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REPORT

ICMC CYANIDE PRODUCTION RECERTIFICATION AUDIT - SUMMARY AUDIT REPORT

Chemours Bulk Transloading Facility
San Luis Potosi, San Luis Potosi, Mexico

Submitted to:

International Cyanide Management Institute (ICMI)
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Washington, DC 20005

Submitted by:

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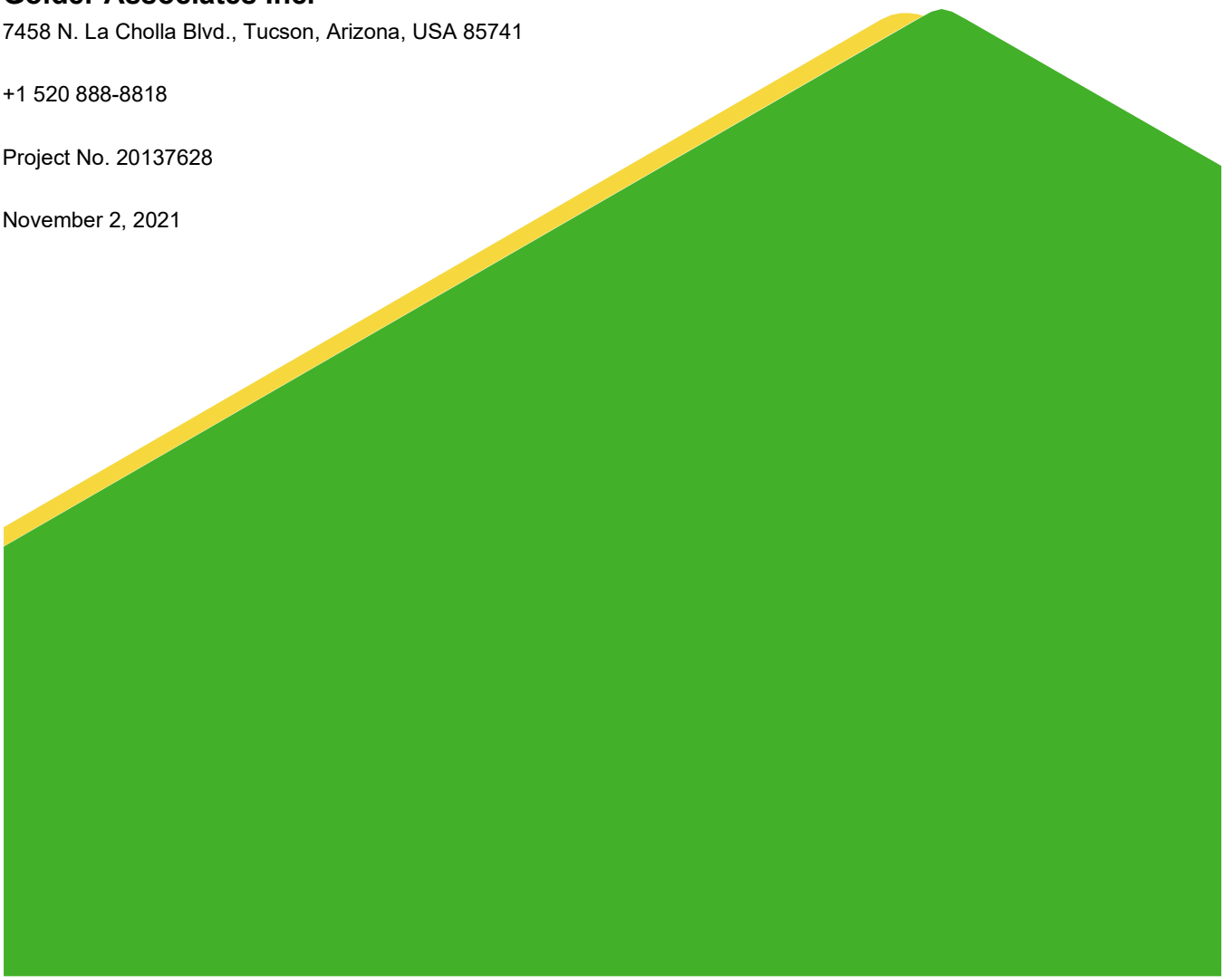

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ICMI - 1 secure pdf

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1.0 SUMMARY AUDIT REPORT FOR CYANIDE PRODUCTION OPERATIONS

Name of Cyanide Production Facility: San Luis Potosi Bulk Transloading Facility

Name of Facility Owner: Chemours Inc.

Name of Facility Operator: The Chemours Company Mexicana, S. de R.L. de C.V.

Name of Responsible Manager: Marcos Cervantes, Cyanide Business Mexico Operations Leader

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2.0 PRODUCTION OVERVIEW

The Bulk Transloading Facility in San Luis Potosi was commissioned in 2006 as a warehouse by DuPont, the predecessor company to Chemours. The warehouse activities were first certified to the International Cyanide Management Institute (ICMI) Cyanide Transportation Protocol as part of the DuPont Mexico Supply Chain audit in 2010. In 2011 operations in San Luis Potosi were expanded to include the transloading system. Because of the addition of this transloading operation, the San Luis Potosi (SLP) facility was certified to the ICMI Production Code in 2014. The facility was recertified in 2017 and is now undergoing its fourth audit cycle.

As noted in previous audit reports, the facility was specifically designed by DuPont engineers, constructed to DuPont specifications, and operated in alignment with the International Cyanide Management Code (ICMC or Code) requirements. Packaged cyanide is stored in covered, well-ventilated warehouses prior to being dispatched to customers by truck. Facility safety features include interlocks on the transloading equipment and isotanker and trailer securement in parking areas within the site. Processes to prevent trace releases of sodium cyanide to the environment include a dust collector interlocked with the transloading operation, use of disposable outer garments, and footwear decontamination. Site security conforms with the Customs Trade Partnership Against Terrorism (CTPAT) requirements of the US Customs and Border Protection.

The property for the Bulk Transloading Facility is owned by Suministros Industriales Potosinos SA de CV (SIP) and is located in the south part of the city of San Luis Potosi (Figure 1). The transloading equipment is owned by Chemours but operated by SIP. The two warehouses, parking areas, rail car movers, and forklifts are owned and operated by SIP. Chemours maintains an office at site with three staff. SIP maintains a staff of 11 at the site. Security is provided under contract round-the-clock by Policia Urbana Bancaria Industriales (PUBI) with a staff of six (i.e., two per shift). Transportes Especializados SA de CV (Segutal), the outbound trucking company, also maintains a staff of three at the site handling and dispatching tractors, isotankers, and trailers. Chemours provides cyanide safety training to all SIP, PUBI, and Segutal staff at the site and includes them in response planning and mock drills. Security is provided under contract round-the-clock.

The Bulk Transloading Facility receives, transloads, and ships solid sodium cyanide (NaCN) as briquettes as shown in the matrix below. Transloading only occurs from rail hopper cars to isotankers or flobins. Ecopacks and wooden boxes are handled and stored without being opened with the exception that occasionally when ecopacks arrive damaged they are transloaded to an isotanker. Empty flobins are returned by customers to the facility for reuse.

Incoming from Plant in Memphis	Transloading at Facility	Outgoing to Customers
Bulk via rail hopper car	Yes	Isotanker via truck/chassis
		Flobins via truck/trailer
Ecopacks via truck/trailer and rail box car	No	Ecopacks via truck/trailer
	Yes	Ecopacks to isotankers (but only when ecopacks arrive damaged)
Wooden boxes via truck/trailer and rail box car	No	Wooden boxes via truck/trailer

Warehouse 1 stores empty and full flobins, whereas Warehouse 2 stores full ecopacks and wooden boxes. The parking area adjacent to the transloading area stores full and empty isotankers. Other parking areas for the warehouse loading docks store full and empty trucks and trailers. Rail cars, either hoppers or box cars, may be stored temporarily on the rail access within the site, but they are generally offloaded when they arrive and then sent offsite.

Kansas City Southern de Mexico (KCSM) provides incoming rail service within Mexico while Auto Lineas Regiomontañas SA de CV (ALR) provides incoming truck service within Mexico. Segutal provides outgoing truck service within Mexico. The rail and trucking shippers are the subject of a separate supply chain audit under the Transportation Protocol of the Code.

Figure 1: Site Location Map

3.0 SUMMARY AUDIT REPORT

Auditor Findings

Transloading Terminal and Warehouse is:

☒ **in full compliance with**

☐ in substantial compliance with

☐ not in compliance with

The International Cyanide Management Code

This operation has not experienced compliance problems during the previous audit cycle.

Audit Company: Golder Associates Inc.

Audit Team Leader: Kent R. Johnejack

Email: kjohnejack@golder.com

Names of Other Auditors

The audit was undertaken solely by Kent R. Johnejack of Golder Associates Inc. Mr. Johnejack is pre-certified as a Lead Auditor and Production Technical Specialist by the International Cyanide Management Institute, and he acted in these capacities during the audit.

Dates of Audit

The site visit for the Recertification Audit was undertaken on June 17, 2021.

Attestation

I attest that I meet the criteria for knowledge, experience, and conflict of interest for Code Verification Audit Team Leader, established by the ICMI and that all members of the audit team meet the applicable criteria established by the ICMI for Code Verification Auditors.

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the Code Verification Protocol for Cyanide Production Operations and using standard and accepted practices for health, safety, and environmental audits.

SLP Bulk Transloading Facility	Kent R Johnejack	November 2, 2021
Name of Operation	Signature of Lead Auditor	Date

PRINCIPLE 1 – OPERATIONS

Design, Construct and Operated Cyanide Production Facilities to Prevent Release of Cyanide

Production Practice 1.1: **Design and construct cyanide production facilities consistent with sound, accepted engineering practices and quality control/quality assurance procedures.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Production Practice 1.1**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has implemented quality control and quality assurance programs during construction of the bulk transloading facility. Qualified staff from Chemours have reviewed the facility construction and concluded that the facility was built as designed. The facility achieved compliance at the time of initial 2010 certification and that finding is still valid as there have been no changes since that time. The auditor observed that Chemours has retained these documents.

Chemours has constructed the facility with steel, concrete, and high-density polyethylene materials, which are compatible with cyanide and high pH.

Chemours has installed interlocks to automatically shut down the retractable filling boots for both isotankers and flobins, the conveyor belt, the dust collection system, and the diversion valve to switch loading from isotankers to flobins, thereby preventing releases due to power outages or equipment failures.

Chemours has employed a manual approach to loading isotankers and flobins that precludes the need for a level indicator and high-level alarm. A timer preset to the duration for filling an isotanker is activated when filling starts and filling stops when the timer alerts that the time is over. A scale is used to weigh the flobins and stop loading when the preset weight has been reached. The auditor observed these overfilling controls during the site visit. The auditor considers that this manual approach provides equivalent protection as level indicators and alarms to prevent overfilling.

Chemours has managed solid cyanide on concrete surfaces that minimize seepage to the subsurface. The auditor observed these concrete surfaces to be in good condition at the time of the site visit.

Code questions related to secondary containments, storage tanks, and pipelines for cyanide solutions are inapplicable because Chemours only manages solid cyanide at this facility.

Production Practice 1.2: **Develop and implement plans and procedures to operate cyanide production facilities in a manner that prevents accidental releases.**

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 1.2**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has developed a thorough set of procedures that describe the standard practices for safe and environmentally sound operation. These procedures have a common template, covering objective, scope, requirements (includes personal protective equipment), definitions, development (includes step-by-step instructions), exam, attachments, and authorizations. Five of these procedures cover contingencies during operational upsets that may result in cyanide exposures or releases. Management of damaged containers, such as loading damaged ecopacks into isotankers, is addressed as a standard activity rather than a contingency action. The auditor observed that all procedures were current as of 2021.

Chemours has developed written procedures to manage changes to site operating practices and equipment. These procedures involve worker input and require approval by the corporate Environmental, Health, and Safety (EHS) Manager. Chemours provided an example of change management for a change to the isotanker loading operation during the recertification period to verify compliance.

Chemours has developed a program for maintaining equipment and devices necessary for cyanide production and handling. This program has been implemented by means of 4-month schedules, wherein each 4-month schedule targets specific components or elements such that entire installations are addressed over the course of a year. The auditor reviewed examples of maintenance records from the throughout the recertification period to verify compliance.

Chemours disposes of cyanide-contaminated wash water in an environmentally sound manner. Wash water, which Chemours assumes to be a hazardous waste, is collected in three sumps and then evaporated onsite with a heater system or shipped offsite via a certified transporter for incineration by a certified contractor.

Chemours disposes of cyanide-contaminated solids in an environmentally sound manner. Solid waste (e.g., used Tyvek suits, ecopacks, pallets/wood, and floor sweepings) is collected in a temporary storage area for shipping offsite via the same certified transporter to the same certified contractor for incineration. The auditor reviewed examples of shipping manifests and annual hazardous waste summaries from throughout the recertification period to verify compliance.

Chemours has stored solid cyanide in two warehouses with louvered walls for ventilation, with metal roofs and elevated concrete floors to minimize the potential for contact with water, and with fulltime security guards and video camera surveillance within the walled facility. Chemours also has temporarily stored solid cyanide in hopper cars and isotankers, which are designed for outdoor use, within the walled facility while awaiting unloading or transport, respectively.

Chemours has ensured cyanide is packaged as required by the United States and Mexico. Ecopacks and wooden boxes are properly packaged at the Chemours Plant in Memphis, Tennessee, but facility staff check and replace straps as needed. Chemours staff check the reusable isotankers and flobins before shipping to ensure proper packaging and labelling.

The Code question related to monitoring process parameters is inapplicable because there are no such parameters to be monitored at the facility.

Production Practice 1.3: Inspect cyanide production facilities to ensure their integrity and prevent accidental releases.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 1.3**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has conducted routine inspections to ensure the proper functioning of equipment and containments. The facility does not manage cyanide solution and therefore does not have any tanks, piping, pumps, and valves to be inspected. However, Chemours has annually inspected the wash water sumps and grated trenches for integrity.

Chemours has inspected the equipment and installations at frequencies sufficient to assure they are functioning as intended. Chemours has inspected the forklifts, showers/eyewashes, and transloading equipment daily; the fire extinguishers, cyanide kits, and rescue equipment monthly; the perimeter wall quarterly; and sump integrity annually. The warehouses have been inspected in the programmed maintenance rounds.

Chemours has documented the inspections on daily reports and maintenance records that state the items inspected, the date of inspection, the name of the inspector, and observations of non-conformances. Corrective actions have been documented. The auditor observed completed inspection and maintenance records from throughout the recertification period to verify compliance.

PRINCIPLE 2 – WORKER SAFETY

Protect Workers' Health and Safety from Exposure to Cyanide

Production Practice 2.1: **Develop and implement procedures to protect plant personnel from exposure to cyanide.**

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 2.1**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has developed a thorough set of procedures to minimize worker exposure during normal plant operations, non-routine and emergency situations, and maintenance. These procedures address safety requirements, including personal protective equipment, and include step-by-step instructions. Chemours programs formal observation event for a subset of procedures each year such that all procedures are reviewed over 2 to 4 year period. Each observation event is documented and includes worker suggestions. The auditor observed examples of these forms from throughout the recertification period.

Chemours has installed one fixed monitor and issues portable monitors to staff to confirm controls are adequate and to limit worker exposure to hydrogen cyanide gas and cyanide dust. The fixed monitor is installed in the transloading conveyor belt pit underneath the hopper car offload. The portable and fixed monitors are set with low and high alarms at 4.7 and 10.0 parts per million, respectively. The required action for both alarms is the same – leave the area and report to supervision for an evaluation of risk. The auditor confirmed by interview that the operators knew the alarm levels and understood that the required action was the same for both alarm levels. Chemours has maintained, tested, and calibrated the portable and fixed monitors as required by the manufacturer and has retained the records. There are 22 portable units. The Chemours Operations/EHS Supervisor has been trained by the manufacturer to calibrate the portable units.

Chemours has calibrated the portable units on a 6-month frequency per the manufacturer. The manufacturer has not established a fixed recalibration period for the fixed unit because the unit performs a self-test every 24 hours and issues an alert when the factory calibration no longer meets specifications. The auditor observed examples of calibration records for the portable units from throughout the recertification period and a 2020 certificate from the manufacturer for the fixed unit.

Chemours has identified areas and activities where workers may be exposed to hydrogen cyanide gas or cyanide dust and has required the use of personal protective equipment while working in these areas and conducting these activities. Chemours has identified the warehouses and transloading area as areas with the potential for exposure. The auditor observed signage at these areas that indicated the required personal protective equipment. In 2020, a consultant measured cyanide in the air and did not document any readings greater than 0.25 milligrams per cubic meter.

Chemours has implemented a buddy system to ensure that workers can provide help or aid to each other or can otherwise notify or communicate with other personnel for assistance. The auditor observed buddy pairs with radios for communication.

Chemours has implemented a program to assess the health of staff to determine their fitness for assigned duties. A medical contractor conducts annual medical exams that cover hearing, respiratory function, and general medical health.

Chemours has implemented a clothing change procedure for employees, contractors, and visitors in areas with the potential for cyanide contamination. A written procedure requires the use of a Tyvek suit and gloves in the warehouses and transloading area. After completing work, these items are removed and placed in a designated bin for disposal as hazardous waste. The auditor observed workers in the warehouses and transloading area wearing the required Tyvek suits and gloves and bins of used items pending disposal. The auditor also observed staff using a mechanical boot brush.

Chemours has installed extensive signage advising workers that cyanide is present and of the required personal protective equipment. In addition, isotankers, flobins, ecopacks, and wooden boxes are labeled to advise workers of their contents and hazards.

Chemours has prohibited personnel from smoking, eating, drinking, and having open flames by means of extensive signage in areas where there is the potential for cyanide contamination. Smoking and open flames are prohibited in the entire plant. Eating and drinking are allowed only in designated break areas and offices.

Production Practice 2.2: Develop and implement plans and procedures for rapid and effective response to cyanide exposure.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 2.2**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has prepared seven procedures to respond to cyanide exposures and spills. These procedures cover transportation, emergency kits, cyanide intoxication treatment, brigade organization, personnel duties, and alarm codes.

Chemours has installed shower/eyewash stations and fire extinguishers throughout the facility. Chemours inspects the six shower/eyewash stations and 23 fire extinguishers monthly according to a written procedure. Also, annual hydrostatic testing on the fire extinguishers has been conducted by a vendor. The auditor randomly checked that the shower/eyewash stations worker properly at the time of the site visit and that the eyewashes had low pressure water. The auditor observed that the fire extinguishers were the dry chemical type.

Chemours has provided water, oxygen, antidotes, and multiple means of communication/notification that are readily available in the facility. Antidote kits are located at four locations and each kit includes amyl nitrite antidote, oxygen, water and activated carbon. Chemours has additional antidotes in the office with cyanokit, sodium nitrite, and sodium thiosulfate to be sent with ambulances for use by doctors. For emergency communication, employees carry radios and there are red emergency alarm buttons at various locations in the facility.

Chemours inspects the supplies and equipment monthly to assure the items are available when needed. No antidotes were expired at the time of the site visit and all were stored at an appropriate temperature. Chemours has provided a Material Safety Data Sheet in Spanish with each of the four cyanide kits at the facility.

Chemours manages only solid cyanide at the facility and therefore there are no storage tanks, process tanks, containers, or piping for cyanide solutions. However, the transloading dust collection system has the potential for cyanide. The auditor observed the piping to be labeled as containing cyanide with the direction of air flow indicated.

Chemours has implemented a decontamination procedure for employees, contractors, and visitors that requires disposal of used Tyvek suits, use of an automatic boot brush, and washing hands and face. The auditor observed workers following this procedure.

Chemours has onsite capability to provide first aid to workers exposed to cyanide, including administering amyl nitrite antidotes. There are four onsite antidote kits with antidotes with additional antidotes in the office. There is a Brigade Emergency Equipment Room with self-contained breathing apparatus units, extra oxygen tanks, chemical resistant suits/boots, and other equipment.

Given that all Chemours and SIP staff are brigade members, all have the capability to attend to workers exposed to cyanide and to administer the amyl nitrite antidotes. The auditor observed the emergency kits and rescue equipment and found them to be in good condition.

Chemours has developed a procedure to transport workers exposed to cyanide via ambulance or company vehicle to one of four local hospitals. The cyanokit, sodium nitrite, and sodium thiosulfate antidotes from the rescue equipment room would be sent with the vehicle transporting the exposed worker for use by doctors at the hospital.

Chemours has alerted these local hospitals of the potential to treat patients with cyanide intoxication. Chemours provided cyanide treatment training to staff from local hospitals in 2019 and is therefore confident that the medical staff are qualified to treat patients with cyanide intoxication.

Chemours has conducted mock drills to test their responses to various types of incidents. Chemours has conducted at least two mock drills per quarter during the recertification period. The mock drills have covered both cyanide exposures and releases. The auditor reviewed an example of a mock drill report to verify the planning, observation, documentation, evaluation, recommendations, and follow-up were adequate from a lessons learned perspective.

Chemours has implemented an incident investigation procedure. Chemours provided a 2020 investigation report for an incident where a worker was hit in the face by the sudden disconnection of a compressed clean air line connected to an isotanker. The procedure for loading isotankers was modified as a result of the investigation.

PRINCIPLE 3 – MONITORING

Ensure that Process Controls are Protective of the Environment

Production Practice 3.1: **Conduct environmental monitoring to confirm that planned or unplanned releases of cyanide do not result in adverse impacts.**

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 3.1**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has managed only solid cyanide at the facility without the potential for process generation of hydrogen cyanide gas. However, there is the potential for generation of cyanide dust from the transloading process. The transloading equipment is a closed circuit with a dust collection system that maintains a negative pressure, meaning that there is no pressure differential that could lead to atmospheric emissions.

Code questions related to surface water and groundwater are inapplicable because the facility does not have such discharges, either direct or indirect, and therefore monitoring or remediation are neither required nor performed.

PRINCIPLE 4 – TRAINING

Train Workers and Emergency Response Personnel to Manage Cyanide in a Safe and Environmentally Protective Manner

Production Practice 4.1: **Train employees to operate the plant in a manner that minimizes the potential for cyanide exposures and releases.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Production Practice 4.1**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has provided training and refreshers to the facility staff from Chemours, SIP, PUBI, and Segutal to understand cyanide hazards. Chemours has annually trained all staff in the procedures applicable to their roles and use of personal protective equipment, as shown in training matrices and training participation lists from throughout the recertification period, and as confirmed by interview.

Chemours has task trained workers via the written procedures to perform their normal production tasks to minimize exposures and prevent releases. Each procedure covers the elements necessary for the job and has a "Development" section which contains step-by-step instructions on how to safely perform a task. Qualified senior staff from Chemours have provided this training during the recertification period.
Chemours has trained staff prior to allowing them to work with cyanide. Until new staff have completed the induction training on seven key procedures, they cannot work without supervision.

Chemours has evaluated the effectiveness of cyanide training by testing and observation. Each procedure contains an exam that requires a passing grade of 80%. Observations have been documented on an observation form. The auditor reviewed examples of completed exams and revision forms from throughout the recertification period to verify compliance.

Production Practice 4.2: **Train employees to respond to cyanide exposures and releases.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Production Practice 4.2**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has trained workers in procedures for cyanide releases and worker exposures. The auditor reviewed training matrices and examples of training participation lists from throughout the recertification period to verify compliance.

In accordance with their written procedure, Chemours has conducted mock drills and evaluated them with respect to training effectiveness. Chemours has conducted at least two mock drills per quarter during the recertification period. The mock drills have covered both cyanide exposures and releases. The auditor reviewed a mock drill report to verify the planning, observation, documentation, evaluation, recommendations, and follow-up were adequate from a training effectiveness perspective.

Chemours has retained training records throughout an individual's employment that include the names of the employee and trainer, the date of training, the topics covered, and knowledge confirmation. The auditor reviewed multiple binders of participation lists, completed exams, and completed revision forms to verify compliance.

PRINCIPLE 5 – EMERGENCY RESPONSE

Protect Communities and the Environment through the Development of Emergency Response Strategies and Capabilities

Production Practice 5.1: Prepare detailed emergency response plans for potential cyanide releases.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 5.1**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has developed seven emergency response procedures that address potential cyanide releases and exposures that may occur onsite or may otherwise require a response. These procedures consider the applicable failure scenarios for its site-specific environmental and operating circumstances. The following scenarios are inapplicable because there is no cyanide solution at the facility: release of hydrogen cyanide gas; pipe, valve, and tank ruptures; and overtopping of ponds, tanks, and waste treatment facilities. Chemours considers power outages and equipment failures inapplicable because of the interlocks present in the transloading equipment. A release during loading applies only to solid cyanide, but Chemours considers the quantity of briquettes involved to be unlikely to constitute an emergency. The only remaining scenario is releases during fires and explosions, which are covered under a subset of four out of the seven procedures. The emergency response procedures also describe specific response actions (e.g., evacuation); use of cyanide antidotes and first aid measures; control of releases at their source; and containment, assessment, mitigation and future prevention of releases.

Production Practice 5.2: Involve site personnel and stakeholders in the planning process.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Production Practice 5.2**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has continually involved its workforce and stakeholders in emergency response planning with respect to emergency planning, current conditions, and risks. Chemours has involved its workforce via regular review and revision of all procedures, including the emergency response procedures, as well as via mock drills. Chemours has involved stakeholders, outside responders, and medical facilities via Chemours-provided cyanide training, drills hosted at the facility with the federal environmental agency, and an inspection by the local Civil Protection unit. Chemours staff stated there is an informal network for communications with their industrial neighbors.

Chemours stated that there are no residential communities in the vicinity of the facility. The auditor reviewed an aerial photograph that showed only vacant lots and industrial facilities in the vicinity.

Production Practice 5.3: Designate appropriate personnel and commit necessary equipment and resources for emergency response.

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Production Practice 5.3**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has developed emergency planning procedures that: identify lead coordinators and their alternates; authorize them to commit resources as necessary; identify the brigade members by name; require annual training in the emergency response procedures, as well as use of self-contained breathing apparatus, barricading, and others; includes call-out procedures and 24-hour contact information for the facility and regional brigades; specify the duties and responsibilities of the brigade; list emergency response and cyanide first aid equipment; contain procedures to inspect that equipment; and describe the role for ambulances. The auditor reviewed completed inspection sheets for the equipment in the Brigade Equipment Room from throughout the recertification period.

Chemours has confirmed that outside entities relevant to the emergency scenarios for the facility are aware of their involvement and have been included in mock drills. The only outside entities with roles that would be directed by Chemours is limited to ambulances and hospitals. In a catastrophe, Civil Protection would take over the emergency response. Civil Protection visited the site in 2018 and approved the facility's safety measures. The federal environmental agency has also been involved in annual mock drills at the site.

Production Practice 5.4: Develop procedures for internal and external emergency notification and reporting.

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Production Practice 5.4**

☐ not in compliance with

Summarize the basis for this finding:

Chemours has developed procedures and contact information relevant to the emergency scenarios relevant to the facility, including regional and corporate management, national chemical emergency response agency (Sistema de Emergencias en Transporte para la Industria Quimica), Red Cross, fire department, police, ambulances, and hospitals. Chemours has not identified a need for outside response providers. At the corporate level, Chemours has developed a Crisis Management Manual that addresses outside notifications and communications with the media. Contact information for the corporate chain-of-command is confidential for security reasons, but the Chemours staff at site have access to that information.

Production Practice 5.5: **Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.**

☒ **in full compliance with**

The operation is
☐ in substantial compliance with **Production Practice 5.5**
☐ not in compliance with

Summarize the basis for this finding:

Chemours has prepared procedures that describes specific remediation measures, such as washing surfaces and materials with a dilute sodium hypochlorite solution to destroy cyanide. A different procedure has prohibited the use of sodium hypochlorite, ferrous sulphate, and hydrogen peroxide to treat cyanide that has been released to surface water. Provision of an alternate drinking water supply is inapplicable because the facility already provides bottled water for their staff, and there are no discharges to surface water or groundwater that might affect intakes or wells, respectively.

Chemours has developed procedures that address the potential for environmental monitoring to the limited extent that such procedures are needed for this facility and setting. Chemours does not manage cyanide solutions at the facility; most surfaces are roofed, concrete, or asphalt; and the climate is arid. Therefore, the need for soil cleanup is unlikely. Nonetheless, a procedure addresses visual identification of the extent of a spill of solid cyanide and another procedure describes sampling and analysis.

Production Practice 5.6: **Periodically evaluate response procedures and capabilities and revise them as needed.**

☒ **in full compliance with**

The operation is
☐ in substantial compliance with **Production Practice 5.6**
☐ not in compliance with

Summarize the basis for this finding:

Chemours has developed provisions for reviewing and revising its emergency planning procedures on an established frequency. The emergency planning procedures require review and revision every 2 or 3 years depending on their classification. The auditor observed that the emergency planning procedures had been revised according to the required schedule and were current as of 2021.

In accordance with their written procedure, Chemours has conducted mock drills as part of reviewing its emergency response planning. Chemours has conducted at least two mock drills per quarter during the recertification period. The mock drills have covered both cyanide exposures and releases. The auditor reviewed an example of a mock drill report to verify the planning, observation, documentation, evaluation, recommendations, and follow-up were adequate. In addition, Chemours has also hosted mock drills onsite with federal regulators.

Chemours has established provisions to review and revise its emergency response procedures if the incident investigation determines a fault in those procedures contributed to the incident. Chemours stated that they have not had any cyanide incidents this audit cycle, and therefore no such reviews have taken place.

Signature Page

Golder Associates Inc.

Kent R. Johnejack
Lead Auditor and Production Technical Specialist

KJ/IA/rm

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