

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Cyanide Transportation Summary Audit Report

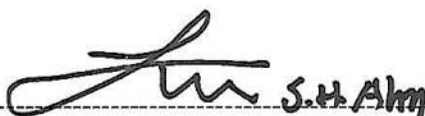
***For the
International Cyanide Management Code***

South America Supply Chain

11 October 2016

Samsung C & T Corporation

Name of Supply Chain Operator



Lead Auditor Signature
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Name of Cyanide Supply Chain : South America Supply Chain
Name of Supply Chain Owner : Samsung C & T Corporation
Name of Supply Chain Operator : Samsung C & T Corporation
Name of Responsible Manager : Mr. Hongtaek Kim / Director, Fine & Specialty Chemicals Team,
Trading & Investment Group, Samsung C & T Corporation
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Location detail and description of operation:

The head office of Samsung C & T Corporation is located in Seoul, Korea. They have two groups named as Trading & Investment Group and Engineering & Construction Group. Related to supplying the sodium cyanide, the main jobs of Trading & Investment Group are making agreement with mining company, receiving customer order, review of customer order and arrangement of shipping. Those were conducted by Fine & Specialty Chemicals Team in Trading & Investment Group of Samsung C & T Corporation.

Samsung C & T Corporation applied the South America Supply during 2013 year. The sodium cyanide manufactures, road transportation companies, shipping companies, ports and final destinations in Peru and Argentina were included in South America Supply Chain.

And then they extended the scope of South America Supply Chain to Mexico during 2015 year.

Since 2015 year, there were some changes in South America Supply Chain.

The current detail segments and subcontractors in South America Supply Chain are as below.

1. Sodium cyanide manufacture : TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. Ulsan Plants in Korea.
2. Transportation from sodium cyanide manufactures in Ulsan Plants to Pusan New Port in Korea : SAM IK Logistics Co., Ltd. and Sebang Co., Ltd. in Korea
3. Marine transportation from Pusan New Port in Korea to Callao Port in Peru, Guaymas Port and Manzanillo Port in Mexico : MSC, Hapag-Lloyd and Hamburg Sud
4. Transportation from Guaymas Port and Manzanillo Port to trans-loading and storage area and gold mining sites in Mexico : Transports Suri S.A. de C.V.
5. Operation of trans-loading and storage facility in La Colorade, Sonora, Mexico : Heap Leaching Systems, S.A. de C.V.

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Auditor's Finding

This operation is

X in full compliance

- ☒ in substantial compliance *(see below) with the International Cyanide Management Code
☐ not in compliance

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.

Audit Company : 3Points Co., Ltd..
Audit Team Leader : Mr. Sang Ho Ahn
E-mail: triplepoint@naver.com

Date(s) of Audit: 20, 25, 30 May and 06 June 2016

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 the audit team met 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.

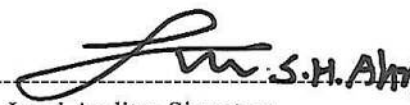
During this recertification audit, I confirmed that the South America Supply Chain of Samsung C & T Corporation has not experienced any significant cyanide incident or compliance problem during the previous three-year audit cycle.

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1. TRANSPORT: Transport cyanide in a manner that minimizes the potential for accidents and releases.

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

The operation is ☒ **X in full compliance with** **with Transport Practice 1.1**
☐ in substantial compliance
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

According to hazardous chemical transportation manual, during 2012 year and September 2015 year, Samsung C & T Corporation considered overall transportation route from sodium cyanide manufactures (TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. in Korea) to the ports in South America and customer gold mining sites in Mexico.

They identified several possible routes from sodium cyanide manufactures in Korea to the ports in South America and customer gold mining sites in Mexico. They evaluated the routes for such items as availability, security, transportation quantity and cost. And then they finally decide the transportation routes as below.

- 1) From cyanide manufacture Ulsan Plants to Pusan New Port in Korea : Roadway transportation by truck and rail transportation by train.
- 2) Pusan New Port in Korea to Callao Port in Peru, Guaymas Port and Manzanillo Port in Mexico : Marine transportation by ship
- 3) Guaymas Port and Manzanillo Port to trans-loading and interim storage facility and to gold mining sites in Mexico : Roadway transportation by truck

During 2012 and September 2015 year, Samsung C & T Corporation evaluated, reevaluated and chose sodium cyanide manufactures, transporters, shipping companies and operator of trans-loading and interim storage facility according to the sub-contractor evaluation procedure.


- 1) Sodium cyanide manufacture : TaeKwang Industrial Co., Ltd. Ulsan Plant and TongSuh Petrochemical Co., Ltd. in South Korea
- 2) From cyanide manufactures in Ulsan Plants to Pusan New Port in Korea
 - (1) From TaeKwang Industrial Co., Ltd. Ulsan plant to Pusan New Port in Korea (Roadway transportation by truck) : Sebang Co., Ltd.
 - (2) From TongSuh Petrochemical Co., Ltd. Ulsan plant to Pusan New Port in Korea (Roadway transportation by truck and rail transportation) : SAM IK Logistics Co., Ltd .
- 3) Pusan New Port in Korea to Callao Port in Peru, Guaymas Port and Manzanillo Port in Mexico (Marine transportation by ship) : MSC, Hapag-Lloyd and Hamburg Sud
- 4) Guaymas Port and Manzanillo Port to trans-loading and interim storage facility and to gold mining sites in Mexico (Roadway transportation by truck) : Transports Suri S.A. de C.V.
- 5) Operation of trans-loading and interim storage facility in La Colorade, Sonora, Mexico : Heap Leaching Systems, S.A. de C.V.

Also Samsung C & T Corporation decided the control measures for each segment in South America Supply Chain as below.

- 1) Cyanide manufactures (TaeKwang Industrial Co., Ltd. and Tonsuh Petrochemical Co., Ltd. Ulsan Plants in Korea)
 - (1) Periodic subcontractor evaluation by Samsung C & T Corporation
 - (2) Implementation & certification of ICMC by TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd.

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- 2) Road transportation companies in Korea
 - (1) Periodic subcontractor evaluation by TaeKwang Industrial Co., Ltd., TongSuh Petrochemical Co., Ltd and Samsung C & T Corporation
 - (2) Implementation & certification of ICMC by SAM IK Logistics Co., Ltd. and Sebang Co., Ltd.
- 3) Rail transportation company in Korea
Periodic subcontractor evaluation and route evaluation by SAM IK Logistics Co., Ltd. already ICMC certified during 2010 year and recertified during 2013 year. The rail transportation is implemented by Korea Rail Operation Company. The SAM IK Logistics Co., Ltd. checked the rail transportation route from Ulsan Rail Center to Rail Center of Pusan New Port and found that Korea Rail Operation Company complied with "Rail road transportation safety act"
- 4) Pusan New Port in Korea
The storage terminal was controlled by Pusan New Port Corporation as national agency.
 - (1) Periodic route evaluation by Samsung C & T Corporation
 - (2) Periodic due diligence investigation for storage terminal of Pusan New port by Samsung C & T Corporation
- 5) Shipping company
 - (1) Periodic route evaluation by Samsung C & T Corporation
 - (2) Periodic due diligence investigation by Samsung C & T Corporation
- 6) Callao port in Peru, Guaymas Port and Manzanillo Port in Mexico
The storage terminal was controlled by national port agencies.
 - (1) Periodic route evaluation by Samsung C & T Corporation
 - (2) Periodic due diligence investigation for storage terminal of ports by Samsung C & T Corporation
- 7) Road transportation companies in Mexico
 - (1) Periodic subcontractor evaluation by Samsung C & T Corporation
 - (2) Implementation and certification of ICMC by road transporter as Transports Suri S.A. de C.V.
- 8) Operation of trans-loading and interim storage facility in La Colorade, Sonora, Mexico
 - (1) Periodic subcontractor evaluation by Samsung C & T Corporation
 - (2) Implementation and certification of ICMC by operator Heap Leaching Systems, S.A. de C.V.

During November 2012 and September 2015 year, Samsung C & T Corporation have identified and evaluated the overall risks for the South America Supply Chain. Below risks were identified.

- Release to road, land and surface water during road and rail transportation by transporters. (Sebang Co., Ltd., SAM IK Logistics Co., Ltd., Korea Rail Operation Company, Transports Suri S.A. de C.V)
- Damage to sodium cyanide container in Pusan New Port in Korea, Callao Port in Peru, Guaymas Port and Manzanillo Port in Mexico, trans-loading and interim storage facility in Mexico.
- Release to sea water during transportation by shipping company (MSC, Hapag-Lloyd and Hamburg Sud)
- Robbery during road transportation, storage in ports and marine transportation.
- Taken away by criminal suspect during road and marine transportation

Samsung C & T Corporation documented the control measures to address risks in South America Supply Chain. They also established emergency response plan for sodium cyanide release, robbery and taken away by criminal suspect. The communication channel with government body, safety agency, police, manufacture and transporter defined in emergency response plan.

According to hazardous chemical transportation manual, Samsung C & T Corporation should reevaluate the overall routes of South America Supply Chain every three year periodically. And if there are some changes related to routes, transporters, facilities and relevant legal requirements, they will re-evaluate the routes non-periodically.

So Samsung C & T Corporation organized South America Supply Chain and completed the route evaluation during November 2012, they also re-evaluate the routes of South America Supply Chain

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during September 2015 year.

Samsung C & T Corporation informed the sodium cyanide transportation route to relevant bodies defined in emergency response plan and received some general comment. They prepared the sodium cyanide handling manual as pocket book and CD. During due diligence investigation, subcontractor evaluation and route survey, they have delivered the manual to safety agency, transporter, ports, shipping company etc.

Samsung C & T Corporation reviewed the overall route for South America Supply Chain. According to the review results, they decide with reasonable justification that convoys, escorts or additional measures are unnecessary for each segment in South America Supply Chain.

Samsung C & T Corporation established emergency response plan for sodium cyanide release and human exposure. In the emergency response plan, role and mutual aid with sodium cyanide manufactures, transporters, ports, safety agency, police, fire fighting agency, hospital etc. were defined. Recently they updated the emergency response plan to include the changes in South America Supply Chain. They advised the emergency response plan to relevant bodies and delivered the sodium cyanide handling manual as pocket book and CD. Those activities were also implemented by ICMC signatories and certified transporters.

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 ☒ **X in full compliance with**
☐ in substantial compliance **with Transport Practice 1.2**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation is trading company. So they do not actually operate cyanide handling and transport equipment. During the subcontractor evaluation and due diligence investigation, they checked and evaluated sodium cyanide transporters whether the sodium cyanide operators were trained, qualified and licensed. They confirmed that the transporters have used operators and drivers trained, qualified and licensed according to national legal requirements. Samsung C & T Corporation have prepared and communicated sodium cyanide handling manual as pocket book and CD to manufactures and transporters etc. to use in training, daily operation and emergency situation.

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

The operation is ☒ **X in full compliance with**
☐ in substantial compliance **with Transport Practice 1.3**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation is trading company. So they do not actually use transport equipment. During the subcontractor evaluation and due diligence investigation, they checked and evaluated sodium cyanide transporters whether the transport equipment is suitable for sodium cyanide shipment.

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And also during the due diligence investigation, they checked the ports and shipping companies whether the transport equipment is suitable or not. According to the subcontractor evaluation and due diligence investigation results, the transporters, ports and shipping companies used suitable equipment. And transporter, ports and shipping company have preventive maintenance procedure to control the transport equipment. And container itself designated to prevent overloading.

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

The operation is ☒ **X in full compliance with** **with Transport Practice 1.4**
☐ in substantial compliance
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation is a trading company. So they do not actually need the detail safety program for transport of sodium cyanide. During the subcontractor evaluation and due diligence investigation, they checked and evaluated sodium cyanide transporters, ports and shipping companies whether the safety program was developed and implemented. Samsung C & T Corporation confirmed that the road transporters, ports and shipping companies have implemented their work instruction to maintain the integrity of sodium cyanide packaging. And also according to the evaluation and investigation results, the transporters, ports and shipping companies developed and implemented the safety program. As a consigner, they requested to transporters for the compliance of local regulation, international standards and safety program. If the transporters violate the local regulation and international standards, they are not able to be registered as approved sub-contractor to Samsung C & T Corporation.

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

The operation is ☒ **X in full compliance with** **with Transport Practice 1.5**
☐ in substantial compliance
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation is a trading company. So they do not actually perform the transportation of sodium cyanide by sea. They evaluated shipping companies according to subcontractor evaluation procedure and hazardous chemical transportation manual for such items as compliance with IMDG Code, compliance of legal requirements and possibility of actual evaluation & investigation. After the evaluation, they selected MSC, Hapag-Lloyd and Hamburg Sud as shipping companies for sodium cyanide transportation. They completed the due diligence investigation. According to the due diligence investigation, those shipping companies were comply with IMDG Code. Transportation of sodium cyanide by air is not applicable at this point.

Transport Practice 1.6: Track cyanide shipments to prevent losses during transport.

The operation is ☒ **X in full compliance with** **with Transport Practice 1.6**
☐ in substantial compliance
☐ not in compliance with

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Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation is trading company. So they do not actually perform the transportation of cyanide. During the subcontractor evaluation, they checked and evaluated the sodium cyanide transporters whether the transport vehicles have means to communication with relevant bodies. According to the evaluation results, the vehicles have pager, mobile phone and communication channel sheet in which telephone numbers of transporters, the manufactures, mining sites and emergency responders defined.

And also during the subcontractor evaluation, they checked and evaluated the transporters whether they periodically test the communication equipment or not. Samsung C & T Corporation checked the overall routes of South America Supply Chain. And found no blackout area. And they requested to transporters to identify blackout area and alternative procedure to control the blackout area. Until now they have not received any identified blackout area from transporters.

Samsung C & T Corporation have procedure to track the progress of cyanide shipments.

And if needed, they tracked the progress of cyanide shipments by contact with sodium cyanide manufactures (Twakwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd.) and transporters (Sebang Logistics Co., Ltd., SAM IK Logistics Co., Ltd. and Transports Suri S.A. de C.V.) and website check of shipping companies.(MSC, Hapag-Lloyd and Hamburg Sud)

As Samsung C & T Corporation receive purchasing orders from customers as gold mining sites, they review the delivery and quantity and input the orders in computer network system. They requested to sodium cyanide manufacture as Taekwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. to dispatch the amount of sodium cyanide and nominate the shipping companies. The individual customer order (order number, target delivery and amount), dispatched date and quantity of sodium cyanide from manufacture to shipping companies were registered in computer network system of Samsung C & T Corporation. And also the progress of marine transportation by shipping companies can be checked for individual customer order in web-site of MSC, Hapag-Lloyd and Hamburg Sud. So the inventory control and custody documentation were properly implemented to prevent loss of sodium cyanide during transportation.

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2. INTERIM STORAGE: Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent releases and exposures.

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

The operation is	X in full compliance with	with Transport Practice 2.1
	in substantial compliance	
	not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation do not actually control the interim storage areas. However they checked overall routes of South America Supply Chain and identified interim storage areas as below.

- 1) Pusan New Port in Korea, Guaymas Port and Manzanillo Port in Mexico
- 2) Trans-loading and storage facility in La Colorade, Sonora, Mexico

Those ports are controlled by national port agency and interim storage areas are rent and controlled by shipping companies. Samsung C & T Corporation completed the due diligence investigation for Pusan New Port in Korea, Guaymas Port and Manzanillo Port in Mexico from November 2013 year to September 2016 year.

They found the interim storage areas were controlled properly in compliance with legal requirements and ICMC code requirements. And also they delivered the sodium cyanide handling manual as pocket book and CD.

The trans-loading and storage facility in La Colorade, Sonora, Mexico was controlled by subcontractor Heap Leaching Systems, S.A. de C.V. Samsung C & T Corporation conducted subcontractor evaluation during 2015 year and chose the Heap Leaching Systems, S.A. de C.V. for the operation of trans-loading and storage facility in La Colorade, Sonora, Mexico. The subcontractor Heap Leaching Systems, S.A. de C.V is already ICMC certified.

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3. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities

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

The operation is ☒ **X in full compliance with**
☐ in substantial compliance **with Transport Practice 3.1**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

During 2013 year and September 2015 year, Samsung C & T Corporation identified possible emergency situations as sodium cyanide release to road, land, surface water and sea water, robbery during transportation and interim storage and taken away by criminal suspect during transportation. And define the emergency response plan in hazardous chemical transportation manual. They defined what they should do, communication channel and relevant external responders such as sodium cyanide manufacture, transporters, shipping companies, mining, safety agency, police and hospitals located mainly in Korea. Recently they updated the emergency response plan and communication channel to reflect changes in South America Supply Chain during September 2015 year and March 2016 year. Such changes as shipping companies, road transporter and exclusion of Argentina were reflected to emergency response plan.

Samsung C & T Corporation prepared and updated the emergency response plan appropriate to overall emergency situations possibly expected in South America Supply Chain. The emergency plan considered the transportation route and interim storage area. And also they confirmed that shipping companies (MSC, Hapag-Lloyd and Hamburg Sud) maintained emergency response plan appropriate for release accident during marine transportation to comply with IMDG Code. As Samsung C & T arrange the transportation of solid sodium cyanide, the plan considered the solid sodium cyanide packaged in film & box and transported in container.

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

The operation is ☒ **X in full compliance with**
☐ in substantial compliance **with Transport Practice 3.2**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Fine & Specialty Chemical Team of Samsung C & T Corporation have implemented two times per year the training for their team members and relevant subcontractors related to the emergency response plan and cyanide handling manual. Recently during September 2015, the emergency response plan, updated communication channel, duties of relevant external agency and main activities of Samsung C & T Corporation were trained and records were maintained. The use of personnel protective equipment, first aid and control method of released sodium cyanide were trained with sodium cyanide handling manual.

During March 2016 year, the training related to emergency response plan and cyanide handling manual was conducted in Mexico for the employee of Samsung C & T Corporation and subcontractor.

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The use of personnel protective equipment, first aid and control method of released sodium cyanide were trained with sodium cyanide handling manual.

The road transporters have trained their employee as yearly training program and also shipping companies have implemented training for their employee to comply with IMDG Code.

In the emergency response plan prepared by Fine & Specialty Chemicals Team, the roles and responsibilities of team leader, team member, other relevant team and external agency defined.

As Samsung C & T Corporation is trading company, they do not actually implement the transportation works. So they do not need the list of emergency response equipment. But in the sodium cyanide handling manual, the emergency response equipment defined.

Samsung C & T Corporation have checked that the road transporters delineated the roles and responsibilities to subcontractors as individual vehicle drivers. They found that road transporters applied the emergency response procedure including roles and responsibilities to subcontractor as the same level of transporters.

According to the hazardous chemical transportation manual, during supplier evaluation and route investigation, the Fine & Specialty Chemical Team checked cyanide manufactures and transportation companies and confirmed that they have procedures for inspecting emergency response equipment and assuring its availability.

Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.

The operation is	X in full compliance with	with Transport Practice 3.3
	<input type="checkbox"/> in substantial compliance	
	<input type="checkbox"/> not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation prepared and updated the emergency response plan appropriate to the overall emergency situations possibly expected in South America Supply Chain. In the emergency response plan, contact information as telephone number, relevant person name and address of sodium cyanide manufactures, road transporters, shipping companies, safety agency, fire fighting agency and hospital were defined. According to hazardous chemical transportation manual, they have checked the emergency response plan twice per year and update the contact information and detail process as needed. Recently they updated the emergency response plan and communication channel to reflect changes in South America Supply Chain during September 2015 year and March 2016 year. Such changes as shipping companies, road transporter and exclusion of Argentina were reflected to emergency response plan.

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

The operation is	X in full compliance with	with Transport Practice 3.4
	<input type="checkbox"/> in substantial compliance	
	<input type="checkbox"/> not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation prepared and updated the emergency response plan appropriate to the overall emergency situations possibly expected in South America Supply Chain.

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And in the sodium cyanide handling manual, the remediation as recovery and protect for released sodium cyanide, decontamination of soil and water, control and disposal of wastes etc. were defined. The sodium cyanide handling manual as pocket book and CD were delivered to road transporters (Sebang Co., Ltd. and SAM IK Logistics Co., Ltd. in Korea and Transports Suri S.A. de C.V. in Mexico), shipping companies (MSC, Hapag-Lloyd and Hamburg Sud) and ports (Pusan New Port in Korea, Callao Port in Peru, Guaymas Port and Manzanillo Port in Mexico)

The ICMC certified transporters have developed and implemented detail response plans appropriate to each segment. So the emergency response plan prepared by Samsung C & T Corporation is supplement to the emergency response plans developed by each certified transporters. In sodium cyanide handling manual, the prohibit of the use of sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat sodium cyanide that has been released into surface water was defined.

Transport Practice 3.5: Periodically evaluate response procedures and capabilities and update them as needed.

The operation is	X in full compliance with	with Transport Practice 3.5
	<input type="checkbox"/> in substantial compliance	
	<input type="checkbox"/> not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

According to hazardous chemical transportation manual, Samsung C & T Corporation have checked the emergency response plan twice per year and update the contact information and detail process with the reflection of changes in South America Supply Chain. The emergency response plan was prepared and updated during September 2015 year and March 2016 year. Such changes as shipping companies, road transporter and exclusion of Argentina were reflected to emergency response plan.

According to hazardous chemical transportation manual, Samsung C & T Corporation have implemented the mock emergency drill once per year. The mock emergency drill was implemented in their Korea office during September 2015. They checked the overall process and adequacy of emergency response plan and recorded the results.

During March 2016 year, the training related to emergency response plan was conducted in Mexico for the employee of Samsung C & T Corporation and subcontractor.

After the mock drill during September 2015 year and training during March 2016 year, they updated and changed communication channel in emergency response plan to the reflect the changes as shipping companies, road transporter and exclusion of Argentina.

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Summary of Due Diligence Investigations

1. Background of due diligence investigation

- 1) Inability of consigner for ports and shipping companies lead to ICMC implementation and certification

The South America Supply Chain includes sodium cyanide manufactures, road transporters, ports and shipping companies as below.

- Sodium cyanide manufactures : TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. Ulsan Plants in South Korea
- From cyanide manufactures Ulsan plant to Pusan New Port in Korea (Roadway transportation by truck and rail transportation) : SAM IK Logistics Co., Ltd. and Sebang Logistics Co., Ltd.
- Control of sodium cyanide storage yard in Pusan New Port in Korea : Pusan New Port Corporation
- From Pusan New Port in Korea to Callao Port in Peru, Guaymas Port and Manzanillo Port in Mexico (Marine Transportation) :MSC, Hapag-Lloyd and Hamburg Sud
- From Guaymas Port and Manzanillo Port to trans-loading and interim storage facility and to gold mining sites in Mexico (Roadway Transportation) : Transports Suri S.A. de C.V.
- Operation of trans-loading and storage facility in La Colorade, Sonora, Mexico : Heap Leaching Systems, S.A. de C.V.

As consigner Samsung C & T Corporation control overall South America Supply Chain and will lead the ICMC implementation and certification to sodium cyanide manufacture, road transporters, operator of trans-loading and interim storage facility, ports and shipping companies. So they successfully lead and chose ICMC certified sodium cyanide manufactures, road transporters and operator of trans-loading and storage facility.

However they can't lead the ports and shipping companies to ICMC implementation and certification due to their inability to affect change in the operating practices of those ports and shipping companies.

So the Samsung C & T Corporation planned and implemented due diligence investigation for ports and shipping companies as required by ICMC.

- 2) Scope of due diligence investigation

The due diligence investigation was focused to the port activities such as loading, unloading and storage of sodium cyanide and marine transportation by shipping companies.

The shipping company's activities can be checked during the due diligence investigation of ports. So the due diligence investigation for Pusan New Port and shipping companies were implemented at the same time. And the results of due diligence investigation for Pusan New Port and shipping companies were recorded in combined reports.

2. Progress of due diligence investigation

- 1) Development of checklist

During 2010 and 2013 year as Samsung C & T Corporation applied ICMC signatory and certification, the Fine & Specialty Chemicals Team members reviewed the ICMC requirements, IMDG Code, Supply Chain, property of sodium cyanide and information from sodium cyanide manufactures. And then developed checklist for due diligence investigation applicable to the control of sodium cyanide storage yard, loading to ship and marine transportation. Recently they updated the checklist considering the route of South America Supply Chain.

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2) Scheduling of due diligence investigation

According to hazardous chemical transportation manual, Samsung C & T Corporation need to conduct due diligence investigation for existing ports and shipping companies every 3 year. And also they need to conduct due diligence investigation for ports and shipping companies newly included to South America Supply Chain. Considering those situation, Samsung C & T Corporation have planned and conducted due diligence investigation for ports and shipping companies from February to September_2016 year.

3) Implementation of due diligence investigation

Samsung C & T Corporation implemented the due diligence investigation for Pusan New Port in Korea during 26 February 2016 year. The activities of shipping companies as MSC, Hapag-Lloyd and Hamburg Sud were also checked during the due diligence investigation of Pusan New Port. They implemented the due diligence investigation for Guaymas Port and Manzanillo Port in Mexico during 22 September 2016 year and 20 September 2016 year.

They also implemented the due diligence investigation for Callao Port in Peru during 31 May 2016 year.

They use the checklist and record the investigation results in checklist and log sheet. After the investigation, they issued the completed checklist to ports and shipping companies and requested corrective actions for some findings. Investigation team checked the action results from ports and shipping companies and confirmed that corrective actions were completed for findings identified during due diligence investigation.

3. Results of due diligence investigation

The Samsung C & T Corporation use the checklist, record the investigation results and prepared reports as below.

1) Pusan New Port in Korea including shipping companies as MSC, Hapag-Lloyd and Hamburg Sud.

(1) Due diligence investigation results

Investigation Area : Storage, loading, unloading and marine transportation in Pusan New Port in Korea including shipping companies' activities

Investigation Item : Storage area control, responsible personnel, emergency plan, mock drill, equipment control and training

Investigation Date : 26 February 2016

(2) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation concluded that the control of the sodium cyanide by Pusan New Port and shipping companies comply with ICMC, IMDG code and national legal requirements.

2) Guaymas Port in Mexico

(1) Due diligence investigation results

Investigation Area : Storage, loading, unloading in Guaymas Port in Mexico

Investigation Item : Storage area control, responsible personnel, emergency plan, mock drill, equipment control and training

Investigation Date : 22 September 2016

(2) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation concluded that the control of the sodium cyanide by Guaymas Port comply with ICMC,

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IMDG code and national legal requirements.

3) Manzanillo Port in Mexico

(1) Due diligence investigation results

Investigation Area : Storage, loading, unloading in Manzanillo Port in Mexico

Investigation Item : Storage area control, responsible personnel, emergency plan, mock drill, equipment control and training

Investigation Date : 20 September 2016

(2) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation concluded that the control of the sodium cyanide by Manzanillo Port comply with ICMC, IMDG code and national legal requirements.

4) Callao Port in Peru

(1) Due diligence investigation results

Investigation Area : Storage, loading, unloading in Callao Port in Peru

Investigation Item : Storage area control, responsible personnel, emergency plan, mock drill, equipment control and training

Investigation Date : 31 May 2016

(2) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation concluded that the control of the sodium cyanide by Callao Port comply with ICMC, IMDG code and national legal requirements.

4. Review of the due diligence investigation results by ICMC audit team

During the ICMC certification audit 2016 year for South America Supply Chain, the auditor Mr. Sang Ho Ahn reviewed the overall due diligence investigation processes and results implemented by Samsung C & T Corporation.

The due diligence investigations included the control of storage yard in ports and marine transportation by shipping companies. The Samsung C & T Corporation implemented the due diligence investigations comprehensively for Pusan New Port in Korea, Guaymas Port and Manzanillo Port in Mexico and Callao Port in Peru during November 2013 year to September 2016 year as below.

- Study and develop checklist applicable to sodium cyanide storage and transportation
- Nominated competent personnel as investigation team leader and member
- Implement due diligence investigation with checklist for ports and shipping companies responsible for the control of sodium cyanide storage and marine transportation
- Issue corrective actions for findings identified during site visits
- Checked corrective action results from ports and shipping companies

The audit team finally concluded that the due diligence investigations for South America Supply Chain implemented by Samsung C & T Corporation were comply with ICMC requirements.

Samsung C & T Corporation

Name of Supply Chain Operator



Lead Auditor Signature

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11 October 2016

Date