Incident Investigation Analysis

REVISION

Rev No.	DCN No.	Change Summary	Release Date	DCN Initiator	Document Owner
1	DCN4205	Initial Release	March 2025	P. LaFountain	K. Rydberg

Prior revision history, if applicable, is available from the Document Control Office.

1 PURPOSE AND SCOPE

The purpose of this policy is to provide a systematic approach to identify and investigate incidents in order to prevent recurrence. Determining the root cause of the incident demonstrates a culture of continuous improvement, and promotes commitment to health and safety for employees at the Albany Nanotech Complex.

It is a goal, through detailed and thorough investigation, to identify corrective actions necessary to prevent future incidents. Evaluating these events provides an opportunity to identify hazards in operational processes, and to bolster safety and health programs at the Albany NanoTech Complex.

2 SCOPE

NY CREATES strives to provide all employees, tenants and contractors with a safe and healthy workplace. This program is integrated into our written health and safety policies, and is a collaborative effort that includes all site personnel.

3 DEFINITIONS

3.1 **Administrative (or Work Practice) Controls** – Procedures that are used to reduce the duration, frequency or severity of exposure to a hazard. These may include work methods training, job rotation, and gradual introduction to work.

3.2 **Engineering Controls** – A method of eliminating or reducing the quantity or severity of job risk factors by redesigning equipment, processes, tools, and workstations.

3.3 **Incident** – An unplanned, undesired event that adversely affects completion of a task. A work incident could include, but is not limited to, an accident resulting in a near miss, injury, illness, and/or property damage.

3.4 **Injury or Illness** – An injury or illness is an abnormal condition or disorder. Injuries include cases such as, but not limited to, a cut, fracture, sprain, or amputation. Illnesses include both acute and chronic illnesses, such as, but not limited to, thermal / chemical burn, respiratory disorder, poisoning, or hearing loss.

3.5 **Near Miss** – Incidents where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred.

3.6 **Personal Protective Equipment (PPE)** – Gloves, safety glasses, respirator, kneepads, and other equipment worn by employees that may help reduce hazards until other controls can be implemented, or to supplement existing controls.

3.7 **Root Cause** – Visible, identifiable, and immediate factors that trigger an incident and, if removed, would have prevented the event from occurring.

4 RESPONSIBILITIES

The investigation team shall be comprised of a diverse team of cross-functional individuals or groups of individuals. This diversity can contribute different perspectives of the incident, allowing for a more comprehensive investigation.

4.1 Executive Management

Executive management shall commit to the incident investigation process and champion the effort by pledging financial and leadership support for the investigation of accidents and near miss events.

4.2 Environmental Health and Safety Department (EHS)

EHS is responsible for this policy and all evaluations, investigations, trainings, and recommended solutions, in collaboration with management.

EHS monitors the results of the program and determines additional areas of focus to incorporate.

EHS is responsible for pulling together the correct group of individuals, including their management from all affected parties, as well as at least one unconnected party to perform the investigation.

EHS also:

- Ensures supervisors and employees are aware of how to conduct incident investigations
- Ensures a system is in place for employees to report incidents and near misses
- Ensures accurate records are maintained, and provides documentation upon request
- Follows up on all corrective actions suggested during the incident investigation process
- Ensures approved corrective actions are implemented in a timely manner
- Conducts continuous review of the program

4.3 Supervisors / Managers

Managers and Supervisors are:

- Accountable for the health and safety of all employees within their departments through their active support of the incident investigation program
- Required to attend incident investigation training to familiarize themselves with the elements of the program
- Responsible for ensuring that employees under their supervision have received the appropriate training on accident and near miss reporting
- Responsible for initiating the incident investigation process **within 24 hours** of an incident
- Responsible for implementing approved corrective actions, and ensuring they are completed appropriately through active follow-up
- Required to conduct a brief review of all incidents and complete the required documentation, including forms **EHS-00026-F7** – Employee Report of Incident (Injury or Illness Event) or **EHS-00026 F8** – Employee Near Miss Report and **EHS-00026-F2** – Supervisor's Incident Investigation Report.

4.4 Employees

Employees are responsible for conducting themselves in accordance with this policy and program.

All employees will:

- Report all incidents and near misses immediately to their supervisor, but **no longer than 12 hours after** the time of the incident
- Complete **EHS-00026-F7** – Employee Report of Incident (Injury or Illness Event) or **EHS-00026-F8** – Employee Near Miss Report, and send to their supervisor

The employee that is directly involved in the incident should be involved in the investigation if they are medically fit to do so.

Any employees who were witness to the incident should also participate in the investigation.

4.5 Program Administrator

The program administrator is responsible for the validation, final approval, and guidance for corrective action implementation strategies. This will be a designated individual in EHS. This individual will also be responsible for tracking investigations and ensure follow-up is adequately completed.

5 ASSOCIATED DOCUMENTS

5.1 **EHS-00012-F7** – First Aid Report

5.2 **EHS-00019-F1** – ERT Incident Report

5.3 **EHS-00026** – Incident (Injury, Illness, or Near Miss Event) Reporting and Prevention Policy

5.4 **EHS-00026-F2** – Supervisor's Incident Investigation Report (Injury, Illness, Near Miss Event)

5.5 **EHS-00026-F7** – Employee Report of Incident (Injury or Illness Event) Form

5.6 **EHS-00026-F8** – Employee Near Miss Report

5.7 **EHS-00083** – OSHA Requirements for Injury and Illness Recordkeeping and Reporting

5.8 **EHS-00083-F1** – OSHA Serious Event Reporting Form

5.9 **EHS-00089-F1** – Incident Investigation Form

6 TRAINING

New and previously untrained employees will receive an overview of this program and how it will be applied when investigating near misses and incidents. The overview, at a minimum, will include the following elements:

- An explanation of the Incident Investigation Program and the role of the employee
- An emphasis on the importance and method of prompt reporting of incidents and near misses
- Review of the incident investigation form, with emphasis on determining contributing factors and corrective actions

7 INVESTIGATION PROCESS

7.1 Notification / Reporting

All employees are required to report any incident or near miss to their immediate supervisor and EHS immediately but **not more than 2 hours after** the time of occurrence.

The process for notification should be followed as directed by site training. After all appropriate site and outside agency notifications have been made, if required, the EHS office will determine the type of investigation required.

7.2 Interviews

Within 24 hours, unless extenuating circumstances preventing these interviews from occurring are relayed to the Program Manager or Lead Investigator, the manager or supervisor of the employee who was involved in the incident or near miss will begin interviewing employees who were involved, in close proximity to the incident, and/or who are familiar with the related process or work practices. All individuals will be interviewed separately. A minimum of two people must be interviewed for any incident or near miss reported.

At least one member of EHS, FEG, or FOG will lead the investigation. The Directors of EHS, FEG, and FOG will determine who the lead will be based on the type, location, or impact of incident that occurred.

While interviewing and during the entire investigation process it is important to:

- Provide a thorough description of the incident and injury, if applicable, and document all associated pertinent information.
- Obtain a detailed description of how the incident, injury, or near miss occurred, as well as the sequence of events leading up to it. This narrative should include other people around or involved, and area conditions (location, weather, lighting, time of day, equipment used, noise, how long into the employee's shift the incident occurred).
- Gather information on the task being performed (general description, how many people it entailed, routine or non-routine, was the individual new to this task, has the individual been trained on how to complete the task, is there a written procedure for the task).

- Collect pictures or videos whenever possible. A camera permit must be obtained if not already issued to the individual taking pictures. Times are especially important because security can review historical footage.
- Tape off areas, as appropriate.
- Set up guarded areas until all aspects of the area have been reviewed by all associated parties and those involved in the investigation.
- Document the scene, including collecting facts about the tools or equipment that were involved (e.g., models, serial numbers, HEX IDs, etc.
- Include the names or IDs of any witnesses to the incident.

7.3 Timeline and Collection of Information

An event timeline will be developed for each reported incident or near miss. ***What happened? What led up to the event?*** This timeline will start with the incident or near miss, and be developed using information obtained from the interviews. Each task and event that took place are to be added to the timeline. Also, the timeline will include all physical and behavioral conditions known at the time of each action and event.

Generating a timeline of events before and after the event is critical.

- Gather information for all manuals and guidance documents.
- Reference recent maintenance records, training records, logs, and preventative maintenance entries.
- Sometimes it is helpful to have multiple people interview the same individuals independently.
- Ask for clarifying questions to fill in missing information, and reflect on facts.
- Any additional facts related to the incident should also be noted in a separate list.

7.4 Determining Root Cause

The goal of the investigation is to determine the root cause or why the incident occurred. In order to ascertain the genesis of the incident, direct and indirect causation needs to be established. Direct causes are visible, identifiable, and immediate factors that trigger an incident. Indirect causes are contributing factors that create an environment in which incidents are likely to occur. Indirect causes do not cause the incident, but rather contribute to the overall likelihood of an incident happening.

It is pertinent to determine all factors that contribute to the incident, i.e., equipment, machinery, tools, procedures, training, and work environment. If these factors are identified, investigators must determine why these factors were not addressed before the incident.

7.5 Recommend Corrective Actions

After the root causes are identified, corrective actions will be identified to reduce or eliminate hazardous conditions that led to the incident. The manager / supervisor and employees will develop and propose specific improvements. Those proposed improvements will be submitted to the program administrator for validation, final approval, and guidance for an implementation strategy.

Record the action(s) required and note the person(s) responsible and timeframe to prevent or correct the issue(s) related to each contributing factor. Note any interim precautions taken to correct the nonconformance or discrepancy, and long-term actions to prevent future recurrence.

Recommended corrective actions will come from the highest feasible level of the hierarchy of hazard control. When selecting and recommending these corrective actions, possible solutions will be prioritized using the following hierarchy. In this hierarchy of hazard control, the most looked-for solutions come from the first level, with the following levels offering increasingly less impactful options.

1) **Elimination** – eliminating the hazard from the workplace

2) **Substitution** – replacing a hazardous substance or activity with a less hazardous one

3) **Engineering controls** – providing guards, ventilation or other equipment to control the hazard

4) **Administrative controls** – developing policies and procedures for safe work practices

5) **Personal protective equipment** – using respirators, earplugs, safety glasses, etc.

7.5.1 Incident Severity

Severity	Description	Examples
Minor	Injuries that do not present a serious health risk and are typically recognized as sufficiently treated using standard first aid supplies and techniques.	Minor cuts, scrapes, burns, bruises, sprains, etc.
Moderate	Injuries which often involve initial first aid treatment, but should also include evaluation by a medical professional. These types of injuries generally do not require immediate dispatch of emergency responders.	Foreign objects in the eye that are not completely removed with flushing or that continue to impact vision or pain continues after flushing, second- or third-degree burns, deep cuts, suspected bone fractures / breaks, minor chemical exposure, exposure to blood, etc.
Severe	Injuries that have the potential to be substantial and/ or life threatening. These types of injuries require the site Medical Emergency Procedure to be followed, and immediate dispatch of emergency responders.	Symptoms of heart attack or stroke, profuse bleeding, amputations, unconsciousness, extreme breathing problems, impaled objects, anaphylactic reaction, hypoglycemia in diabetics, shock, seizure, major chemical exposure, etc.

7.6 Implement Corrective Actions

The circumstances will define how the corrective actions are designed. Specific corrective actions will address root causes specific to the incident, but generalized corrective actions could improve overall root causes that could provide improvements to safety systems. It's important that a systematic approach is used to ensure all incident investigations are successful.

7.7 Monitoring Changes

Once implemented, corrective actions will be monitored by the manager / supervisor and Program Manager for effectiveness, to verify that net risk is not increased and to determine that the root cause of the incident has been eliminated or reduced. The manager / supervisor will conduct follow-up interviews with employees who were part of the accident investigation to determine if the implemented corrective actions require any adjustments to provide maximum safety to the employees. Any deficiencies or concerns shall be reported back to the Program Manager for follow-up.

8 ANALYSES SUMMARY

A summary analyses statement should be made after the investigation as a take-away and key message to carry out for future reference.

9 PERIODIC PROGRAM REVIEW

EHS will conduct a program review annually, and any time an incident investigation indicates deficiencies in the procedure, to assess the progress and success of the program. The constant and continuous evaluation of incidents and their findings should be communicated to all teams. The communication will serve as a means of educating the site, will allow for learning and growth, and will assist in the prevention of future near misses and incidents. The review will consider the following:

- Evaluation of all training programs and records
- The need for retraining managers, supervisors and employees
- The length of time between accidents, investigations and implementation of corrective actions
- The program's success based upon comparison to previous years, using the following criteria:
    - Frequency of accidents and near misses
    - Frequency of workers' compensation claims
    - Insurance carrier's loss analysis
    - Employee feedback through direct interviews, walk-through observations, written surveys and questionnaires and reevaluations

10 RECORDS

Metrics should be kept in a simple database of historical records with time, date, parties, and levels of severity.

This data can also be used to refer back to for past years or reference, if needed.