DuPont Supply Chain in Chile

Cyanide Code Audit

Summary Audit Report

Project No. 209678

December 2013
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3. PORTS DUE DILIGENCE.

4. TRANSPORTES VERASAY LTD
1. **SCOPE OF THE AUDITED OPERATIONS**

Name of Cyanide Facility: DuPont Supply Chain in Chile
Name of Facility Owner: E.I. DuPont de Nemours & Co (DuPont)
Name of Facility Operator: DuPont Supply Chain in Chile
Name of Responsible Manager: Rodrigo E. Gonzalez
Address: Av. El Bosque 500, Oficina 1102, Las Condes
State/Province: Santiago Country: Chile
Telephone (562)23622428 Fax: (562)23622428
E-Mail: Rodrigo-Eduardo@dupont.com

DuPont Chile, subsidiary of E.I. DuPont de Nemours & Co. is a consigner for sodium cyanide supply in solid state (briquettes) in Chile.

Cyanide is transported to Chile by ship and is delivered by the cargo company at the Valparaiso or San Antonio (preferred ports for mines in central Chile), Antofagasta or Mejillones (the preferred port for the mines in northern Chile). Ship unloading operations are performed by the Port Authority, which releases the container by placing it on a truck’s platform. At this point, the cyanide becomes responsibility of DuPont. Currently, the cyanide is transported directly to the mine, without the intervention of secondary storage facilities; however. The transport routes operated from Chile’s Ports to the mines are from 163 to 1,232 km long; the preferred ports are those that represent the shortest route from one port to the mine.

This audit comprises the transportation operations from the moment the Ocean Carrier delivers the cyanide to the Port facility to its delivery in the client facilities (the mine). DuPont Supply Chain in Chile initial certification was published on 8 October 2010. Records from the previous audit performed in July 2010 to date to this audit were reviewed.

Cyanide is packaged by the manufacturer (Du Pont USA) in the following way: primary packaging in a poly propylene super-sack filled up to 1 ton. The super-sack is then placed in a polyethylene bag to protect the material from water and humidity; finally the packaged material is placed in a wooden box (package type I). No less than 20 boxes are placed in standard 20-feet shipping containers (the containers); the exact number of boxes is to prevent lateral movement of the boxes within the container. To further prevent movement a block and brace is applied consisting of placing wood beams between the last box and the container’s door. Prior to shipping, the manufacturer seals the container with a tag with serial number at the production facility to prevent material losses. These seals are only removed at the mine.

DuPont performs every three years a due diligence of each port to ensure that there are acceptable safety measures for the cyanide handling and emergency response. The latest due diligences were performed in all four ports from May 2012 to August 2012.

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DuPont subcontracts Transportes Verasay Ltd. (Verasay) to transport sodium cyanide in Chile. DuPont provides training to Verasay’s drivers and convoy leaders, approves the crew used for each transport operation, and audits Verasay on an annual basis to ensure compliance with its procedures. Additionally, DuPont has trained Verasay’s Hazardous Materials Manager and convoy leaders to train the operators and to assess the routes to ensure these activities are performed even if DuPont personnel are not readily available. Verasay has its own system to comply with the code and the training received from DuPont is redundant with the training provided in house. Verasay is certified as cyanide transporter independent of DuPont.

1.1. **OVERALL AUDITOR’S FINDING**

This operation is

- √ in full compliance
- □ in substantial compliance *(see below)*
- □ not in compliance

with the International Cyanide Management Code.

* For cyanide transportation operations seeking Code certification, the Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

This operation has not experienced compliance problems, cyanide related incidents, exposures or releases during the previous three-year audit cycle.

Audit Company: ERM Mexico, S. A. de C. V.
Audit Team Leader: Juan Carlos Rangel Lopez
E-mail: juanCarlos.rangel@erm.com
Date(s) of Audit: 23 and 24 July 2013

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute 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 Verification Protocol for Cyanide Transportation Operations and using standard and accepted practices for health, safety and environmental audits.
2. **DUPONT DETAILED REPORT AS CONSIGNER**

The operation is

- √ in full compliance
- □ in substantial compliance
- □ not in compliance

with the International Cyanide Management Code.

2.1. **TRANSPORT PRACTICE 1. TRANSPORT CYANIDE IN A MANNER THAT MINIMIZES THE POTENTIAL FOR ACCIDENTS AND RELEASES.**

2.1.1. **Transport Practice 1.1: Select cyanide transport routes to minimize the potential for accidents and releases.**

The operation is

- √ in full compliance with
- □ in substantial compliance with Transport Practice 1.1
- □ not in compliance with

**Summarize the basis for this Finding/Deficiencies Identified:**

DuPont has the following procedure DUP-SA-Evalu Rutas “Routes Assessment Procedure”, dated 21 June 2005. DuPont’s route assessment procedure establishes the first step in the route assessment is to describe the route and the following safety criteria must be identified:

- Dangerous turns
- Steep slopes
- Main cities and population density
- Bridges
- Slides zones
- Intersection with rail roads
- Fog, ice, and snow areas
- Water bodies
- Environmentally sensitive areas
- Areas with high robbery risk
- Areas where driver could rest
- Any other conditions that may represent a risk.

It establishes that a physical inspection of the route must be performed by DuPont’s representative or by a convoy leader, trained by DuPont for these purposes, from the transportation subcontractor. During the inspection, the scheduled and rest stops are selected, as well as the places where the vehicles and drivers can stay overnight, the communication services available, emergency numbers, gas stations, police offices, sensitive areas, and communities are also identified. The areas where accidents are most likely to take place are also identified.
Based on the route inspection, a risk assessment is performed. The assessment is documented in a matrix where the transportation route is divided in sections considering crossings of urban areas, intersections with other roads, and other key points (e.g. mine check point). Each section is assessed for each of the route safety criteria mentioned and, based on these, a risk ranking is used (A for areas where incident risk is high to D where the risk is low).

A copy of the matrix is included in transportation procedure and as annex in the Emergency Response Plan. Additionally, a description of the points with a higher risk is included in the transportation procedure. The route assessment procedure also establishes that the route assessments must be updated as necessary and at least once per year by a DuPont representative or some enabled by DuPont to do so.

According to the track changes of the transportation procedures, the route assessments to the different mines have been updated at least once per year from 2010 to 2013.

DuPont has the following procedures:

- **DUP-CH-001** “Sodium Cyanide Ground Transportation to Maricunga” (latest revision March 2013).
- **DUP-CH-010** “Sodium Cyanide Ground Transportation to Manto de Oro” (latest revision March 2013).
- **DUP-CH-020** “Sodium Cyanide Ground Transportation to Peñon” (latest revision March 2013).
- **DUP-CH-030** “Sodium Cyanide Ground Transportation to Florida” (latest revision March 2013).

Procedures DUP-CH-001, DUP-CH-010, DUP-CH-020, and DUP-CH-030 are hereinafter referred as the transport procedures.

General preventive measures have been established in the transport procedures including: limiting the transportation activities to day-time only, a minimum 8 hr driver-rest period prior to starting a cyanide transportation operation, mandatory 10 minutes breaks approximately every two hours in pre-selected stop points during cyanide transportation operations, maximum driving journey of 12 hours, all shipments performed in convoys with at least one safety escort vehicle and a convoy leader. The procedure allows the convoy leader to stop the operations (in a pre-selected point) when the route conditions are unsafe (e.g. due to weather conditions). The evaluation matrices were used to develop emergency scenarios in the different route sections. Each scenario has specific preventive measures (e.g. establishing maximum speed of 20 km controlled by the truck driver leading the convoy in steep slopes).
DuPont requires the transporter to be a Code certified and to follow these procedures. Most of the requirements established in DuPont’s procedures are redundant with those implemented by the transporter currently used by DuPont.

Additionally, the transport procedures establish that the convoy leader must prepare a report for each transport operation where he must include information on the weather, road, and traffic condition for each day; it must also record delays and the explanation for these. As previously noted, these requirements are redundant with those implemented by the transporter currently used by DuPont.

According to the transport procedures, when a new route is to be operated, DuPont organizes provides information in to the relevant authorities and communities through informative forums. The information is reinforced through refresher seminars or in writing. During the audit, refresher training records from 2010 to 2013 and written communications documenting these activities were reviewed and found consistent with the procedure requirements and the areas crossed by the different routes.

DuPont distributes on an annual basis updated copies of the sodium cyanide material safety datasheet the hospitals (five) that are located along the active routes. During the audit, refresher training records from 2010 to 2013 and written communications provided to external responders, the authorities and medical facilities were reviewed and consistent with DuPont procedures.

DuPont has an Evaluation, Selection, and Accreditation of Contractors for the Sodium Cyanide Transport and Storage (DUP-SA-COD-01, revision June 2010). According to this procedure, the contractors must comply with the following requirements, among others:
- To comply with DuPont’s Sourcing and Logistic requirements (not related to the Code)
- To have safety standards and procedures
- To have a drugs and alcohol policy
- To have a training program
- To be a Code Signatory (and Certified from October 2010 onwards)
- To have a maintenance program for their equipment

According to the procedures an initial assessment is performed prior to use the contractor services and then an annual audit is performed following DuPont’s simplified verification protocol. The simplified protocol covers all the aspects required by the cyanide code. Additionally, every three years, an audit is performed using an extended protocol which consists of a 14 pages checklist which covers, among others, the following points:
- General information
- Frequency of work related and traffic related incidents and accidents
- Insurance
- Safety management system (MSDS, incident investigation procedures, corrective actions, documents and records control)
- Training program (including a list of 27 topics and records keeping)
- Hiring policies
- Disciplinary policies
- Driver control
- Rewards policies
- Safety leader
- Written work procedures
- Personnel protection equipment
- Hazardous materials management
- Emergency response
- Vehicle inspection
- Travel planning
- Transport equipment maintenance
- Occupational healthy

In Chile, DuPont subcontracts Transportes Verasay Ltd. for the cyanide transport. Verasay is certified under the Cyanide Code.

The 2011-2013 DuPont audits to Verasay were performed by Mr. Jean Jacques Covos and Mr. Rodrigo Eduardo Gonzalez. According to Mr. Gonzalez records are also reviewed during the audits to support the answers to the checklists. According to the 2011-2013 audit records, Verasay complies with DuPont requirements.

Additionally, DuPont ensures that their procedures are followed by Verasay, through field supervision, training to the transporter personnel (redundant with that provided by the transporter), and by approving the crew used in the transport operations.

2.1.2. Transport Practice 1.2: Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

The operation is

√ in full compliance with
□ in substantial compliance with Transport Practice 1.2
□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

DuPont’s transport procedures establish the following requirements for drivers:
- To be healthy
- To have the legally required driving license
- To be trained in defensive driving
- To be trained by DuPont in sodium cyanide handling and emergency response.
The procedures also establish that the driver must have at least one rest day per week, must have rested at least 8 hours prior starting the trip, that a 10 minutes break must be taken approximately every two hours, and that the maximum work journey for the driver is 12 hours. Most of these requirements are redundant with the procedures implemented by the transporter.

The transportation procedures also establish that the convoy leader must have transport background, to be knowledgeable on basic mechanics, and leadership qualities.

DuPont trains the convoy leaders to ensure they are familiar with DuPont’s specific requirements.

Additionally, DuPont provides training in cyanide transportation and emergency response to Verasay designated drivers and convoy leaders. DuPont keeps attendance list to document the training. Training records from August 2010 to July 2013 were reviewed and contrasted with a sample of operation reports and no deviations were identified.

The following topics were covered during the training sessions:

**Cyanide generalities**
- Cyanide uses and handling
- Safety precautions when handling cyanide
- Safety precautions when parking cyanide loaded trucks
- PPE required for cyanide handling
- Health effects of cyanide exposure
- Signs and symptoms of cyanide intoxication
- First aids
- What to do in case of skin contact, ingestion, inhalation,
- Emergency response, spill and fire

**Cyanide Transportation**
- Route analysis
- Safety talk
- Training requirements to participate in cyanide transportation operations
- Truck inspection requirements
- Ocean container fastening to the truck
- On the road operations
- Fuel refilling
- Breaks
- What to do in case of mechanical failure

**Emergency response**
- Product identification
- Prevention of cyanide gas formation
- Signs and symptoms of cyanide intoxication
- First aids
- What to do in case of skin contact, ingestion, inhalation,
o Detailed safety instructions
o Wet accident operations
o Dry accident operations

**Hazardous substances transportation**

o Type of accidents
o Accident statistics (cause, location, type)
o Classification of hazardous substances
o MSDS
o Vehicles and equipment
o Hazards communication system (NFPA based)
o Transport Labeling (UN based)
o Vehicle cleanup
o Parking safety
o General safety measures
o Vehicle inspection
o Among others
o Inspections by the authorities

The training provided by DuPont to the convoy leader and drivers is redundant with that provided by the transporter.

DuPont, through their Product Steward, verifies that the drivers have been trained in the previous twelve months and that the trucks are included in the list of vehicles enabled for the cyanide transport operation.

As previously noted, DuPont subcontracts Verasay for cyanide transport. Verasay is certified under the Cyanide Code. A copy of Verasay audit report was available for review. According to the report, Verasay complies with transport Practice 1.2 independent of DuPont.

DuPont ensures that its procedures are followed by Verasay through annual audits, field supervision, training, and by approving the crew for transport operations

**2.1.3. Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.**

The operation is

- [ ] in full compliance with
- [ ] in substantial compliance with Transport Practice 1.3
- [x] not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

This element is not applicable to DuPont as a consignor. DuPont uses a transporter that is certified under the Cyanide Code.

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**Signature of Lead Auditor**

**Date** 23 to 24 July 2013

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However, DuPont’s transport procedures establish the characteristics required for vehicles to be used for cyanide transportation including:

- The be included in a preventive maintenance program
- Permits required by the local authorities

The transport procedures establish that the convoy leader must review the truck and platform documents.

A checklist, which includes questions about the truck conditions, the driver, the required documents, and truck accessories, is used to document the inspection. A checklist form is filled for each truck in the convoy. A sample of 45 convoy files (out approximately 375 from August 2010 to July 2013) was reviewed; no significant or systematic deviations from DuPont procedures were identified.

2.1.4. **Transport Practice 1.4: Develop and implement a safety program for transport of cyanide.**

The operation is

- ✓ in full compliance with
- □ in substantial compliance with Transport Practice 1.4
- □ not in compliance with

**Summarize the basis for this Finding/Deficiencies Identified:**

This element is not applicable to DuPont as a consignor. DuPont uses a transporter that is certified under the Cyanide Code.

However, the transport procedures establish that the load cannot be altered during the transportation process. To ensure this, tags are placed in the ocean container’s locks at the manufacturing facility. These tags can only be removed at the mine.

The procedures also establish that the transporter cannot divide the shipment or otherwise remove it from the container, which is redundant with the transporter’s procedures.

The containers received in the port are placed on platform trailers hauled by trucks without the need of changing the packaging.

DuPont’s transport procedures establish that placards with cyanide’s UN number and poison signs must be placed in the container; this is verified through the vehicle inspection checklist. The convoy leader is required to have additional placards in case the container is missing one or more, which is redundant with the transporter’s procedures.

DuPont’s transport procedures establish that:
o Inspections are performed prior the vehicle departs to the port facility for loading (documented through the vehicle inspection checklist)
o Inspections are performed prior to the departure from the port facility (special focus on twist lock) (no records established).
o The trucks and the platforms must be included in a preventive maintenance program
o Operators rest at least 8 hrs prior to trip, should not drive for over 12 consecutive hours, and take a 10 min break approximately every two hours at pre-selected stops points where the risk has been assessed and ranked as low; the convoy leader ensures that these are the only programmed stops.
o Prior to departure, the convoy leader assesses the weather conditions and gets information about political issues on the road; if he deems it necessary he can postpone the trip and this decision is informed to the mine and to DuPont.
o Prior to departure of every shipment and every morning during the transport operation, the drivers are tested for alcohol levels (blow tests documented in a trip log).
o Load shifting within the container is not considered possible as all containers are filled with 20 boxes and block and brace is applied to prevent load movement.

Container rollovers in different conditions (during the rainy season, crossing a river, in a curve, or crash) are considered and preventive measures are included in the Emergency Response Plan.

2.1.5. Transport Practice 1.5: Follow international standards for transportation of cyanide by sea and air.

The operation is

√ in full compliance with
□ in substantial compliance with Transport Practice 1.5
□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As described in Section 1, the scope of this audit was from the moment the ship delivers the cyanide at the Chilean port and its ground transportation operations to mines in Chile; therefore, this practice does not apply. Nevertheless, DuPont forbids transporting cyanide by air means
2.1.6.  *Transport Practice 1.6: Track cyanide shipments to prevent losses during transport.*

The operation is

- ✓ in full compliance with
- □ in substantial compliance with Transport Practice 1.6
- □ not in compliance with

DuPont transport procedures require the convoy leader to be provided with a cellular phone and a satellite phone. The convoy leader must also have a cellular phone and a radio. These requirements are redundant with the transporter’s procedures.

Transport procedures require communication equipment to be tested prior to the departure of the convoy and the inspection to be recorded in the vehicle inspection checklist.

DuPont’s transport procedures establish that the convoy leader must report the progress of the convoy at the pre-selected stop points. The progress report is provided by phone to the transporter base, which informs DuPont and other interested parties of the convoy progress. A tabular report is generated with the estimated and actual time of arrival to the selected stop points, which is continuously sent by email to DuPont’s Product Steward. Also, all incidents (e.g., mechanical failure) are reported immediately to DuPont and the client. This requirement is redundant with the transporter’s procedures which include a system to track the progress of the cyanide shipments.

DuPont locks and tags at the production facility the cyanide container. These tags are only removed at the mine. Additionally, DuPont provides a transport manifest (similar to a bill of lading) to the transporter that must be receipt stamped by the mine.

According to its audit report, the transporter has its own requirements to prevent loss of cyanide during the transport operation.

The transport procedures establish that the bill of lading, the MSDS, and emergency response information are carried by each driver; this is verified and recorded in the vehicles inspection checklist included in the convoy leader report. These requirements are redundant with those implemented by the transporter procedures.
2.2. INTERIM STORAGE: DESIGN, CONSTRUCT AND OPERATE CYANIDE TRANS-SHIPPING DEPOTS AND INTERIM STORAGE SITES TO PREVENT RELEASES AND EXPOSURES.

2.2.1. Transport Practice 2.1: Store cyanide in a manner that minimizes the potential for accidental releases.

The operation is

- [ ] in full compliance with
- [ ] in substantial compliance with Transport Practice 2.1
- [ ] not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Cyanide is transported directly from the port to the client sites without the intervention of interim storage facilities. This Practice does not apply to DuPont.

DuPont has procedures to store cyanide in a manner that minimizes the potential for accidental releases.

2.3. EMERGENCY RESPONSE: PROTECT COMMUNITIES AND THE ENVIRONMENT THROUGH THE DEVELOPMENT OF EMERGENCY RESPONSE STRATEGIES AND CAPABILITIES.

2.3.1. Transport Practice 3.1: Prepare detailed emergency response plans for potential cyanide releases.

The operation is

- [ ] in full compliance with
- [ ] in substantial compliance with Transport Practice 3.1
- [ ] not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

DuPont has implemented an Emergency Response Plan (DUP-Chile-02, latest review July 2010). This plan has been agreed with Verasay and the mines, which provides emergency response team and is responsible for the communication with the media. This is a detailed document of 44 pages plus four annexes (one per current, historical or potential clients) of nine to eleven pages with specific information and the risk matrices for each route and contact information for each mine. The Emergency Response Plan includes, among other information, the emergency response team organization chart, emergency phone directory, communication channels guidelines, emergency scenarios, and instructions to attend specific and general emergency scenarios.

According to their audit report, the transporter has its own emergency response plan that covers the scope of its responsibility as agreed with DuPont and that complies with the Code requirements.

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The plant was last updated in March 2013.

The plan has a detailed explanation of the sodium cyanide characteristics and toxicity based on the MSDS. The emergency scenarios, the general emergency response instruction, and the scenario-specific instructions consider the solid state of the cyanide.

Section 2 C of the Emergency Response Plan provides information regarding the packaging and transportation characteristics of the product, the container, and the transportation unit. All emergency scenarios developed are related to ground transportation: crash with another vehicle, vehicle rollover in steep slope or curve, rollover with spill, rollover with hurt persons, and rollover with the product reaching a water body, among other.

All the scenarios are in relation with accidents of trucks hauling a platform trailer carrying a 20-ft container, which is the only transportation modality used by DuPont and its subcontractors.

The Plan’s Section 4 establishes the responsibilities for the members of the response team (the transporter personnel with assistance from DuPont); it also establishes that the external emergency response teams (police department, firefighters, etc) will be used to secure the area, to communicate with the population and evacuate it, if required, and to coordinate vehicular traffic in the area. It also includes responsibilities for the mine’s emergency response team. However, it recognizes that the mine or other emergency response team (e.g. firefighters which by law are responsible of attending the emergency) may request to control the emergency, in which case, the convoy leader would pass the control of the emergency to them but will remain on site to provide advice and support, if necessary.

2.3.2. Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.

The operation is

✓ in full compliance with
☐ in substantial compliance with Transport Practice 3.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As mentioned in practice 1.2 the drivers and the convoy leader have received training from DuPont in the emergency response procedures. Additionally, the plan has been agreed with the mines. The convoy leaders have received additional training from DuPont’s specialized personnel.
The Plan’s Section 4 establishes the responsibilities for the members of the initial response team (convoy leader and drivers), including the roles of the DuPont. It also includes responsibilities for the on-scene commander (from DuPont), the communications leader (responsible for contact with the authorities and the media).

Section 4.3 has a list of the required emergency response equipment (which is also included as a checklist of section 9.5 of the transport procedures. The list includes:

- 14 overall tyvek suits
- 8 pairs of leather gloves
- 8 pairs of PVC booths
- 8 safety glasses or goggles
- 8 pairs of impermeable gloves
- 2 danger tape rolls
- 2 hand lanterns
- 1 ducting tape
- Cyanide gas detector
- Water analysis kit
- 40 disposable respirators 8210
- 12 amyl nitrite shots
- 4 Shoves
- 4 safety cones
- 4 sweeps
- 1 emergency light
- 50 polyethylene bags
- 80 kg of calcium carbonate
- 45 kg of sodium hypochlorite
- 2 empty containers

The transport procedures establish that the emergency equipment must be carried by the convoy leader in the safety escort vehicle. A checklist is used to verify that it is available and it is documented in the convoy leader report. No deviations were identified in the sample of records reviewed.

The Plan’s Section 8 establishes that all the training in relation with emergency response is provided at least on an annual basis. This training is redundant with that provided by the transporter to its personnel. According to the reviewed training records, DuPont lectured from three to four training sessions per year from 2010 to 2013. No deviations from this requirements were identified during the review of the training records and their contrast with convoy leader reports.
2.3.3. **Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.**

The operation is

√ in full compliance with

□ in substantial compliance with Transport Practice 3.3

□ not in compliance with

**Summarize the basis for this Finding/Deficiencies Identified:**

The Plan’s Section 3.A includes a communications flow diagram which can be summarized as follows: the convoy leader must inform the transporter base. The base will inform DuPont’s Customer Services from where all the internal communications are distributed. DuPont field coordinator, who receives backup from the on-scene commander, informs external emergency response teams, the mine, and DuPont. Section 3.B includes a list of the members of the internal response team members (including DuPont’s and the transporter) and that of external emergency responders (police, firefighters, hospitals, authorities, etc.). The mine contact information is included in the respective mine-specific annex. This is consistent with the transporter’s Emergency Response Plan; which also complies with the Code requirements.

The emergency notification and reporting procedures are included within the Emergency Response Plan. The Plan’s Section 8 establishes that it must be reviewed whenever modifications are required or, at least, once a year.

2.3.4. **Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.**

The operation is

√ in full compliance with

□ in substantial compliance with Transport Practice 3.4

□ not in compliance with

**Summarize the basis for this Finding/Deficiencies Identified:**

Section 5.6 of the Emergency Response Plan establishes the procedure to clean a spill and the decontamination of the area which consist of:

- isolate the area,
- sweep the cyanide (it is handled only in dry state),
- collect the debris in plastic bags or drums,
- treat the area with calcium carbonate and then with a 5% sodium hypochlorite solution,
- wait at least 15 min,
- rinse the area with water, and
- wait for the area to dry and then remove the barricades.
This procedure was communicated to the different port authorities during the training provided as part of the due diligence process.

Section 5.8 establishes that chemicals should not be added in water bodies, and the use of sodium hypochlorite, oxygen peroxide and iron sulfate is limited only to puddles, and artificial water reservoirs. Additionally, it includes instructions for assessing the impact on surface water bodies and to prevent the population to be poisoned by contaminated water. These instructions are part of the emergency response instructions to cyanide spills with contact to water and water bodies. This procedure was communicated to the different port authorities during the training provided as part of the due diligence process.

2.3.5. **Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed.**

The operation is

- [✓] in full compliance with
- [ ] in substantial compliance with Transport Practice 3.5
- [ ] not in compliance with

**Summarize the basis for this Finding/Deficiencies Identified:**

The Plan’s Section 8 establishes that it must be reviewed whenever modifications are required or, at least, once a year. The transport procedures establish that the convoy leader report must be used to update the assessment of the route. According to the respective track changes, the Emergency Response Plan and the Procedures were reviewed at least on an annual basis from August 2010 to July 2013.

The Plan’s Section 7.5 establishes that at least one emergency drill must be performed every year. The latest drills were the following:

- December 2012, truck turn over with spill of 200kg of cyanide
- November 2011 side crash with spill of cyanide
- December 2010, truck fall through slide with spill of 100kg of cyanide.

The emergency drills reports were reviewed and improvement opportunities were usually reported and implemented (generally related to reinforce training).
3. **PORTS DUE DILIGENCE.**

This operation is

- [✓] in full compliance
- [ ] in substantial compliance
- [ ] not in compliance

with the International Cyanide Management Code.

DuPont has the procedure DuPont-SA-Cod-02 “Assessment, Selection, and Accreditation of Ports for the reception of Cyanide Containers” (Latest revision July 2010, herein after the ports assessment procedure), which requires performing a due diligence of the ports every three years. The aspects to assess during the due diligence are the following:

- Ship mooring
- Tugboat availability and resources
- Security
- Load lifting equipment
- Safety and emergency procedures as well as response capacity
- IMO Class 6 materials storage area
- Containers handling equipment
- Preventive and corrective maintenance programs
- Availability and use of personal protective equipment
- Medical resources
- Truck parking areas
- Supervision by the authorities
- Training plan

The ports assessment procedure establishes that these aspects must be assessed during a port inspection and includes a questionnaire/report format.

According to the reviewed due diligence reports for Valparaiso, San Antonio, Antofagasta and Mejillones ports, the latest due diligences took place from May 2012 to August 2012 and were performed by DuPont’s Product Steward (back then Mr. Jean Jeaque Covos later replaced by Mr. Gonzalez). Mr. Gonzalez is currently also the person responsible of providing cyanide handling and emergency response to the transporters, external emergency responders.

According to the reviewed ports’ due diligences reports, there are sufficient safety measures to prevent releases in the four ports; however, as the Antofagasta port does not have a dedicated dangerous goods storage area, cyanide containers are discharged directly from the ship to platform trailers for their removal from the port. According to Mr. Gonzalez, DuPont has requested the ocean transporter to avoid as much as possible this port.
Furthermore, during the ports’ due diligence process, DuPont visually inspected the equipment used by the ports for ship unloading and containers handling within the port; according to the visual inspection, these were found in good conditions and adequate for the tasks; however, DuPont had no access to maintenance records.

Additionally, DuPont has agreed with the customs authorities that the containers will not be open at the port for inspection but when they arrive to the mine. This reduces the time the cyanide is in the port and prevents the containers getting open by persons without training in cyanide handling.

Finally, the reports mention that the ports have their own emergency response plans and arrangements. To ensure the ports have personnel trained on cyanide handling and emergency response, DuPont provided training to ports representatives selected by the Port Authority during the due diligence process. As additional measure, Mr. Gonzalez has provided his contact details and offered technical support to the port representatives in case of emergency.
4. TRANSPORTES VERASAY LTD

This operation is

√ in full compliance
□ in substantial compliance
□ not in compliance

with the International Cyanide Management Code.

In Chile, DuPont subcontracts Transportes Verasay Ltd. for the cyanide transport. Verasay is certified under the Cyanide Code. According to the re-certification audit report, Verasay has continued to comply with the Code Principles and Practices applicable to transporters independent of DuPont.