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August 13, 2025

To: Distribution

Re: **California NanoSystems Institute – Recharge Facilities**
Audit Report No. 08-25-0002

We have completed a limited review of recharge facilities at the California NanoSystems Institute as part of the 2024-25 annual audit services plan. This audit was conducted in conformance with the Institute of Internal Auditors' 2024 International Professional Practices Framework's (IPPF) Global Internal Audit Standards. The report detailing the results of our work is enclosed.

We sincerely appreciate the cooperation and assistance provided by the personnel of the California NanoSystems Institute during the review. If you have any questions, please contact me.

Respectfully submitted,

Ashley Andersen
Director
Audit and Advisory Services

Enclosure

Distribution

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Audit & Advisory Services

Audit Report

California NanoSystems Institute – Recharge Facilities

August 13, 2025

Performed by:
Antonio Mañas Meléndez, Associate Audit Director
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Approved by:
Ashley Andersen, Audit Director

Report No. 08-25-0002

EXECUTIVE SUMMARY

OBJECTIVE

The primary purpose of this audit was to evaluate whether adequate procedures and internal controls have been implemented at the California NanoSystems Institute (CNSI) to ensure that Income and Recharge (I&R)[1] practices comply with the University of California (UC), University of California, Santa Barbara (UCSB) I&R guidelines. The main objectives were to:

- Evaluate whether recharge rates for the I&R centers[2] (Facilities) have been reviewed, approved, and communicated to users as required by I&R guidelines.
- Verify that the approved recharge rates are consistently applied to the facilities' use starting on the approved effective date, as required by the I&R guidelines.
- Verify that billing and payments are consistent with usage and comply with established I&R guidelines.
- Evaluate financial trends in deficits and surpluses to ensure compliance with the I&R guidelines.
- Assess the accuracy of receivables, identify overdue payments, and evaluate the effectiveness of escalation procedures.
- Assess the access control and the adequacy of audit logs in the Facility Billing System (FBS)[3] to ensure separation of duties.
- Assess the effectiveness of facility monitoring practices in identifying and preventing potential misuse, overbooking, or underutilization of resources.
- Determine if monthly reconciliations are consistently performed and align with the General Ledger(GL).

SCOPE

Our review focused on the internal control processes implemented by CNSI. Recharge rate compliance was assessed based on the Fiscal Year (FY) 2024–2025 approval memo and transaction data from July 1, 2024, to January 31, 2025. We reviewed the following six CNSI facilities[4]:

- Quantum Structures Facility (Cleanroom)
- BioPACIFIC Materials Innovation Platform (BioPacific)
- Microfluidics Lab and Innovative Workshop (MFL_IW)

[1] The term "recharge" refers to the assessment (charge) made by one campus account for goods or services, based on a specific unit of measure, provided to another campus account.
[2] Income & Recharge Centers are university units created for the primary purpose of providing goods and /or services to support the university's education, research, and public service mission.
[3] FBS is an all-in-one software used by universities and research centers to track usage and handle billing for their core facilities and service centers. See the background section for details.
[4] See Background section for description od each facility.

- Biological Nanostructures Lab (BNL)
- IT Services
- Building Services

CONCLUSION

Based on the results of the work performed within the scope of this review, we found that:

- As required, all recharge rates for the six facilities were reviewed and approved through the FY 2025 annual I&R proposal review and approval process. For these facilities, excluding BioPacific, this marks the first approved recharge packet[5] since their inception. Although some facilities communicated and updated their websites with the approved rates, a consistent, department-wide process for communicating or publishing rates has not yet been established. This presents an opportunity to implement standardized procedures across all facilities.

- Across the six facilities, we observed that 77% [6] of the transactions reviewed were consistent with the approved rates, with some facilities demonstrating significantly higher levels of compliance. However, approved rates were not consistently applied as required, contributing to a revenue shortfall of approximately $60,589 across four facilities. Key factors impacting compliance included delays in rate implementation, user misclassification, and the use of undocumented rate models. Strengthening controls in these areas will help improve consistency and reduce revenue discrepancies.

- The department maintains strong controls for timely billing and consistent invoicing, meeting the required guidelines. Internal recharges were accurate, with the appropriate object codes, and external payments were generally recorded correctly in the GL. However, some discrepancies between usage reports and billing records were observed. This highlights opportunities to improve data reconciliation processes, enhance recordkeeping, and implement reconciliation controls to strengthen billing accuracy and overall financial integrity.

- Over the past five years**,** some facilities have shown signs of recovery and revenue growth following significant pandemic-related impacts. However, persistent financial deficits remain in five of the six facilities. Nonetheless, compliance with surplus and deficit level requirements has been inconsistent with guideline expectations, posing a potential risk of unpredictable recharge rate adjustments and financial instability. Strengthening financial management practices and regularly reviewing pricing models and operational processes will enhance long-term financial stability.

- Most invoices were paid on time, reflecting generally effective accounts receivable collection efforts. However, there is a need to formally document current escalation procedures to minimize delays in payment and recurring late-paying clients. Manual tracking processes also introduced risks to financial accuracy and increased the

[5] Documentation covering the facilitity's rate review and approval process.
[6] This compliance rate should not be viewed as inherently good or bad, as it was not evaluated in comparison to other campus departments or any established benchmark. The rate reflects the proportion of transactions that met the requirements out of the total reviewed. Various factors contributed to the instances of non-compliance, which have been discussed in the report.

potential for tracking errors. The department informed us that the planned Oracle system upgrade is expected to support automation and reduce reliance on manual processes, providing an opportunity to strengthen accounts receivable management.

- The FBS supports separation of duties through a role-based access model, allowing only authorized users to perform sensitive actions. System and audit logs effectively capture key activities, promoting transparency and accountability. However, duplicate user accounts and excessive access rights highlight the need to strengthen user account management and access controls. Additionally, there is no formal audit log review process; implementing one will enhance ongoing monitoring and oversight.

- The FBS effectively manages reservations and allows users to book equipment time in advance. However, monitoring controls over actual facility usage are currently limited, as the system relies heavily on user responsibility and lacks real-time usage tracking capabilities. Booking patterns might indicate potential underutilization and limited access for other users. While the potential for access loss discourages misuse, oversight mechanisms such as frequent spot checks and usage trend analysis would help mitigate the risk of overbooking, underutilization, or misuse.

- GL reconciliations were completed with proper separation of duties and were generally executed promptly.

CNSI Management provided a letter in response to our observations, intended to offer CNSI's perspective on the audit findings and recommendations. Audit & Advisory Services has included this information in Appendix B, located in the final section of this report.

OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

1. RECHARGE RATE APPROVAL AND COMMUNICATION

OBSERVATION

Our review found that all six facilities had an approved recharge packet for FY 2025, and most had updated their websites with the new rates. However, there are inconsistencies in how rates were communicated and published; each facility manages communication and publishing differently, highlighting the need for standardized procedures across all facilities.

We verified that facilities have an approved recharge packet, and all the approved rates were communicated to authorized users and published on the facilities' websites as required. Each facility had a recharge packet for FY 2025. However, not all facilities were compliant in communicating and publishing the rates. Specifically:

- All six facilities[7] we reviewed had a recharge packet for FY 2025. This is the first approved recharge packet since the facilities' inception, except for BioPacific. The department explained that the recharge proposals were developed and reviewed by the Budget and Planning office for the prior years, but were never fully approved or finalized.

- BNL facility proactively communicated rate changes to approved users. However, the remaining five facilities did not notify users as required.

- Five facilities have updated their websites with the new rates, but one facility, Building Services, has not updated its website and continues to display outdated rates as of February 7, 2025.

The published rates on some facility websites did not match the approved rates in the recharge packets, leading to discrepancies. Some approved tools were missing from the websites, while others included tools not listed in the approved proposal. For example, on the BioPacific and MFL_IW websites, tools such as *Optic11* and *Ultimalers* were not published. The BNL website includes tools not listed on the approved recharge proposal, such as *Fluorescence Microscope, Covaris, and Ultrascentrifuge.*

2. RECHARGE RATE IMPLEMENTATION

OBSERVATION

Except for IT Services and Building Services, all four other facilities use the FBS system to monitor facility tool usage and apply the approved recharge rates. Overall, we observed a 77% compliance rate in the application of rates across the six facilities. However, the approved rates were not applied consistently due to delays in implementation, user misclassifications, and the use of unapproved rate models. This resulted in instances of non-compliance and a revenue shortfall of approximately $60,589, as presented in Table 1.

Compliance statistics for each facility, along with their corresponding compliance rates for implementing the approved rates, are summarized in Table A2 of Appendix A.

[7] Cleanroom, BLN, BioPacific, MFL_IW, IT Services, and Building Services.

Table 1	Financial Impact Of Inconsistent Rate Application		
Facility**	**Amount Collected**	**Expected Amount to be Collected**	**Amount Uncollected**
Clean Room	$174,093	$174,396	$304
BioPacific	255,973	279,209	23,236
MFL_IW	21,199	25,339	4,140
BNL	106,614	139,523	32,909
Grand Total	**$557,878**	**$618,467**	**$60,589**

Source: FBS Usage report and Auditor analysis.
** IT Services and Building Services have an insignificant impact and were excluded from this analysis.

We reviewed the consistency of rates applied over six months of transactions, covering the period from the effective dates of the approved rates – August 1, 2024, through January 31, 2025 – for BNL, Cleanroom, BioPacific, and MFL_IW, and from July 1 through December 31, 2024, for IT Services and Building Services Facilities. Table A1 in Appendix A summarizes transactions for each facility's six-month period and the number of transactions for which we verified compliance. Where applicable, the total transactions include internal, external, and incubator[8] usage data.

Verified Transactions

We verified that the rates charged for using the facility tools were aligned with the approved recharge rates outlined in the recharge packet. We found varying compliance rates as presented in Table 1, with some facilities demonstrating significantly higher compliance rates than others. The non-compliance rate (23%) resulted in a revenue shortfall in four out of six facilities, as presented in Table 1.

Some of the following issues and practices contributed to non-compliance and discrepancies between the approved rates in the recharge packet and those applied to transactions across the facilities:

- Delayed rate implementation: Four facilities failed to implement the approved rates on the effective date for all tools and services outlined in the recharge packet, leading to the continued application of outdated or previous rates. This delay in rate implementation resulted in revenue shortfalls, inaccurate user billing, and non-compliance with the I&R guidelines.

- Rates were misapplied due to user misclassification: Three facilities using the FBS system assigned incorrect rate codes to the users' profiles, and two facilities that do not use the FBS system manually charged the wrong rate. This resulted in users being charged rates inconsistent with their category (e.g., external or incubator users charged internal rates and vice versa), leading to potential revenue loss, unfair pricing practices, and non-compliance with rate-setting policies.

- Unapproved rate models: Certain transactions at four facilities applied unknown or varying rates for the same tool. We were informed that these were typically a flat rate applied to the unit cost when a user uses the tool for extended hours, rather than the

[8] Start up companies that are given a reduced rate for a period of two years.

applicable rate specified in the proposal. Some services were also described as mask services, which include two rates and employ a ratio model to determine the unit price. These rate models are not explicitly documented in the recharge packets or explained on the websites, ensuring consistent billing practices, transparency, and authorized rates.

- Zero-cost transaction[9]: Some tools were charged at zero cost despite unit prices being listed for two facilities. The department explained that these transactions were for users' training before giving them access to the tool. If possible, it could be good to separate training and troubleshooting transaction data from actual recharge transactions.

- Inconsistent tool naming[9]: The tools and services listed in the approved proposal for four facilities do not always match the names used in the system for transaction processing. This misalignment makes it difficult to verify transactions with approved rates and ensure proper billing.

- Lack of proper user tracking[9]: Two facilities that do not utilize the FBS system fail to track or identify external users, which could impact the assignment of the correct rate, accountability, and data accuracy.

Examples of non-compliance in rate application have been summarized in Table A3 in Appendix A.

Unverified Transactions

We were unable to verify 732 transactions[10] from four facilities, as the related tools or services were not included in the approved recharge packet. A total of $36,694 was collected from these transactions. The department explained that BNL and MFL_IW tools were classified as Materials or Supplies, the Building Services tool was a pass-through and unpublished service, and Cleanroom tools were being tracked in preparation for a potential recharge model after National Science Foundation funding ends.

Table 2	Unverified Transactions/Tools		
Facility	**Transactions Unverified**	**Number of Tools/Services**	**Amount Collected from Unverified Tools**
Cleanroom	107	5	-
BioPacific	-	-	-
MFL_IW	526	36	9,897
BNL	95	10	25,869
IT Services	-	-	-
Building Services	3	1	927
Grand Total	**732**	**52**	**36,694**

Source: FBS Usage report and Auditor analysis.

[9] Transactions from these non-revenue or non-monetary activities were not included in the calculation of the noncompliance rate and the revenue shortfall.

[10] These transactions were not included in the calculation of the noncompliance rate and the revenue shortfall.

Table 2 lists the tools and quantities that were not verified for the respective facilities.

RECOMMENDATION

We recommend that CNSI establish standardized communication and publishing procedures to ensure approved recharge rates are communicated and accurately published. Additionally, document a procedure to:

- Update the rates of all tools and services as of the effective date of approval.
- Validate that updated rates are accurate.
- Document all rate models in the recharge proposal for review and approval. Then, communicate these models to users.
- Assign the correct rate codes to the proper category of users.
- Define the criteria for external users for IT services.
- Implement an external user tracking document for Building Services and IT Services.

MANAGEMENT RESPONSE

CNSI will establish standardized communication and publishing procedures to ensure approved recharge rates are communicated and accurately published. Specifically, we will:

- Create a document that includes a checklist and timeline for posting newly approved recharge rates, including dissemination of this information to users via email, updating the CNSI website to reflect the new rates, propagating the changes to FBS, and verifying user assignments to the correct billing categories that identify the position(s) performing each task.

- Create a single PDF rate sheet that captures all CNSI rates across all facilities. Post the PDF on the CNSI website and require each facility to link to the single PDF rate sheet instead of posting individual sheets.

- Provide website edit access to at least two CNSI staff members to alleviate bandwidth constraints and provide backup.

- Ensure that complete rate models are captured in the individual recharge proposals.

- Correct user lists for IT Services and Building Services in FBS to capture all Incubator users as External.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026*.*

3. RECHARGE BILLING, AND PAYMENTS

OBSERVATION

The facility's billing process is timely and compliant. Internal recharges were mostly accurate, with correct object codes applied, and most external payments were recorded correctly in the GL, except for one external payment that could not be traced. However, we found partial consistency between billing records and the facility usage report. This highlights the need for improved reconciliation and data integrity.

Facility Usage and Billing

For three facilities,[11] we compared the facility usage report with the total amount recharged for internal users and invoiced for 11 external users over three sampled months[12]. We noted that billing occurs within 45 days as required. However, the usage report and the billing data do not always match. Specifically:

- Cleanroom: Two of the three recharge journals did not match the facility usage report. The recharge journal was $250 less than the usage report in October 2024 and $237 more in November 2024. One of the five external invoices was significantly less than the usage report. The external user, Soraa Laser Diode Inc., was undercharged by $1,200. The amount billed to the remaining four external users matched the usage report. This discrepancy should be reviewed to ensure accurate billing.

- BNL: All three recharge journals did not match the facility usage report. The August 2024 financial journal was $1,165 less than the usage report, and the usage in October and November 2024 was $96 less. The amount billed to external users in all four invoices matched the usage report. This discrepancy should be reviewed to ensure that the billing was accurate.

- For IT Services: The total for all three recharge journals and the invoice amounts for the two external invoices matched the usage report. However, the incorrect rate was applied to external users—these users were charged the internal rate. As mentioned, this facility does not have external rates for tools like *Poster Printing*. There is an opportunity to define external users and rates to ensure external users are appropriately charged and accounted for.

  The department explained that manual adjustments or changes are usually made after downloading the data from the FBS system, without updating the master FBS dataset. Additionally, the Recharge Analyst could manually edit rates applied when noticing rate discrepancies in the FBS report compared to the expected values.

Additionally, we verified that billing occurred within 45 days of using the facility for the nine recharges and 11 external users. For both internal and external users, billing was completed within the required 45 days. The department processes monthly recharges and sends customer invoices by the end of the month after the month of service or use. The department maintains an effective and consistent invoicing system, ensuring operational efficiency and adherence to billing policies.

Payments

We found that internal recharges were mostly accurate, with correct object codes. External users' payments were mostly recorded in the GL, except for one that could not be traced.

We verified that the correct object codes were charged for nine recharges to internal users, and the payments from eight invoices are properly recorded in the GL. We found the following:

[11] Cleanroom, BNL, and IT Services.
[12] August. October, and November 2024.

- For eight out of nine internal recharges, the service was charged to object codes 3900 and 7280, except for one instance where the user department requested a different account fund and object code for the recharge.

- Seven of the eight paid invoices in our sample were correctly recorded in the GL. The Accounts Receivable schedule indicates that one payment was received and deposited on September 15, 2024. However, this payment was not recorded in the GL.

RECOMMENDATION

We recommend that CNSI document a procedure to:

- Reconcile financial journals and invoices with usage data and document and track post-edits.
- Reconcile paid invoices to the General Ledger and the Accounts Receivable schedule.

MANAGEMENT RESPONSE

Once the integration of FBS with the new Oracle financial system is complete, CNSI will document and confirm that reconciliation procedures for recharge services are fully compliant with applicable campus policies, procedures, and guidelines.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026.

4. FINANCIAL AND COMPLIANCE TRENDS

OBSERVATION

Most facilities have faced ongoing financial deficits over the past five years and have not consistently met the deficit and surplus level[13] requirements. Although some facilities have shown signs of recovery and revenue growth following pandemic-related disruptions, persistent fluctuations could be a concern. Implementing strategies to stabilize compliance ratios and identify financial trends to take proactive measures is essential.

Deficit or Surplus Position

We reviewed the final closing balances for the six facilities from FY 2020 to FY 2024. We noted ongoing deficits across most facilities, with Building Services being the only facility consistently operating at a surplus. Specifically:

- CleanRoom, MFL_IW, BNL, and IT Services have remained in deficit across all five years. However, BNL Cleanroom and IT Services experienced significantly lower deficits in FY 2024, which may indicate potential cost control or increased revenue streams.

- MFL_IW exhibits the most severe financial instability, with a deficit of $198,286 in FY 2024.

- BioPacific initially had a surplus but gradually shifted into a manageable deficit.

[13] The 3.0 or -3.0 ratio representing three months of average expenditure.

- Building Services has consistently been in surplus for the last five years.

Table 3 presents the facilities' final closing balances for each year.

Table 3	Final Closing Balances					
Year	**Clean Room**	**BioPacific***	**MFL**	**BNL**	**IT Services**	**Building Services**
FY 2024	$40,587	$7,311	$198,286	$79,130	$9,977	$(13,252)
FY 2023	87,600	4,766	119,765	165,816	21,059	(27,172)
FY 2022	88,317	$(8,550)	17,721	120,498	16,017	(37,453)
FY 2021	84,361	-	11,498	90,683	10,545	(6,346)
FY 2020	$44,673	-	$17,721	$120,498	$4,146	$(9,145)

Source: Campus GL and Auditor analysis.
* BioPacific began operations in FY 2022.
Positive amounts are deficits, and negative amounts are surpluses.

Compliance Ratios

We evaluated whether deficit or surplus levels comply with the policy requiring facilities to maintain a year-end surplus or deficit balance within three months of average expenditure[14]. The analysis shows inconsistent compliance across all facilities. No facility has maintained consistent compliance or adhered to this requirement over the last three to five years. Facilities with highly unstable compliance ratios are at risk of experiencing significant fluctuations in recharge rates. This has highlighted the need to review existing strategies to stabilize compliance ratios to maintain predictable recharge rates.

Table 4	Deficit/Surplus Level Ratios					
Year	**Clean Room**	**BioPacific***	**MFL**	**BNL**	**IT Services**	**Building Services**
FY 2024	3.3	3.2	11.4	3.1	5.0	-2.3
FY 2023	6.1	1.8	7.1	7.1	43.8	-4.9
FY 2022	7.5	-38.3	3.5	4.0	35.1	-7.6
FY 2021	8.5	-	2.5	4.3	11.6	-0.8
FY 2020	2.6	-	3.0	4.7	2.3	-2.5

Source: Campus GL and Auditor analysis.
* BioPacific began operations in FY 2022.
Positive values are deficits, and negative values are surpluses.
Values are expressed in months (a maximum of 3 or -3 is the required compliance ratio)

Recharge Income Trends

We analyzed the trends in the total recharge income of the facilities over the past five years to gain insight into whether the facilities are growing, stagnating, or declining financially, as well as trends in utilization. We noted fluctuations, with some facilities showing growth while others experienced inconsistency.

[14] The 3.0 or -3.0 average expenditure ratio requirement.

The income trends show recovery and growth for most facilities, particularly Cleanroom, MFL, and BNL, which have experienced significant revenue increases in FY 2024. BioPacific and IT Services' income remains relatively low, although it is increasing. Building Services has experienced a downward trend since its peak in FY 2022.

A decrease in revenue may indicate reduced demand or underutilization of services, which can be caused by factors such as rate fluctuations, shifts in user needs, or operational inefficiencies. Identifying these trends early allows facilities to take proactive measures, such as adjusting pricing strategies or optimizing operations.

Table 5 summarises total revenue for each facility for the specified years.

Table 5	Recharge Facilities Income					
Year	**Cleanroom**	**BioPacific***	**MFL**	**BNL**	**IT Services**	**Building Services**
FY 2024	$(234,371)	$(24,999)	$(131,009)	$(400,933)	$(35,076)	$(55,128)
FY 2023	(203,585)	(17,849)	(99,627)	(248,862)	(19,689)	(55,775)
FY 2022	(148,708)	$(11,231)	(57,488)	(337,812)	(10,953)	(90,214)
FY 2021	(91,152)	-	(58,167)	(225,070)	(8,414)	(86,803)
FY 2020	$(296,809)	-	$(98,477)	$(273,969)	$(24,830)	$(48,220)

Source: Campus GL and Auditor analysis.
* BioPacific began operations in FY 2022.
Positive amounts are deficits, and negative amounts are surpluses.
Amount includes revenue received from internal recharges and external invoices.

RECOMMENDATION

We recommend that CNSI evaluate the adequacy of existing strategies to stabilize compliance ratios and periodically review financial trends to take proactive measures.

MANAGEMENT RESPONSE

As part of preparing the annual recharge proposals required by campus policy, CNSI leadership will evaluate the adequacy of existing strategies to stabilize compliance ratios and review financial trends for potential proactive measures. This will be captured in the checklist described in recommendation 1.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026.

5. ACCOUNT RECEIVABLES MANAGEMENT

OBSERVATION

Our review of accounts receivable for FY 2025 showed that many accounts paid on time within the expected period. However, the escalation procedures have not been formalized or communicated to support stronger enforcement and prompt payment. The current manual tracking of receivables can lead to tracking errors; however, the upcoming Oracle upgrade is expected to enhance accuracy and automate processes.

Table 6 shows accounts receivable status for each facility.

Table 6	Account Receivable Status		
Status	**Facility**	**Number of Invoices**	**Total Amount**
Paid	Building Services	5	$1,056.40
	BNL	24	7,347.87
	Clean Room	19	81,047.85
	MFL_IW	20	31,087.14
	IT Services	12	11,599.05
Unpaid	BNL	4	1,432.40
	Clean Room	4	9,165.00
	MFL_IW	6	5,160.25
Grand Total		**94**	**$147,896**

Source: CNSI Account Receivable Schedule and Auditor Analysis.

We determined the total amount of receivables in both paid and unpaid statuses, as well as the escalation procedures in place for late payments. We noted opportunities to improve invoice management and payment collection:

- A total of 94 accounts valued at $147,896 were being tracked in the Accounts Receivable schedule from July 1, 2024, to January 31, 2025, for five out of six facilities[15]. The department follows a 30-day policy, except for one client, Hewlett-Packard, which has a 65-day net policy.

- A significant number of invoices, 80 out of 94, representing 85%, were fully paid. Of the 80 invoices, 59 were paid within 30 days, as expected, while 21 were paid after 30 days. Some clients took longer than necessary to settle their accounts. For example, Xiresta and Arizona State University took the longest to pay, at 335 days and 144 days, respectively. Some users repeatedly paid late. For instance, Scikare and Capella Partners had more than one invoice paid after 30 days.

- 14 invoices, totaling $15,758, remained unpaid during the audit. Seven were within 30 days, and seven were past due for more than 30 days at the time of our review. BNL and MFL_IW facilities have three past-due invoices each, and Clearoom has one past-due invoice. Three companies, Dragon Q Energy, Vine Medical, and Temporal Agriculture, have outstanding invoices with balances of almost 90 days.

- One invoice worth $270 for the College of Claremont has not been paid since May 2023. The department was unable to recover this payment despite several follow-ups and is no longer pursuing it.

- The department currently relies on informal and personalized communication for payment follow-ups. If initial contact fails, the department contacts higher-level personnel within the company or involves campus management. Users may potentially lose facility access due to ongoing non-payment. However, this has not been formally documented in an agreement with users.

[15] The BioPacific facility did not have receivables.

- The accounts receivable are manually tracked in an Excel document. We identified some errors due to manual tracking; for example, the invoice status (Paid, Unpaid, Almost Due) is identified by colors. We identified two instances of color-coding errors where unpaid invoices were incorrectly marked as paid. This could lead to inaccurate financial reporting if it remains undiscovered. Additionally, the payment date was not always documented to confirm evidence of payment. We were informed that the new Oracle system being implemented will provide more robust and accurate invoice tracking capabilities, helping generate and track invoices more accurately.

RECOMMENDATION

We recommend that CNSI formalize an escalation procedure to enforce payment terms and enhance oversight of the Accounts Receivable schedule, thereby reducing tracking errors.

MANAGEMENT RESPONSE

- CNSI will document and include payment expectations and escalation path for non-payment, including the risk of loss of facility access due to persistent non-payment in communication to users.

- Once the integration of FBS with the new Oracle financial system is complete, CNSI will confirm that the escalation procedures for recharge services are fully compliant with applicable campus policies, procedures, and guidelines.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026*.*

6. ACCESS CONTROL AND AUDIT LOGS

OBSERVATION

We found that the FBS system enforces separation of duties through a role-based access model, ensuring only authorized personnel can perform sensitive actions. Changes are documented in system logs, and the audit logs provide adequate information about key system activities and modifications, including price changes, to ensure transparency and accountability. However, duplicate user accounts and excessive access were identified, highlighting the need to improve user account management and permission control. Additionally, there is no formal review process in place for audit logs.

Access Control[16]

During the review, we found that each user role within the FBS system, such as end users, Principal Investigators (PIs), lab managers, and administrators, has specific permissions to limit sensitive actions, such as price changes, transaction deletion, and user creation, to authorized personnel. However, we found the following:

- Two users have more than one account with different email addresses. Consolidating these accounts would reduce redundancy and streamline access.

[16] See background section, User Roles, for details.

- Six users have access to all four facilities, raising concerns about whether all access was necessary. A review of access levels is essential.

- 17 users across all facilities have permission to modify prices, which is excessive given the financial impact. The department took steps to revoke the price change permission for two employees no longer with the department, but their permissions were granted during training.

- 11 users are administrators with full system access. Limiting administrative privileges to essential personnel would strengthen security and prevent unauthorized system-wide changes.

Audit Logs[17]

Our review of price change audit logs across four[18] facilities showed that the logs provide adequate and relevant details about price change actions, such as the impacted tool or service line item, date, action taken, user account responsible, and the previous price. However, there is no department procedure in place to review audit logs regularly. This lack of oversight could increase the risk of unauthorized modifications going undetected.

Additionally, we verified that all user accounts that changed prices were listed on the active price change permission list. We found that, except for two user accounts for FBS employees outside the designated permission lists, all users who made changes had the permissions to do so. Additionally, we noted that only a few users actively made changes despite the significant number of authorized users, highlighting the need to review the price change permission list.

Table 7 summarizes the number of users with price change permission compared to those who made changes over the audit log period.

Table 7	Audit Logs		
Facility	**Users with Price Change Permission**	**Active Users who made changes**	**Audit log Period**
BioPacific	14	4	2021 - 2024
BNL	8	1	2020 - 2024
Clean Room	8	1	2020 - 2024
MFL_IW	8	2	2020 - 2024

Source: CNSI facilities audit logs of price changes, and Auditor Analysis

Two user accounts for FBS employees also updated prices for BNL and MFL_IW facilities. We were informed that FBS employees may sometimes make price changes due to their onboarding and server setup roles, primarily to troubleshoot issues, test functionality, or assist facilities with specific problems.

[17] See background section, Audit Logs, for details.
[18] Cleanroom, BNL, MFL_IW, and BioPacific facilities.

RECOMMENDATION

We recommend that CNSI document a procedure to:

- Comprehensively review user roles and permissions, focusing on reducing duplicate accounts and limiting critical system functions to essential users.

- Implement a periodic review of the audit log.

MANAGEMENT RESPONSE

- To the extent the new integration between FBS and the new Oracle financial system does not have protections against duplicate accounts and limit critical system functions, CNSI will document a periodic review of user roles and permissions and determine whether reports can be generated to administer these audits.

- In the event that the new systems do not have safeguards for duplicate accounts and limitations for critical functions, CNSI will document an annual review of an audit log generated through the FBS report.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026*.*

7. FACILITY RESERVATION AND MONITORING

OBSERVATION

The FBS effectively manages reservations, allowing users to book equipment time in advance. However, we found that monitoring actual usage and door access records may be limited, and spot checks are rare and not consistently applied across all facilities. While users are aware that misuse may result in loss of access, the absence of effective oversight, regular reporting, and trend analysis could increase the risk of overbooking, underutilization, or misuse.

We assessed the facilities' monitoring practices and reservation trends to identify potential misuse or overbooking. We noted the following:

- The current booking system lacks real-time usage tracking and relies heavily on user responsibility to use the equipment properly and not abuse the system. CNSI emphasized that misuse of the facilities would result in users losing access to them. Spot checks comparing door access to reservations are occasionally performed, but are infrequent and not consistently applied across all facilities, typically only occurring when concerns arise.

- The facility door access tracks entry into the facility but does not track when users exit, making it difficult to monitor actual usage. The department mentioned that some tools have usage logs that could be used to confirm usage when necessary.

- Some users book the same tool multiple times throughout the day, often for extended periods, with bookings ranging from a few hours to nearly a full day. Tools are typically booked by a single user for the day, which could indicate potential underutilization, as it

may limit access for other users. Additionally, users may be able to extend their bookings without incurring additional charges, particularly on less busy days. Since door access is tracked only upon entry, there is no reliable way to determine how long a user actually remains in the facility. Specifically, our analysis of bookings for BNL and Cleanroom from July 1, 2024, to January 31, 2025, showed that:

- For the Cleanroom, 16 users booked the same tool multiple times in a day. In most cases, a single user booked a tool throughout the day, except for three instances where two different users booked the same tool on the same day. The booking durations for the three analyzed users ranged from 4.25 to 9.5 hours, often from early morning to late night.

- For BNL, 16 users made multiple bookings of the same tool per day. Similar to Cleanroom, tools were generally booked by a single user for the entire day, except for one instance where two users booked the same tool on the same day. However, BNL bookings for four users were shorter, ranging from 1.5 to 4.5 hours, and spread throughout the day.

RECOMMENDATION

We recommend that CNSI periodically analyze booking patterns, including the frequency and duration of multiple bookings by individual users, and review these reports to identify unusual trends or underutilized tools. Frequent spot checks should also be developed to verify actual facility tool usage.

MANAGEMENT RESPONSE

CNSI will document the Facility Manager's responsibilities and frequency as they pertain to reviewing FBS logs.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026*.*

8. GL RECONCILIATION

OBSERVATION

Our review confirmed that GL reconciliations were performed with appropriate separation of duties and generally completed timely. However, there are opportunities for improvement in timeliness. Strengthening adherence to reconciliation timelines will ensure more prompt financial oversight.

We reviewed the department's reconciliation for a sample of three facilities (Cleanroom, IT Services, and BNL) in February 2024, August 2024, and November 2024. We found that reconciliation was performed for all sampled months and facilities. More than one person was involved, and the event occurred two, five, and 19 days after the data became available in the Data Warehouse. This was mostly timely. However, the 19- day delay is considered excessive and could be improved.

RECOMMENDATION

We recommend that CNSI establish and adhere to a standardized timeline to perform

reconciliation.

MANAGEMENT RESPONSE

Once the integration of FBS with the new Oracle financial system is complete, CNSI will document the reconciliation timeline for recharge services and ensure compliance with applicable campus policies, procedures, and guidelines.

Audit and Advisory Services will follow up on the status of these issues by January 30, 2026*.*

GENERAL INFORMATION

BACKGROUND[19]

A key mission of CNSI is to bring scientific and technological innovation into the economy, benefiting society while fostering greater engagement between the CNSI academic community and industry. CNSI plays a critical role in the broader UCSB Innovation and Entrepreneurship ecosystem.

A key aspect of this mission is providing researchers with cutting-edge tools and equipment necessary to conduct advanced research. CNSI operates several world-class shared-use experimental facilities, overseen by experienced and dedicated laboratory managers who provide expertise, user training, and decades of research experience.

The following facilities were reviewed during the audit:

- Quantum Structures Facility (Cleanroom) - Processing activities support fundamental research and education in chemical, biological, and material *nanostructures*. Activities in this facility contribute to the CNSI's mission of developing techniques to control and manipulate structures at the nanoscale. This facility is open to all research users.

- BioPACIFIC Materials Innovation Platform - Operates a one-of-a-kind user facility dedicated to creating a nexus for *synthetic biology* and materials to revolutionize high-performance *polymers*. The BioPACIFIC MIP provides access to cutting-edge equipment purchased with NSF grants and campus funding for both campus and external users.

- Microfluidics Lab and Innovative Workshop - The Microfluidics Lab was established as a campus-wide resource for researchers utilizing custom-made microfluidic devices and other specialized scientific instruments. The Innovation Workshop is open to research groups, technology management and capstone teams, incubator companies, and external companies, with additional opportunities for education and outreach. These labs house a variety of tools used by student teams, researchers, and local companies.

- Biological Nanostructures Lab -The BNL provides access to complex, high-value instrumentation to support and enhance interdisciplinary research at the interface of life science and engineering, and scientific expertise in the theory, operation, and analysis of data generated from such instruments. This lab is open to student teams,

[19] CNSI Website: https://www.cnsi.ucsb.edu/facilities.

researchers, and local companies.

- Building Services - This facility provides researchers conducting their work in Elings Hall with affordable resources such as *Liquid and Gaseous Nitrogen, Dry Solvents, and Compressed Gas.*

- IT Services -IT Services are an integral part of modern-day research. This facility offers services such as poster printing, computer and network support, and technical and computer support services for CNSI staff, faculty, and researchers in Elings Hall.

Facility Billing System (FBS)[20]

FBS is a fully integrated core facility management software package, including usage tracking and billing, designed especially for monitoring the chargeback recovery of facilities and service centers within a university or research institution. CNSI utilizes the FBS system to manage the majority of the facility's user access, bookings, and billing. IT services and Building Services facilities do not use this system to manage usage. The FBS reservation system allows users to book equipment time in advance. Users must complete mandatory safety training and demonstrate proficiency to be granted access to equipment. After the required training, facility managers set up user profiles in the FBS system. The system is designed to prevent double bookings, ensuring no reservation conflicts automatically. Penalties, such as revocation of access, are in place to deter misuse.

a. User roles

The FBS system defines multiple roles with specific permissions. This structured hierarchy ensures that only authorized personnel can perform sensitive actions, reducing the risk of unauthorized modifications. The system utilizes email-based user identification, where each email address corresponds to a unique user, thereby preventing identity confusion. The FBS system features built-in safeguards, including mandatory training for user access, audit trails for changes, approval processes for new accounts, and restrictions on end-user modifications. Some users include:

- End Users: Limited to making reservations and using authorized accounts.

- Primary Users: This is the primary responsible person for a lab, typically a PI or faculty member. They can receive communications and add users to their lab.Administrators/Operators: Full system control, including most critical transactions such as price changes, user creation/deletion, and system maintenance.

b. Audit logs

The FBS system's audit logs play a crucial role in maintaining security, accountability, and transparency. The system retains comprehensive audit trails, ensuring accountability and traceability of significant changes. Some audit logs available include Price Change Audit Report, User Access Audit Report, and Transaction Audit Report.

The audit report provides relevant and sufficient details, for example, in the Price Change

[20] Priority Software FBS: https://www.prioritysoftware.com/fbs-core-facility-management-software/

Audit Report, details include:

- The service line item/*SKU_code*/facility tool that was modified
- The date of the action
- The action that was taken
- The name of the user who made the changes
- The type of rate code modified (B, X, W)
- The previous price before the changes

Billing and Receivables

After recharge rates are approved through the recharge proposal process, the facility managers enter them into the FBS system to automatically assign rates to usage. Internal Facility users pay using the institutional financial system, and external users pay using a credit card or check and receive paper invoices. The facility managers export the usage data for the prior month by the 10th of the following month.

- For internal recharges, the usage report is posted in a box folder for departments to make adjustments before submission at the end of the month. Internal users are generally given three to five business days to review the recharge journals, provide feedback or corrections, and notify CNSi of any issues. Once details are confirmed, CNSI submits the journal to Business and Financial Services (BFS).

- CNSI uses the FBS system to generate invoices for external users. When an external user is billed, the Cost Recovery[21] and Non-University Differential (NUD)[22] Accounts are split. CNSI maintains an Excel spreadsheet that is color-coded to track the invoices and payments for each external user. The collection period is 30 days; if a payment is not received by day 31, they follow up with the user. The invoice is recorded in GUS and the GL when payments are received and accepted.

CRITERIA

Our work included interviews, observations, a review of support documentation, and other steps to achieve the outlined objectives. Specifically, we:

- Reviewed UC and UCSB policies and other guidance relevant to the scope of the review:
  - UC Policy, *BFB-A-47 Direct Costing Procedures*
  - UCSB *Income and Recharge Guidelines*
  - UC Policy, *BFB-A-59_ Costing and Working Capital for Auxiliary and Service Enterprises*
  - UCSB *Departmental Costing Guidelines*
  - UCSB *Income and Recharge Policies and Procedures Training*

- Researched and reviewed relevant UC Audit and Advisory Services reports related to the scope of the audit.

[21] The full costs of providing the goods or services.
[22] The mark-up income on sales to external customers.

- Conducted interviews with CNSI personnel to understand core business processes, policies, procedures, guidance, and internal controls.

- Performed a risk analysis that considered potential threats, their likelihood of occurrence, the severity of their impact, and existing controls to mitigate the risks.

- Determined that all recharge facilities have current approved recharge packets and rates have been appropriately communicated to users and updated on websites.

- Determined whether approved user rates are consistently applied to facility use transactions.

- Selected a sample of recharge activity and determined whether payments align with facility usage, billing occurred within 45 days, appropriate object codes (3900, 7280), and payments are appropriately recorded in the GL.

- Analyzed financial reports to identify facilities' trends in deficits or surpluses and evaluated whether deficit or surplus levels comply with policy.

- Quantify and analyze the receivables status of each facility. Identified overdue receivables and assessed the escalation procedures for late/overdue payments.

- Assessed the facilities' use monitoring practices and reservation trends to identify potential misuse or overbooking.

- Reviewed user roles and permissions in the computer system that guarantee separation of duties and evaluated the adequacy of audit logs to track modification of recharge rates in the system.

- Verified that monthly reconciliations are conducted consistently for a sample of months and facilities.

This audit was conducted in conformance with the Institute of Internal Auditors' 2024 International Professional Practices Framework's (IPPF) Global Internal Audit Standards.

AUDIT TEAM

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APPENDIX A

Table A1 summarizes transactions for each facility's six-month period and the number of transactions for which we verified compliance. Where applicable, the total transactions include internal, external, and incubator usage data.

Table A1	Facilities and Total Transactions		
Facility	**Total Transactions**	**Total Transactions Reviewed**	**Total Transactions Unverified****
Cleanroom	921	814*	107
BioPacific	984	984	-
MFL_IW	1160	634*	526
BNL	1642	1546*	96
IT Services	284	284	-
Building Services	75	72	3
Grand Total	**5066**	**4334**	**732**

Source: FBS Usage report and Auditor analysis.

* This includes some training transactions charged at zero cost: Cleanroom includes 57, MFL has one, and BNL includes 135 transactions. These transactions will not be counted in the total verified transactions (in Table A2) for analysis, as they are not actual transactions.

** These transactions were for tools/services not listed in the recharge pocket for FY2024-25, such as Supplies/Materials.

Table A2 summarizes compliance statistics for each facility and the corresponding compliance rates for implementing the approved rates.

Table A2	Facilities and Compliance Rates				
Facility	**Total Verified Transactions***	**Total Compliant**	**% of Compliance**	**Total Non-Compliance**	**% of Non-Compliance**
Cleanroom	757	739	98%	18	2%
BioPacific	984	517	53%	467	47%
MFL_IW	633	378	60%	255	40%
BNL	1411	1222	87%	189	12%
IT Services	284	280	99%	4	1%
Building Services	72	71	99%	1	1%
Grand Total	**4141**	**3207**	**77%**	**934**	**23%**

Source: Facility usage report and Auditor analysis.

- Total does not include training transactions charged at zero cost.

Table A3 in Appendix A presents some related instances of non-compliance with the rates and summarises examples of instances where the inconsistencies occurred.

Table A3		**Examples of Non-compliance in Rate Application**
Observation	**Facility**	**Instances of Occurrences**
Delayed Rate Implementation	MFL_IW	• The approved rate for FY2024/25 was not implemented for the *Staff Assistant services (WW-time)* at the review time. The prior rate was charged for all transactions from September through January 2025.
	BioPacific	• The approved rates were applied in November 2024, rather than August 2024, for some tools and services such as the *Symphony X Synthesizer and Texture Analyzer*. Transactions between August and October for these tools were charged the previous rates.
	BNL	• The incubator user rates were implemented in September 2024, rather than the effective date of August 2024. For example, at Hakari Company, an active incubator, the incubator rate was not applied for August transactions except for September 2024 transactions for *General Lab Equipment and Analytical 1 & 2* tools. The internal rate was applied to transactions in August 2024. • The external rate for *Storage and General Lab Equipment* tools was applied to Vine Medical in October 2024, instead of August 2024. Transactions in August and September were charged at the incubator and internal rate.
	Cleanroom	• External rates were implemented in January 2025 for one external company, Capella, for the *CR Access and Technical Assistance* tools. October 2024 transactions for the *Vulcan* and *Furnace Run* tools were charged at the internal rate instead of the external rate.
Misapplication of Rates Due to the Misclassification of Users	Cleanroom	• The BluGlass company, an external user, was charged an internal rate instead of an external rate for the *CR Access and Technical Assistance* tools in October 2024. • An incubator company, Leeta, was charged an internal rate instead of the incubator rate for the *Material Synthesis core* tool in October 2024. • An external user, Capella, was charged the internal rate instead of the external rate for the *Material Synthesis Core* in October.
	BNL	• Vine Medical, an external user, was charged both the internal and incubator rates instead of the external rates for some transactions in August and September 2024 for *Storage and General lab equipment tools.*
	MFL_IW	• Michael Goard, Internal BioPACIFIC, and Rachel Segalman, internal users, were charged the incubator rates for *Haas CNC, Lasser cutter, and Forms lab* tools for transactions in September through December 2024.

Table A3		Examples of Non-compliance in Rate Application
Observation	**Facility**	**Instances of Occurrences**
		• Vine Medical and Capella, both external users, were charged the incubator rate for some transactions in September 2024 for the *Laser cutter* tool.
	IT Services	• Four external users, including Hakari Medical Technologies, Leeta Materials, and two students, were charged internal rates instead of the external rate for the *Poster printing*. The two students did not charge the transaction to their projects; how such transactions should be treated is unclear. Additionally, this facility does not specifically have approved rates for external users. Facility managers make judgmental determinations about whether a client service is external or internal. For consistent application, the department should define external users and develop external rates in the proposal for this facility.
	Building Services	• Mirios Inc., an external user, was charged an internal rate instead of an external rate for the *Gaseous Nitrogen* tool in August 2024.
Unapproved Rate Models	Cleanroom	• Four September and October 2024 transactions were described as mask services, which included two rates. The *LCP* tool combines two tools listed in the proposal: *Technical Assistance and CR Access.* The model used a ratio instead of combining the two rates to determine the unit cost.
	BioPacific	• Several rates were neither prior nor current for tools such as *Analytical HPLC, 3D Printing, Optics11, and Separations*. These were possible flat-rate applications.
	BNL	• Several tools, including *General Lab Equipment, Cell Culture Core, and Qubit*, were charged using the flat-rate model instead of the applicable rate specified in the proposal. For example, the *General Lab Equipment* was charged at a lower unit price of $2.18, $0.40, and $1.96 per unit, rather than the $12 per unit stated in the proposal.
	MFL_IW	• Several tools, including *FormLabs, Laser Cutter, and Waterjet*, were charged lower unit prices for external users, which were neither the prior rate nor the current rate of $5.40, $88.15, and $163.65, respectively. Instead, the unit prices charged were $3, $19.30, and $40, respectively. These were possible flat-rate applications.
Inconsistent Tool Naming*	Cleanroom	• *CR Access* on the proposal is also called *ACID BENCH, DCVD, ECR, PRIMO*, etc, in the system
	BioPacific	• *Separations* is referred to as *V10 Evaporator and Genevac in the system. 3D Printing is also Mono3Z2*
	BNL	• *Analytical(AVG or Analytical 1 & 2)* is referred to as *NamoSight NS300 and Octet R4. Sequencing is also a MiSeq Run*
	MFL_IW	• *General Use* is also referred to as *Circuit-cutter, Hot-press, and Vac-oven*
Lack of proper tracking of users*	IT Services	

Table A3		Examples of Non-compliance in Rate Application
Observation	**Facility**	**Instances of Occurrences**
	Building Services	• Due to the infrequency of external users, these facilities do not maintain specific records for external users. They are either included in the internal data or identified in the Accounts Receivable schedule. This could impact the completeness of the data and the accuracy of billing.

Source: Facility use report and Auditor Analysis.
*Transactions from these non-revenue or non-monetary activities were not included in the calculation of the noncompliance rate and the revenue shortfall.

APPENDIX B

Table B1	CNSI Management Response

Key Observations and Background

We appreciate the auditors' time and insights. The audit took place during a pivotal period in CNSI's operations, following a comprehensive three-year restructuring of staff and processes. It was also conducted shortly before UCSB's major transition to the new Oracle FMM financial system. The following observations from CNSI Management are intended to provide key background and context for understanding the audit findings and recommendations.

1. Recharge Packet Approval Process.

The auditors note that recharge packets were only recently approved for most CNSI facilities. In previous years, recharge packets were developed and submitted, but the revision process led to unproductive iterations among CNSI staff and between CNSI staff and Budget and Planning (BAP). Problems underlying these interactions were identified by CNSI leadership in prior internal reviews and internal audits, and were addressed during a significant restructuring effort over the past three years. The staff responsible for the prior submissions no longer work for the Institute.

During the development of the FY24–25 proposals, delays in Office of Research (OR)/BAP approvals and a lack of clarity regarding the workflow between CNSI, OR, and BAP led to confusion around the implementation timeline and other challenges. We agree that establishing a more robust and transparent communication strategy would benefit all parties involved.

2. FBS Limitations.

CNSI utilizes the campus-approved FBS software to manage many aspects of facility operations and must work within the limitations of this and other applicable systems. Currently, FBS offers limited monitoring controls for actual facility usage, relying primarily on user input and lacking real-time tracking capabilities. While CNSI continues to explore options, no alternative platform offering improved functionality over FBS has been identified to date. Other auditor suggestions, such as clearly delineating activities related to customer acquisition or training and troubleshooting from actual recharge transactions, would be helpful, but may not be possible due to limitations within the FBS and other software, which do not provide unbounded flexibility in this regard.

3. Resource Limitations.

It is important to highlight that CNSI manages six facilities generating over $875,000 in annual income for UCSB, yet operates with only 1.2 FTE dedicated to financial administration—a staffing level that is inadequate for the scale and complexity of its operations. Despite CNSI's instrumental role in securing significant indirect cost recovery through major extramurally funded centers, its campus budget allocation has remained flat, failing to keep pace with inflation, rising salaries, and cost-of-living adjustments. This persistent underfunding jeopardizes the Institute's ability to sustain efficient operations and support the broader research enterprise. Increasing CNSI's budget and staffing would enhance operational consistency and long-term institutional impact. However, given current campus budget constraints, additional support is unlikely, limiting CNSI's capacity to fully implement certain audit recommendations.

Table B1	CNSI Management Response
Key Observations and Background	

4. External Economic Landscape.

CNSI's recharge facilities are not immune to the economic pressures felt both by the state and the nation. The financial health analysis of the CNSI facilities conducted during this audit included FYs 21 and 22, during which the pandemic severely curtailed research operations. It is important to note that the facilities have shown encouraging signs of recovery and revenue growth. That said, the current instability of federal funding is likely to affect the financial health of recharge facilities across the whole UCSB campus.

In terms of deficit reduction, BNL, Cleanroom, and IT are showing positive trends into FY24, with ~50% reduction in deficits as compared to the prior years. We agree that the increased deficits within MFL-IW are a concern, which we are actively addressing. Through the operational restructuring that has taken place over the past four years, CNSI has instituted improved supervision, streamlined processes, and established better and more transparent communication across and between the facilities and the Institute. One outcome is the recent combination of two facilities, previously called the Innovation Workshop and Microfluidics Facility, into a single entity called the 'Innovation Workshop' and referred to within as MFL-IW. This condensed the physical footprint of the facility to enable growth of other Institute priorities, while focusing the facility's offering of high-impact services to accelerate research and discovery, which we believe will drive customer engagement and improve facility efficiency. The other change driving the MFL-IW deficit is the recruitment of a full-time PhD-level manager in 2022, who replaced the prior part-time manager, and who is now leading the facility reorganization and driving growth. As the auditors note, income is increasing, but not commensurate with the salary increase. Now that the facility reorganization is complete, CNSI leadership is working closely with the Innovation Workshop manager to identify opportunities for additional salary support via engagement in grant-funded research, innovation initiatives, and workforce development. These efforts aim to strengthen the facility's financial sustainability while enhancing its value to CNSI and the broader campus community.

Source: CNSI