans	2b(1)(E)		
(F) Other	2b(1)(F)		
(G) Total interest. Add lines **2b(1)(A)** through **(F)**	2b(1)(G)		0
(2) Dividends: **(A)** Preferred stock	2b(2)(A)		
(B) Common stock	2b(2)(B)		
(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)		
(D) Total dividends. Add lines **2b(2)(A)**, **(B)**, and **(C)**	2b(2)(D)		0
(3) Rents	2b(3)		
(4) Net gain (loss) on sale of assets: **(A)** Aggregate proceeds	2b(4)(A)		
(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
(C) Subtract line **2b(4)(B)** from line **2b(4)(A)** and enter result	2b(4)(C)		0
(5) Unrealized appreciation (depreciation) of assets: **(A)** Real estate	2b(5)(A)		
(B) Other	2b(5)(B)		
(C) Total unrealized appreciation of assets. Add lines **2b(5)(A)** and **(B)**	2b(5)(C)		0

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		421,327,587
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds)	2b(10)		
c Other income	2c		
d Total income. Add all **income** amounts in column (b) and enter total	2d		511,006,434

Expenses

		(a) Amount	(b) Total
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	120,577,427	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)		
(4) Total benefit payments. Add lines **2e(1)** through **(3)**	2e(4)		120,577,427
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Interest expense	2h		
i Administrative expenses: (1) Professional fees	2i(1)		
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)		
(5) Total administrative expenses. Add lines **2i(1)** through **(4)**	2i(5)		0
j Total expenses. Add all **expense** amounts in column (b) and enter total	2j		120,577,427

Net Income and Reconciliation

		(a) Amount	(b) Total
k Net income (loss). Subtract line **2j** from line **2d**	2k		390,429,007
l Transfers of assets:			
(1) To this plan	2l(1)		
(2) From this plan	2l(2)		

Part III Accountant's Opinion

3 Complete lines 3a through 3c if the opinion of an independent qualified public accountant is attached to this Form 5500. Complete line 3d if an opinion is not attached.

a The attached opinion of an independent qualified public accountant for this plan is (see instructions):

(1) ☒ Unmodified (2) ☐ Qualified (3) ☐ Disclaimer (4) ☐ Adverse

b Check the appropriate box(es) to indicate whether the IQPA performed an ERISA section 103(a)(3)(C) audit. Check both boxes (1) and (2) if the audit was performed pursuant to both 29 CFR 2520.103-8 and 29 CFR 2520.103-12(d). Check box (3) if pursuant to neither.

(1) ☒ DOL Regulation 2520.103-8 (2) ☐ DOL Regulation 2520.103-12(d) (3) ☐ neither DOL Regulation 2520.103-8 nor DOL Regulation 2520.103-12(d).

c Enter the name and EIN of the accountant (or accounting firm) below:

(1) Name: MOSS ADAMS (2) EIN: 91-0189318

d The opinion of an independent qualified public accountant is **not attached** because:

(1) ☐ This form is filed for a CCT, PSA, or MTIA. (2) ☐ It will be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50.

Part IV Compliance Questions

4 CCTs and PSAs do not complete Part IV. MTIAs, 103-12 IEs, and GIAs do not complete lines 4a, 4e, 4f, 4g, 4h, 4k, 4m, 4n, or 5. 103-12 IEs also do not complete lines 4j and 4l. MTIAs also do not complete line 4l.

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? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.)	4a		X	

		Line	Yes	No	Amount
b	Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible? Disregard participant loans secured by participant's account balance. (Attach Schedule G (Form 5500) Part I if "Yes" is checked.)	4b		X	
c	Were any leases to which the plan was a party in default or classified during the year as uncollectible? (Attach Schedule G (Form 5500) Part II if "Yes" is checked.)	4c		X	
d	Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a. Attach Schedule G (Form 5500) Part III if "Yes" is checked.)	4d		X	
e	Was this plan covered by a fidelity bond?	4e	X		500,000
f	Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	4f		X	
g	Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?	4g		X	
h	Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?	4h		X	
i	Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)	4i		X	
j	Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked and see instructions for format requirements.)	4j		X	
k	Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?	4k		X	
l	Has the plan failed to provide any benefit when due under the plan?	4l		X	
m	If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	4m			
n	If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3	4n			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year? ☐ Yes ☒ No
If "Yes," enter the amount of any plan assets that reverted to the employer this year ____________.

5b 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.)

5b(1) Name of plan(s)	5b(2) EIN(s)	5b(3) PN(s)

5c Was the plan a defined benefit plan covered under the PBGC insurance program at any time during this plan year? (See ERISA section 4021 and instructions.) ☒ Yes ☐ No ☐ Not determined
If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year 435334.

SCHEDULE R (Form 5500)	Retirement Plan Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code). ▶ **File as an attachment to Form 5500.**	**2021** **This Form is Open to Public Inspection.**

For calendar plan year 2021 or fiscal plan year beginning 01/01/2021 and ending 12/31/2021

A Name of plan
LLNS DEFINED BENEFIT PENSION PLAN

B Three-digit plan number (PN) ▶ 003

C Plan sponsor's name as shown on line 2a of Form 5500
Lawrence Livermore National Security LLC

D Employer Identification Number (EIN)
20-5624386

Part I Distributions

All references to distributions relate only to payments of benefits during the plan year.

1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions........ **1** 0

2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits):

EIN(s): 20-5624386 ______________

Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.

3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year........ **3** 0

Part II Funding Information

(If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)

4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)?........ ☐ Yes ☐ No ☒ N/A

If the plan is a defined benefit plan, go to line 8.

5 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 ruling letter granting the waiver. **Date:** Month _______ Day _______ Year _______

If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.

6 a Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived)........ **6a**

b Enter the amount contributed by the employer to the plan for this plan year........ **6b**

c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount)........ **6c**

If you completed line 6c, skip lines 8 and 9.

7 Will the minimum funding amount reported on line 6c be met by the funding deadline?........ ☐ Yes ☐ No ☐ N/A

8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change?........ ☐ Yes ☐ No ☒ N/A

Part III Amendments

9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box........ ☐ Increase ☐ Decrease ☐ Both ☒ No

Part IV ESOPs

(see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.

10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan?........ ☐ Yes ☐ No

11 a Does the ESOP hold any preferred stock?........ ☐ Yes ☐ No

b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.)........ ☐ Yes ☐ No

12 Does the ESOP hold any stock that is not readily tradable on an established securities market?........ ☐ Yes ☐ No

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than 5% of total contributions to the plan during the plan year (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _______ Day _______ Year _______

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) ____________
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _______ Day _______ Year _______

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) ____________
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): ______________________________

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _______ Day _______ Year _______

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) ____________
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): ______________________________

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _______ Day _______ Year _______

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) ____________
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): ______________________________

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _______ Day _______ Year _______

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) ____________
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): ______________________________

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _______ Day _______ Year _______

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) ____________
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): ______________________________

14 Enter the number of deferred vested and retired participants (inactive participants), as of the beginning of the plan year, whose contributing employer is no longer making contributions to the plan for:

a The current plan year. Check the box to indicate the counting method used to determine the number of inactive participants: ☐ last contributing employer ☐ alternative ☐ reasonable approximation (see instructions for required attachment)	**14a**	
b The plan year immediately preceding the current plan year. ☐ Check the box if the number reported is a change from what was previously reported (see instructions for required attachment)	**14b**	
c The second preceding plan year. ☐ Check the box if the number reported is a change from what was previously reported (see instructions for required attachment)	**14c**	

15 Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year	**15a**	
b The corresponding number for the second preceding plan year	**15b**	

16 Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year	**16a**	
b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers	**16b**	

17 If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

18 If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

19 If the total number of participants is 1,000 or more, complete lines (a) through (c)

a Enter the percentage of plan assets held as:
Stock: 54.5% Investment-Grade Debt: 28.0% High-Yield Debt: 0.0% Real Estate: 9.0% Other: 8.5%

b Provide the average duration of the combined investment-grade and high-yield debt:
☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☒ 15-18 years ☐ 18-21 years ☐ 21 years or more

c What duration measure was used to calculate line 19(b)?
☒ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify):

20 **PBGC missed contribution reporting requirements.** If this is a multiemployer plan or a single-employer plan that is not covered by PBGC, skip line 20.

a Is the amount of unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 greater than zero? ☐ Yes ☒ No

b If line 20a is "Yes," 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____________________

SCHEDULE SB (Form 5500)	Single-Employer Defined Benefit Plan Actuarial Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code). ▶ **File as an attachment to Form 5500 or 5500-SF.**	**2021** **This Form is Open to Public Inspection**

For calendar plan year 2021 or fiscal plan year beginning 01/01/2021 and ending 12/31/2021

▶ **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
LLNS DEFINED BENEFIT PENSION PLAN

B Three-digit plan number (PN) ▶ 003

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
Lawrence Livermore National Security LLC

D Employer Identification Number (EIN)
20-5624386

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

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

Part I Basic Information

1	Enter the valuation date: Month 01 Day 01 Year 2021			
2	Assets:			
	a Market value		**2a**	4,473,988,891
	b Actuarial value		**2b**	4,026,590,002

		(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
3	Funding target/participant count breakdown			
	a For retired participants and beneficiaries receiving payment	1,544	1,742,808,220	1,742,808,220
	b For terminated vested participants	249	116,475,177	116,475,177
	c For active participants	1,843	1,600,675,301	1,607,914,575
	d Total	3,636	3,459,958,698	3,467,197,972

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**	5.69%
6	Target normal cost		
	a Present value of current plan year accruals	**6a**	95,769,014
	b Expected plan-related expenses	**6b**	3,400,000
	c Total (line 6a + line 6b)	**6c**	99,169,014

Statement by Enrolled Actuary

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

SIGN HERE

Signature of actuary — Date: 09/16/2022

Margo A. Burdette
Type or print name of actuary

2005676
Most recent enrollment number

Aon Consulting, Inc.
Firm name

404-261-3400
Telephone number (including area code)

3550 Lenox Road N.E., Suite 1700
Atlanta GA 30326
Address of the firm

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

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	267,202,758
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	267,202,758
10	Interest on line 9 using prior year's actual return of 18.94%	0	50,608,202
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		19,156,073
	b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 5.52%		1,057,415
	b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
	c Total available at beginning of current plan year to add to prefunding balance		20,213,488
	d Portion of (c) to be added to prefunding balance		20,213,488
12	Other reductions in balances due to elections or deemed elections	0	198,137,275
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	139,887,173

Part III Funding Percentages

14	Funding target attainment percentage	14	112.09%
15	Adjusted funding target attainment percentage	15	116.13%
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	101.29%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage	17	%

Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
07/15/2022	60,000,000	0			
09/09/2022	10,000,000	0			
12/31/2021	0	19,678,847			
			Totals ► 18(b)	70,000,000	18(c) 19,678,847

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	64,224,281

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

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

21 Discount rate:

	1st segment:	2nd segment:	3rd segment:	
a Segment rates:	4.75 %	5.36 %	6.11 %	☐ N/A, full yield curve used

b Applicable month (enter code)	**21b**	0
22 Weighted average retirement age	**22**	62

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 6c)	**31a**	99,169,014
b Excess assets, if applicable, but not greater than line 31a	**31b**	99,169,014

32 Amortization installments:	Outstanding Balance	Installment
a Net shortfall amortization installment	0	0
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**	0

	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**	0
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	64,224,281
38 Present value of excess contributions for current year (see instructions)		
a Total (excess, if any, of line 37 over line 36)	**38a**	64,224,281
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

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

2021

This Form is Open to Public Inspection

For calendar plan year 2021 or fiscal plan year beginning 01/01/2021 and ending 12/31/2021

▶ **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
LLNS DEFINED BENEFIT PENSION PLAN

B Three-digit plan number (PN) ▶ 003

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
Lawrence Livermore National Security Llc

D Employer Identification Number (EIN)
20-5624386

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

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

Part I Basic Information

1 Enter the valuation date: Month 01 Day 01 Year 2021

2 Assets:

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b Actuarial value	2b	4,026,590,002

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b For terminated vested participants	249	116,475,177	116,475,177
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d Total	3,636	3,459,958,698	3,467,197,972

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	5.69%
6 Target normal cost		
a Present value of current plan year accruals	6a	95,769,014
b Expected plan-related expenses	6b	3,400,000
c Total (line 6a + line 6b)	6c	99,169,014

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 Margo A. Burdette maB — 09/16/2022
Signature of actuary — Date

Margo A. Burdette — 2005676
Type or print name of actuary — Most recent enrollment number

Aon Consulting, Inc. — 404-261-3400
Firm name — Telephone number (including area code)

3550 Lenox Road N.E., Suite 1700
Atlanta GA 30326
Address of the firm

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

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	267,202,758
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	267,202,758
10	Interest on line 9 using prior year's actual return of 18.94%	0	50,608,202
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		19,156,073
	b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 5.52%		1,057,415
	b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
	c Total available at beginning of current plan year to add to prefunding balance		20,213,488
	d Portion of (c) to be added to prefunding balance		20,213,488
12	Other reductions in balances due to elections or deemed elections		198,137,275
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	139,887,173

Part III Funding Percentages

14	Funding target attainment percentage	14	112.09%
15	Adjusted funding target attainment percentage	15	116.13%
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	101.29%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
07/15/2022	60,000,000	0			
09/09/2022	10,000,000	0			
12/31/2021	0	19,678,847			
			Totals ►	18(b) 70,000,000	18(c) 19,678,847

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	64,224,281

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

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

21 Discount rate:

	1st segment:	2nd segment:	3rd segment:	
a Segment rates:	4.75 %	5.36 %	6.11%	☐ N/A, full yield curve used

b Applicable month (enter code)	**21b**	0
22 Weighted average retirement age	**22**	62

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 6c)	**31a**	99,169,014
b Excess assets, if applicable, but not greater than line 31a	**31b**	99,169,014

32 Amortization installments:	Outstanding Balance	Installment
a Net shortfall amortization installment	0	0
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**	0

	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**	0
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	64,224,281

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

a Total (excess, if any, of line 37 over line 36)	**38a**	64,224,281
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

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, line 19—Discounted Employer Contributions

Year applied for contributions: 2021

Date	Amount	Days to Discount to 1/1/2021 at 5.69%	Interest Adjusted Contribution
July 15, 2022	$ 60,000,000	560	$ 55,115,953
September 9, 2022	10,000,000	616	9,108,328
Total	$ 70,000,000		$ 64,224,281

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, line 22—Description of Weighted Average Retirement Age

The average retirement age shown in line 22 has been calculated by assuming the following retirement rates and no decrements other than retirement for this calculation.

(a) Age	(b) Rate	(c) Weight	(d) Product (a) × (b) × (c)
50	2.00%	1.0000	1.00
51	2.00%	0.9800	1.00
52	2.00%	0.9604	1.00
53	2.00%	0.9412	1.00
54	2.00%	0.9224	1.00
55	2.00%	0.9039	0.99
56	3.00%	0.8858	1.49
57	4.00%	0.8593	1.96
58	7.00%	0.8249	3.35
59	15.00%	0.7672	6.79
60	24.00%	0.6521	9.39
61	15.00%	0.4956	4.53
62	15.00%	0.4212	3.92
63	15.00%	0.3581	3.38
64	15.00%	0.3043	2.92
65	20.00%	0.2587	3.36
66	20.00%	0.2070	2.73
67	20.00%	0.1656	2.22
68	15.00%	0.1325	1.35
69	15.00%	0.1126	1.17
70	20.00%	0.0957	1.34
71	20.00%	0.0766	1.09
72	20.00%	0.0612	0.88
73	20.00%	0.0490	0.72
74	20.00%	0.0392	0.58
75	100.00%	0.0314	2.35
		Weighted Average	61.51

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, Part V—Statement of Actuarial Assumptions/Methods

Interest Rates for Minimum Funding Purposes	Based on segment rates with no lookback (as of January 2021), each adjusted as needed to fall within the 25-year average interest rate corridor under ARPA.
1st Segment Rate	4.75%.
2nd Segment Rate	5.36%.
3rd Segment Rate	6.11%.
Salary Increases	See Table 1.
COLA Applied to Retirement Benefit	2.00%.
Social Security Wage Base Increases	2.25%.
Retirement Age	
Active Participants	See Table 2.
Terminated Vested Participants	Age 60.
Mortality Rates	
Healthy and Disabled	2021 static mortality table for annuitants and non-annuitants per §1.430(h)(3)-1(e) (based on the 2006 base rates from the RP-2014 mortality study).
Withdrawal Rates	See Table 3.
Disability Rates	See Table 4.
Optional Payment Form Election Percentage	Single participants: 100% elect single life annuity. Married participants: 100% elect joint and 50% survivor annuity.
Decrement Timing	Middle of year decrements (except that retirement is assumed to occur at the beginning of the year for ages where the assumed retirement rate is 100%).

Surviving Spouse Benefit	It is assumed that 80% of males and 60% of females have an eligible spouse. Male retirees are three years older than their female spouses, and female retirees are the same age as their male spouses.
Valuation Compensation	Prior year pensionable earnings rolled forward one year with the salary increase assumption.
Benefit and Compensation Limits	Projected benefits and compensation are limited by the current IRC section 415 maximum benefit of $230,000 and the IRC section 401(a)(17) compensation limit of $290,000.
Valuation of Plan Assets	Smoothed fair market value of assets over the current and prior two years, adjusted for contributions, benefit payments, administrative expenses, and expected earnings. The average value of assets calculated in this manner is further limited to not less than 90% nor more than 110% of fair market value.
Expected Return on Assets	
2019 Plan Year	6.75%, limited to 6.11%.
2020 Plan Year	6.25%, limited to 5.94%.
2021 Plan Year	5.75%.
Trust Expenses Included in Target Normal Cost	$3,400,000.
Actuarial Method	Standard unit credit cost method.
Valuation Date	January 1, 2021.

Table 1

Salary Increase Rates

Age	Rate	Age	Rate
25	7.55%	50	4.05%
26	7.35%	51	3.95%
27	7.15%	52	3.85%
28	6.95%	53	3.75%
29	6.75%	54	3.65%
30	6.55%	55	3.55%
31	6.35%	56	3.45%
32	6.15%	57	3.45%
33	5.95%	58	3.35%
34	5.75%	59	3.35%
35	5.55%	60	3.25%
36	5.45%	61	3.25%
37	5.35%	62	3.15%
38	5.25%	63	3.15%
39	5.15%	64	3.05%
40	5.05%	65	3.05%
41	4.95%	66	2.95%
42	4.85%	67	2.95%
43	4.75%	68	2.85%
44	4.65%	69	2.85%
45	4.55%	70+	2.75%
46	4.45%		
47	4.35%		
48	4.25%		
49	4.15%		

Table 2

Retirement Rates

Age	Rate
50	2.00%
51	2.00%
52	2.00%
53	2.00%
54	2.00%
55	2.00%
56	3.00%
57	4.00%
58	7.00%
59	15.00%
60	24.00%
61	15.00%
62	15.00%
63	15.00%
64	15.00%
65	20.00%
66	20.00%
67	20.00%
68	15.00%
69	15.00%
70	20.00%
71	20.00%
72	20.00%
73	20.00%
74	20.00%
75+	100.00%

Table 3

Withdrawal Rates

Age	Rate
30	6.00%
31	6.00%
32	5.00%
33	5.00%
34	5.00%
35	5.00%
36	5.00%
37	5.00%
38	5.00%
39	3.00%
40	3.00%
41	3.00%
42	2.50%
43	2.50%
44	2.00%
45	1.50%
46	1.50%
47	1.50%
48	1.50%
49	1.50%
50+	0.00%

Table 4

Disability Rates

Age	Male	Female	Age	Male	Female
15	0.03%	0.03%	45	0.16%	0.24%
16	0.03%	0.03%	46	0.18%	0.27%
17	0.03%	0.03%	47	0.21%	0.30%
18	0.03%	0.03%	48	0.25%	0.33%
19	0.03%	0.03%	49	0.28%	0.36%
20	0.03%	0.03%	50	0.33%	0.40%
21	0.03%	0.03%	51	0.39%	0.44%
22	0.03%	0.03%	52	0.46%	0.49%
23	0.03%	0.03%	53	0.53%	0.54%
24	0.03%	0.03%	54	0.61%	0.59%
25	0.03%	0.03%	55	0.69%	0.64%
26	0.03%	0.03%	56	0.77%	0.69%
27	0.03%	0.03%	57	0.86%	0.74%
28	0.03%	0.04%	58	0.95%	0.80%
29	0.03%	0.04%	59	1.05%	0.85%
30	0.03%	0.04%	60	1.15%	0.90%
31	0.03%	0.05%	61	1.26%	0.96%
32	0.03%	0.05%	62	1.38%	1.01%
33	0.03%	0.06%	63	1.51%	1.05%
34	0.03%	0.06%	64	1.64%	1.09%
35	0.04%	0.07%	65+	0.00%	0.00%
36	0.04%	0.08%			
37	0.05%	0.09%			
38	0.06%	0.10%			
39	0.07%	0.12%			
40	0.08%	0.13%			
41	0.09%	0.15%			
42	0.10%	0.17%			
43	0.12%	0.19%			
44	0.14%	0.22%			

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386   PN: 003

Schedule SB, Part V—Summary of Plan Provisions

Effective Date	October 1, 2007. Amended and restated effective as of January 1, 2017.
Eligibility	All of the following: ▪ Employed or on an approved leave of absence with the University of California on September 30, 2007; ▪ Former participant (or eligible to become a participant) in the University of California Retirement Plan ("UCRP"); and ▪ Elected to accept employment with LLNS under Total Compensation Package 1 ("TCP1") as of October 1, 2007 (or later date if on an approved leave of absence).
Participation Date	Later of October 1, 2007 or date of becoming an eligible employee.
Normal Retirement	
Eligibility	Age 60 and completion of five-year period of service.
Basic Retirement Income	Monthly annuity is the product of: a. 2.5%; b. Highest average plan compensation less $133; and c. Years of credited service. The product of (a) and (c) is limited to 100%.
Social Security Supplement	Monthly annuity payable until age 65 is the product of: a. 2.5%; b. $133; and c. Years of credited service. The product of (a) and (c) is limited to 100%.

Adjustment for Members With Non-Coordinated Benefits September 30, 2007	For members entitled to Social Security benefits: ▪ In calculation of basic retirement income, offset \$133 only for credited service earned after October 1, 2007. ▪ Calculation of Social Security supplement based on credited service earned after October 1, 2007. For members not entitled to Social Security benefits: ▪ Basic retirement income will be calculated without the \$133 offset. ▪ Neither the member nor the member's spouse shall be eligible for the Social Security supplement.
Early Retirement	
Eligibility	Age 50 and completion of five-year period of service.
Basic Retirement Income and Social Security Supplement	Normal retirement benefits and Social Security Supplements are reduced according to the following table:

Age at Retirement	Percentage of Age 60 Benefit
50	44.0%
51	49.6%
52	55.2%
53	60.8%
54	66.4%
55	72.0%
56	77.6%
57	83.2%
58	88.8%
59	94.4%
60	100.0%

Vested Termination	
Eligibility	Completion of five-year period of service.
Benefit	Early retirement benefit commencing at early retirement date.

Late (or Deferred) Retirement	
Eligibility	Any time after eligibility for normal retirement.
Benefit	Normal retirement benefit actuarially increased for those months in which the member was credited for less than 40 hours of service and for those months after April 1 of the calendar year following the year the member turns age 70½ regardless of the hours of service.
Disability	
Eligibility	Completion of five-year period of service and eligible for and receives disability income under the employer's Defined Benefit Eligible Disability Program.
Benefit	Early or normal retirement benefit. Credited service continues to accrue until earlier of the date the member ceases to be disabled, retires, or attains normal retirement date. Maximum basic retirement Income is greater of: ▪ Basic retirement income under vested termination; or ▪ 40% of final complete month of full-time equivalent compensation. The 40% factor is increased to 60% for members with non-coordinated benefits under the UCRP.
Preretirement Death Benefit	
Eligibility	Active with period of service of two years or inactive vested (including disabled members) with a spouse on date of death.
Benefit	
Not Retirement Eligible	Amount that would be paid if participant had terminated on the earlier of date of termination or date of death, survived until the spouse's date of retirement, elected a 50% joint and contingent annuity naming the spouse as the contingent annuitant, and then died. The spouse's date of retirement may not be earlier than the date the member would have attained 50 nor later than the member's normal retirement date.
Retirement Eligible	Same as above, except that member is assumed to have elected a 100% joint and contingent annuity.

Basic Death Benefit	
Eligibility	Active with two years of service or inactive vested (including disabled members).
Benefit	$7,500. However, active members who were participants in the UCRP prior to October 1, 1990, receive the greater of $7,500 or $1,500 plus one month of full-time equivalent compensation.
Normal Form of Payment	
Married Participants	50% joint and contingent annuity.
Unmarried Participants	Single life annuity.
Optional Forms of Payment of the Basic Retirement Income	100% joint and contingent, 75% joint and contingent, 66⅔% joint and contingent, 50% joint and contingent, and single life annuity.
Calculation of Joint and Contingent Form	Actuarial equivalent of the single life annuity increased by 2.4%. For members with non-coordinated benefits on September 30, 2007, the 2.4% factor is replaced by 4.8%, except that if such members are eligible for Social Security benefits, the factor shall be 4.8% for credited service earned prior to October 1, 2007 and 2.4% for credited service earned after October 1, 2007.
Employee Contributions	Beginning June 3, 2012, a participant must contribute 5% of earnings. Beginning June 30, 2013, a participant must contribute 7% of earnings.
Cost of Living Adjustment Applied to Basic Retirement Income	The monthly benefit shall be adjusted each July 1 to reflect movement in the CPI but not more than 2.0%. However, if movement in the CPI exceeds 4.0%, then the benefit is adjusted by 2.0% plus 75% of the amount that CPI movement exceeds 4.0%. The maximum adjustment is 6.0%. No adjustment shall be made if it will decrease the benefit.
Benefits Not Valued	None.

Definitions

Highest Average Plan Compensation (HAPC)	Monthly amount that is the highest average full-time equivalent compensation during 36 continuous months. For inactive members, HAPC is adjusted each July 1 for movement in the CPI but not more than 2.0%. However, if movement in the CPI exceeds 4.0%, then HAPC is adjusted by 2.0% plus 75% of the amount that CPI movement exceeds 4.0%. The maximum adjustment is 6.0%. No adjustment to HAPC is provided after the earlier of a member's retirement date and normal retirement date.
Full-Time Equivalent Compensation	100% of plan compensation (base salary excluding overtime or bonus pay) which a member would earn from the employer for that calendar month.
Credited Service	One year for each plan year in which member earns 2,080 hours or more and prorated for plan years in which member earns less than 2,080 hours. For members who retire within 120 days of termination of service, proportional credited service will be granted for accumulated sick leave based on a 2,080-hour year. Includes credited service under the UCRP.
Period of Service	Years and complete months from employment commencement to date of termination.
Actuarial Equivalent	
Mortality	1994 GAR Mortality Table for males (set back three years for members and set back five years for beneficiaries).
Interest	7.5%.
COLA	2% per year.
Normal Retirement Date (NRD)	First of month coinciding with or next following the attainment of age 60 with five years of credited service.

Plan Changes Since the Prior Year

The funding valuation reflects the following plan changes:

- An update to the mortality rates for determining minimum lump sum payments under IRC section 417(e)(3) mortality to the applicable rates for the current plan year.
- The legislated increase in the Section 401(a)(17) recognizable pay limit from $285,000 for 2020 to $290,000 for 2021.

Other Information to Fully and Fairly Disclose the Actuarial Position of the Plan

Form 5500 EFAST Software Limitations

Due to software limitations with the electronic filing process, information filed electronically cannot be controlled by the Enrolled Actuary. The values on the signed Schedule SB will govern to the extent there are any differences in the entries filed electronically and the actual data contained on the signed Schedule SB.

American Rescue Plan Act of 2021 Election

Under the American Rescue Plan Act of 2021 (ARPA), the stabilized interest rates for certain purposes will be adjusted once the ARPA stabilization is applied. By default, this stabilization would have applied starting with the 2020 plan year.

This Schedule SB reflects stabilized 2021 minimum funding interest rates that are adjusted for ARPA. Via this filing, LLNS will irrevocably commit LLNS Defined Benefit Pension Plan to use of those rates for the 2021 plan year.

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, line 24—Change in Actuarial Assumptions

The January 1, 2021 valuation reflects the following non-prescribed assumption changes:

- A change in the expected return on assets from 6.25% to 5.75%.
- A change in the assumed expenses payable from the trust from $3,200,000 to $3,400,000.
- A change in salary scale to better reflect anticipated future experience.
- A change in retirement rates for active participants to better reflect anticipated future experience.
- A change in the assumed retirement age for terminated vested participants from age 59 to age 60 to better reflect anticipated future experience.
- A change in termination rates for active participants to better reflect anticipated future experience.
- A change in disability rates to better reflect anticipated future experience.
- A change in the percent married assumption for females from 55% to 60% to better reflect anticipated future experience.
- A change in the spousal age difference for female retirees to females are the same age as their male spouses to better reflect anticipated future experience.

These assumption changes did not reduce the funding shortfall by more than the thresholds stated in IRC Section 430(h)(5); as such, approval of the Commissioner is not required.

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, line 26—Schedule of Active Participant Data as of January 1, 2021

Schedule SB, Line 26—Schedule of Active Participant Data
As of January 1, 2021

Lawrence Livermore National Security, LLC
LLNS Defined Benefit Pension Plan
Active Employees

EIN: 20-5624386 PN: 003

Number of Participants and Average Compensation

Attained Age	Years of Credited Service									
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+
<25										
25-29										
30-34					1					
35-39		1	2	13	12	1				
40-44		2	3	17	74 $151,822	19	1			
45-49			10	37 $142,790	101 $154,990	61 $170,956	5	1		
50-54			4	30 $142,972	147 $150,340	127 $172,902	62 $167,171	18	1	
55-59			6	38 $144,537	160 $143,770	144 $163,256	135 $171,331	81 $184,610	35 $168,583	1
60-64		5	3	26 $130,835	94 $141,609	66 $163,717	69 $192,064	64 $202,018	33 $190,144	6
65-69				10	31 $154,994	16	13	11	15	7
70+	1	1		4	6	4	3	2	2	1

N-1,843

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386   PN: 003

Schedule SB, line 19—Discounted Employer Contributions

Year applied for contributions: 2021

Date	**Amount**	**Days to Discount to 1/1/2021 at 5.69%**	**Interest Adjusted Contribution**
July 15, 2022	$ 60,000,000	560	$ 55,115,953
September 9, 2022	10,000,000	616	9,108,328
Total	$ 70,000,000		$ 64,224,281

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, line 22—Description of Weighted Average Retirement Age

The average retirement age shown in line 22 has been calculated by assuming the following retirement rates and no decrements other than retirement for this calculation.

(a) Age	**(b) Rate**	**(c) Weight**	**(d) Product (a) × (b) × (c)**
50	2.00%	1.0000	1.00
51	2.00%	0.9800	1.00
52	2.00%	0.9604	1.00
53	2.00%	0.9412	1.00
54	2.00%	0.9224	1.00
55	2.00%	0.9039	0.99
56	3.00%	0.8858	1.49
57	4.00%	0.8593	1.96
58	7.00%	0.8249	3.35
59	15.00%	0.7672	6.79
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61	15.00%	0.4956	4.53
62	15.00%	0.4212	3.92
63	15.00%	0.3581	3.38
64	15.00%	0.3043	2.92
65	20.00%	0.2587	3.36
66	20.00%	0.2070	2.73
67	20.00%	0.1656	2.22
68	15.00%	0.1325	1.35
69	15.00%	0.1126	1.17
70	20.00%	0.0957	1.34
71	20.00%	0.0766	1.09
72	20.00%	0.0612	0.88
73	20.00%	0.0490	0.72
74	20.00%	0.0392	0.58
75	100.00%	0.0314	2.35
		Weighted Average	61.51

Schedule SB, line 24—Change in Actuarial Assumptions

The January 1, 2021 valuation reflects the following non-prescribed assumption changes:

- A change in the expected return on assets from 6.25% to 5.75%.
- A change in the assumed expenses payable from the trust from $3,200,000 to $3,400,000.
- A change in salary scale to better reflect anticipated future experience.
- A change in retirement rates for active participants to better reflect anticipated future experience.
- A change in the assumed retirement age for terminated vested participants from age 59 to age 60 to better reflect anticipated future experience.
- A change in termination rates for active participants to better reflect anticipated future experience.
- A change in disability rates to better reflect anticipated future experience.
- A change in the percent married assumption for females from 55% to 60% to better reflect anticipated future experience.
- A change in the spousal age difference for female retirees to females are the same age as their male spouses to better reflect anticipated future experience.

These assumption changes did not reduce the funding shortfall by more than the thresholds stated in IRC Section 430(h)(5); as such, approval of the Commissioner is not required.

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, line 26—Schedule of Active Participant Data as of January 1, 2021

Schedule SB, Line 26—Schedule of Active Participant Data
As of January 1, 2021

Lawrence Livermore National Security, LLC
LLNS Defined Benefit Pension Plan
Active Employees

EIN: 20-5624386 PN: 003

Number of Participants and Average Compensation

Attained Age	Years of Credited Service									
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+
<25										
25-29										
30-34					1					
35-39		1	2	13	12	1				
40-44		2	3	17	74 $151,822	19	1			
45-49			10	37 $142,790	101 $154,990	61 $170,956	5	1		
50-54			4	30 $142,972	147 $150,340	127 $172,902	62 $167,171	18	1	
55-59			6	38 $144,537	160 $143,770	144 $163,256	135 $171,331	81 $184,610	35 $168,583	1
60-64		5	3	26 $130,835	94 $141,609	66 $163,717	69 $192,064	64 $202,018	33 $190,144	6
65-69				10	31 $154,994	16	13	11	15	7
70+	1	1		4	6	4	3	2	2	1

N-1,843

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386 PN: 003

Schedule SB, Part V—Statement of Actuarial Assumptions/Methods

Interest Rates for Minimum Funding Purposes	Based on segment rates with no lookback (as of January 2021), each adjusted as needed to fall within the 25-year average interest rate corridor under ARPA.
1st Segment Rate	4.75%.
2nd Segment Rate	5.36%.
3rd Segment Rate	6.11%.
Salary Increases	See Table 1.
COLA Applied to Retirement Benefit	2.00%.
Social Security Wage Base Increases	2.25%.
Retirement Age	
Active Participants	See Table 2.
Terminated Vested Participants	Age 60.
Mortality Rates	
Healthy and Disabled	2021 static mortality table for annuitants and non-annuitants per §1.430(h)(3)-1(e) (based on the 2006 base rates from the RP-2014 mortality study).
Withdrawal Rates	See Table 3.
Disability Rates	See Table 4.
Optional Payment Form Election Percentage	Single participants: 100% elect single life annuity. Married participants: 100% elect joint and 50% survivor annuity.
Decrement Timing	Middle of year decrements (except that retirement is assumed to occur at the beginning of the year for ages where the assumed retirement rate is 100%).

Surviving Spouse Benefit	It is assumed that 80% of males and 60% of females have an eligible spouse. Male retirees are three years older than their female spouses, and female retirees are the same age as their male spouses.
Valuation Compensation	Prior year pensionable earnings rolled forward one year with the salary increase assumption.
Benefit and Compensation Limits	Projected benefits and compensation are limited by the current IRC section 415 maximum benefit of $230,000 and the IRC section 401(a)(17) compensation limit of $290,000.
Valuation of Plan Assets	Smoothed fair market value of assets over the current and prior two years, adjusted for contributions, benefit payments, administrative expenses, and expected earnings. The average value of assets calculated in this manner is further limited to not less than 90% nor more than 110% of fair market value.
Expected Return on Assets	
2019 Plan Year	6.75%, limited to 6.11%.
2020 Plan Year	6.25%, limited to 5.94%.
2021 Plan Year	5.75%.
Trust Expenses Included in Target Normal Cost	$3,400,000.
Actuarial Method	Standard unit credit cost method.
Valuation Date	January 1, 2021.

Table 1

Salary Increase Rates

Age	Rate	Age	Rate
25	7.55%	50	4.05%
26	7.35%	51	3.95%
27	7.15%	52	3.85%
28	6.95%	53	3.75%
29	6.75%	54	3.65%
30	6.55%	55	3.55%
31	6.35%	56	3.45%
32	6.15%	57	3.45%
33	5.95%	58	3.35%
34	5.75%	59	3.35%
35	5.55%	60	3.25%
36	5.45%	61	3.25%
37	5.35%	62	3.15%
38	5.25%	63	3.15%
39	5.15%	64	3.05%
40	5.05%	65	3.05%
41	4.95%	66	2.95%
42	4.85%	67	2.95%
43	4.75%	68	2.85%
44	4.65%	69	2.85%
45	4.55%	70+	2.75%
46	4.45%		
47	4.35%		
48	4.25%		
49	4.15%		

Table 2

Retirement Rates

Age	Rate
50	2.00%
51	2.00%
52	2.00%
53	2.00%
54	2.00%
55	2.00%
56	3.00%
57	4.00%
58	7.00%
59	15.00%
60	24.00%
61	15.00%
62	15.00%
63	15.00%
64	15.00%
65	20.00%
66	20.00%
67	20.00%
68	15.00%
69	15.00%
70	20.00%
71	20.00%
72	20.00%
73	20.00%
74	20.00%
75+	100.00%

Table 3

Withdrawal Rates

Age	Rate
30	6.00%
31	6.00%
32	5.00%
33	5.00%
34	5.00%
35	5.00%
36	5.00%
37	5.00%
38	5.00%
39	3.00%
40	3.00%
41	3.00%
42	2.50%
43	2.50%
44	2.00%
45	1.50%
46	1.50%
47	1.50%
48	1.50%
49	1.50%
50+	0.00%

Table 4

Disability Rates

Age	Male	Female	Age	Male	Female
15	0.03%	0.03%	45	0.16%	0.24%
16	0.03%	0.03%	46	0.18%	0.27%
17	0.03%	0.03%	47	0.21%	0.30%
18	0.03%	0.03%	48	0.25%	0.33%
19	0.03%	0.03%	49	0.28%	0.36%
20	0.03%	0.03%	50	0.33%	0.40%
21	0.03%	0.03%	51	0.39%	0.44%
22	0.03%	0.03%	52	0.46%	0.49%
23	0.03%	0.03%	53	0.53%	0.54%
24	0.03%	0.03%	54	0.61%	0.59%
25	0.03%	0.03%	55	0.69%	0.64%
26	0.03%	0.03%	56	0.77%	0.69%
27	0.03%	0.03%	57	0.86%	0.74%
28	0.03%	0.04%	58	0.95%	0.80%
29	0.03%	0.04%	59	1.05%	0.85%
30	0.03%	0.04%	60	1.15%	0.90%
31	0.03%	0.05%	61	1.26%	0.96%
32	0.03%	0.05%	62	1.38%	1.01%
33	0.03%	0.06%	63	1.51%	1.05%
34	0.03%	0.06%	64	1.64%	1.09%
35	0.04%	0.07%	65+	0.00%	0.00%
36	0.04%	0.08%			
37	0.05%	0.09%			
38	0.06%	0.10%			
39	0.07%	0.12%			
40	0.08%	0.13%			
41	0.09%	0.15%			
42	0.10%	0.17%			
43	0.12%	0.19%			
44	0.14%	0.22%			

Schedule SB Attachment (Form 5500)—2021 Plan Year
LLNS Defined Benefit Pension Plan
EIN: 20-5624386   PN: 003

Schedule SB, Part V—Summary of Plan Provisions

Effective Date	October 1, 2007. Amended and restated effective as of January 1, 2017.
Eligibility	All of the following: ▪ Employed or on an approved leave of absence with the University of California on September 30, 2007; ▪ Former participant (or eligible to become a participant) in the University of California Retirement Plan ("UCRP"); and ▪ Elected to accept employment with LLNS under Total Compensation Package 1 ("TCP1") as of October 1, 2007 (or later date if on an approved leave of absence).
Participation Date	Later of October 1, 2007 or date of becoming an eligible employee.
Normal Retirement	
Eligibility	Age 60 and completion of five-year period of service.
Basic Retirement Income	Monthly annuity is the product of: a. 2.5%; b. Highest average plan compensation less $133; and c. Years of credited service. The product of (a) and (c) is limited to 100%.
Social Security Supplement	Monthly annuity payable until age 65 is the product of: a. 2.5%; b. $133; and c. Years of credited service. The product of (a) and (c) is limited to 100%.

Adjustment for Members With Non-Coordinated Benefits September 30, 2007

For members entitled to Social Security benefits:

- In calculation of basic retirement income, offset $133 only for credited service earned after October 1, 2007.
- Calculation of Social Security supplement based on credited service earned after October 1, 2007.

For members not entitled to Social Security benefits:

- Basic retirement income will be calculated without the $133 offset.
- Neither the member nor the member's spouse shall be eligible for the Social Security supplement.

Early Retirement

Eligibility

Age 50 and completion of five-year period of service.

Basic Retirement Income and Social Security Supplement

Normal retirement benefits and Social Security Supplements are reduced according to the following table:

Age at Retirement	Percentage of Age 60 Benefit
50	44.0%
51	49.6%
52	55.2%
53	60.8%
54	66.4%
55	72.0%
56	77.6%
57	83.2%
58	88.8%
59	94.4%
60	100.0%

Vested Termination

Eligibility

Completion of five-year period of service.

Benefit

Early retirement benefit commencing at early retirement date.

Late (or Deferred) Retirement	
Eligibility	Any time after eligibility for normal retirement.
Benefit	Normal retirement benefit actuarially increased for those months in which the member was credited for less than 40 hours of service and for those months after April 1 of the calendar year following the year the member turns age 70½ regardless of the hours of service.
Disability	
Eligibility	Completion of five-year period of service and eligible for and receives disability income under the employer’s Defined Benefit Eligible Disability Program.
Benefit	Early or normal retirement benefit. Credited service continues to accrue until earlier of the date the member ceases to be disabled, retires, or attains normal retirement date. Maximum basic retirement Income is greater of: ▪ Basic retirement income under vested termination; or ▪ 40% of final complete month of full-time equivalent compensation. The 40% factor is increased to 60% for members with non-coordinated benefits under the UCRP.
Preretirement Death Benefit	
Eligibility	Active with period of service of two years or inactive vested (including disabled members) with a spouse on date of death.
Benefit	
Not Retirement Eligible	Amount that would be paid if participant had terminated on the earlier of date of termination or date of death, survived until the spouse’s date of retirement, elected a 50% joint and contingent annuity naming the spouse as the contingent annuitant, and then died. The spouse’s date of retirement may not be earlier than the date the member would have attained 50 nor later than the member’s normal retirement date.
Retirement Eligible	Same as above, except that member is assumed to have elected a 100% joint and contingent annuity.

Basic Death Benefit	
Eligibility	Active with two years of service or inactive vested (including disabled members).
Benefit	$7,500. However, active members who were participants in the UCRP prior to October 1, 1990, receive the greater of $7,500 or $1,500 plus one month of full-time equivalent compensation.
Normal Form of Payment	
Married Participants	50% joint and contingent annuity.
Unmarried Participants	Single life annuity.
Optional Forms of Payment of the Basic Retirement Income	100% joint and contingent, 75% joint and contingent, 66⅔% joint and contingent, 50% joint and contingent, and single life annuity.
Calculation of Joint and Contingent Form	Actuarial equivalent of the single life annuity increased by 2.4%. For members with non-coordinated benefits on September 30, 2007, the 2.4% factor is replaced by 4.8%, except that if such members are eligible for Social Security benefits, the factor shall be 4.8% for credited service earned prior to October 1, 2007 and 2.4% for credited service earned after October 1, 2007.
Employee Contributions	Beginning June 3, 2012, a participant must contribute 5% of earnings. Beginning June 30, 2013, a participant must contribute 7% of earnings.
Cost of Living Adjustment Applied to Basic Retirement Income	The monthly benefit shall be adjusted each July 1 to reflect movement in the CPI but not more than 2.0%. However, if movement in the CPI exceeds 4.0%, then the benefit is adjusted by 2.0% plus 75% of the amount that CPI movement exceeds 4.0%. The maximum adjustment is 6.0%. No adjustment shall be made if it will decrease the benefit.
Benefits Not Valued	None.

Definitions

Highest Average Plan Compensation (HAPC)	Monthly amount that is the highest average full-time equivalent compensation during 36 continuous months. For inactive members, HAPC is adjusted each July 1 for movement in the CPI but not more than 2.0%. However, if movement in the CPI exceeds 4.0%, then HAPC is adjusted by 2.0% plus 75% of the amount that CPI movement exceeds 4.0%. The maximum adjustment is 6.0%. No adjustment to HAPC is provided after the earlier of a member's retirement date and normal retirement date.
Full-Time Equivalent Compensation	100% of plan compensation (base salary excluding overtime or bonus pay) which a member would earn from the employer for that calendar month.
Credited Service	One year for each plan year in which member earns 2,080 hours or more and prorated for plan years in which member earns less than 2,080 hours. For members who retire within 120 days of termination of service, proportional credited service will be granted for accumulated sick leave based on a 2,080-hour year. Includes credited service under the UCRP.
Period of Service	Years and complete months from employment commencement to date of termination.
Actuarial Equivalent	
Mortality	1994 GAR Mortality Table for males (set back three years for members and set back five years for beneficiaries).
Interest	7.5%.
COLA	2% per year.
Normal Retirement Date (NRD)	First of month coinciding with or next following the attainment of age 60 with five years of credited service.

Plan Changes Since the Prior Year

The funding valuation reflects the following plan changes:

- An update to the mortality rates for determining minimum lump sum payments under IRC section 417(e)(3) mortality to the applicable rates for the current plan year.
- The legislated increase in the Section 401(a)(17) recognizable pay limit from $285,000 for 2020 to $290,000 for 2021.

Other Information to Fully and Fairly Disclose the Actuarial Position of the Plan

Form 5500 EFAST Software Limitations

Due to software limitations with the electronic filing process, information filed electronically cannot be controlled by the Enrolled Actuary. The values on the signed Schedule SB will govern to the extent there are any differences in the entries filed electronically and the actual data contained on the signed Schedule SB.

American Rescue Plan Act of 2021 Election

Under the American Rescue Plan Act of 2021 (ARPA), the stabilized interest rates for certain purposes will be adjusted once the ARPA stabilization is applied. By default, this stabilization would have applied starting with the 2020 plan year.

This Schedule SB reflects stabilized 2021 minimum funding interest rates that are adjusted for ARPA. Via this filing, LLNS will irrevocably commit LLNS Defined Benefit Pension Plan to use of those rates for the 2021 plan year.

Report of Independent Auditors and Financial Statements

LLNS Defined Benefit Pension Plan

December 31, 2021 and 2020

MOSSADAMS

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Report of Independent Auditors

The Participants and Plan Administrator
LLNS Defined Benefit Pension Plan

Report on the Audit of the Financial Statements

Scope and Nature of the ERISA Section 103(a)(3)(C) Audit

We have performed an audit of the financial statements of LLNS Defined Benefit Pension Plan, an employee benefit plan subject to the Employee Retirement Income Security Act of 1974 (ERISA), as permitted by ERISA Section 103(a)(3)(C) (ERISA Section 103(a)(3)(C) audit). The financial statements comprise the statement of net assets available for benefits as of December 31, 2021, and the related statement of changes in net assets available for benefits for the year then ended, and the related notes to the financial statements (collectively, the 2021 financial statements).

Management, having determined it is permissible in the circumstances, has elected to have the audit of the 2021 financial statements performed in accordance with ERISA Section 103(a)(3)(C) pursuant to 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. As permitted by ERISA Section 103(a)(3)(C), our audit need not extend to any statements or information related to assets held for investment of the plan (investment information) by a bank or similar institution or insurance carrier that is regulated, supervised, and subject to periodic examination by a state or federal agency, provided that the statements or information regarding assets so held are prepared and certified to by the bank or similar institution or insurance carrier in accordance with 29 CFR 2520.103-5 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA (qualified institution).

Management has obtained a certification from a qualified institution as of and for the year ended December 31, 2021, stating that the certified investment information, as described in Note 7 to the financial statements, is complete and accurate.

Opinion

In our opinion, based on our audit and on the procedures performed as described in the Auditor's Responsibilities for the Audit of the Financial Statements section

- the amounts and disclosures in the accompanying 2021 financial statements, other than those agreed to or derived from the certified investment information, are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (GAAP).

- the information in the accompanying 2021 financial statements related to assets held by and certified to by a qualified institution agrees to, or is derived from, in all material respects, the information prepared and certified by an institution that management determined meets the requirements of ERISA Section 103(a)(3)(C).

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of LLNS Defined Benefit Pension Plan and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our ERISA Section 103(a)(3)(C) audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with GAAP, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error. Management's election of the ERISA Section 103(a)(3)(C) audit does not affect management's responsibility for the financial statements.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about LLNS Defined Benefit Pension Plan's ability to continue as a going concern within one year after the date that the financial statements are available to be issued.

Management is also responsible for maintaining a current plan instrument, including all plan amendments, administering the plan, and determining that the plan's transactions that are presented and disclosed in the financial statements are in conformity with the plan's provisions, including maintaining sufficient records with respect to each of the participants, to determine the benefits due or which may become due to such participants.

Auditor's Responsibilities for the Audit of the Financial Statements

Except as described in the Scope and Nature of the ERISA Section 103(a)(3)(C) Audit section of our report, our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of LLNS Defined Benefit Pension Plan's internal control. Accordingly, no such opinion is expressed.

- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about LLNS Defined Benefit Pension Plan's ability to continue as a going concern for a reasonable period of time.

Our audit did not extend to the certified investment information, except for obtaining and reading the certification, comparing the certified investment information with the related information presented and disclosed in the 2021 financial statements, and reading the disclosures relating to the certified investment information to assess whether they are in accordance with the presentation and disclosure requirements of GAAP.

Accordingly, the objective of an ERISA Section 103(a)(3)(C) audit is not to express an opinion about whether the financial statements as a whole are presented fairly, in all material respects, in accordance with GAAP.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matter

Auditor's Report on the 2020 Financial Statements

We were engaged to audit the 2020 financial statements of LLNS Defined Benefit Pension Plan. As permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA, the Plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information certified by a qualified institution. In our report dated October 14, 2021, we indicated that (a) because of the significance of the information that we did not audit, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion and accordingly, we did not express an opinion on the 2020 financial statements, and (b) the form and content of the information included in the 2020 financial statements other than that derived from the certified information were presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA.

Moss Adams LLP

Campbell, California
October 5, 2022

Financial Statements

LLNS Defined Benefit Pension Plan
Statements of Net Assets Available for Benefits
December 31, 2021 and 2020

	2021	2020
Assets:		
Investments, at fair value:		
Participation in the LLNS/Triad Group Trust	$ 4,798,333,210	$ 4,392,625,803
Receivables:		
Employer's contribution	70,000,000	85,000,000
Total receivables	70,000,000	85,000,000
Total assets	4,868,333,210	4,477,625,803
Liabilities:		
Accrued expenses	2,463,880	2,185,480
Net assets available for benefits	$ 4,865,869,330	$ 4,475,440,323

See accompanying notes.

Statements of Changes in Net Assets Available for Benefits
Years Ended December 31, 2021 and 2020

	2021	2020
Additions to net assets attributed to:		
Investment income:		
Participation in the LLNS/Triad Group Trust	$ 436,434,743	$ 713,909,015
Contributions:		
Employer's	70,000,000	85,000,000
Participants'	19,678,847	20,391,687
	89,678,847	105,391,687
Total additions	526,113,590	819,300,702
Deductions from net assets attributed to:		
Benefits paid to participants	120,577,427	104,608,607
Administrative expenses	15,107,156	13,763,398
Total deductions	135,684,583	118,372,005
Net increase in net assets	390,429,007	700,928,697
Net assets available for benefits:		
Beginning of year	4,475,440,323	3,774,511,626
End of year	$ 4,865,869,330	$ 4,475,440,323

See accompanying notes.

NOTE 1 – THE PLAN AND ITS SIGNIFICANT ACCOUNTING POLICIES

General – The following description of the LLNS Defined Benefit Pension Plan (the Plan), provides only general information. Participants should refer to the Plan document for a more complete description of the Plan's provisions.

The Plan is a defined benefit plan that was established on October 1, 2007, by Lawrence Livermore National Security, LLC (the Company), to provide benefits to eligible employees, as defined in the Plan document. The Plan is currently designed to be qualified under the applicable requirements of the Internal Revenue Code (the Code) as amended, and the provisions of the Employee Retirement Income Security Act of 1974 (ERISA).

The Plan is a closed plan and participants under the Plan include employees of the Company who on September 30, 2007, were employed by or on an approved leave of absence from employment with the University of California, and were participating in the University of California Retirement Plan (UCRP) or in an employment classification eligible to become a participant in the Plan, and who did not elect retired or inactive vested status in the UCRP, and who made a Choice Election to accept employment with the Company on October 1, 2007, in accordance with the terms of Total Compensation Package 1 (TCP1), as described in Section H35(d)(1) of Contract Number DE-AC52-07NA27344 between the Company and the Department of Energy/National Nuclear Security Administration related to the operation of the Lawrence Livermore National Laboratory.

On August 1, 2008, the Lawrence Livermore National Security, LLC, and Triad National Security, LLC (Triad) (formerly Los Alamos National Security, LLC) Defined Benefit Pension Plan Group Trust (the Group Trust) was formed from the pension assets of the Plan and the Triad Defined Benefit Pension Plan. In the context of pension plans, a group trust is a separate trust that invests together some or all of the assets of "participating trusts." The Plan is one participating trust and the Triad Defined Benefit Pension Plan is the other participating trust. The assets are commingled for investment purposes only at the direction of the participating trusts and are not commingled to pay plan benefits. The Company and Triad will continue to sponsor separate qualified pension plans and maintain separate participating trusts. As of December 31, 2021 and 2020, the Plan's interest in the Group Trust was 40.46% and 40.58%, respectively.

The pooling of assets of tax exempt trusts does not affect the tax exempt status of the participating trusts or the qualified status of their related plans, according to Internal Revenue Service Revenue Ruling (Rev. Rul.) 81-100. According to Rev. Rul. 81-100, each participating trust remains fully separate and independent from the other participating trust.

Administration – The Company has appointed the Benefits and Investment Committee (the Committee) to manage the operation and administration of the Plan. The Company contracted with The Bank of New York Mellon/BNY Mellon N. A. (Mellon) to act as the trustee for the Plan. The Company contracted with Willis Towers Watson (Towers Watson) to act as the Plan's actuary and Aon to act as the third-party administrator. Effective April 2020, the Company contracted with Aon to act as the Plan's actuary. Substantially all expenses incurred for administering the Plan are paid out of the Plan, unless paid by the Company.

Vesting – The Plan provides that pension benefits vest to participants based on years of service as follows: less than five years of credited service, 0%; five or more years of credited service, 100%. Regardless of service, participants are always 100% vested in their contributions.

Pension benefits – Benefits become payable to the participant after five years of credited service and:

(a) electing early retirement upon attaining age 50; or

(b) electing normal retirement upon attaining age 60; or

(c) upon actual retirement if later than age 60.

For married participants who do not elect otherwise, benefits will be paid on the basis of a 50% joint and contingent annuity, as stipulated by ERISA, and will be the amount determined under the benefit formula stated in the Plan multiplied by the appropriate factor. If a participant is unmarried, benefits will be paid on the basis of a single life annuity and will be for the amount determined under the Plan's benefit formula.

Death and disability benefits – There are no benefits payable during a period of disability prior to retirement under the Plan. The surviving spouse of a participant who has provided at least two years of credited service will be eligible to receive a survivor annuity and the designated beneficiary of such participant will receive a one-time single-sum basic death benefit from the Plan.

Basis of accounting – The financial statements of the Plan are prepared on the accrual method of accounting in accordance with accounting principles generally accepted in the United States of America.

Estimates – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, disclosure of contingent assets and liabilities, and the actuarial present value of accumulated plan benefits at the date of the financial statements. Actual results could differ from those estimates.

Investment valuation and income recognition – The Plan's investments are held in the Group Trust by Mellon and investment elections are based solely on the instructions received from the Committee. The investments held in the Group Trust are reported at fair value. The Plan's trustee, Mellon, certifies the fair market value of all investments. If available, quoted market prices are used to value investments. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. See Note 2 for discussion of fair value measurements.

The Group Trust records purchases and sales of securities on a trade date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Net appreciation reported by the Group Trust includes the gains and losses of investments bought or sold as well as held during the year. The Plan presents its share of the investment income in the Group Trust in the statements of changes in net assets available for benefits.

Payment of benefits – Benefit payments to participants are recorded upon distribution.

Income taxes – The Plan has received a favorable determination letter dated February 6, 2018. The Plan administrator believes that the Plan is operated in accordance with, and qualifies under, the applicable requirements of the Code and related state statutes, and that the trust, which forms a part of the Plan, is exempt from federal income and state franchise taxes.

In accordance with guidance on accounting for uncertainty in income taxes (ASC 740-10), management evaluated the Plan's tax positions and does not believe the Plan has any uncertain tax positions that require disclosure or adjustment to the financial statements. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

Risks and uncertainties – The Plan invests its assets in the Group Trust. The Group Trust utilizes various investment securities. Investment securities are exposed to various risks, such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of net assets available for benefits.

Plan contributions, if any, and the actuarial present value of accumulated plan benefits are reported based on certain assumptions pertaining to interest rates, inflation rates, and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimations and assumptions process, it is reasonably possible that changes in these estimates and assumptions in the near term would be material to the financial statements.

NOTE 2 – FAIR VALUE MEASUREMENTS

The fair value measurements standard establishes a framework for measuring fair value. That framework provides a hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy under the standard are described below:

Level 1 – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

Level 2 – Inputs to the valuation methodology include:

- Quoted market prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following are descriptions of the valuation techniques used for assets held by the Group Trust measured at fair value. There had been no changes in the techniques used at December 31, 2021 and 2020.

Common stocks: Shares of common stock are valued at the closing price reported on the active market on which the individual securities are traded*.*

Registered investment companies: Valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-end mutual funds that are registered with the U.S. Securities and Exchange Commission. These funds are required to publish their daily net asset value (NAV) and to transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

Common/collective trusts: Units held in common/collective trusts (CCT) are valued using the NAV practical expedient of the CCT as reported by the CCT managers. The NAV practical expedient is based on the fair value of the underlying assets owned by the CCT, minus its liabilities and then divided by the number of units outstanding. Certain CCTs in the Group Trust's investments have redemption restrictions and requires written notice ranging from 10 business days to 45 business days.

Preferred corporate stocks, government securities, government short-term investment funds (interest-bearing cash and cash equivalents), and other investments listed on a national securities exchange and over-the-counter securities: Valued at the last reported sale price on the valuation date or, if no sales are reported for that day, the last published sale price.

Corporate debt instruments: Valued based on market values quoted by dealers who are market makers in these securities, by independent pricing services, or by a methodology approved by Mellon.

Partner/joint venture interests: Valued using the market approach at the NAV practical expedient. NAV is used as a practical expedient to estimate fair value and which represents the Group Trust's proportionate share of the estimated fair value of the underlying net assets of the partner/joint venture interests. Certain partner/joint venture interests in the Group Trust's investments have redemption restrictions and requires written notice ranging from ten business days to three months. Certain partner/joint venture interests are invested in master limited partnerships. (MLPs). MLPs are business ventures that exists in the form of publicly traded limited partnerships and are valued at the closing price reported on the active market on which the MLPs are traded.

Asset-backed securities included in securities lending collateral: These are bonds or notes backed by financial assets. Institutional observable inputs are used with an income valuation technique provided by outside vendors.

Certificates of deposit, repurchase agreements, and commercial paper included in securities lending collateral are valued using a market approach and are carried at cost, which approximates fair value.

Other investments: Other investments mainly consists of domestic and foreign bonds and U.S. Treasury bonds. The fair value of certain bonds are valued at the closing price reported in an active market in which the individual security is traded. U.S. Ultra bonds, U.S. Treasury bonds and U.S. Note futures are valued at the prices listed on the national exchanges as of the last sales price. Other bonds are valued based on yields currently available on comparable securities of issuers with similar credit ratings. When quoted prices are not available for identical or similar bonds, the bond is valued under a discounted cash flows approach that maximizes observable inputs, such as current yields or similar instruments, but includes adjustments for certain risks that may not be observable, such as credit and liquidity risks.

The methods described above may produce a fair value calculation that may not be indicative of net realized value or reflective of future fair values. Furthermore, while the Group Trust believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables set forth by level, within the fair value hierarchy, the investments of the Group Trust at fair value as of December 31, 2021 and 2020:

	2021			
	Level 1	Level 2	Level 3	Total
Assets:				
Interest-bearing cash	$ 3,474,689	$ 477,385	$ -	$ 3,952,074
Corporate stock - common	3,130,739,716	-	-	3,130,739,716
U.S. and other government securities	1,338,413,035	7,412,276	-	1,345,825,311
Corporate stock - preferred	2,798,464	-	-	2,798,464
Corporate debt instruments - preferred	-	1,015,297,630	-	1,015,297,630
Corporate debt instruments	-	867,636,748	-	867,636,748
Other investments	17,395,809	123,269,102	-	140,664,911
Registered investment companies	519,057,854	-	-	519,057,854
Security lending collateral (See Note 10)	37,911	1,129,268,188	-	1,129,306,099
Total assets in the fair value hierarchy	$ 5,011,917,478	$ 3,143,361,329	$ -	8,155,278,807
Investments measured at NAV practical expedient				4,788,975,685
Investments at fair value				$12,944,254,492
Liabilities:				
Obligation to return collateral under security lending agreement	$ 400,000	$ 1,129,431,944	$ -	$ 1,129,831,944

	2020			
	Level 1	Level 2	Level 3	Total
Assets:				
Interest-bearing cash	$ 10,864,219	$ 10,000	$ -	$ 10,874,219
Partnership/joint venture interest	4,617,064	-	-	4,617,064
Corporate stock - common	3,539,148,711	-	-	3,539,148,711
U.S. and other government securities	1,008,074,448	14,036,778	-	1,022,111,226
Corporate stock - preferred	3,824,872	252,575	-	4,077,447
Corporate debt instruments - preferred	-	991,580,381	-	991,580,381
Corporate debt instruments	-	822,994,600	-	822,994,600
Other investments	(17,136,408)	133,929,645	-	116,793,237
Registered investment companies	797,570,449	-	-	797,570,449
Security lending collateral (See Note 10)	158,044	1,091,524,354	-	1,091,682,398
Total assets in the fair value hierarchy	$ 5,347,121,399	$ 3,054,328,333	$ -	8,401,449,732
Investments measured at NAV practical expedient				3,491,726,070
Investments at fair value				$11,893,175,802
Liabilities:				
Obligation to return collateral under security lending agreement	$ 2,099,565	$ 1,091,224,121	$ -	$ 1,093,323,686

NOTE 3 – PARTY-IN-INTEREST TRANSACTIONS

Certain investments and securities lending activities in the Group Trust are managed by Mellon. Any purchases and sales of these funds are performed in the open market at fair value. Such transactions, while considered party-in-interest transactions under ERISA regulations, are permitted under the provisions of the Plan and are specifically exempt from the prohibition of party-in-interest transactions under ERISA.

NOTE 4 – ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

Accumulated plan benefits represent the estimated future periodic payments under the Plan's provisions that are attributable to services rendered by employees through the valuation date. Accumulated plan benefits include benefits expected to be paid to:

(a) retired or terminated employees or their beneficiaries; or

(b) beneficiaries of employees who have died; or

(c) present employees or their beneficiaries.

Benefits under the Plan are based on years of service and benefit credit rates. The accumulated plan benefits for active employees are based on years of service and benefit credit rates on the date at which the benefit information is presented (valuation date). Benefits payable under all circumstances (retirement, death, disability, and termination of employment) are included to the extent they are deemed attributable to employee service rendered to the valuation date.

The actuarial present value of accumulated plan benefits is determined by the Plan's actuary, Aon, and is that amount that results from applying actuarial assumptions to adjust the accumulated Plan benefits to reflect the time value of money (through discounts for interest), anticipated Cost of Living Adjustments, and the probability of payment (by means of decrements, such as for death, disability, withdrawal, or retirement) between the valuation date and the expected date of payment. The significant actuarial assumptions used in the valuations as of January 1, 2021 (beginning of the Plan year), is as follows:

Interest	5.75%
Cost of Living Adjustments	2.00%
Mortality assumption:	The Pri-2012 Mortality Table with a fully generational projection using scale MP-2020 for healthy participants, the Pri-2012 Disabled Retirement Mortality Table with a fully generational projection using scale MP-2020 for disabled participants and Pri-2012 Contingent Survivor Mortality Table with a fully generational projection using scale MP-2020 for contingent survivors.
Retirement age:	Retirement rate varies from 50 to 75 years old, average age 62

The foregoing actuarial assumptions are based on the presumption that the Plan will continue. Were the Plan to terminate, different actuarial assumptions and other factors might be applicable in determining the actuarial present value of accumulated plan benefits. The computation of the actuarial present value of accumulated plan benefits were made as of January 1, 2021. Had the valuation been performed as of December 31, there would be no material differences.

The actuarial present value of accumulated plan benefits at December 31, 2020, is as follows:

Actuarial present value of accumulated Plan benefits:	
Vested benefits:	
Participants currently receiving payments	$ 1,704,352,563
Vested benefits for other participants	1,731,532,667
Total vested plan benefits	3,435,885,230
Nonvested benefits	5,282,022
Total actuarial present value of accumulated plan benefits	$ 3,441,167,252

The change in the actuarial present value of accumulated plan benefits for the year ended December 31, 2020, is as follows:

Actuarial present value of plan benefits, December 31, 2019	$ 3,020,698,934
Increase (decrease) during the year attributable to:	
Benefits accumulated	185,574,206
Benefits paid	(104,608,607)
Plan amendments	850,141
Assumption changes	210,828,973
Other changes	127,823,605
	420,468,318
Actuarial present value of accumulated plan benefits, December 31, 2020	$ 3,441,167,252

The following assumptions were changed since January 1, 2020 (the last valuation date):

- The mortality improvement scale changed from MP-2019 to MP-2020.
- The interest rate changed from 6.25% to 5.75%.

NOTE 5 – FUNDING POLICY

Participant contributions – The Plan requires mandatory participant contributions equal to 7% of eligible compensation each pay period.

Employer contributions – It is the policy of the Company to contribute no less frequently than annually an amount at least equal to the minimum contribution required by law. Lawrence Livermore National Security, LLC, may, at its discretion, contribute amounts in excess of the minimum required contribution.

Annual contributions, if any, are determined by the Plan's actuary. The Plan has satisfied the minimum funding standards required by ERISA and the Code for the years ended December 31, 2021 and 2020.

NOTE 6 – PARTICIPATION IN THE GROUP TRUST

The Plan's participation in the Group Trust reported on the statements of net assets available for benefits consists of the investments held at fair value, certain receivables, and liabilities that are not reported separately on the Plan's financial statements as follows at December 31:

	2021	2020
Investments, at fair value (Note 2)	$ 12,944,254,492	$ 11,893,175,802
Due from investment managers	47,928,120	877,665,510
Obligation to return collateral under security lending agreement (Note 10)	(1,129,831,944)	(1,093,323,686)
Due to investment managers	(30,983,895)	(864,102,970)
Net assets allocable to the participating Plans	$ 11,831,366,773	$ 10,813,414,656
Allocated to the Triad Defined Benefit Pension Plan	$ 7,033,033,563	$ 6,420,788,853
Allocated to the LLNS Defined Benefit Pension Plan	4,798,333,210	4,392,625,803
	$ 11,831,366,773	$ 10,813,414,656

The Plan's participation in the Group Trust reported on the statements of changes in net assets available for benefits consists of investment income as follows for the years ended December 31:

	2021	2020
Investment income		
Net appreciation in fair value of investments	$ 895,008,903	$ 1,600,151,829
Interest	92,444,395	89,636,772
Dividends	79,334,641	76,320,192
Other investment income	26,283,128	7,330,346
Total investment income reported by the Group Trust	$ 1,093,071,067	$ 1,773,439,139
Allocated to the Triad Defined Benefit Pension Plan	$ 656,636,324	$ 1,059,530,124
Allocated to the LLNS Defined Benefit Pension Plan	436,434,743	713,909,015
	$ 1,093,071,067	$ 1,773,439,139

NOTE 7 – CERTIFIED INFORMATION

The Plan administrator has elected the method of compliance permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. Accordingly, Mellon, the trustee of the Plan, has certified to the completeness and accuracy of:

- The Plan's participation in the Group Trust reflected on the accompanying statements of net assets available for benefits as of December 31, 2021 and 2020.

- The Plan's interest in the investment income in the Group Trust reflected on the accompanying statements of changes in net assets available for benefits for the years ended December 31, 2021 and 2020.

- Investment information, investment-related receivables and liabilities, and investment income disclosed related to the Group Trust in Note 6 as of and for the years ended December 31, 2021 and 2020.

NOTE 8 – FINANCIAL INSTRUMENTS WITH OFF-BALANCE SHEET RISK

In the normal course of operations, assets in the Group Trust are invested in financial instruments that may give rise to off-balance-sheet risk. These instruments involve, in varying degrees, elements of credit and market risk in excess of the amounts recognized on the statements of net assets available for benefits. The notional value provides a measure of the Group Trust's involvement in such instruments but is not indicative of potential loss. The intent is to use these financial instruments to reduce, rather than increase, market risk. For 2021 and 2020, these financial instruments consisted of futures contracts and are included under "other investments" on the statements of net assets available for benefits.

NOTE 9 – DERIVATIVE FINANCIAL INSTRUMENTS

The Committee adopted a "Statement of Investment Policy" that applies to the Group Trust. This statement provides guidelines for certain plan investment managers to allow the use of derivative instruments to achieve investment objectives. It is the investment managers' responsibility to understand the potential impact of derivative instruments on the total portfolio under various market risk scenarios and to comply with these guidelines. As with other marketable securities, all derivatives are recorded at fair value.

Derivatives are subject to risks that include the possible inability of the counterparty to meet the terms of the contracts (counterparty risk), and adverse market movements (market risk).

During the years ended December 31, 2021 and 2020, the following types of derivative instruments were used in the Group Trust:

Foreign currency contracts – The Group Trust's global equity portfolio includes equity securities denominated in foreign currencies. The Committee has retained an investment manager to hedge a portion of the foreign currency risk associated with these securities. Consistent with this strategy, the investment manager enters into forward foreign currency agreements to exchange foreign currencies at a specified future date and at a specified rate.

The trustee's commitments to buy and sell foreign currencies on behalf of the Group Trust totaled approximately $5,608,000 and $821,261,000 at December 31, 2021 and 2020, respectively. Commitments at December 31, 2021, expire through January 2022.

Futures contracts – The Group Trust enters into futures contracts in the normal course of its investing activities to manage market risk associated with the Group Trust's fixed income investments and to achieve overall investment portfolio objectives. During 2021 and 2020, futures contracts consisted of U.S. Treasury securities and these investments were made in accordance with the guidelines set forth by the Committee. The credit risk associated with these contracts is minimal because they are traded on organized exchanges. The Group Trust's notional exposure related to these futures contracts was approximately $1,305,514,000 and $2,217,921,000 for 2021 and 2020, respectively.

During the period the contract is open, changes in the value of the contract are recognized as unrealized gains or losses by daily marking to market the contract to reflect the market value of the contract at the end of each day's trading. The Group Trust receives from or pays to the broker an amount equal to the daily fluctuation in the market value of the contract known as margin variation, which is recognized in the net appreciation in fair value of investments.

The Group Trust is exposed to credit loss in the event of nonperformance by a counterparty to its contractual obligations. Based on the extent of the investment in these derivatives with any one counterparty, the Company has determined that the risk of loss to the Group Trust in the event of nonperformance by a counterparty is not significant. The Group Trust does not anticipate nonperformance by a counterparty.

In the Group Trust's statements of net assets available for benefits, all derivative financial instruments are carried at fair value. The fair value of the Group Trust's derivative financial instruments are as follows:

Asset Derivatives December 31, 2021		Liability Derivatives December 31, 2021		
Type of Exposure	Fair Value	Type of Exposure	Fair Value	Number of Open Contracts
Cash Equivalents		*Cash Equivalents*		
Foreign Currency	$ 3,474,075	Foreign Currency	$ 385	47
Other Assets		*Other Assets*		
Futures	$ 19,142,496	Futures	$ 1,746,688	24

Asset Derivatives December 31, 2020		Liability Derivatives December 31, 2020		
Type of Exposure	Fair Value	Type of Exposure	Fair Value	Number of Open Contracts
Cash Equivalents		*Cash Equivalents*		
Foreign Currency	$ 6,262,204	Foreign Currency	$ 79	61
Other Assets		*Other Assets*		
Futures	$ 647,912	Futures	$ 18,699,565	21

NOTE 10 – SECURITIES LENDING

The Group Trust participates in a securities lending program with the trustee. The program allows the trustee to lend securities, which are assets of the Group Trust, to approved borrowers. The trustee requires the borrowers, pursuant to a security loan agreement, to deliver collateral having a market value of not less than the collateral requirement. For U.S. securities, the collateral requirement is 102% of the fair market value of the securities lent. For foreign securities, the collateral requirement is 105% of the fair market value of the securities lent. The Group Trust bears the risk of loss with respect to any unfavorable change in fair value of the invested cash collateral. However, the borrowers bear the risk of loss related to the decrease in the fair value of the noncash collateral and, therefore, would have to deliver additional securities to maintain the required collateral. In the event that the securities lent are not returned by the borrower and the collateral proceeds are insufficient to replace any of the loaned securities, the trustee will pay such amounts as are necessary to make the Group Trust whole. The fair value of the investment of cash collateral received pursuant to securities lending transactions is reflected on the statement of net assets available for benefits as an asset and the obligation to return the amount received is reflected as a liability. As of December 31, 2021 and 2020, collateral for securities on loan from the Group Trust included reinvested collateral in accordance with the guidelines in the “Securities Lending Authorization Agreement” (the Lending Agreement).

Noncash collateral of approximately $82,557,000 and $71,977,000 received for securities on loan at December 31, 2021 and 2020, respectively, consisted of sovereign debt securities as in accordance with the Lending Agreement held by the trustee on behalf of the Plan. Noncash collateral is not included with the collateral balance included in the statement of net assets available for benefits because it may not be sold or repledged.

The Group Trust and the trustee receive a percentage of the net income derived from the securities lending activities based on the type of securities received as collateral. Income earned during 2021 and 2020 was approximately $2,650,000 and $5,077,000, respectively, which is included in other investment income, net of trustee fees.

NOTE 11 – PLAN TERMINATION OR MODIFICATION

With prior approval of the National Nuclear Security Administration, the Company can terminate the Plan, subject to the provisions of federal law. Upon the termination of the Plan, partially or in its entirety, the rights of all affected participants to benefits accrued to the date of such termination, to the extent funded as of such date, are nonforfeitable. Provided, however, that upon termination of the Plan, the Company’s obligation to make further contributions to the Plan on behalf of affected participants shall cease, except for any additional contribution that may be necessary to meet the minimum funding or other requirements of ERISA.

In the event of a complete termination of the Plan, funds will be distributed to the extent available, in the following order:

- Accrued benefits derived from mandatory employee contributions.
- Annuity benefits that were in pay status before the beginning of the three-year period ending on the termination date, and those annuity benefits that could have been in pay status for participants who, before the beginning of the three-year period ending on the termination date, had reached their earliest retirement date as defined by the Pension Benefit Guaranty Corporation (the PBGC).

- Other vested benefits insured by the PBGC up to the applicable limits.
- All other vested benefits.
- All other participants.

Any residual assets of the Plan will be distributed to the Company, provided that all liabilities of the Plan have been paid.

Certain benefits under the Plan are insured by the PBGC. Generally, the PBGC guarantees most vested normal age retirement benefits, early retirement benefits, and certain disability and survivor's benefits. However, the PBGC does not guarantee all types of benefits under the Plan and the amount of benefit protection is subject to certain limitations. Vested benefits under the Plan are guaranteed at the level in effect on the date of termination. There is a statutory ceiling, which is adjusted periodically, on the amount of a participant's monthly benefit that the PBGC guarantees. Whether all participants receive their benefits should the Plan terminate at some future time will depend on the sufficiency, at that time, of the Plan's net assets to provide for accumulated benefit obligations and may also depend on the financial condition of the Plan's sponsor and the level of benefits guaranteed by the PBGC.

NOTE 12 – SUBSEQUENT EVENT

The Plan has evaluated subsequent events through October 5, 2022, which is the date the financial statements were available to be issued.