

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Cyanide Transportation Summary Audit Report


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

West Africa Supply Chain

05 July 2011

Samsung C & T Corporation

Name of Supply Chain Operator



Lead Auditor Signature
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Name of Cyanide Supply Chain : West Africa 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. S K Sohn, / General Manager, Fine & Specialty Chemicals Team, Trading & Investment Group, Samsung C & T Corporation
Address : 29th Fl., Samsung C & T Corp. Bldg., 1321-20 Seocho 2-dong, Seocho-gu,
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Website: www.samsungcnt.co.kr

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.

The Samsung C & T Corporation applied the Ghana Supply Chain and Burkina Faso Supply Chain as ICMC signatory and certified during 2010 year. And also they have extended their sodium cyanide exporting business to other countries such as Niger, Mali and Guinea. However it is difficult for them to ICMC signatory application and certification for each individual country. So they applied West Africa Supply Chain in which each individual country such as Ghana, Burkina Faso, Niger, Mali and Guinea were included. The sodium cyanide manufactures, road transportation companies, shipping companies, ports and final destinations were included in West Africa Supply Chain as below.

- ① Sodium cyanide manufacture : TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. Ulsan Plants in Korea
- ② Sodium cyanide manufactures in Ulsan Plants to Pusan port in Korea : Seyang Logistics Co., Ltd. and SAM IK Logistics Co., Ltd. in Korea
- ③ Marine transportation from Pusan port in Korea to West Africa : Maersk, MSC and Safmarine
- ④ The ports & road transporter in West Africa and final destinations

Departing port	Arriving ports in West Africa	Final Destination	Road transporter in West Africa
Pusan port in Korea	Takoradi port in Ghana	Ghana	Vehrad Transport and Haulage Limited
	Tema port in Ghana	Burkina Faso	
		Niger	
		Mali	
		Guinea	Transport Terrassement Minier (T.T.M)
	Conakry port in Guinea	Guinea	
	Dakar port in Senegal	Mali	<u>Bollere Africa</u> <u>Logistics SDV Senegal</u>

The Ghana Supply Chain and Burkina Faso Supply Chain were already certified for ICMC during 2010 year. So the extended scope of West Africa Supply Chain was mainly checked during this audit. And also the continual implementation of ICMC to existing scope was partially checked. The audit results were combined and recorded in detail report and this summary report.

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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: 18, 19 and 20 April 2011

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 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.

. Samsung C & T Corporation

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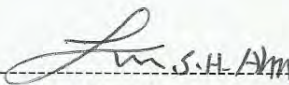


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Description of Consignor's role in ensuring compliance of its carriers

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**
☐ in substantial compliance **with Transport Practice 1.1**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Since last year May, the Samsung C & T Corporation considered overall transportation route from sodium cyanide manufacturers to customers gold mining sites in Ghana, Burkina Faso, Niger, Guinea and Mali according to their hazardous chemical transportation manual in which route evaluation process defined. They identified several possible routes from sodium cyanide manufactures in Korea to gold mining in Ghana, Burkina Faso, Niger, Guinea and Mali. They evaluate the routes for such items as availability, security, transportation quantity and cost. And then they finally decided the transportation routes as below.

- From cyanide manufactures Ulsan plants to Pusan port in Korea : Roadway transportation by truck and rail transportation
- Pusan port in Korea to Takoradi port or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal : Marine transportation by ship
- Takoradi port, Tema port, Conakry port and Dakar port to gold mining sites in Ghana, Burkina Faso, Niger, Guinea and Mali : Roadway transportation by truck

They have sub-contractor evaluation procedure in which detail evaluation items for sodium cyanide manufacture, road transporter, shipping company and re-packaging plant operation. Main evaluation items are ICMC signatory, compliance with IMDG Code and legal requirements etc. According to the procedure, they evaluated and chose sodium cyanide manufactures, road transportation companies and shipping companies as below.

- Sodium cyanide manufacture : TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. Ulsan Plants in South Korea
- From cyanide manufactures in Ulsan to Pusan port in Korea : Seyang Logistics Co., Ltd. and SAM IK Logistics Co., Ltd.
The Seyang Logistics Co., Ltd. is sub-contractor of TaeKwang Industrial Co., Ltd. and SAM IK Logistics Co., Ltd is sub-contractor of TongSuh Petrochemical Co., Ltd. not chosen by Samsung C & T Corporation.
- Pusan port in Korea to Takoradi port or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal (Marine transportation by ship) : MSC, Maersk and Safmarine
- Takoradi port in Ghana to gold mining sites in Ghana (Roadway transportation by truck) : Vehrad Transport and Haulage Limited
- Tema port in Ghana to gold mining sites in Burkina Faso, Niger, Mali and Guinea (Roadway transportation by truck) : Vehrad Transport and Haulage Limited
- Conakry port in Guinea to gold mining sites in Guinea (Roadway transportation by truck) : Transport Terrassement Minier (T.T.M)
- Dakar port in Senegal to gold mining sites in Mali (Roadway transportation by truck) : Bollore Africa Logistics SDV Senegal

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The work scope of West Africa Supply Chain includes re-packaging plant in Tema Ghana.
The Samsung C & T Corporation also evaluated and chose sub-contractor as below.

- Re-packaging from woven bag to tank container in Tema Ghana : Operated by Vehard Transport and Haulage Limited

Vehard Transport and Haulage Limited is ICMC signatory and certified for sodium cyanide Transportation works already. And also the Vehard Transport and Haulage Limited registered as ICMC signatory for the re-packaging plant of sodium cyanide.

The Samsung C & T Corporation have plan to install and operate the sodium cyanide mixing facility in gold mining site in Burkina Faso. After the installation, they will apply the ICMC signatory for the operation of sodium cyanide mixing facility.

During last year, the Samsung C & T Corporation chose Pusan port in Korea, Takoradi or Tema ports in Ghana considering the location, security and availability.

And also recently they chose Conakry port in Guinea and Dakar port in Senegal to extend their Sodium cyanide exporting business to Guinea and Mali. The port facilities of Pusan in Korea, Takoradi or Tema in Ghana, Conakry in Guinea and Dakar in Senegal were operated by national port control agency. So Samsung C & T Corporation chose ports in Pusan Korea, Takoradi or Tema Ghana, Conakry in Guinea and Dakar in Senegal.

And they completed the due diligence investigations to evaluate their safety & potential need to ensure safe cyanide management.

Considering the above overall situations, Samsung C & T Corporation decided the control methods for each segment in West Africa Supply Chain as below.

- 1) Cyanide manufactures (TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. Ulsan plants)
 - (1) Periodic supplier evaluation by Samsung C & T Corporation
 - (2) Implementation & certification of ICMC by TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd.
- 2) Transportation companies in Korea
 - (1) Periodic supplier evaluation by TaeKwang Industrial Co., Ltd., TongSuh Petrochemical co., Ltd. and Samsung C & T Corporation
 - (2) Implementation & certification of ICMC by Seyang Logistics Co., Ltd. and SAM IK Logistics Co., Ltd.
- 3) Pusan port in Korea

The shipping company rent the storage area in port from national port agency. And the shipping companies actually control the sodium cyanide storage yard in port.

 - (1) Periodic route evaluation by Samsung C & T Corporation
 - (2) Periodic due diligence investigation by Samsung C & T Corporation
 - * Due to inability as consigner leading the shipping company to ICMC implementation and certification.
- 4) Shipping companies
 - (1) Periodic route evaluation by Samsung C & T Corporation
 - (2) Periodic due diligence investigation by Samsung C & T Corporation
 - * Due to inability as consigner leading the shipping companies to ICMC implementation and certification
- 5) Takoradi or Tema ports in Ghana, Conakry in Guinea and Dakar in Senegal

The shipping companies rent the storage area in port from national port agency. And the shipping companies actually control the sodium cyanide storage yard in port.

 - (1) Periodic route evaluation by Samsung C & T Corporation
 - (2) Periodic due diligence investigation by Samsung C & T Corporation
 - * Due to inability as consigner leading the shipping company to ICMC implementation and

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Certification.

6) Road transportation companies in West Africa

- (1) Periodic supplier evaluation by Samsung C & T Corporation
- (2) Implementation & certification of ICMC by Vehrad Transport and Haulage Limited, Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal

7) Re-packaging company

- (1) Periodic supplier evaluation by Samsung C & T Corporation
 - (2) Implementation & certification of ICMC by Vehrad Transport and Haulage Limited
- * For re-packaging plant operation, the re-packaging company registered as ICMC signatory
And will complete certification near soon.

Below companies in the West Africa Supply Chain of Samsung C & T Corporation were registered as ICMC signatories and their operations were certified under the ICMC code.

- TaeKwang Industrial Co., Ltd. as cyanide producer
- TongSuh Petrochemical Co., Ltd. as cyanide producer
- Seyang Logistics Co., Ltd. as transporter
- SAM IK Logistics Co., Ltd. as transporter
- Vehrad Transport and Haulage Limited as transporter
- Transport Terrassement Minier (T.T.M) as transporter
- Bollore Africa Logistics SDV Senegal as transporter

The Samsung C & T Corporation have identified and evaluated the over all risks for the West Africa Supply Chain. Below risks were identified.

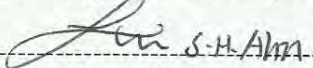
- Release to land & water, toxic gas leakage to air in sodium cyanide manufacturing process
- Release to road, land and surface water during road and rail transportation by transporters.
- Damage to sodium cyanide container in Pusan port in Korea, Takoradi port or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal.
- Release to sea water during transportation by shipping company
- Robbery during road transportation, storage in port and sea transportation.
- Taken away by criminal suspect during road and sea transportation

Possibility and consequence were evaluated for above risks according to their hazardous chemical transportation manual. According to hazardous chemical transportation manual, the Samsung C & T Corporation should reevaluate the overall routes of West Africa Supply Chain every three year periodically. And if there are some changes related to routes, transporters, facilities and relevant legal requirements, they will reevaluate the routes non-periodically. As they completed the route evaluation during last year 2010 for Ghana supply Chain and Burkina Faso Supply Chain. And also they completed the route evaluation during 2011 year for West Africa Supply Chain which includes the Ghana Supply Chain & Burkina Faso Supply Chain. So they will reevaluate the routes of West Africa Supply Chain in 2014 year.

The Samsung C & T Corporation documented the measures to address risks in West Africa 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. And also the due diligence actions can be taken by Samsung C & T Corporation defined in emergency response plan.

According to route evaluation and risk assessment results, Samsung C & T Corporation inform the sodium cyanide transportation route to relevant bodies defined in emergency response plan and receive some general comment. They prepared the sodium cyanide handling manual as pocket book and CD. They have delivered the manual to safety agency, transporter, ports, shipping company etc. They also delivered the manual to new road transporters as Transport Terrassement Minier (T.T.M) & Samsung C & T Corporation

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Bollore Africa Logistics SDV Senegal and new ports as Conakry port in Guinea & Dakar port in Senegal during this year.

The Samsung C & T Corporation reviewed the overall route for West Africa Supply Chain. According to the review results, they decided that convoys and escorts are necessary for road transportation from Takoradi port or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal to mining sites in Ghana, Burkina Faso, Niger, Mali and Guinea. And also decided that convoys, escorts or additional measures are unnecessary for other segments as justified as below.

- 1) From sodium cyanide manufacture (TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. in Ulsan Korea) to Pusan port in Korea
 - Transportation by ICMC signatory (Seyang Logistics Co., Ltd. and SAM IK Logistics Co., Ltd.)
 - As main road is expressway, the road condition is good
 - The rail transportation is operated by government subsidiary body. The security level is relatively high.
 - Some segments are curved, near the high population density and surface water areas
But those risks can be controlled by transporter.
- 2) Storage in Pusan port
 - The Pusan port is controlled by government agency, so yard condition and security are in safe and good condition.
- 3) Transport from Pusan port in Korea to Takoradi port or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal
 - Controlled by big international shipping companies as MSC, Maersk and Safmarine which comply with IMDG Code.
 - Transportation routes are as below
 - Pusan port -> Interim anchorage harbor in Hong Kong or Malaysia -> Move south area of India Ocean -> Move around the Cape of Good Hope -> Takoradi or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal

The sea transportation routes are far from dangerous area as Somalia. No need for special escort.

For road transportation from Takoradi or Tema port, Conakry port in Guinea and Dakar port in Senegal to mining in Ghana, Burkina Faso, Niger, Mali and Guinea, the transportation companies (Vehrad Transport and Haulage Limited, Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal) use escort and convoy for their transportation by trucks. And also bellows were checked.

- Road transportation by ICMC certified transporter
- Some segments are curved, near the high population density and surface water areas.

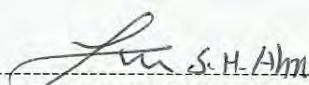
But those risks can be controlled by transporter.

The 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 manufacture, transporter, ports, safety agency, police, fire fighting agency, hospital etc. were defined. 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.

The Samsung C & T Corporation communicated the emergency response plan and sodium cyanide handling manual as pocket book and CD to manufacture, transporters, ports and shipping company and requested implementation.

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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** **with Transport Practice 1.2**
☐ in substantial compliance
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Samsung C & T Corporation is trading company. So they do not actually operate cyanide handling and transport equipment. During the subcontractor evaluation, they checked and evaluated sodium cyanide transporters whether the sodium cyanide operators were trained, qualified and licensed.

The Samsung C & T Corporation have prepared and communicated sodium cyanide handling manual as pocket book and CD to manufacture, transporters, ports and shipping companies to use in training, daily operation and emergency situation. The sodium cyanide handling manual communicated to ICMC certified manufactures and transporters supplements the information developed by manufactures and transporters.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

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

The 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. 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.

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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, Maersk and Safmarine 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. The due diligence investigation results were reviewed during this ICMC audit and described as in section of due diligence report.

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

Summarize the basis for this Finding/Deficiencies Identified:

The 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. The evaluation by Samsung C & T Corporation was in addition to the internal requirements and programs of road transporters. According to the evaluation results, the vehicles have pager, mobile phone and communication channel sheet in which telephone numbers of transportation companies, the manufacture, mining and emergency responders defined.

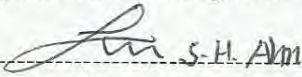
And also during the subcontractor evaluation, they checked and evaluated the transports whether they periodically test the communication equipment or not. The Samsung C & T Corporation checked the overall routes of West Africa Supply Chain especially for the extended scope as Niger, Mali and Guinea. 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.

The 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 (Seyang Logistics Co., Ltd., SAM IK Logistics Co., Ltd., Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal) and website check of shipping companies.(MSC, Maersk and Safmarine) And also during the subcontractor evaluation, they checked and evaluated the tracking of cyanide shipments by transporters.

As the Samsung C & T Corporation receive purchasing orders from customers as gold mining company, they review the delivery & quantity and input the orders in ERP(SAP) 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 company. The individual customer order (order number, target delivery and amount), dispatched date

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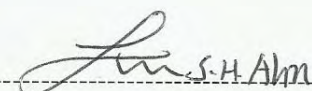

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and quantity of sodium cyanide from manufacture to shipping company were registered in ERP(SAP) system of Samsung C & T Corporation. And also the progress of marine transportation by shipping company can be checked for individual customer order in web-site of MSC, Maersk and Safmarine. So the inventory control and custody documentation were properly implemented to prevent loss of sodium cyanide during shipment.

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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**
☐ in substantial compliance **with Transport Practice 2.1**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

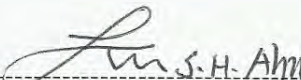
The Samsung C & T Corporation do not actually control the interim storage areas. However they checked the over all routes of West Africa Supply Chain and identified interim storage areas as below.

- Pusan port in Korea
- Trans shipping depots in Malaysia
- Takoradi port & Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal

Those ports are controlled by national port agency and interim storage areas are rent and controlled by shipping company. So it is difficult for Samsung C & T Corporation to site audit and due diligence investigation for those ports and interim storage areas. However they did their best the due diligence investigation for those ports and interim storage areas during 14~15 June 2010 for Takoradi port & Tema port in Ghana and 28~29 March 2011 for Conakry port in Guinea and Dakar port in Senegal. The due diligence investigation activities are site visit and web site check for those ports, national port agency, interim storage areas and shipping companies. They found the interim storage areas were controlled properly in compliance with legal requirements and ICMC code requirements. But some minor nonconformity items issued during due diligence investigation, they requested corrective actions and confirmed the corrective action results from shipping company and national port agency. And also they delivered the sodium cyanide handling manual as pocket book and CD. The results for due diligence investigation were detailed in reports.

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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:

The 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. Detail emergency response plans considering road transportation were already prepared by road transporters (Seyang Logistics Co., Ltd., SAM IK Logistics Co., Ltd., Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal) and checked by Samsung C & T Corporation.

And also they checked that shipping companies (MSC, Maersk and Safmarine) issued commitment to comply with IMDG Code in which the emergency response plan required. For interim storage ports areas, they delivered the sodium cyanide handling manual as pocket book and CD in which handling and treatment for released sodium cyanide defined. The Samsung C & T Corporation prepared the emergency response plan appropriate to over all emergency situations possibly expected in West Africa Supply Chain. The emergency plan considered the transportation route and interim storage area. And also they confirmed that shipping companies (MSC, Maersk and Safmarine) maintained emergency response plan appropriate for release accident during sea transportation to comply with IMDG Code. For West Africa Supply Chain, the 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. The emergency plan considered the transportation method and interim storage area. The emergency response plans considered the infrastructure as road condition, ports and marine transportation.

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 has responsibility for the overall emergency response and cyanide handling within the West Africa Supply Chain. Related to emergency response training, they implemented their role as training their team member, encouraging cyanide manufactures and transporters implementing emergency response training.

They implemented the training for their team members for the over all emergency response plan and cyanide handling manual during May and November 2010. They also have training plan in which the

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emergency trainings are scheduled two times in 2011 year. The communication channel, duties of relevant external agency and main activities of Fine & Special Chemical Team 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 as pocket book and CD. 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. For interim storage ports areas, they delivered the sodium cyanide handling manual as pocket book and CD in which handling and treatment for released sodium cyanide defined. For interim storage ports areas, the training or introduction with that manual is enough for emergency situations in ports.

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. The Samsung C & T Corporation is trading company. So they do not actually implement the transportation works. They do not need the list of emergency response equipment. But in the sodium cyanide handling manual as pocket book and CD, the emergency response equipment defined. The Samsung C & T Corporation have checked that the road transporters delineated the roles and responsibilities to subcontractors as individual vehicle driver. They found that road transporters applied the emergency response procedure including roles and responsibilities to subcontractor as the same level of transporters.

The fine & Specialty Chemical Team have implemented hazardous chemical transportation manual. According to the manual, during supplier evaluation and route investigation, the Fine & Specialty Chemical Team checked cyanide manufacture and transportation companies and affirmed 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	

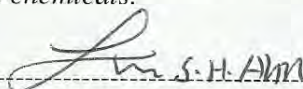
Summarize the basis for this Finding/Deficiencies Identified:

The Samsung C & T Corporation prepared the emergency response plan appropriate to the over all emergency situations possibly expected in West Africa Supply Chain. In the emergency plan, contact information as telephone number, relevant person name and address of sodium cyanide manufacture, road transporter, shipping company, safety agency, fire fighting agency and hospital were defined. During February 2011 year, the emergency response plan was updated to include the contact information of TongSuh Petrochemical Co., Ltd., SAM IK Logistics co., Ltd., Conakry port in Guinea, Dakar port in Senegal, Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal. According to their hazardous chemical transportation manual, the emergency response plan was prepared including contact information, notification method, detail process as what Samsung C & T Corporation should do. According to Samsung C & T Corporation hazardous chemical transportation manual, they should check the emergency response plan twice per year and revise the contact information and detail process as needed. Current internal and external notification is prepared during May 2010 year and updated during February 2011 year to include the contact information of TongSuh Petrochemical Co., Ltd., SAM IK Logistics co., Ltd., Conakry port in guinea, Dakar port in Senegal, Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal.

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

Samsung C & T Corporation

Name of Supply Chain Operator



Lead Auditor Signature

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The operation is **X in full compliance with**
☐ in substantial compliance **with Transport Practice 3.4**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Samsung C & T Corporation prepared the emergency response plan appropriate to the over all emergency situations possibly expected in West Africa Supply Chain. And in the sodium cyanide handling manual as pocket book and CD, the remediation as recovery and protect for released sodium cyanide, decontamination of soil and water, control & disposal of wastes etc. were defined. The sodium cyanide handling manual as pocket book and CD were delivered to road transporter (Seyang Logistics Co., Ltd., SAM IK Logistics Co., Ltd., Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal), shipping companies (MSC, Maersk and Safmarine) and ports.(Takoradi port & Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal)

The certified transportation companies 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 transportation companies. According to 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 revise them as needed.

The operation is **X in full compliance with**
☐ in substantial compliance **with Transport Practice 3.5**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

According to Samsung C & T Corporation hazardous chemical transportation manual, they should check the emergency response plan twice per year and revise the contact information and detail process with the reflection of changes in West Africa Supply Chain. The emergency response plan was prepared during last year and updated during February 2011 to include the contact information of TongSuh Petrochemical Co., Ltd., SAM IK Logistics co., Ltd., Conakry port in Guinea, Dakar port in Senegal, Transport Terrassement Minier (T.T.M) and Bollore Africa Logistics SDV Senegal.

According to Samsung C & T Corporation hazardous chemical transportation manual, they should do the mock emergency drill once per year. The mock emergency drill was implemented in their office during May 2010. They checked the over all process and adequacy of emergency response plan and recorded the results. During October 2010, they participated to mock emergency drill by sodium cyanide manufacture.(TaeKwang Industrial Co., Ltd.) They plan the mock emergency drill during May 2011 year.

According to Samsung C & T Corporation hazardous chemical transportation manual, they should check the emergency response plan twice per year and do the mock emergency drill once per year. And after the check and mock drill they should revised the plan as needed.

After the mock drill during May and October 2010, they changed communication route slightly in emergency plan.

Samsung C & T Corporation

Name of Supply Chain Operator


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Ocean Carriers and Ports- Summary Report of Due Diligence Investigations

Sea Transporter Summary

Audit and Operational Information for Shipping Companies and Ports

1. Background of due diligence investigation

1) Inability as consigner leading ports and shipping companies to ICMC implementation and certification, the Samsung C & T Corporation completed the due diligence investigation instead. The West Africa Supply Chain includes sodium cyanide manufacture, road transporter, ports and shipping companies as below.

- Sodium cyanide manufacture : TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. Ulsan Plants in South Korea
- From cyanide manufactures Ulsan plants to Pusan port in Korea : Seyang Logistics Co., Ltd. and SAM IK Logistics Co., Ltd.
- Control of sodium cyanide storage yard in Pusan port of Korea : MSC, Maersk and Safmarine.
The Pusan port is managed by national port agency. But the shipping companies rent and actually controlled the sodium cyanide storage yard.
- From Pusan port in Korea to Takoradi or Tema port in Ghana, Conakry port in Guinea and Dakar port in Senegal (Marine transportation by ship) : MSC, Maersk and Safmarine
- Takoradi or Tema port in Ghana to mining sites in Ghana, Burkina Faso, Niger, Mali and Guinea (Roadway transportation by truck) : Vehrad Transport and Haulage Limited
- Conakry port in Guinea to mining sites in Guinea (Roadway transportation by truck) : Transport Terrassement Minier(T.T.M)
- Dakar port in Senegal to mining sites in Mali (Roadway transportation by truck) : Bollore Africa Logistics SDV Senegal

As consigner the Samsung C & T Corporation control overall West Africa Supply Chain and will lead the ICMC implementation and certification to sodium cyanide manufacture, road transporters, ports and shipping companies. So they successfully lead the TaeKwang Industrial Co., Ltd., TongSuh Petrochemical Co., Ltd., Seyang Logistics Co., Ltd., SAM IK Logistics Co., Ltd. Vehrad Transport and Haulage Limited, Transport Terrassement Minier(T.T.M) and Bollore Africa Logistics SDV Senegal to ICMC implementation and certification.

However they can not lead the ports and shipping companies to ICMC implementation and certification due to their inability to affect change in the operating practices of those transportation facilities and 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 shipping companies rent the storage area in port and actually controlled the sodium cyanide storage yard. So the due diligence investigations were implemented for shipping companies including such activities as control of storage yard in port, loading to ship and ship transportation.

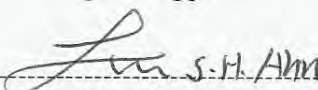
2. Progress of due diligence investigation

1) Development of checklist

The Fine & Specialty Chemical Team member of Samsung C & T Corporation reviewed the ICMC requirement, IMDG Code, West Africa Supply Chain, property of sodium cyanide and information from TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. And then developed checklist for due diligence investigation applicable to the control of sodium cyanide

. Samsung C & T Corporation

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storage yard, loading to ship and ship transportation. Below requirements from ICMC Code and IMDG Code were reflected to checklist.

(1) Requirements from ICMC Code

- Interim storage area control
- Employee training
- Emergency response plan

(2) Requirements from IMDG Code

- Control of cyanide shipment package, marking and labeling
- Control of transportation document, container packing certificate and list
- Maintaining the cyanide emergency information

2) Nomination of investigation team leader and member

Considering the work experience and knowledge of ICMC, Mr. S K Sohn General Manager of Fine & Specialty Chemicals Team nominated team leader and member for due diligence investigation as below.

- Team Leader : Mr. S. K. Sohn (General Manager / Fine & Specialty Chemicals Team)
Mr. S. J. Chung (Manager / Fine & Specialty Chemicals Team)
- Team Member : Mr. T. H. Ahn (Assistant Manager / Fine & Specialty Chemicals Team)
Mr. H. W. Kim (Assistant Manager / Fine & Specialty Chemicals Team)

3) Scheduling of due diligence investigation

They plan the due diligence investigation during 14~15 June 2010 for three shipping companies including the control of sodium cyanide storage yard and marine transportation. And inform the plan to shipping companies with checklist. And also they plan the due diligence investigation during 28~29 March 2011 for three shipping companies to check the control of sodium cyanide storage yard in Conakry port in Guinea and Dakar port in Senegal.

4) Implementation of due diligence investigation

The team implemented due diligence investigation as planned during 14~15 June 2010 and 28~29 March 2011. They use the checklist and record the investigation results in checklist and log sheet. After the investigation, they issued the completed checklist to shipping companies and requested corrective actions for some nonconformities. Investigation team checked the action results from shipping and confirmed that corrective actions were completed for nonconformities.

3. Results of due diligence investigation

The Samsung C & T Corporation use the checklist and record the investigation results in checklist as below;

1) MSC

(1) Due diligence investigation results

Section 1. Control of storage yard in Port

Investigation Area : Storage yard in Pusan Port in Korea

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 14~15 June 2010

Investigation Team : S. K. Sohn (Team Leader)

T. H. Ahn (Team Member)

Section 2. Control of marine transportation

Investigation Area : Ship operation in Pusan Port

Investigation Item : Cyanide shipment package control, Marking, Shipping document, Emergency information etc.

Investigation Date : 14~15 June 2010

Samsung C & T Corporation

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Investigation Team : S. K. Sohn (Team Leader)
T. H. Ahn (Team Member)

Section 3. Control of interim storage in Port

Investigation Area : Storage yard in Pelepas Port in Malaysia
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 14~15 June 2010
Investigation Team : H. W. Kim (Team Member)
S. J. Chung (Reviewer)

Section 4. Control of storage yard in Port

Investigation Area : Storage yard in Tema Port in Ghana
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock Drill etc.
Investigation Date : 15 June 2010
Investigation Team : S. J. Chung (Team Leader)

Section 5. Control of storage yard in Port

Investigation Area : Storage yard in Takoradi Port in Ghana
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 14 June 2010
Investigation Team : S. J. Chung (Team Leader)

Section 6. Control of storage yard in Port

Investigation Area : Storage yard in Conakry Port in Guinea
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 28 March 2011
Investigation Team : S. J. Chung (Team Leader)
T. H. Ahn (Team Member)

Section 7. Control of storage yard in Port

Investigation Area : Storage yard in Dakar Port in Senegal
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 29 March 2011
Investigation Team : S. J. Chung (Team Leader)
T. H. Ahn (Team Member)

(2) Corrective action request

The investigation team issued the checklist to each office in ports and requested corrective actions for some minor nonconformities identified during due diligence investigation. And also the investigation team confirmed the corrective action plans and results taken by port office of MSC.

(3) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation concluded that the MSC control the sodium cyanide storage yard and marine transportation properly comply with ICMC, IMDG code and national legal requirements.

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2) Maersk

(1) Due diligence investigation results

Section 1. Control of storage yard in Port

Investigation Area : Storage yard in Pusan Port in Korea

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 14~15 June 2010

Investigation Team : S. K. Sohn (Team Leader), T. H. Ahn (Team Member)

Section 2. Control of marine transportation

Investigation Area : Ship operation in Pusan Port

Investigation Item : Cyanide shipment package control, Marking, Shipping document, Emergency information etc.

Investigation Date : 14~15 June 2010

Investigation Team : S. K. Sohn (Team Leader)
T. H. Ahn (Team Member)

Section 3. Control of interim storage in Port

Investigation Area : Storage yard in Pelepas Port in Malaysia

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 14 June 2010

Investigation Team : H. W. Kim (Team Member)
J. Chung (Reviewer)

Section 4. Control of storage yard in Port

Investigation Area : Storage yard in Tema Port in Ghana

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 15 June 2010

Investigation Team : S. J. Chung (Team Leader)

Section 5. Control of storage yard in Port

Investigation Area : Storage yard in Takoradi Port in Ghana

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 14 June 2010

Investigation Team : S. J. Chung (Team Leader)

Section 6. Control of storage yard in Port

Investigation Area : Storage yard in Conakry Port in Guinea

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 28 March 2011

Investigation Team : S. J. Chung (Team Leader), H. Ahn (Team Member)

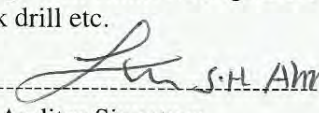
Section 7. Control of storage yard in Port

Investigation Area : Storage yard in Dakar Port in Senegal

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Samsung C & T Corporation

Name of Supply Chain Operator


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Investigation Date : 29 March 2011
Investigation Team : S. J. Chung (Team Leader)
T. H. Ahn (Team Member)

(2) Corrective action request

The investigation team issued the checklist to each office in ports and requested corrective actions for some minor nonconformities identified during due diligence investigation. And also the investigation team confirmed the corrective action plans and results taken by port office of Maersk.

(3) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation Concluded that the Maersk control the sodium cyanide storage yard and marine transportation properly comply with ICMC, IMDG code and national legal requirements.

3) Safmarine

(1) Due diligence investigation results

Section 1. Control of storage yard in Port

Investigation Area : Storage yard in Pusan Port in Korea

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 14~15 June 2010

Investigation Team : S. K. Sohn (Team Leader)
T. H. Ahn (Team Member)

Section 2. Control of marine transportation

Investigation Area : Ship operation in Pusan Port

Investigation Item : Cyanide shipment package control, Marking, Shipping document, Emergency information etc.

Investigation Date : 14~15 June 2010

Investigation Team : S. K. Sohn (Team Leader)
T. H. Ahn (Team Member)

Section 3. Control of interim storage in Port

Investigation Area : Storage yard in Pelepas Port in Malaysia

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 14~15 June 2010

Investigation Team : H. W. Kim (Team Member)
S. J. Chung (Reviewer)

Section 4. Control of storage yard in Port

Investigation Area : Storage yard in Tema Port in Ghana

Investigation Item : Storage area control, Responsible personnel, Emergency plan, Mock drill etc.

Investigation Date : 15 June 2010

Investigation Team : S. J. Chung (Team Leader)

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Section 5. Control of storage yard in Port

Investigation Area : Storage yard in Takoradi Port in Ghana
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 14 June 2010
Investigation Team : S. J. Chung (Team Leader)

Section 6. Control of storage yard in Port

Investigation Area : Storage yard in Conakry Port in Guinea
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 28 March 2011
Investigation Team : S. J. Chung (Team Leader)
T. H. Ahn (Team Member)

Section 7. Control of storage yard in Port

Investigation Area : Storage yard in Dakar Port in Senegal
Investigation Item : Storage area control, Responsible personnel, Emergency plan,
Mock drill etc.
Investigation Date : 29 March 2011
Investigation Team : S. J. Chung (Team Leader)
T. H. Ahn (Team Member)

(2) Corrective action request

The investigation team issued the checklist to each office in ports and requested corrective actions for some minor nonconformities identified during due diligence investigation. And also the investigation team confirmed the corrective action plans and results taken by port office of Safmarine.

(3) Conclusion

According to the due diligence investigation results, the Samsung C & T Corporation concluded that the Safmarine control the sodium cyanide storage yard and marine transportation properly comply with ICMC, IMDG code and national legal requirements.

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

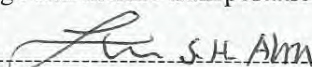
During the ICMC certification audit 2010 year for Ghana Supply Chain and Burkina Faso Supply, the auditors Mr. Sang-Ho Ahn and Mr. Do-Sik Yoon reviewed the due diligence investigation process and results implemented by Samsung C & T Corporation. During this ICMC certification audit 2011 year for West Africa Supply Chain, the auditor Mr. Sang-Ho Ahn reviewed the overall due diligence investigation process and results implemented by Samsung C & T Corporation.

The due diligence investigations included the control of storage yard in ports and marine transportation. The Samsung C & T Corporation implemented the due diligence investigations comprehensively for shipping companies as MSC, Maersk and Safmarine 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 shipping companies responsible for the control of sodium cyanide storage and marine transportation

. Samsung C & T Corporation

Name of Supply Chain Operator


S.H. Ahn

Lead Auditor Signature

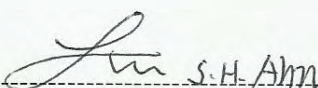
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- Issue corrective actions for nonconformities identified during site visit
- Checked corrective action results from shipping companies

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

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INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Cyanide Transportation Summary Audit Report

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

Africa Supply Chain

**(Addendum to Summary Audit Report of
West Africa Supply Chain)**

05 April 2013

Samsung C & T Corporation

Dosue Yoon

Name of Supply Chain Operator

Lead Auditor Signature

05 April 2013

Samsung C & T Corporation
Africa Supply Chain

Cyanide Transportation Summary Audit Report

Name of Cyanide Supply Chain : Africa 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. S K Sohn, / General Manager of Fine & Specialty Chemicals Team, Trading & Investment Group, Samsung C & T Corporation
Address : 29th Fl., Samsung C & T Corp. Bldg., 1321-20 Seocho 2-dong, Seocho-gu,
State/Province, Country: Seoul, 137-956, Korea
Telephone : 82-2-2145-2695
Fax : 82-2-2145-2704
E-Mail : sksohn@samsung.com
Website: www.samsungcnt.co.kr

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 West Africa Supply Chain as ICMC signatory and certified during 2011 year. They have extended their sodium cyanide exporting business to East Africa country such as Tanzania. So they applied Africa Supply Chain in which each individual country such as Ghana, Burkina Faso, Niger, Mali and Guinea in West Africa and Tanzania in East Africa were included. There was no change in supplying the sodium cyanide to West Africa countries such as Ghana, Burkina Faso, Niger, Mali and Guinea.

As Samsung C & T Corporation applied Africa Supply Chain, there are two changes compared to the certified West Africa Supply Chain as below;

(1) Scope Extension

Samsung C & T Corporation have extended their sodium cyanide exporting business to Tanzania in East Africa. When Samsung C & T Corporation supplying the sodium cyanide to Tanzania in East Africa, they supply the sodium cyanide to Mombasa port in Kenya. The road transporter nominated by customer transports the sodium cyanide from Mombasa port in Kenya to gold mining sites in Tanzania. Samsung C & T have made the supplying contracts with customers in Tanzania under CIF condition. According to the CIF condition, the Samsung C & T Corporation is responsible for supplying sodium cyanide to Mombasa port in Kenya. The customs clearance and transportation from Mombasa port in Kenya to gold mining sites in Tanzania are controlled and implemented by customers. So the road transportation from Mombasa port in Kenya to gold mining sites in Tanzania is not included in Africa Supply Chain.

(2) Use of Pusan new port in Korea

Recently the Pusan new port was constructed and used since October last year 2012 in Korea. Samsung C & T Corporation and shipping companies have used the Pusan port and Pusan new port during exporting the sodium cyanide for the time being.

The West Africa Supply Chain was already certified for ICMC during 2011 year. So the scope extension and use of Pusan new port in Korea were mainly checked during this audit.

Samsung C & T Corporation

Do Seul Yoon

Name of Supply Chain Operator

Lead Auditor Signature

05 April 2013

*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 :DS GMP
Audit Team Leader : Mr. DoSik Yoon
E-mail:dosiky@naver.com

Date(s) of Audit: 22,23,25 March 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 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.

. Samsung C & T Corporation

Name of Supply Chain Operator

Do sik yoon

Lead Auditor Signature

Date: 05 April 2013

. Samsung C & T Corporation

Name of Supply Chain Operator

Do sik yoon

Lead Auditor Signature

05 April 2013

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:

There are two changes in existing certified West Africa Supply Chain of Samsung C & T Corporation. The First is the Pusan new port was constructed recently and used since October last year 2012 in Korea. The second is Samsung C & T Corporation extend the sodium cyanide export business to Tanzania in East Africa.

So according to hazardous chemical transportation manual, Samsung C & T Corporation has checked the transportation from sodium cyanide manufacturer to Pusan new port in Korea and export to Tanzania. They evaluated for such items as availability, security, transportation quantity and cost. And also considering the delivery and infrastructure as the port in Africa, they finally decide the transportation routes as below;

- 1) From cyanide manufacturing Ulsan plants to Pusan new port in Korea: Roadway transportation by truck and rail transportation
- 2) Pusan new port in Korea to Mombasa port in Kenya : Marine transportation by ship
- 3) Mombasa port in Kenya to gold mining sites in Tanzania(Controlled by customers) : Roadway transportation by truck

The overall segments and control measures for sodium cyanide manufactures, transporters from manufactures to Pusan port and Pusan new port in Korea and marine transportation by international shipping companies are same as existing West Africa Supply Chain.

As two changes occurred, the Pusan new port in Korea and Mombasa port in Kenya are included additionally in Africa Supply Chain comparing to existing West Africa Supply Chain. During January 2013, Samsung C & T Corporation have identified and evaluated the additional risks for the two changes in Africa Supply Chain. The identified additional risks were almost same as in West Africa supply Chain. After the risk assessment, Samsung C & T Corporation decided the control measures for identified high risks of Pusan new port in Korea and Mombasa port in Kenya as below.

1) 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

* Due to inability as consigner for Pusan New Port Corporation to lead ICMC implementation and certification.

2) Mombasa port in Kenya

The storage terminal was controlled by national port agency.

(1) Periodic route evaluation for shipping companies by Samsung C & T Corporation

(2) Periodic due diligence investigation by Samsung C & T Corporation

* Due to inability as consigner for shipping company lead to ICMC implementation and certification.

Samsung C & T Corporation

Do see you

Name of Supply Chain Operator

Lead Auditor Signature

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Samsung C & T Corporation completed the route evaluation during 2011 year for existing West Africa Supply Chain and during January 2013 year for changes in Africa Supply Chain. And they will reevaluate the routes of Africa Supply Chain in 2014 year.

According to route evaluation and risk assessment results, Samsung C & T Corporation informed the sodium cyanide transportation route to Pusan new port in Korea and Mombasa port in Kenya. They received some question & general comment and considered during route selection and development of control measures.

The Samsung C & T Corporation reviewed two additional routes as sodium cyanide transportation from manufactures to Pusan new port in Korea and marine transportation to Mombasa port in Kenya. According to the review results, they decided that convoys, escorts or additional measures are unnecessary for those two additional segments with reasonable justification.

As in West Africa Supply Chain, Samsung C & T Corporation established emergency response plan for sodium cyanide release and human exposure. In the emergency preparedness, role and mutual aid with sodium cyanide manufacture, transporter, ports, safety agency, police, fire fighting agency, hospital etc. were defined. During January, 2013, the emergency response plan was revised to additionally include the Pusan new port in Korea and Mombasa port in Kenya. They advised the emergency preparedness to relevant bodies, Pusan new port in Korea and Mombasa port in Kenya.

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:

Same as in West Africa Supply Chain. During the subcontractor evaluation and due diligence investigation, Samsung C & T Corporation checked and evaluated sodium cyanide transporters whether the sodium cyanide operators were trained, qualified and licensed. They confirmed that the sodium cyanide operators were trained, qualified and licensed.

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:

Same as in West Africa Supply Chain. During the due diligence investigation, they checked the Pusan new port in Korea and Mombasa port in Kenya whether the transport equipment is suitable or not. According to the due diligence investigation results, the ports and shipping companies used suitable equipment. And transporter, ports and shipping companies have preventive maintenance procedure to control the transport equipment. And container itself designated to prevent overloading.

Samsung C & T Corporation

Do Seok Yoon

Name of Supply Chain Operator

Lead Auditor Signature

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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:

Same as in West Africa Supply Chain. The transportation of sodium cyanide was implemented by subcontractors as transporters, ports and shipping companies. However safety program was checked during the due diligence investigation and subcontractor evaluation. Samsung C & T Corporation confirmed that the Pusan new port in Korea and Mombasa port in Kenya implemented the safety program as maintaining the integrity of sodium cyanide packaging, identification of sodium cyanide, inspection of transportation equipment and so on.

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. The Samsung C & T Corporation completed the due diligence investigation during 20 February 2013 for control of sodium cyanide storage terminal in Pusan new port in Korea. And also they completed the due diligence investigation during 23~24 January 2013 for Mombasa port in Kenya and the activities of three shipping companies. According to the due diligence investigation results, the control of storage terminal in Pusan new port in Korea and Mombasa port in Kenya comply with ICMC requirements and the three shipping companies comply with IMDG code for marine transportation.

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

Summarize the basis for this Finding/Deficiencies Identified:

Same as West Africa Supply Chain. Samsung C & T Corporation checked the extended scope as transportation from manufactures to Pusan new port in Korea and marine transportation to Mombasa port in Kenya. And found no blackout area. 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, Pusan new port in Korea and Mombasa port in Kenya additionally included in Africa Supply Chain.

Samsung C & T Corporation

Name of Supply Chain Operator

Do Sile Yim

Lead Auditor Signature

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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**
☐ in substantial compliance **with Transport Practice 2.1**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation identified and considered the Pusan new port in Korea and Mombasa port in Kenya as interim storage areas additionally in Africa Supply Chain. They do not actually control the interim storage areas. However they do their best the due diligence investigation for those ports during 20 February 2013 for Pusan new port in Korea and during 23~24 January 2013 for Mombasa port in Kenya. They found the interim storage areas were controlled properly in compliance with legal requirements and ICMC code requirements.

Samsung C & T Corporation

Name of Supply Chain Operator

Dosae Youn

Lead Auditor Signature

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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** **with Transport Practice 3.1**
☐ in substantial compliance
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Same as in West Africa Supply Chain. During January 2013, Samsung C & T Corporation revised the communication channel in emergency response plan to include the Pusan new port in Korea and Mombasa port in Kenya additionally. And for the two additional ports, they informed the significance of sodium cyanide handling and treatment.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

Same as in West Africa Supply Chain. Samsung C & T Corporation have implemented the training for their team members for the emergency response plan and cyanide handling manual during May and November every year. They also have training plan in which the emergency trainings are scheduled two times in 2013 year. Recently during March 2013, the revised communication channel, duties of relevant external agency and main activities of Fine & Special Chemical Team were trained and records were maintained.

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**
☐ in substantial compliance
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Samsung C & T Corporation prepared the emergency response plan appropriate to the overall emergency situations possibly expected in Africa Supply Chain. In the emergency plan, contact information as telephone number, relevant person name and address of sodium cyanide manufacture, road transporter, shipping company, safety agency, fire-fighting agency and hospital were defined. In January 2013, the emergency response plan was updated to include the contact information of Pusan new port in Korea and Mombasa port in Kenya additionally.

. Samsung C & T Corporation

Name of Supply Chain Operator

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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**
☐ in substantial compliance **with Transport Practice 3.4**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Same as in West Africa Supply Chain.

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

The operation is **X in full compliance with**
☐ in substantial compliance **with Transport Practice 3.5**
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

According to Samsung C & T Corporation hazardous chemical transportation manual, they should check the emergency response plan twice per year and revise the contact information and detail process with the reflection of changes in Africa Supply Chain. The emergency response plan was updated in January 2013 to include the contact information of Pusan new port in Korea and Mombasa port in Kenya additionally. According to Samsung C & T Corporation hazardous chemical transportation manual, they should do the mock emergency drill once per year. The mock emergency drill was implemented in their office in May 2012. They checked the overall process and adequacy of emergency response plan and recorded the results. And also on 4 May 2012, Samsung C & T Corporation Fine & Specialty Chemicals Team manager Mr. John (Suk Joon) Chung participated the emergency mock drill and training conducted by TongSuh Petrochemical Co., Ltd. Ulsan plant.

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D. S. Lee

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Summary of Due Diligence Investigations**1. Background of due diligence investigation****1) Inability of consigner for ports lead to ICMC implementation and certification**

Compared to ICMC certified West Africa Supply Chain, the Africa Supply Chain includes Pusan new port in Korea and Mombasa port in Kenya.

As consigner Samsung C & T Corporation control overall Africa Supply Chain and will lead the ICMC implementation and certification to sodium cyanide manufacture, road transporters, ports and shipping companies. So they successfully lead the sodium cyanide manufactures and transporters to ICMC implementation and certification.

However they cannot lead the ports as Pusan new port in Korea and Mombasa port in Kenya to ICMC implementation and certification due to their inability to affect change in their operating practices. So the Samsung C & T Corporation planned and implemented due diligence investigation for Pusan new port in Korea and Mombasa port in Kenya additionally included in Africa Supply Chain.

2) Scope of due diligence investigation

The storage terminals was controlled by Pusan New Port Corporation and Mombasa port as national agency. The due diligence investigation was implemented for the control of sodium cyanide storage terminals by Pusan New Port Corporation and Mombasa port national agency.

2. Progress of due diligence investigation**1) Development of checklist**

In the year 2011 when Samsung C & T Corporation certified ICMC for West Africa Supply Chain, the Fine & Specialty Chemical Team members reviewed the ICMC requirements, IMDG Code, West Africa Supply Chain, property of sodium cyanide and information from TaeKwang Industrial Co., Ltd. and TongSuh Petrochemical Co., Ltd. And they developed checklist for due diligence investigation applicable to the control of sodium cyanide storage yard, loading to ship and marine transportation. They revised some contents in the checklist and used during due diligence investigation for Pusan new port in Korea and Mombasa port in Kenya.

2) Nomination of investigation team leader and member

Considering the work experience and knowledge of ICMC, Mr. S. K Sohn General Manager of Fine & Specialty Chemicals Team nominated team leader and member for due diligence investigation as below.

- Team Leader : Mr. S. K. Sohn (General Manager / Fine & Specialty Chemicals Team)
Mr. Henry Kim (Manager / Fine & Specialty Chemicals Team)
Mr. Joey Han (Manager / Fine & Specialty Chemicals Team)
- Team Member : Mr. Benjamin Kim (Assistant Manager / Fine & Specialty Chemicals Team)
Mr. Bernard Luchendo (Nairobi Office / Samsung C & T Corporation)

3) Scheduling of due diligence investigation

They plan the due diligence investigation on 20 February 2013 for Pusan new port in Korea and 23~24 January 2013 for Mombasa port in Kenya. And inform the plan to the two ports with checklist.

4) Implementation of due diligence investigation

The team implemented due diligence investigation as planned on 20 February 2013 for Pusan new port in Korea and for 23~24 January 2013 for Mombasa port in Kenya. They use the checklist and record the investigation results in checklist and log sheet. After the due

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diligence investigation, they issued the completed checklist to ports and requested corrective actions for some nonconformities.

3. Results of due diligence investigation

Samsung C & T Corporation used the checklist and recorded the investigation results in report.

- 1) Due diligence investigation of Pusan new port in Korea
 - (1) Activities : Control of storage yard, handling and loading sodium cyanide in port
 - (2) Investigation Date : 20 February 2013
 - (3) Investigation Team : Mr. Henry Kim (Manager / Fine & Specialty Chemicals Team)
Mr. Benjamin Kim (Assistant Manager / Fine & Specialty Chemicals Team)
- 2) Due diligence investigation of Mombasa port in Kenya
 - (1) Activities : Control of storage yard, handling and loading sodium cyanide in port
 - (2) Investigation Date : 23~24 January 2013
 - (3) Investigation Team : Mr. Joey Han (Manager / Fine & Specialty Chemicals Team)
Mr. Bernard Luchendo (Nairobi Office / Samsung C & T Corporation)
- 3) Conclusion

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

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

During the ICMC audit in the year 2013 for changes of Africa Supply Chain, the auditor Mr. Do-Sik Yoon reviewed the overall due diligence investigation process and results implemented by Samsung C & T Corporation.

The due diligence investigations included the check of control for storage yard in ports. Samsung C & T Corporation implemented the due diligence investigations comprehensively for Pusan new port in Korea and Mombasa port in Kenya as below.

- Study and develop checklist applicable to sodium cyanide storage and handling
- Nominated competent personnel as investigation team leader and member
- Implement due diligence investigation with checklist for the control of sodium cyanide storage areas
- Issue corrective actions for nonconformities identified during site visit

The audit team finally concluded that the due diligence investigations for Pusan new port in Korea and Mombasa port in Kenya included in Africa Supply Chain implemented by Samsung C & T Corporation were comply with ICMC requirements.

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