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REPORT

ICMC CYANIDE PRODUCTION RECERTIFICATION AUDIT - SUMMARY AUDIT REPORT

Chemours Bag to Bulk Transloading Facility
Hermosillo, Sonora, Mexico

Submitted to:

International Cyanide Management Institute (ICMI)
1400 I Street, NW - Suite 500
Washington, DC 20005

Submitted by:

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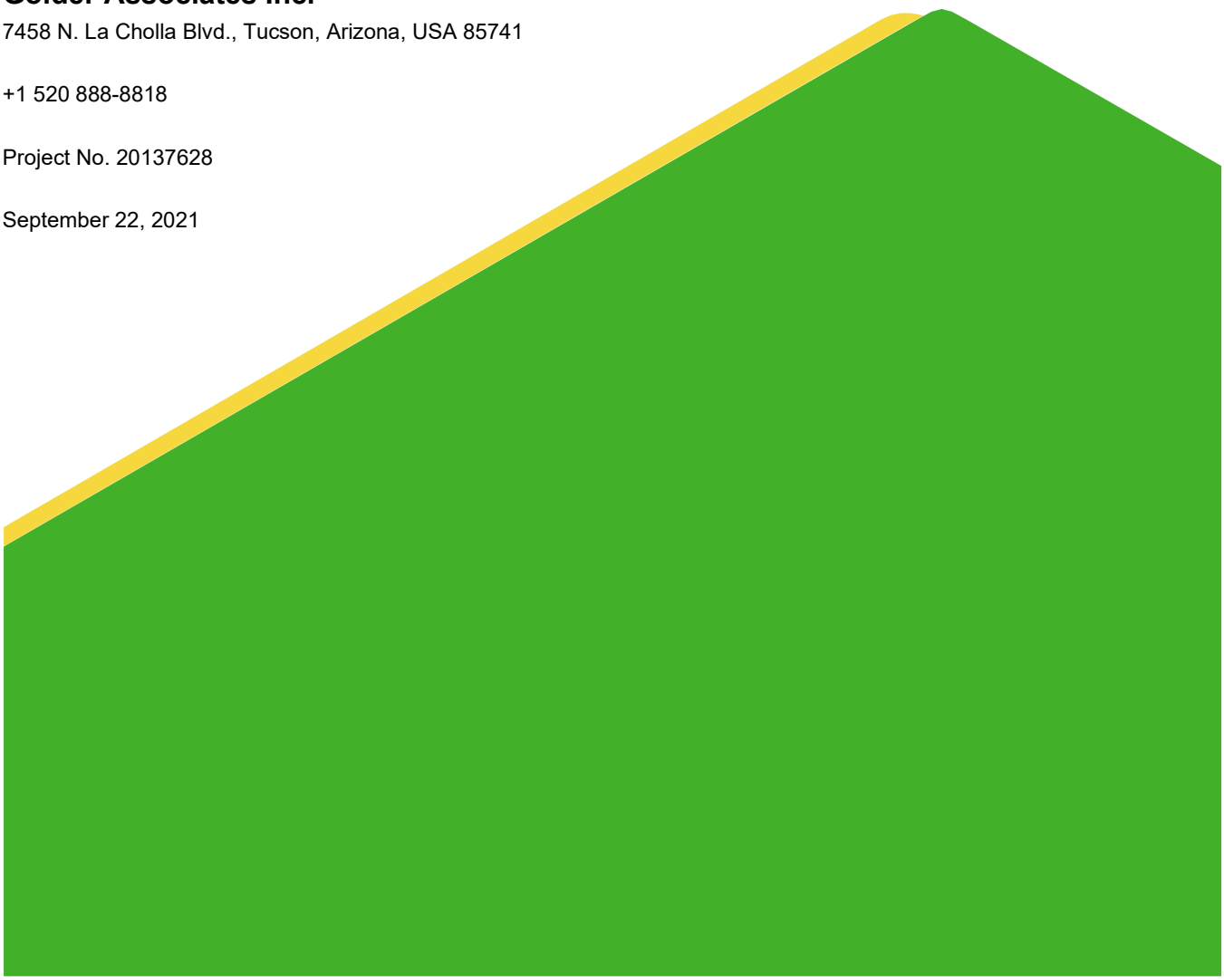

Distribution List

ICMI - 1 pdf

Chemours Mining Solutions - 1 pdf and 1 Word file

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1.0 SUMMARY AUDIT REPORT FOR CYANIDE PRODUCTION OPERATIONS

Name of Cyanide Production Facility: Hermosillo Bag to 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: Manuel Bravo, Site Operations Supervisor

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2.0 PRODUCTION OVERVIEW

The Bag to Bulk Transloading Facility in Hermosillo was commissioned in 2006 at a different location. The warehouse activities were first certified to the International Cyanide Management Institute's (ICMI) Transportation Verification Protocol as part of the DuPont (the predecessor to Chemours Inc. [Chemours]) Mexico Supply Chain audit in 2010. In 2011, operations in Hermosillo were expanded to include a package-to-isotanker transloading system and moved to a rail yard/intermodal facility that is owned and operated by Intermodal Mexico (IMEX). Because of the addition of this repackaging/transloading operation, the relocated facility was certified to the ICMI Production Verification Protocol in 2014. This 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 ICMI Production Verification Protocol requirements. Packaged cyanide is stored in covered, well-ventilated warehouses prior to being dispatched to customers by truck or isotanker. Processes to prevent release of trace sodium cyanide to the environment include a wash water collection and evaporator system and footwear decontamination. Site security conforms with the Customs Trade Partnership Against Terrorism (CTPAT) requirements of the US Customs and Border Protection Service.

The property for the Bag to Bulk Transloading Facility is owned by IMEX and is located in an industrial park in the southeast part of the city of Hermosillo (Figure 1). The transloading equipment is owned by Chemours but operated by IMEX. The warehouse and forklifts are owned and operated by IMEX. The trucks are owned and/or leased by Transportes Especializados SA de CV (Segutal). Chemours maintains an office at site with one staff. IMEX maintains a staff of seven at the site with four as operators and three as security guards. Segutal, the outbound trucking company, also maintains a staff of two at the site for handling and dispatching tractors, isotankers, and trailers. Chemours provides cyanide safety training to all IMEX and Segutal staff at the site and includes them in response planning and mock drills. Security is provided under contract round-the-clock.

The Bag to Bulk Transloading Facility handles only solid sodium cyanide as briquettes as shown in the matrix below. Transloading only occurs from ecopacks and flobins to isotankers, although typically only flobins are transloaded to isotankers. Some ecopacks and flobins are received, stored and reshipped without being opened. Empty flobins are returned by customers to the facility for reuse.

Incoming from Plant in Memphis	Transloading at Facility	Outgoing to Customers
Ecopacks and flobins via truck/trailer and rail box car	Yes	Isotanker via truck/chassis
	No	Ecopacks and flobins via truck/trailer

The warehouse stores ecopacks and empty and full flobins. 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 are offloaded when they arrive and then returned.

Ferromex 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.

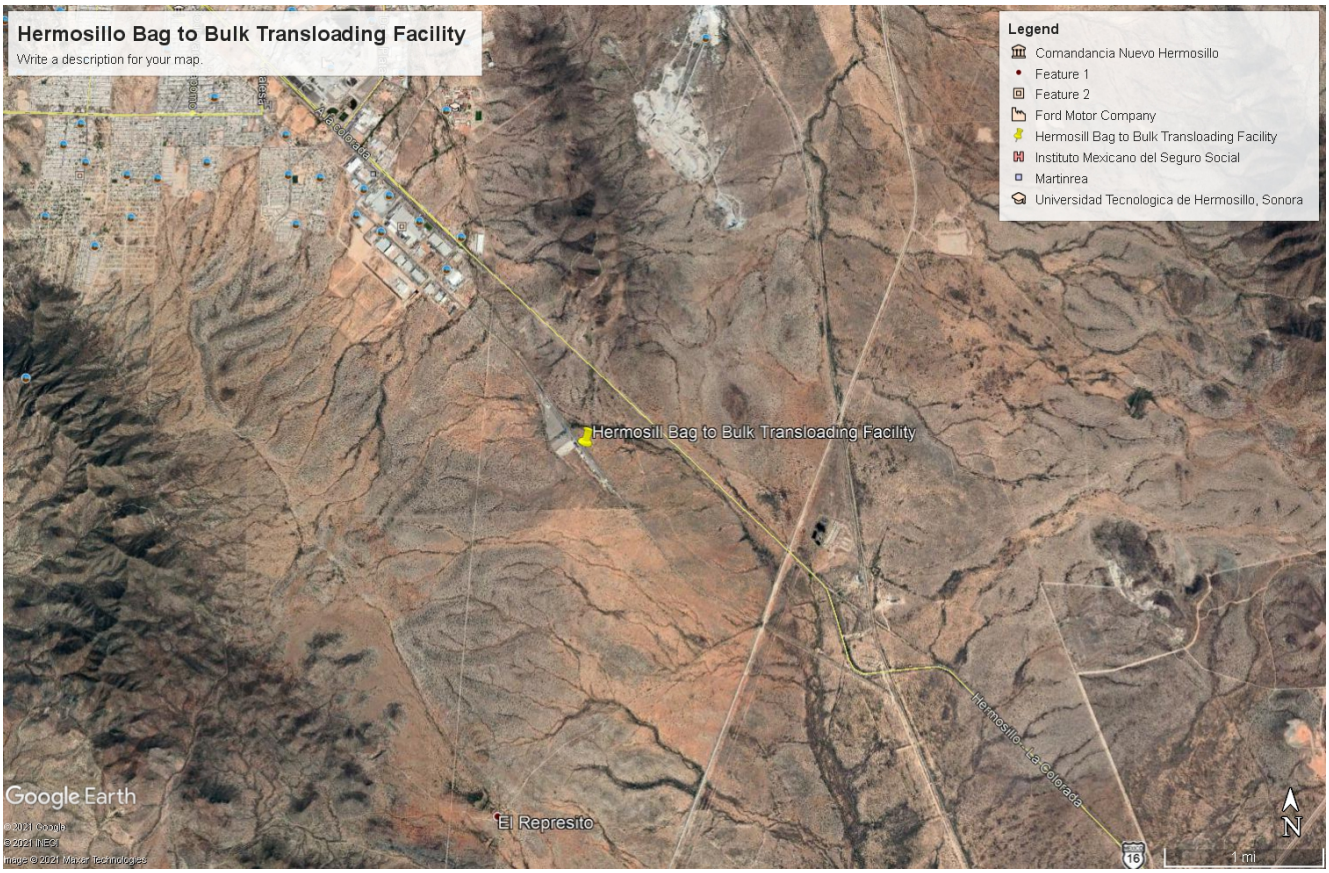

Figure 1: Site Location Map

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

The 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 ICMI and he acted in these capacities during the audit.

Dates of Audit

The site visit for the Recertification Audit was undertaken on July 15, 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 International Cyanide Management Code (ICMC or Code) Verification Protocol for Cyanide Production Operations and using standard and accepted practices for health, safety and environmental audits.

Hermosillo Bag to Bulk Transloading Facility	Kent R Johnejack	September 22, 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 the 2013 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, aluminum, concrete, and high-density polyethylene materials, which are compatible with cyanide and high pH.

Chemours has adopted a manual approach to loading isotankers that precludes the need for interlocks. Flobins are loaded into an isotanker one-by-one as the operators count and document them to ensure that only 14 are loaded. Likewise, the operators ensure that only 19 ecopacks are loaded. The auditor observed a loading event with flobins to confirm the procedure was followed. The auditor considers that this manual approach provides equivalent protection as interlocks because the operators would simply stop work in the event of a power failure or equipment failure, thus preventing releases. The auditor also 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.**

☒ **in full compliance with**

The operation is

☐ 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. 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, include a risk assessment, and require approval by the corporate EHS Manager (or designee). Chemours staff stated that there were no operating or physical changes at the Hermosillo operations this audit cycle.

Chemours has developed a program for maintaining equipment and devices necessary for cyanide production and handling. These procedures were implemented throughout the audit cycle by means of annual schedules for each device or piece of equipment. The auditor observed a complete set of binders of maintenance records and reviewed examples from the throughout the recertification period to verify compliance.

Chemours disposes of cyanide-contaminated wash water in an environmentally sound manner. Wash water is collected in two sumps for disposal by an evaporation unit. The evaporator has been inspected weekly throughout the recertification period. Chemours empties and inspects the two sumps annually with maintenance as needed. For both sumps, there are diversion valves so that rainwater can be released via pipes to an ephemeral ditch along the fenceline, in accordance with CHMO-07. These valves have been locked to prevent inadvertent discharges. The auditor observed the system to be in good condition.

Chemours disposes of cyanide-contaminated solids in an environmentally sound manner. Solid waste (e.g., used Tyvek suits, ecopacks, pallets, evaporator residue, and floor sweepings) is collected in a temporary hazardous waste storage area for shipping offsite via a certified transporter for disposal by a certified contractor. 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 a warehouse with chainlink fence walls for ventilation, with a metal roof and elevated concrete floor to minimize the potential for contact with water, and with fulltime security guards and video camera surveillance. Chemours also has temporarily stored solid cyanide in isotankers, which are designed for outdoor use, within the fenced facility while awaiting transport.

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

The Code question related to monitoring process parameters is inapplicable because there are 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 for integrity.

Chemours has inspected the equipment and installations at frequencies sufficient to assure they are functioning as intended. Chemours has inspected the warehouse, forklifts, showers/eyewashes, and transloading equipment daily; the evaporation unit weekly; the fire extinguishers, cyanide kit, rescue equipment, and radios monthly; the perimeter fence and closed-circuit television system quarterly; and sump integrity annually.

Chemours has documented the inspections on forms 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 issued portable monitors to staff to confirm controls are adequate and to limit worker exposure to hydrogen cyanide gas and cyanide dust. The portable 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 monitors as required by the manufacturer and has retained the records. There are four portable units. The IMEX Site Operations 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 auditor observed examples of calibration records for the portable units from throughout the recertification period.

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 warehouse 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 2019, 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 warehouse and transloading area. After completing work, these items are removed and placed in a designated barrel for disposal as hazardous waste. The auditor observed workers in the warehouse 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, and ecopacks are labelled 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 the lunchroom 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, closed circuit TV, and alarm codes.

Chemours has installed shower/eyewash stations and fire extinguishers throughout the facility. Chemours inspects the five shower/eyewash stations and 16 fire extinguishers monthly according to a written procedure. Also, annual hydrostatic testing on the fire extinguishers is conducted by an outside vendor. The auditor randomly checked that the shower/eyewash stations worked properly 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. An antidote kit is located in the rescue equipment room that includes amyl nitrite, sodium nitrite, and sodium thiosulfate antidotes. Oxygen, water, activated carbon, and additional antidotes (cyanokit, amyl nitrite, sodium nitrite, and sodium thiosulfate) are also located in the rescue equipment room. The cyanokit, sodium nitrite, and sodium thiosulfate antidotes are 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 emergency supplies and equipment monthly to assure the items are available when needed.

No antidotes were expired at the time of the site visit, except those labelled as such and used only for training, and all were stored at an appropriate temperature in a refrigerator. Chemours has provided a Safety Data Sheet in Spanish on a bulletin board in the main office.

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 evaporator unit has a vertical vent pipe with the potential for cyanide. The auditor observed the piping to be labelled as containing cyanide with the direction 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 is an onsite antidote kit in the rescue equipment room with additional antidotes for use by doctors. There are supplies and equipment in the rescue equipment room, including self-contained breathing apparatus units, extra oxygen tanks, chemical resistant suits/boots, and other equipment. Given that all Chemours and IMEX 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 to local hospitals via dedicated company truck or personal vehicle. 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 local hospitals of the potential to treat patients with cyanide intoxication via cyanide treatment training. Chemours provided cyanide treatment training to staff from local hospitals in 2019 and 2021, 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, except for 2020 and 2021 due to restrictions on group size due to the pandemic. The mock drills have covered both cyanide exposures and releases. The auditor reviewed examples of mock drill reports 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 stated that there have been no incidents, cyanide-related or otherwise, this audit cycle and therefore no examples were available for review.

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. Chemours has commissioned a consultant to conduct annual air surveys. The auditor reviewed annual reports to verify that the measured cyanide dust emissions of less than 0.25 milligrams per cubic meter were within regulatory limits.

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, IMEX, 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 six 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 drills per quarter during the recertification period except that drills were not held in 2020 due to the pandemic-related restrictions on group size and the 2021 drill was limited to verifying travel times to local hospitals. The mock drills have covered both cyanide exposures and releases. The auditor reviewed a mock drill report to verify that the planning, observation, documentation, evaluation, and 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 manual approach to transloading wherein the workers would simply stop work. 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, including hospitals, via Chemours-provided cyanide training, membership on the Technical Advisory Committee for the dangerous chemicals first responders organization in Sonora, and an inspection by the federal environmental protection agency.

Chemours stated that there are no residential communities in the vicinity of the facility. The auditor reviewed an aerial photograph that showed only undeveloped land 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 external hospitals to treat patients exposed to cyanide. The auditor reviewed completed inspection sheets for the equipment in the rescue 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 training. The only outside entities with a role are hospitals and even then, it is an offsite role for treatment of patients exposed to cyanide. Local doctors participated in 2019 and 2021 trainings offered by Chemours.

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 [SETIQ]), Red Cross, fire department, police, 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 a procedure 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 a different 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 drills per quarter except that drills were not held in 2020 due to the pandemic-related restrictions on group size and the 2021 drill was limited to verifying travel times to local hospitals. The mock drills have covered both cyanide exposures and releases.

The auditor reviewed an example of a mock drill report to verify that the planning, observation, documentation, evaluation, and recommendations, and follow-up were adequate from an emergency planning perspective.

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/rm

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