Total Compiling of Incident Reports From Nexsim to the United States Department of Defense

Nex.RY Simulator Critical Failure Incident Report

Prepared by Nexsim Quantum Computing

Date: December 6, 2023
Date of Incident: December 5, 2023

I. Executive Summary:

The Nex.RY Simulator, a quantum computing prototype developed by Nexsim Quantum Computing, suffered a catastrophic failure during its 12th test on December 5, 2023, at 20:23 hours. This incident resulted in the collapse of a critical turbine strut, leading to the destruction of the outer containment ring and severe structural damage to the facility. The following report provides a comprehensive overview of the incident, its aftermath, and the preliminary analysis of the root cause.

II. Incident Overview:

1. Date and Time: December 5, 2023, 20:23 hours.
2. Location: Nexsim Quantum Computing Facility (leased from the U.S Department of Defense).
3. Nature of Incident: Turbine strut failure causing destruction of the outer containment ring and structural damage.

III. Personnel Casualties:

1. Fatalities: Three scientists and five workers.
2. Injuries: Forty-two individuals, including board members, scientists, engineers, and workers, sustained varying levels of bodily damage.

IV. Facility Damage:

1. South Wall: Total collapse.
2. West Wall: Partial collapse.
3. North Wall: Irreparable damage.

V. Incident Response:

1. Evacuation Protocols:
   - Detailed Procedures: All personnel, including board members, scientists, engineers, and workers, adhered to a meticulously designed evacuation protocol. This protocol encompassed designated evacuation routes, assembly points, and roles and responsibilities assigned to specific personnel.
   - Training Effectiveness: The successful evacuation underscores the efficacy of ongoing training programs, where employees are regularly briefed on emergency procedures, ensuring a swift and orderly evacuation even under high-stress situations.
   - Communication Measures: The incident highlighted the importance of clear and concise communication channels, both within the facility and with external emergency response teams, ensuring that evacuation instructions were disseminated promptly and accurately.

2. Emergency Services Contact:
   - Prompt Notification: The incident triggered an immediate and efficient response from on-site personnel who promptly initiated contact with local emergency services. This swift action ensured that external assistance and expertise were quickly mobilized to the site.
   - Collaboration with Emergency Teams: The collaboration between on-site emergency response teams and local services facilitated a seamless exchange of critical information. This

collaboration contributed to the successful coordination of resources, including medical assistance and structural engineering expertise.
- Continuous Communication: Communication with emergency services continued throughout the incident, with regular updates provided on the evolving situation. This transparent and continuous dialogue ensured that external responders were well-informed and able to adapt their approach based on real-time developments.

By providing these additional details, the incident response section becomes more comprehensive, offering insights into the preparedness, training, communication, and collaboration aspects that contributed to the successful evacuation and engagement of local emergency services.

VI. Root Cause Analysis:

1. Preliminary Findings: Turbine strut failure.
2. Probable Cause: Unexpected cooling in the heat exchange system, altering the tensile strength of the lower frame of the strut.

VII. Mitigation Measures:

1. Temporary Suspension: All testing suspended pending a comprehensive investigation.
2. Enhanced Monitoring: Implementation of further enhanced monitoring systems for real-time data analysis.
3. Collaboration: Nexsim QC has chosen to continue the private development of the Nex.RY technology, with the approval and funding of the DoD.

VIII. Detailed Root Cause Analysis:

1. Preliminary Findings: Turbine Strut Failure:
- Feasible Details: Initial investigations determined that the catastrophic failure of the turbine strut was the primary contributing factor to the incident. The strut, a critical component in the structural integrity of the Nex.RY Simulator, experienced a sudden and unexpected failure during the 13th test on December 5, 2023, at 20:23 hours.

2. Probable Cause: Unexpected Cooling in the Heat Exchange System:

- Feasible Details: Subsequent analysis identified the probable cause of the turbine strut failure as an unforeseen cooling event within the heat exchange system. This unexpected cooling resulted in alterations to the tensile strength of the lower frame of the strut, ultimately leading to its collapse.

- Deviation in Material Composition: As part of the ongoing investigation, a detailed examination of the turbine strut design revealed deviations in material composition and manufacturing tolerances. The turbine blade structure, composed of both an internal carbon fiber skeleton and an external fiberglass exoskeleton, exhibited slight variations from the specified design.

1. Carbon Fiber Skeleton:
   - Material Composition: The internal structure of the blade, consisting of a carbon fiber skeleton, demonstrated a composition where carbon fibers constituted 61.83% +/- .05% by volume, with a polymer matrix (Cyanoacrylate) making up the remaining 38.17% +/- .05% by volume.
   - Deviations: The material testing phase uncovered slight deviations from the specified composition, highlighting potential areas of concern in the manufacturing process.

2. Fiberglass Exoskeleton:
   - Material Composition: The external layer of the blade, featuring a fiberglass exoskeleton, exhibited a composition where fiberglass accounted for 70.05% +/- .05% by volume, with a polymer matrix (Polyester resin) constituting the remaining 29.95% +/- .05% by volume.
   - Deviations: Similar to the carbon fiber skeleton, deviations in material composition were identified during testing, prompting a thorough review of the manufacturing processes.

- Heat Exchange System Analysis: Further investigation into the heat exchange system, a critical subsystem of the Nex.RY Simulator, unveiled an intricate combination of materials carefully selected for optimal thermal conductivity and durability.

1. Copper Matrix:
   - Scientific Rationale: The copper matrix, chosen for its exceptional thermal conductivity, featured a crystalline lattice structure facilitating the rapid movement of thermal energy.
   - Overcooling Potential: In specific scenarios, the rapid heat dissipation facilitated by the copper matrix, coupled with unexpected cooling events, could lead to an unintentional reduction in temperature, potentially affecting the overall efficiency of the heat exchange process.

2. Aluminum Fins:
   - Scientific Rationale: Aluminum fins were strategically integrated into the system to increase the surface area available for heat exchange, enhancing overall efficiency.

- Overcooling Potential: Sudden and substantial cooling events could inadvertently amplify the cooling effect of the aluminum fins, potentially surpassing the optimal temperature range for the turbine strut.

3. Nickel-Based Alloys:
   - Scientific Rationale: Nickel alloys, resilient in high-temperature environments, were incorporated to ensure the longevity and durability of critical components.
   - Overcooling Potential: Despite the high-temperature stability of nickel alloys, unexpected cooling events could impact the material's response to thermal stress, potentially influencing the tensile strength of structural elements within the turbine strut.

4. Ceramic Insulators:
   - Scientific Rationale: Ceramic insulators, known for their thermal stability, were strategically used to manage heat flow within the system.
   - Overcooling Potential: In the event of rapid and unexpected cooling, the insulating properties of ceramics may inadvertently lead to the retention of lower temperatures, disrupting the delicate thermal balance within the heat exchange system.

- Material Testing and Rigorous Analysis: In response to these preliminary findings, an extensive material testing phase has been initiated to comprehensively understand the structural integrity of both the turbine strut components and the heat exchange system under varying temperature conditions. This phase aims to validate hypotheses related to the overcooling phenomenon and identify specific mechanisms at play in the failure of the Nex.RY Simulator.

This detailed Root Cause Analysis provides a comprehensive examination of the factors contributing to the turbine strut failure, encompassing deviations in material composition, manufacturing tolerances, and unexpected cooling events within the intricate heat exchange system. The ongoing material testing and analysis are imperative to further substantiate these findings and inform targeted corrective actions for future iterations of the quantum computing prototype.

IX. Recommendations:

1. Engineering Review: Conduct a comprehensive review of the entire turbine system, focusing on material specifications, manufacturing processes, and quality control measures. See above for summarized material analysis.
2. Thermal Dynamics Analysis: Engage our internal thermal dynamics experts again to optimize the heat exchange system and prevent unexpected cooling. See above for Heat Exchange Matrix material analysis.

3. Risk Assessment: Conduct a thorough risk assessment to identify potential vulnerabilities in other critical components. See "**Risk Assessment for Nex.RY Simulator Quantum Computing Prototype**" for a further analysis,

X. Conclusion:

Nexsim deeply regrets the loss of lives and the impact on the facility. The company is fully committed to a transparent and collaborative investigation to determine the root cause of the incident. Our priority is to implement corrective measures and preventive actions to ensure the safety and reliability of future quantum computing prototypes.

Risk Assessment for Nex.RY Simulator Quantum Computing Prototype

Prepared by Nexsim Quantum Computing

Date: December 10, 2023

I. Introduction:

In the aftermath of the critical failure incident on December 5, 2023, involving the Nex.RY Simulator, Nexsim Quantum Computing recognizes the imperative need for a comprehensive risk assessment to identify potential vulnerabilities in other critical components of the quantum computing prototype. This assessment aims to enhance the safety, reliability, and resilience of the system, mitigating the risk of similar incidents in the future.

II. Methodology:

1. Component Identification: Compile an exhaustive list of critical components within the Nex.RY Simulator, including but not limited to quantum processing units, control systems, power supply units, and auxiliary systems.
2. Functional Dependencies: Analyze the interdependencies and functional relationships among the identified components to understand potential cascading effects of failures.
3. Environmental Factors: Consider external factors such as temperature variations, electromagnetic interference, and operational stressors that may impact component performance.
4. Historical Data: Review historical data from previous tests and simulations to identify patterns or anomalies that may indicate potential vulnerabilities.

III. Critical Components:

1. Quantum Processing Units (QPUs):
   - Feasible Details: Assess the stability of QPUs under varying quantum states and processing loads. Evaluate the impact of unexpected cooling on quantum entanglement processes.

2. Control Systems:
   - Feasible Details: Investigate the robustness of control algorithms in responding to abrupt changes in system parameters. Analyze potential vulnerabilities in the communication protocols between control systems and quantum processors.

3. Power Supply Units:
   - Feasible Details: Examine the reliability of power supply units, considering the impact of power fluctuations and potential electrical surges. Evaluate the effectiveness of failsafe mechanisms to prevent overloading.

4. Auxiliary Systems (Cooling, Ventilation):
   - Feasible Details: Scrutinize the efficiency of cooling systems, assessing their response to unexpected cooling events and potential failures in temperature regulation. Evaluate ventilation systems to ensure optimal heat dissipation.

IV. Potential Vulnerabilities:

1. Material Compatibility:
   - Feasible Details: Assess the compatibility of materials used in critical components to avoid issues such as corrosion, degradation, or unintended interactions that could compromise structural integrity.

2. Software Security:
   - Feasible Details: Conduct a cybersecurity audit to identify potential vulnerabilities in the software controlling the quantum processing and control systems. Implement measures to prevent unauthorized access and potential cyber threats.

3. Redundancy Measures:
   - Feasible Details: Evaluate the redundancy mechanisms in place for critical components. Ensure that backup systems are robust and capable of seamlessly taking over in the event of a failure.

4. Operational Protocols:
   - Feasible Details: Review and enhance operational protocols to include specific guidelines for unexpected events. Train personnel on emergency procedures to minimize response times and ensure efficient evacuation.

V. Mitigation Strategies:

1. Enhanced Monitoring Systems:
   - Feasible Details: Implement advanced monitoring systems with real-time analytics to detect anomalies in component performance. Integrate machine learning algorithms for predictive maintenance.

2. Materials Testing:
   - Feasible Details: Conduct rigorous materials testing for all critical components to ensure their resilience under various operating conditions. Consider alternative materials with improved properties if necessary.

3. Scenario-Based Training:
   - Feasible Details: Develop scenario-based training programs for personnel to simulate unexpected events. Enhance their preparedness and response capabilities to minimize the impact of unforeseen incidents.

4. Continuous Improvement:
   - Feasible Details: Establish a continuous improvement framework, regularly reviewing and updating risk assessments based on the latest technological advancements, operational insights, and feedback from incident investigations.

VI. Conclusion:

The risk assessment outlined above seeks to proactively identify and address potential vulnerabilities in critical components of the Nex.RY Simulator. Nexsim Quantum Computing remains committed to the highest standards of safety and reliability, striving for continuous improvement in the pursuit of cutting-edge quantum computing technology.

Nex.RY Simulator Facility Damage Report

Prepared by Nexsim Quantum Computing

Date: December 16, 2023

Introduction:

In order to gain a granular understanding of the facility damage resulting from the catastrophic failure incident on December 5, 2023, Nexsim Quantum Computing conducted a detailed analysis focusing on the structural breakdown of each affected wall. This examination utilizes specific construction terminology to elucidate the nuances of the damage incurred.

I. South Wall: Total Collapse

1. Cause of Collapse: The South Wall experienced a total collapse primarily due to a combination of lateral and vertical forces exerted by the falling debris from the turbine strut failure. The impact of the debris on load-bearing columns and foundation elements resulted in a cascading failure mechanism.

II. Structural Elements Affected:

- Load-Bearing Columns: Several load-bearing columns along the southern face of the facility succumbed to the dynamic loading, leading to a loss of vertical support.
- Foundation Integrity: The foundational elements, including footings and slabs, were compromised under the sudden and immense forces, contributing to the overall collapse.

III. West Wall: Partial Collapse

1. Failure Points: The West Wall experienced a partial collapse characterized by failure points at specific junctures.
2. Structural Stress Points:
   - Shear Failure: Analysis indicates shear failure at specific sections of the wall, suggesting that lateral forces exceeded the material's shear strength.
   - Bearing Capacity: Certain load-bearing elements demonstrated signs of stress, indicating potential weaknesses in load distribution mechanisms.
3. Impact on Adjacent Elements: The partial collapse has led to localized damage in adjacent structural components, necessitating detailed assessments to ascertain the extent of compromised integrity.

IV. North Wall: Irreparable Damage

1. Mechanism of Failure: The North Wall sustained irreparable damage primarily through a combination of torsional and compressive forces induced by the collapse of the South Wall and the partial collapse of the West Wall.
2. Structural Components Affected:
   - Torsional Failure: Twisting forces along the vertical axis of the wall resulted in torsional failure, causing substantial distortion in the structural geometry.
   - Compressive Stress: The cumulative effects of compressive stress, stemming from adjacent structural failures, exceeded the material's capacity to resist deformation.
3. Reconstruction Challenges: The complexity of the damage, involving both torsional and compressive failure modes, presents unique challenges in the reconstruction process, necessitating meticulous planning and engineering expertise.

V. Equipment Damage:

1. Nex.RY Simulator: Severe damage to the outer containment ring, internal quantum components, and control systems.
2. Turbine System: Complete failure of the turbine strut, requiring not only replacement but a comprehensive redesign to prevent future failures.

VI. Environmental Impact:

1. Containment Breach: Swift and effective containment measures prevented any hazardous material leaks or environmental impact.
2. Hazardous Materials: All hazardous materials remained secure, with no risk of environmental contamination.

VII. Emergency Response Measures:

1. Evacuation: The evacuation plan was executed successfully, ensuring the safety of all personnel.
2. Emergency Services: Local emergency services responded promptly and collaborated with internal emergency teams to control the situation.

VIII. Recovery Plan:

1. Structural Assessment: Engage structural engineers to assess the stability of remaining walls, prioritize repairs, and outline reconstruction plans for the North Wall.
2. Turbine System Redesign: Collaborate with engineering experts to redesign the turbine system, incorporating enhanced safety features.
3. Facility Reconstruction: Initiate planning for the complete reconstruction of the North Wall, involving consultations with construction and architecture experts.

IX. Financial Impact:

1. Equipment Replacement: An estimated $15.5 million for replacing damaged quantum components and control systems.
2. Facility Repair: Preliminary assessment indicates repair costs of $112 million for the structural damages to the West Wall.
3. Operational Downtime: Projected losses of $1.1 billion due to the temporary suspension of operations during the recovery period.

X. Timeline for Recovery:

1. Immediate Actions: Begin immediate structural assessments, initiate redesign plans for the turbine system, and establish a timeline for quantum component replacements.

2. Short-Term Goals: Complete structural repairs and initiate the redesign of the turbine system within the next six months.
3. Long-Term Goals: Commence full facility reconstruction, with a projected completion within the next twelve months, however we have begun estimating and we wager we can have the Nex.RY 2 operational within 5 months thanks to the backup materials we have.

XI. Conclusion:

Nexsim is committed to the swift and comprehensive restoration of the facility. The company will prioritize safety, collaboration with industry experts, and the implementation of enhanced measures to prevent future incidents.

Prepared by: [REDACTED]

Engineering Review: Comprehensive Evaluation of the Turbine System

Prepared by Nexsim Quantum Computing

Date: December 15, 2023

I. Introduction:

In light of the critical failure incident involving the turbine strut of the Nex.RY Simulator on December 5, 2023, Nexsim Quantum Computing recognizes the imperative need for a comprehensive engineering review of the entire turbine system. This review aims to scrutinize material specifications, manufacturing processes, and quality control measures, with the goal of identifying potential vulnerabilities, ensuring adherence to design specifications, and implementing corrective actions to enhance the reliability of future quantum computing prototypes.

II. Objectives:

1. Material Specifications: Evaluate the suitability and adherence of materials used in the turbine system to design specifications.
2. Manufacturing Processes: Assess the precision and consistency of manufacturing processes employed in the production of turbine components.
3. Quality Control Measures: Review the effectiveness of existing quality control measures in detecting deviations and ensuring compliance with engineering standards.

III. Material Specifications:

1. Carbon Fiber Skeleton:
   - Review Parameters: Scrutinize the material composition of the internal carbon fiber skeleton in accordance with design specifications.
   - Deviation Analysis: Assess any deviations identified during material testing and evaluate their impact on structural integrity.

2. Fiberglass Exoskeleton:
   - Review Parameters: Examine the material composition of the external fiberglass exoskeleton, ensuring alignment with specified percentages.
   - Deviations Impact Analysis: Evaluate the consequences of identified deviations on the overall structural integrity and resilience of the turbine system.

IV. Manufacturing Processes:

1. Carbon Fiber Skeleton Production:
   - Precision Assessment: Evaluate the precision of manufacturing processes involved in creating the carbon fiber skeleton, including molding and curing procedures.
   - Consistency Check: Ensure uniformity in the application of manufacturing processes across multiple turbine components.

2. Fiberglass Exoskeleton Production:
   - Consistency Assessment: Assess the consistency of manufacturing processes for the fiberglass exoskeleton, focusing on resin application, layering, and curing.
   - Adherence to Design: Verify that manufacturing processes align with design specifications and engineering standards.

V. Quality Control Measures:

1. Material Testing Protocols:
   - Effectiveness Evaluation: Review the effectiveness of material testing protocols in detecting deviations from design specifications.
   - Enhancements: Identify opportunities for enhancements in material testing procedures to ensure more robust detection of irregularities.

2. Manufacturing Quality Checks:
   - Process Validation: Assess the efficacy of quality control measures implemented during the manufacturing process to catch deviations in real-time.
   - Continuous Monitoring: Explore possibilities for continuous monitoring during manufacturing to detect and rectify deviations promptly.

VI. Root Cause Analysis Integration:

1. Correlation with Incident Findings:
   - Integration: Align the engineering review findings with those of the root cause analysis to identify any correlations and verify the impact of material specifications and manufacturing processes on the turbine strut failure.
   - Holistic Understanding: Develop a holistic understanding of the interconnected factors contributing to the incident and inform targeted corrective actions.

VII. Recommendations:

1. Material Specification Refinement:
   - Adjustments: Consider refining material specifications based on the review findings to enhance the structural integrity and resilience of turbine components.
   - Consultation: Engage with material scientists and engineering experts to ensure optimal material selection for future prototypes.

2. Manufacturing Process Optimization:
   - Process Refinement: Implement refinements in manufacturing processes to address identified inconsistencies and enhance precision.
   - Training Programs: Develop targeted training programs for manufacturing personnel to ensure a standardized and meticulous approach.

3. Quality Control Enhancement:

- Protocol Strengthening: Strengthen material testing protocols and manufacturing quality control measures to improve the detection of deviations.
- Technological Integration: Explore the integration of advanced technologies for real-time monitoring and automated quality checks.

VIII. Conclusion:

The comprehensive engineering review serves as a critical step in understanding and addressing potential vulnerabilities within the turbine system. Nexsim Quantum Computing remains committed to implementing the recommendations arising from this review to fortify the robustness and reliability of future quantum computing prototypes.

Prepared by: [REDACTED]

Personnel Casualties: Detailed Incident Report

Prepared by Nexsim Quantum Computing

Date: December 23, 2023

Introduction

The tragic incident on December 5, 2023, involving the Nex.RY Simulator at the Nexsim Quantum Computing Facility resulted in significant personnel casualties. This detailed incident report provides a comprehensive overview of the fatalities and injuries sustained by the personnel involved in the incident.

I. Casualties

1. Dr. Emily Thompson:
   - Position: Lead Quantum Physicist

- Involvement: Dr. Thompson was in close proximity to the collapsing South Wall during the incident.
- Cause of Fatality: Dr. Thompson suffered fatal injuries as a result of debris impact, leading to severe head trauma.

2. Dr. Benjamin Reynolds:
   - Position: Chief Engineer
   - Involvement: Dr. Reynolds was overseeing test parameters near the turbine strut when the incident occurred.
   - Cause of Fatality: Dr. Reynolds succumbed to injuries sustained from the collapse of the West Wall, resulting in multiple fractures and internal injuries.

3. Dr. Sarah Martinez:
   - Position: Computational Scientist
   - Involvement: Dr. Martinez was on the upper floor during the incident, and the collapse of the North Wall contributed to her fatality.
   - Cause of Fatality: Dr. Martinez suffered fatal injuries from falling debris and structural elements, leading to significant trauma and internal bleeding.

4. Worker James Anderson:
   - Position: Facility Maintenance
   - Involvement: Worker Anderson was in the immediate vicinity of the turbine strut during the incident.
   - Cause of Fatality: Worker Anderson sustained fatal injuries from the collapsing structure, resulting in severe blunt force trauma.

5. Worker Maria Rodriguez:
   - Position: Lab Technician
   - Involvement: Worker Rodriguez was in a laboratory near the South Wall during the incident.
   - Cause of Fatality: Worker Rodriguez suffered fatal injuries due to debris impact and structural collapse, resulting in multiple injuries, including head trauma.

II. Injuries

1. Dr. Alexander Harris:
   - Position: Board Member
   - Injury: Fractured leg and minor head contusion. Dr. Harris was on the ground floor and was injured while attempting to evacuate as debris fell.

2. Dr. Melissa Carter:

- Position: Quantum Computing Specialist
- Injury: Sprained wrist and lacerations. Dr. Carter sustained injuries while navigating through debris to reach an emergency exit.

3. Engineer Michael Turner:
   - Position: Mechanical Engineer
   - Injury: Broken ribs and abrasions. Engineer Turner was on the upper floor and suffered injuries during the initial collapse of the South Wall.

4. Worker Sophia Nguyen:
   - Position: Lab Assistant
   - Injury: Concussion and minor burns. Worker Nguyen was in a laboratory near the heat exchange system and suffered injuries from falling equipment.

5. Board Member John Richards:
   - Position: Board Chairman
   - Injury: Bruised ribs and contusions. Board Member Richards sustained injuries during the evacuation, navigating through obstructed pathways.

6. Dr. Michelle Davis:
   - Position: Data Analyst
   - Injury: Sprained ankle and minor cuts. Dr. Davis sustained injuries while attempting to seek shelter during the initial collapse.

7. Engineer Christopher Mitchell:
   - Position: Structural Engineer
   - Injury: Dislocated shoulder and facial abrasions. Engineer Mitchell was conducting structural assessments near the West Wall when the incident occurred.

8. Worker Olivia Thompson:
   - Position: Facility Janitor
   - Injury: Bruised ribs and minor head injury. Worker Thompson was in the vicinity of the South Wall during the incident, performing routine cleaning tasks.

9. Dr. Anthony Lee:
   - Position: Quantum Algorithm Specialist
   - Injury: Sprained wrist and minor cuts. Dr. Lee sustained injuries while assisting in the evacuation of personnel from the upper floors.

10. Engineer Rachel Adams:

- Position: Electrical Engineer
- Injury: Electrical shock and minor burns. Engineer Adams was near the power distribution panel when the incident occurred, resulting in an electrical malfunction.

11. Board Member Cynthia Rodriguez:
    - Position: Board Secretary
    - Injury: Twisted ankle and minor contusions. Board Member Rodriguez was in a conference room on the upper floor during the incident.

12. Worker Samuel White:
    - Position: IT Support
    - Injury: Fractured arm and lacerations. Worker White was in the server room during the incident, attending to critical system maintenance.

13. Dr. Thomas Baker:
    - Position: Quantum Software Developer
    - Injury: Concussion and minor back strain. Dr. Baker was on the upper floor and suffered injuries during the evacuation.

14. Engineer Jessica Carter:
    - Position: Systems Engineer
    - Injury: Broken nose and facial lacerations. Engineer Carter was conducting system checks near the heat exchange system when the incident occurred.

15. Worker Daniel Kim:
    - Position: Security Guard
    - Injury: Sprained wrist and minor burns. Worker Kim was near the facility entrance and sustained injuries while assisting with the evacuation.

16. Board Member Catherine Foster:
    - Position: Board Treasurer
    - Injury: Fractured ankle and minor head contusion. Board Member Foster sustained injuries while attempting to evacuate through a partially obstructed exit.

17. Dr. Robert Harris:
    - Position: Theoretical Physicist
    - Injury: Bruised ribs and moderate back pain. Dr. Harris was in a laboratory near the South Wall during the incident.

18. Engineer Vanessa Lopez:

- Position: Mechanical Design Engineer
- Injury: Sprained knee and facial abrasions. Engineer Lopez was conducting tests on a nearby prototype when the incident occurred.

19. Worker Eric Miller:
   - Position: Facilities Technician
   - Injury: Broken arm and minor burns. Worker Miller was in the facility's maintenance workshop at the time of the incident.

20. Dr. Sandra Turner:
   - Position: Quantum Biologist
   - Injury: Minor cuts and contusions. Dr. Turner was in a laboratory near the West Wall during the incident.

21. Engineer Benjamin Clark:
   - Position: Robotics Specialist
   - Injury: Dislocated shoulder and facial abrasions. Engineer Clark was working on a robotics project near the turbine strut when the incident occurred.

22. Worker Mia Sanchez:
   - Position: Administrative Assistant
   - Injury: Concussion and minor back strain. Worker Sanchez was in an office on the upper floor during the incident.

23. Dr. Jonathan Turner:
   - Position: Materials Scientist
   - Injury: Sprained ankle and moderate cuts. Dr. Turner was in a materials testing laboratory near the South Wall.

24. Engineer Allison Baker:
   - Position: Aerospace Engineer
   - Injury: Fractured wrist and facial lacerations. Engineer Baker was conducting tests on materials near the heat exchange system.

25. Worker Kevin Wilson:
   - Position: Security Guard
   - Injury: Sprained knee and minor burns. Worker Wilson was stationed at the facility entrance and sustained injuries while assisting with evacuation efforts.

III. Uninjured Individuals:

26. Dr. Olivia Parker:
   - Position: Bioelectric Neurosurgeon
   - Location: Dr. Parker was in a secured laboratory on the upper floor, conducting experiments unrelated to the Nex.RY Simulator at the time of the incident.

27. Engineer Ryan Miller:
   - Position: Control Systems Engineer
   - Location: Engineer Miller was in the control room, monitoring system parameters remotely when the incident occurred.

28. Worker Emma Turner:
   - Position: Administrative Coordinator
   - Location: Worker Turner was in an office on the ground floor, handling administrative tasks at the time of the incident.

29. Dr. Joshua White:
   - Position: Artificial Intelligence Specialist
   - Location: Dr. White was in a dedicated AI research room, working on algorithmic advancements and was isolated from the immediate impact.

30. Engineer Lauren Adams:
   - Position: Systems Integration Engineer
   - Location: Engineer Adams was in a testing facility adjacent to the main laboratory, overseeing integration tests at the time of the incident.

31. Board Member Greg Anderson:
   - Position: Board Member
   - Location: Board Member Anderson was attending a virtual board meeting off-site and was not present in the facility during the incident.

32. Dr. Mia Evans:
   - Position: Robotic Materials Specialist
   - Location: Dr. Evans was in a specialized R.D. robotics laboratory on the upper floor, conducting experiments unrelated to the Nex.RY Simulator.

33. Engineer Brandon Garcia:
   - Position: Software Engineer
   - Location: Engineer Garcia was in a software development room on the ground floor, working on code optimizations at the time of the incident.

34. Worker Natalie Martinez:
   - Position: Cafeteria Staff
   - Location: Worker Martinez was in the cafeteria on the ground floor, attending to routine duties during the incident.

35. Dr. Jordan Lewis:
   - Position: Quantum Coder
   - Location: Dr. Lewis was in his cubicle playing Galaga on his work computer on the upper floor.

36. Engineer Rachel Robinson:
   - Position: Robotics Engineer
   - Location: Engineer Robinson was in a robotics testing area near the West Wall, conducting tests on a separate project.

37. Board Member Karen Thompson:
   - Position: Board Member
   - Location: Board Member Thompson was traveling for business and was not present in the facility during the incident.

38. Dr. Ethan Walker:
   - Position: Biomedical Engineer
   - Location: Dr. Walker was in a biomedical research laboratory on the upper floor, conducting experiments unrelated to the Nex.RY Simulator.

39. Engineer Jessica Simmons:
   - Position: Hardware Engineer
   - Location: Engineer Simmons was in a dedicated hardware testing room on the ground floor, conducting tests unrelated to the Nex.RY Simulator.

40. Worker Brian Davis:
   - Position: Facilities Maintenance
   - Location: Worker Davis was conducting routine maintenance on electrical systems in a maintenance room on the ground floor during the incident.

41. Dr. Taylor Garcia:
   - Position: Quantum Psychologist
   - Location: Dr. Garcia was in a dedicated psychological research room on the upper floor, conducting experiments unrelated to the Nex.RY Simulator.

42. Engineer Zachary Turner:
   - Position: Robotic Hydraulics Engineer
   - Location: Engineer Turner was in Robotics Testing Bay C near the beck loading docks, conducting tests unrelated to the Nex.RY Simulator.

These uninjured individuals were situated in various locations throughout the facility, engaged in diverse tasks unrelated to the Nex.RY Simulator, which contributed to their safety during the incident.

Nexsim Quantum Computing, in response to the tragic incident on December 5, 2023, is committed to providing support to the families of the deceased and ensuring comprehensive assistance for the injured personnel. The company is dedicated to following industry best practices and adhering to applicable laws and regulations regarding compensation, insurance, and legal responsibilities.

Support for Families of the Deceased:

1. Life Insurance:
   - Nexsim Quantum Computing has comprehensive life insurance coverage for its employees, including scientists, engineers, and workers. The families of the deceased individuals will be eligible to receive life insurance benefits in accordance with the terms and conditions outlined in the company's life insurance policy.

2. Financial Assistance:
   - The company recognizes the immediate financial needs of the affected families and will provide a one-time financial assistance package to help cover immediate expenses related to funeral arrangements and other pressing matters.

3. Legal Assistance:
   - Nexsim Quantum Computing will engage legal counsel to ensure that the families of the deceased receive the appropriate legal support in navigating insurance claims, paperwork, and any legal proceedings that may arise.

Assistance for Injured Personnel:

1. Worker's Compensation:

- In accordance with applicable state laws, Nexsim Quantum Computing provides worker's compensation benefits to the injured personnel. This coverage includes medical expenses, rehabilitation costs, and compensation for lost wages during the recovery period.

2. Health Insurance:
   - All injured personnel are covered under the company's health insurance plan. Nexsim Quantum Computing will continue to facilitate and cover medical expenses, ensuring that the injured individuals receive necessary medical care and treatment.

3. Disability Benefits:
   - In the case of temporary or permanent disabilities resulting from the incident, affected personnel may be eligible for disability benefits. The company will work closely with the individuals and the insurance provider to ensure a smooth claims process.

1. OSHA Reporting:

In accordance with Occupational Safety and Health Administration (OSHA) regulations, Nexsim Quantum Computing is actively engaging in a comprehensive reporting process. The company is committed to providing detailed reports that encompass the incident timeline, root cause analysis, and the preventive measures being implemented to enhance workplace safety.

- OSHA Reporting Timeline:
  - Nexsim Quantum Computing will adhere to OSHA's reporting deadlines, ensuring that all required documentation is submitted within the stipulated time frames.

- Root Cause Analysis:
  - The company is conducting an exhaustive root cause analysis to identify the specific factors that contributed to the incident. This analysis will be incorporated into the OSHA reports to facilitate a thorough understanding of the events leading to the failure of the NEX.ry Simulator.

2. Insurance Coverage Verification:

Nexsim Quantum Computing is actively collaborating with its insurance providers to verify coverage and ensure that the families of the deceased and the injured personnel receive the full benefits entitled to them under existing insurance policies.

- Claims Process Transparency:

  - The company will maintain transparency throughout the claims process, providing families and injured individuals with clear information about coverage, entitlements, and the steps involved in filing and processing claims.

3. Legal Obligations:

Engaging legal counsel, Nexsim Quantum Computing is committed to fulfilling all legal obligations, including those outlined by the Employee Retirement Income Security Act (ERISA) and state-specific workers' compensation laws.

- ERISA Compliance:
  - The legal team will ensure that all actions taken by the company are in full compliance with ERISA regulations, providing the necessary documentation and support to families and injured personnel.

- Workers' Compensation Laws:
  - Nexsim Quantum Computing will work closely with legal experts to navigate state-specific workers' compensation laws, ensuring that the injured personnel receive the compensation and benefits to which they are entitled.

4. Collaboration with Authorities:

Nexsim Quantum Computing recognizes the importance of collaborating with relevant authorities to ensure a comprehensive and thorough investigation.

- Coordination with Regulatory Bodies:
  - The company will actively cooperate with regulatory bodies overseeing workplace safety, quantum computing technology, and any other relevant areas to address inquiries and implement recommendations.

This commitment to regulatory compliance and legal obligations underscores Nexsim Quantum Computing's dedication to accountability, transparency, and the well-being of those affected by the incident.

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