



INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

GUIDANCE FOR USE OF THE CYANIDE TRANSPORTATION VERIFICATION PROTOCOL

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TRANSPORTATION GUIDANCE

Table of Contents

Introduction	1
General Guidance	1
1. Use of the Cyanide Transportation Verification Protocol	1
2. Scope	2
3. Detailed Audit Findings Report	2
4. Management Plans and Procedures	4
5. Potential Audit Findings	5
6. Certification Decision	6
7. Consignor Supply Chain Audits and Due Diligence Investigations	7
8. Submission of Audit Reports and ICMI Completeness Review	10
9. Pre-Operational Certification Audits	12
10. Recertification Audits	13
Cyanide Transportation Guidance	19
Principle 1 TRANSPORT	19
Transport Practice 1.1	19
Transport Practice 1.2	24
Transport Practice 1.3	26
Transport Practice 1.4	28
Transport Practice 1.5	31
Transport Practice 1.6	35
Principle 2 INTERIM STORAGE	38
Transport Practice 2.1	39
Principle 3 EMERGENCY RESPONSE	42
Transport Practice 3.1	43
Transport Practice 3.2	45
Transport Practice 3.3	48
Transport Practice 3.4	50
Transport Practice 3.5	52



TRANSPORTATION GUIDANCE

The International Cyanide Management Code (hereinafter “the Code”, “Code” or “the Cyanide Code”), this document, and other documents or information sources referenced at www.cyanidecode.org are believed to be reliable and were prepared in good faith from information reasonably available to the drafters. However, no guarantee is made as to the accuracy or completeness of any of these other documents or information sources. No guarantee is made in connection with the application of the Code, the additional documents available or the referenced materials to prevent hazards, accidents, incidents, or injury to employees and/or members of the public at any specific site where gold or silver is extracted from ore by the cyanidation process. Compliance with this Code is not intended to and does not replace, contravene or otherwise alter the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other requirements regarding the matters included herein. Compliance with this Code is entirely voluntary and is neither intended nor does it create, establish, or recognize any legally enforceable obligations or rights on the part of its signatories, supporters or any other parties.



TRANSPORTATION GUIDANCE

Introduction

This Guidance for Use of the Cyanide Transportation Verification Protocol (“Transportation Guidance”) is issued by the International Cyanide Management Institute (“ICMI” or “the Institute”) to assist cyanide transporters in understanding their obligations in implementing the International Cyanide Management Code (“Code”, “the Code” or “the Cyanide Code”), and to aid Code auditors in their evaluation of Code compliance.

Compliance is evaluated against the Code’s Transport Principles and Transport Standards of Practice (Transport Practices) using the Cyanide Transportation Verification Protocol. The questions in the Verification Protocol are based on the measures typically necessary to meet these Transport Principles and Transport Practices. In most cases, these measures are presented in broad terms and include multiple options to allow their flexible implementation for transport operations and routes that may extend thousands of kilometers and may involve not only road transport and management by consigners, but also transport by ships and rail, and management at ports.

Cyanide transporters must exercise professional judgment in determining the specific controls needed for their operation, and auditors must similarly exercise professional judgment to evaluate these operations for compliance with the Code. This Transportation Guidance places each Verification Protocol question in the appropriate context, describes the Code’s expectations, identifies how various control measures can meet these expectations and advises operations and auditors on the factors to be considered when making these judgments. It provides a basis to evaluate alternatives to those measures typically employed to meet a Transport Practice for compliance with the Code. This Transportation Guidance also includes important information on the audit process and preparation and submission of audit reports.

General Guidance

1. Use of the Cyanide Transportation Verification Protocol

ICMI has prepared the Cyanide Transportation Verification Protocol and this Transport Guidance to address each Principle and Transport Practice and to evaluate and document a cyanide transport operation’s compliance with the Code. This guidance is suitable for use by operations in preparing for initial certification, recertification, and pre-operational certification audits, and is suitable for use as the audit questionnaire for operations seeking certification. General Guidance Sections 9 and 10 address the application of this guidance document to pre-operational certification and recertification, respectively.

Operations preparing for Cyanide Code certification audits, either pre-operational or operational, are encouraged to use this Transport Guidance as a template in preparing a Cyanide Management Plan that would describe how the operation plans to address or already addresses each Standard of Practice and associated Verification Protocol question, referencing the existing documentation available for review. Although such a plan is not required in order



TRANSPORTATION GUIDANCE

to comply with the Code, it would guide the operation in ensuring that all elements required for Code compliance have been accounted for in preparation for the audit.

2. Scope

The Transportation Verification Protocol and this Transport Guidance for its use apply to those entities engaged in the transport of cyanide. This includes 1) Code signatory trucking companies, 2) signatory consignors arranging the transport of cyanide through contracted carriers included in designated supply chains, 3) trucking companies not signatory to the Code but transporting cyanide as part of a designated cyanide supply chain, 4) interim storage sites used during transport, and 5) other entities such as ports, marine carriers, and rail lines and terminals which are included in designated cyanide supply chains.

The Verification Protocol is used as the basis for certification audits of signatory trucking companies as well as for evaluating the compliance of trucking companies which are included in a signatory consignor's supply chain but are not individual Code signatories seeking separate certification.

In addition to the actual physical carriers of the cyanide, any entities contracted by a transporter to conduct activities that are addressed by the Verification Protocol, such as a company hired to perform maintenance of cyanide transport vehicles, a contracted convoy escort, or a contracted emergency response or remediation provider are subject to the relevant parts of the Verification Protocol and the auditor's findings of a contractor's cyanide management practices are to be included within the transport audit report. Information specific to consignors and shipments by sea or rail or through ports is found in Section 7 of this General Guidance.

3. Detailed Audit Findings Report

Detailed Audit Findings Reports should be organized in a sequential listing of the Transportation Principles, Transport Practices, and Verification Protocol questions, as is found in the Transportation Verification Protocol, with responses and supporting evidence for each question.

The Detailed Audit Findings Report should also include:

- 1) the date of the audit;
- 2) the names of auditors with the lead auditor, technical auditors, and other auditors, and the auditing firm identified;
- 3) a description of the transport operation, similar to that required in the Summary Audit Report, indicating key operational components that provide context to the reader ahead of the audit findings; and
- 4) for Transport Supply Chains, an overall description of the supply chain, and listing of entities participating in the supply chain and included within the scope of the audit, such as the consigner, trucking companies, ports, shipping lines, rail operations, and warehouses Any changes to a certified supply chain made since its previous audit



TRANSPORTATION GUIDANCE

should also be noted, such as additions or removals of ports, marine carriers, or trucking companies, along with the date the change was made.

Nature of Responses:

The Detailed Audit Findings Report must include responses to each Verification Protocol question. These responses must be of sufficient detail to provide a clear justification for the resulting audit finding. A simple “yes” or “no” or “not applicable” answer, or simple repetition of the protocol question in the affirmative is not adequate. In responding to each question, the auditor must describe the evidence that supports the finding. What evidence demonstrates that the operation is in full compliance? What deficiency results in substantial compliance? Why is a question “not applicable”? Data to support a finding, such as the specific limitations on driver’s hours, should also be provided, where applicable.

Auditors are not prohibited from including recommendations or suggestions for further improvement that may not be necessary for compliance with the Code. However, auditors are requested to clearly identify these as additional measures and explain, as necessary, why they are not required for Code compliance.

Evidence:

As with any formal audit, various types of evidence are necessary to support the findings of a Cyanide Code certification audit. These include documents reviewed by the auditor, the auditor’s direct observations in the field, and interviews with appropriate personnel. In many cases, the most appropriate personnel for interviews are those in the field doing the job, as these are the individuals with first-hand knowledge of how work is conducted at the operation. Auditors should ask the same questions to several employees in order to confirm how written procedures actually are implemented. It is also important to record the names of each person interviewed. Useful evidence may also be found in inspection reports prepared by applicable regulatory agencies.

The evidence should be identified in the response to each Verification Protocol question in the Detailed Audit Findings Report. The response also should identify the basis for any representative sampling of records, inspection reports or other documentation. For example, what records were reviewed in determining whether an inspection program was implemented?

Necessary Compliance Measures:

The Verification Protocol questions are based on the measures typically necessary for Code compliance. Variations and alternatives also can be acceptable if they are demonstrated to achieve compliance with a Transport Practice. Therefore, an operation can still be in full compliance with a Transport Practice even if the auditor answers “no” to one of more of the Verification Protocol questions under that Transport Practice.

This Transport Guidance places each Transportation Verification Protocol question in the appropriate context and helps the auditor and the operation understand the intent and performance expectation for the Transport Practice. In doing so, it allows the auditor to better evaluate any alternate measures taken by an operation to meet a Practice. Full and complete answers to Protocol questions are important in all cases, but especially so when alternative



TRANSPORTATION GUIDANCE

measures are used to meet a Transport Practice, because in these cases, the operation has not implemented the typically-used measure identified for the Verification Protocol question. The auditor must describe how and why the alternate measure meets the Practice.

Conditions specific to transport routes, such as regulatory requirements, lengths of routes, and the types of transporters included in a supply chain may legitimately affect how a truck transporter or a consigner chooses to meet a given Transport Practice, and these must also be identified in the responses to the Protocol questions. However, since compliance with local regulations is separate from Code compliance, the auditor cannot simply justify a finding based only on regulatory compliance and instead should describe substantively how or why compliance with a local regulation ensures compliance with the Code.

4. Management Plans and Procedures

Transporters are expected to develop and implement a number of written management systems or procedures to comply with the Code. These typically include plans, procedures, work instructions, or other documents for operational activities and systems that the Code expects to be implemented for safe cyanide management, such as route selection procedures and training program documents.

The Code does not mandate any specific form or format for these procedures, plans and other documents. Formalized manuals, operating procedures, checklists, signs, work orders, training materials, or other materials all can be acceptable if they accomplish the goal of the Transport Practices. Moreover, none of these documents need be limited solely to issues involving cyanide management. However, regardless of how they are structured, an operation's procedures and management systems should demonstrate that the operation understands the controls and practices necessary to manage cyanide in a manner that prevents or limits releases and exposures.

The auditor must determine whether the necessary plan, procedure or system is in place, whether it addresses the elements identified in the Verification Protocol, and whether there is evidence that the plan, procedure or system is being implemented.

The auditor must determine if the operation's plans, procedures and systems can reasonably be expected to meet the performance goals of the Transport Practice based on available evidence. However, the auditor is neither expected nor advised to conduct an exhaustive analysis of every plan, procedure and management system to confirm every assumption and calculation. Obviously, if an assumption or calculation that may have a significant bearing on the operation's ability to comply with the Code appears to be questionable, it should be further investigated. For example, if the load-bearing capacity of a piece of cyanide transport equipment seems to be significantly higher than is typical for the type of equipment, the auditor should follow up to determine if the value is appropriate. However, the auditor's judgment should not be substituted for that of another professional when the impact of the difference will not adversely affect the ability of the plan, procedure or management system to meet the Transport Practice.



TRANSPORTATION GUIDANCE

The intent of third-party auditing for Code certification is not to have the auditor judge each decision made by the transporter's engineers or planners, but to ensure that the transporter's activities are based on the reasonable assumptions and calculations of competent professionals. The question of when to accept what is presented to the auditor, and when it is necessary to dig deeper into an issue is intrinsic to every audit. The auditor's professional judgment is especially important in this regard during Certification audits.

5. Potential Audit Findings

Auditors make separate findings for each Transport Practice. These individual findings determine the overall finding for the operation and its certification status.

The Verification Protocol does not have a numerical score. Compliance with each Transport Practice and with the Code itself is a "Pass/Fail" situation, but there are two passing categories: full compliance and substantial compliance.

Full compliance with any individual Transport Practice means just what it says; there are no deficiencies in complying with any Verification Protocol questions under that Practice. A finding of full compliance with a Transport Practice can be made if there are affirmative answers to all applicable Verification Protocol questions under that Practice, or if the operation has implemented an acceptable alternative to the measure identified in the Protocol question to achieve the Transport Practice.

An operation is in substantial compliance with a Transport Practice if it is not in full compliance (that is, if there are one or more negative answers to Verification Protocol questions and no alternate measures that achieve the Practice). However, the following three criteria must be satisfied for an auditor to make a finding of substantial compliance, and their evaluation can require a considerable degree of professional judgment.

First, the operation must have made a good-faith effort to comply. This means that the operation has made a reasonable attempt to manage cyanide in a manner consistent with the Transport Practice rather than simply ignoring a particular aspect of Code. As an example, having a vehicle inspection program that needed additional elements could be viewed as a good-faith effort as opposed to having no inspection program at all. However, using an Emergency Response Plan developed for another transport company without changing the company name or other specific information may not constitute a good-faith effort. Failure to correct an identified issue within a reasonable amount of time may also not constitute a good-faith effort.

Second, for a finding of substantial compliance to be made, the deficiency must be readily correctable. The concept of "readily correctable" implies that the deficiency can be brought into full compliance within one year, which is the time limit for completing implementation of a Corrective Action Plan.

Third, there can be no immediate or substantial risk to health, safety or the environment from a deficiency causing a substantial compliance finding. Many deficiencies related to record-



TRANSPORTATION GUIDANCE

keeping or documentation would not pose an immediate or substantial risk to health, safety or environment, and if the other two criteria are met, these types of deficiencies can often result in a finding of substantial compliance. However, a finding of substantial compliance may not be appropriate in a situation where the driver of a truck delivering cyanide has not been trained in the safe operation of the vehicle, as this could present an immediate and substantial risk to the health and safety of the driver and the public.

An operation may not be fully compliant with any of the Protocol questions under a given Transport Practice, but can still be found in substantial compliance with that Practice if it met the three criteria discussed above for each of the questions.

An operation that is neither in full nor substantial compliance with a Transport Practice is in non-compliance with that Practice. It could be that a good-faith effort was not made to comply, that the deficiency is not readily correctable, or that the deficiency could present immediate or substantial risk to health, safety or the environment.

Any deficiency that drops the operation from full to substantial compliance or from substantial to non-compliance for a given Transport Practice should only be applied to a single Transport Practice.

6. Certification Decision

The certification decision for an operation is based on the findings made for each individual Transport Practice. For this decision, the lowest individual finding for any Transport Practice prevails as the overall audit finding.

An operation can be found in full compliance with the Code only if all Transport Practices are found in full compliance. Operations found in full compliance are certified in full compliance with the Code.

An operation is in substantial compliance with the Code if any Transport Practice is found in substantial compliance and none are in non-compliance. These operations are conditionally certified subject to implementing a Corrective Action Plan and coming into full compliance.

An operation is in non-compliance with the Code if it is found in non-compliance with any Transport Practice.

ICMI does not make a separate decision regarding an operation's certification. ICMI announces an operation's certification when it accepts an Audit Report which finds the operation in full or substantial compliance. ICMI has no independent means of determining whether an operation complies with the Code, and it therefore relies entirely on the findings of accredited professional auditors. The auditors will have observed the operation in its entirety and should evaluate what they observe within the context of the operation as a whole. While the guidance provided in this document is intended to assist auditors around the world to view and interpret the Cyanide Code's expectations from a similar perspective and reach consistent findings given the same set of facts, the professional auditors and technical experts conducting Cyanide Code



TRANSPORTATION GUIDANCE

certification audits must use their own professional and expert judgment to reach their own independent conclusions.

Code certification is required for companies that transport cyanide to mines which are certified in compliance with the Code. Certified transporters are expected to comply with the Code at all times and in all cases, regardless of whether they are transporting cyanide to mines that are Code-certified or to mines and other facilities that are not Code-certified.

7. Consignor Supply Chain Audits and Due Diligence Investigations

Many cyanide producers, as well as entities such as distributors, sales agents, brokers and mining companies, arrange for and oversee the transport of cyanide along all or some portion of a route from the producer to the mine. Companies that organize supply chains consisting of contracted carriers (e.g., trucking companies, railway operations, ports and shipping companies) to transport cyanide are “consignors.” Consignors can become Code signatories for cyanide transportation and designate for certification supply chains consisting of multiple cyanide carriers.

The Code signatory application of a consignor must list each supply chain to be certified and for each supply chain identify each entity that manages cyanide (e.g., each trucking company, railway and rail terminal, shipping company, port, and warehouse).

Each of a consignor’s supply chains are certified separately. In audits of consigner supply chains, the consigner is audited, and each individual trucking company within a supply chain is audited if it is not independently signatory and certified under the Code. Trucking companies that are designated as part of the supply chain and that are signatory to the Code and certified would not require additional auditing as part of the supply chain audit, but must be mentioned as such within the Detailed and Summary audit reports. No other information regarding these signatory and certified trucking companies is required to be included in the responses to individual protocol questions or in the audit findings.

Due Diligence Investigations:

Supply chain components, in particular rail carriers, ports, and shipping lines, are not audited in the same manner as truck transporters and supply chain consigners. Full Code audits are not required for rail lines and rail terminals, shipping lines, or ports due to security issues, limited access, and the inability of consignors to affect changes in the operating practices of these transport operations.

Rather than conduct Code audits of these entities, a Due Diligence Investigation must be conducted and documented for each rail carrier, shipping company, and port facility included in the supply chain. The Due Diligence Investigations must be documented in a written report generated by the consigner or by an auditor meeting ICMI requirements for a transport technical expert auditor.

If the Due Diligence Investigation is conducted by the consignor, the Due Diligence Investigation report must be reviewed by an auditor meeting ICMI requirements for a transport



TRANSPORTATION GUIDANCE

technical expert auditor, and the auditor must conclude that the consigner's Due Diligence Investigation reasonably evaluated the facility. Due Diligence Investigations must be conducted on a three-year cycle and should include an inspection of each transport component of a supply chain, with the recognition that access to marine shipping, ports, and rail facilities may be limited.

However, the provisions of Transport Practices 1.2 through 1.6, 2.1 and 3.1 through 3.5 of this Transportation Guidance can be applied in full or in part to rail transport, sea transport, and port activities as a guide for Due Diligence Investigations.

A summary of the Due Diligence Investigation report for each supply chain component must be included in both the Detailed Audit Findings Report and the Summary Audit Report. Each Due Diligence Investigation report must conclude that the rail carrier, shipping line, port, or other supply chain component can safely manage cyanide, based on the Due Diligence Investigation or that, to the extent practical, the consigner has implemented any necessary management measures to ensure the safe management of cyanide by the supply chain component.

Common Supply Chain Components:

If a trucking company, rail carrier, port or shipping company is included as part of more than one of a consignor's supply chains, the common component can be evaluated for one chain and the results (a Due Diligence Investigation report if a rail carrier, port or shipping company, or a Code certification audit report in the case of a trucking company) can be used as part of the required documentation for the other of the same consignor's supply chains. In such a case, the duration of the certification period of the second supply chain would be limited to that remaining for the first supply chain certified with that common segment until that supply chain was recertified.

However, a consignor using a carrier that has been part of a different signatory consignor's certified supply chain is required to conduct its own Code certification audit or Due Diligence Investigation of that carrier as part of the certification of its supply chain. This is necessary because a consignor often provides its carriers that are not individually certified with some of the elements necessary for Code compliance, such as emergency response capabilities, route assessments, and community consultation processes.

Auditing Consigners:

As part of the certification process for their supply chains, consigners are audited using the Cyanide Transportation Verification Protocol to evaluate their route and contractor selection processes as well as any elements of Code compliance the consigner provides to transporters within the supply chain, such as emergency response capabilities and training in cyanide safety and management. Consigners are expected to have documented plans and procedures to demonstrate compliance for selecting the overall route of shipment and for selecting and overseeing the individual cyanide carriers that comprise their supply chains, as well as systems, plans, and procedures that demonstrate compliance with other applicable Code requirements.



TRANSPORTATION GUIDANCE

The audit of the consignor must also evaluate the consignor's implementation of these procedures, oversight of the carriers in its supply chain and any other service or support it provides for its carriers necessary to maintain Code compliance.

The importance of a consignor's contractor selection and oversight procedures cannot be overstated. As the Code signatory, the consignor has direct responsibility for the Code compliance of its entire supply chain (other than any trucking companies that are individually certified under the Code). While the performance of ports, rail, and marine transporters will be evaluated by Due Diligence Investigations, and non-signatory trucking companies will be audited using the Transportation Verification Protocol, it is the consignor that has formally committed to ICMI that all elements of its supply chain will maintain compliance with the Code.

A single audit of the consignor's procedures and oversight activities can satisfy this requirement for all of the consignor's supply chains as long as it addresses any differences in how the consignor manages its supply chains as well as the common issues applicable to all its supply chains.

Changes to a Certified Supply Chain:

A consignor can modify a certified supply chain at any time during its three-year certification period. A consignor that adds a component to a certified supply chain, such as trucking companies, ports, rail carriers, and shipping lines, must notify ICMI of the change within 72 hours of the initiation of activities by the new component. A truck transporter being added to the supply chain and not independently signatory and certified must be audited within six months of its first transport of cyanide. Any port, rail carrier, or shipping line being added to the supply chain must undergo a Due Diligence Investigation within six months of its first transport of cyanide. The consignor also must submit a revised Certification Audit Report or addendum to its most recent certification audit report, addressing any new components. As with other reports, these reports must be submitted to ICMI within three months of the completion of the audit (if a truck transporter) or the Due Diligence Investigation (if a port, rail carrier, or marine carrier). Such a change does not extend the three-year duration of the supply chain's certification or affect its certification status unless the addendum concludes that due to the change, the supply chain is no longer in its previous compliance status.

Co-Producers:

Co-producers that are Code signatory consignor-transporters may transport cyanide to certified mines using portions of each consignor's certified supply chain, as illustrated in the following example: Code-certified Producer A has a contract to sell sodium cyanide to Code-certified Mine Z, but fulfills the contract with cyanide manufactured by Code-certified Producer B. Producer B transports the cyanide from its production facility to its port of departure via truck and rail carriers that are part of one of its certified supply chains. Producer A takes responsibility for the remainder of the transport, starting with the ocean carrier and continuing to the port of entry on another continent and on to Mine Z via a trucking company. The ocean carrier, port of entry and trucking company are all included in one of Producer A's certified supply chains, which also includes other carriers not involved in the shipment of cyanide to Mine Z. In this situation, the transport of Producer B's cyanide to Mine Z complies with the



TRANSPORTATION GUIDANCE

Code even though it involves portions of two certified supply chains of two different consignors because 1) the cyanide is manufactured by a certified producer; 2) there is a written agreement between Producer A and Producer B that defines the responsibilities of each consignor with respect to the management of their respective portions of the overall supply chain from the cyanide production facility to the mine; 3) each carrier remains under the control and oversight of its signatory consignor during the transport of cyanide to Mine Z; and 4) the individual carriers in both supply chains have undergone Code certification audits or Due Diligence Investigations as part of the certification of their respective supply chains.

8. Submission of Audit Reports and ICMI Completeness Review

Lead auditors must submit the following documents to ICMI within 90 days of completing the site inspection portion of a Cyanide Code certification audit: Detailed Audit Findings Report; Summary Audit Report; Corrective Action Plan (for operations found in substantial compliance with the Code); Auditor Credentials Forms; and a letter from an authorized representative of the audited operation or from the signatory company for the audited operation, granting ICMI permission to post the Summary Audit Report and Corrective Action Plan (if required) on the Cyanide Code website. The lead auditor's signature on the Auditor Credentials Form must be certified by notarization or its equivalent.

Upon receipt of the required information, ICMI conducts a review of the submitted documentation for "completeness." This review is intended to ensure that all necessary information has been provided. It does not address the substantive issues of Code compliance.

ICMI's "Completeness Review" of the Detailed Audit Findings Report determines whether all relevant Verification Protocol questions have been answered and confirms that sufficient details are provided in support of the auditor's findings. The Summary Audit Report is reviewed to ensure that it accurately represents the results of the Detailed Audit Findings Report and that it includes sufficient information to demonstrate the basis for each finding. As the Summary Audit Report is intended to be a summary of the information included in the Detailed Audit Findings Report, the Summary Audit report should include only information that is presented in the Detailed Audit Findings Report. Auditor Credentials Forms also are reviewed to confirm that the auditors meet ICMI criteria at the time of the audit. The Corrective Action Plan, if required, is reviewed to confirm that it covers all deficiencies that resulted in findings of substantial compliance. ICMI also confirms that a letter from the audited facility is submitted authorizing ICMI to post the Summary Audit Report (and Corrective Action Plan, if required) on the Cyanide Code website.

If the documentation is complete, ICMI informs the auditor and operation and posts the Summary Audit Report, Auditor Credentials Form, and, if required, the Corrective Action Plan on the Cyanide Code website. If the documentation is incomplete, ICMI advises the auditor and operation of the deficiencies and requests that revised documentation be submitted within 30 days. ICMI will not accept an incomplete audit report. The date of certification is the date on which ICMI makes the approved documentation available on the Cyanide Code website and announces the certification.



TRANSPORTATION GUIDANCE

Supply Chain Reports:

The reports for supply chain audits should be structured to provide clarity on the roles of each supply chain component, such as the consigner and trucking companies, in meeting the compliance requirements.

As the consigner has overall responsibility for certification of the supply chain, responses to individual Transportation Verification Protocol Questions pertaining to the consigner's roles and responsibilities should be included in the supply chain's Detailed Audit Findings Report.

The auditor must also include responses to individual Verification Protocol Questions for any truck transporters included in the supply chain, but which are not Code signatories and are not independently certified. Auditors may choose to submit a separate detailed audit report for any non-signatory truck transporter included in the supply chain, rather than include the information in the supply chain audit report. Detailed information is not required in response to audit questions for truck transporters that are Code signatories and are certified but are included in the supply chain. However, any such transporters should be noted in the description of the supply chain, including the certification dates for any such truck transporters.

Summaries of Due Diligence Investigation reports are required to be included for any rail transporters, marine transporters, and ports included in the supply chain. The requirement for submittal of certification audit reports within 90 days of the completion of the site inspection portion of the audit applies to the entire supply chain audit rather than to the audit of any individual carrier.

In the response to each Verification Protocol question, the information for each supply chain component (e.g., consigner, truck transporters, ports, shipping lines, rail lines) should be clearly identified, by means such as headers for the information. For example, the response to Verification Protocol 1.1.1 pertaining to route selection, would typically include a header for consigner, followed by the response for the consigner, headers for each non-signatory truck transporter included within the supply chain, and when appropriate, headers for ports, marine carriers, and other transporters. In this way, responsibilities of each supply chain component for Code compliance are clear.

A single Summary Audit Report must be submitted for the transportation components of the supply chain and must include a finding for the overall supply chain, as well as a finding for each Transportation Practice that considers the responses to the Verification Protocol questions for each supply chain component.

The "description of operation" section of the Summary Audit Report should clearly identify the entire supply chain, including each truck, rail and ocean carrier as well as any rail terminals, ports, interim storage facilities, warehouses and repackaging operations included within the supply chain. The Summary Audit Report also should identify any additions, removals, or other modifications made to the supply chain since its previous audit, including the date the change was made.



TRANSPORTATION GUIDANCE

Production operations that meet ICMI's definition of "warehouses" may be included in certified supply chains. Such facilities must be audited by a lead auditor and an auditor meeting ICMI's criteria as a production technical expert auditor. A separate Detailed Audit Findings Report and Summary Audit Report, based on the Production Verification Protocol must be submitted for each warehouse operation included in a supply chain and not separately certified as a production operation.

The Summary Audit Report must also include summaries of any Due Diligence Investigation reports of rail lines and terminals, ports and shipping companies.

Where a supply chain includes a truck transporter or cyanide warehouse that is signatory and separately certified from the supply chain, the Summary Audit Report should refer to the Summary Audit Report posted on the Cyanide Code website applicable to that truck transporter or warehouse.

Supply chain auditors must make an Auditor's Finding for the consigner, as well as compliance findings for each Transport Practice. Deficiencies identified during a supply chain audit should be addressed in a single Corrective Action Plan that includes all deficiencies identified for all components of the supply chain, including the consigner, and any truck transporters, ports, marine carriers, rail lines, warehouses, or other entities included in the supply chain.

Auditor Credentials Forms for the auditor(s) evaluating the consigner's programs and activities, auditor(s) conducting or reviewing any Due Diligence Investigations, and auditor(s) of the trucking companies are also required.

9. Pre-Operational Certification Audits

The Code allows for pre-operational certification of transporters and supply chains that are not yet transporting cyanide.

The same Verification Protocol used to determine compliance during an initial operational audit is used for a pre-operational audit, and the guidance provided in this document applies equally to both types of audits but with one significant difference. Since transport operations that are not yet carrying cyanide cannot be audited for their actual compliance, pre-operational certification is based on their commitments to conduct their transport activities in full compliance with the Cyanide Code's Principles and Transport Practices.

Auditors of transporters and supply chains seeking pre-operational certification must determine if the operation can reasonably be expected to be in full compliance with the Code's Principles and Transport Practices once the operation's plans are implemented and it becomes active. The auditor therefore should review implemented or draft materials for equipment specifications, operating procedures, emergency response, training and other written documentation. If detailed draft plans and procedures are not yet available, an operation may provide written commitments to implement measures consistent with the Code. Such commitments can be in form of descriptions of intended activities, cyanide management plans, and other written statements of intent that conclusively demonstrate that, once it begins



TRANSPORTATION GUIDANCE

transporting cyanide, it will fully comply with the Code. The commitment must include sufficient detail for the auditor to be confident in such a finding.

When using the Verification Protocol to evaluate pre-operational compliance of a transporter that is not yet in operation, the Protocol questions should be applied prospectively. For example, a question such as “Does the transporter implement a procedure to evaluate the risks of selected cyanide transport routes and take the measures necessary to manage these risks?” should be applied as “Based on the operation’s draft procedures or other written commitments, will the transporter implement a procedure to evaluate the risks of selected cyanide transport routes and take the measures necessary to manage these risks?”

A transport operation seeking pre-operational certification may not yet be transporting cyanide, but may have in place and have implemented inspection, maintenance and training procedures for its transport of other materials. In such cases, the auditor should note in the audit reports the items that are already in place and implemented and should audit them on that basis. For example, if a transporter already has a vehicle inspection program implemented, the auditor should review the documents and records for the program rather than simply reviewing the transporter’s commitment to establishing such a program to comply with this requirement.

A finding of full compliance is required for pre-operational certification; if found in substantial compliance, the operation must revise its plans and procedures such that it is reasonably expected to be in full compliance with all Principles and Transport Practices. A pre-operational transporter or supply chain found in full compliance is conditionally certified, subject to an on-site audit to verify that the operation is being operated in compliance with the Code. This on-site confirmatory audit must be conducted within six months of the date on which the transporter first handles cyanide.

10. Recertification Audits

While the guidance provided in this document applies to both initial certification audits and subsequent recertification audits, the fact that recertification audits evaluate compliance over a three-year period results in some different considerations from those of an initial audit.

Modifications to Cyanide Supply chains:

One of the first questions an auditor should ask during a recertification audit is whether there have been changes to the consigner, or individual components of the supply chain, such as truck transporters, ports, or rail and shipping lines since its previous audit. Certified operations, including certified supply chains, are expected to maintain Code compliance throughout the three-year period between audits. If there have been no changes to the supply chain, the audit simply revisits all the same issues that were previously evaluated. However, modifications to supply chain components must be evaluated to verify that the changes conform to the Code, including the requirement that ICMI be notified of modifications to the elements of a certified supply chain and that an addendum to the existing Summary Audit Report be submitted to ICMI



TRANSPORTATION GUIDANCE

evaluating the new cyanide carrier, as detailed in Section VI.C of the Code's *Signatory and Certification Process*.

If truck transporters have been removed or added to a supply chain since the previous audit, the audit should evaluate the compliance of both any removed truck transporter and the replacement truck transporter. Since the initial carrier can no longer be inspected, this aspect of the auditor's findings must be based on the consignor's documented oversight of its activities and procedures for the period during which the removed truck transporter was still transporting cyanide as part of the supply chain.

Potential compliance deficiencies between audits:

A certified transport operation may experience various types of potential compliance deficiencies during the three years between certification audits. Potential deficiencies can range from missing documentation required by the Code (e.g., inspection reports, training records) to cyanide exposure or releases that impact worker health or the environment. Since an operation is expected to maintain compliance over the entire period between audits, auditors will need to evaluate the significance of any compliance deficiencies or potential non-compliance situations that may have occurred but have been corrected by the time of the recertification audit, in determining if any such deficiencies or situation should be identified in the audit report and how they affect the operation's compliance status.

One type of compliance deficiency or potential non-compliance situation always should be evaluated during a recertification audit and discussed in the Detailed Audit Findings Report and Summary Audit Report of a cyanide transport operation's recertification audit regardless of its effect on compliance. Signatory companies are required to notify ICMI of the occurrence of any "significant cyanide incidents," as defined in the Code's *Definitions and Acronyms*. The nature and cause of such incidents, as well as the operation's response and the measures it has taken to prevent a reoccurrence should be described and the auditor's rationale for the resulting finding and compliance determination should be provided, based on the factors discussed below.

Auditors must use their professional judgment to determine if other potential compliance deficiencies or non-compliance situations merit inclusion in a recertification audit report. It may be appropriate for the Detailed Audit Findings Report to document those situations which may appear insignificant but which by themselves or in combination with other items may indicate a trend that should be identified to subsequent auditors. For example, less than perfect implementation of an inspection program may appear as a few isolated instances. While deficiencies such as these may not be significant enough to merit discussion in the Summary Audit Report, the auditor should consider documenting such deficiencies in the Detailed Audit Findings Report (along with the rationale for the resulting finding) so that similar deficiencies found in the next audit can be evaluated in the proper context.

An auditor's findings and resulting compliance determinations regarding other potential compliance deficiencies or non-compliance situations will depend primarily on the cause and duration of the problem and the nature of the facility's response.



TRANSPORTATION GUIDANCE

Cause:

Potential compliance deficiencies or non-compliance situations can be separated into those that are isolated incidents and those that represent programmatic failures. An example of an isolated incident would be a single missing report of a delivery truck's pre-departure inspection over three years of operation. If such a situation is quickly remedied, measures taken to prevent a reoccurrence, and the operation has demonstrated that it can maintain compliance, then the operation may be found in full compliance.

Similarly, incidents that are directly attributable to worker error can be viewed as isolated incidents beyond the operation's control as long as the transport operation had maintained its standard operating procedures and training programs in full compliance with the Code and had a rapid and effective response to the incident. An operation experiencing a cyanide release or exposure resulting from a truck driver losing control of a vehicle may be found in full compliance if it had implemented the Code's requirements for driver qualifications, licensing and training and had responded quickly and appropriately.

However, if these same incidents were due a transport operation's failure to properly implement the underlying management systems on which its certification was based, then the auditor should find that their prevention was within the operation's control. Having no pre-trip inspection forms for one year of the three-year audit period, failing to train transport personnel, or not being able to promptly or adequately respond to an emergency incident are evidence that the transport operation allowed these systems to fail. Such programmatic failures could result in a finding of substantial or even non-compliance depending on the specific scenario and the operation's efforts to maintain the systems needed to comply with the Code.

Duration:

The duration of the potential compliance deficiency or non-compliance situation may also have direct implications on the resulting audit finding. While situations that present significant risks to workers, communities and the environment obviously require a response and correction as immediate as practical, operations are expected to take prompt action to remedy all deficiencies regardless of the risk they present, in order to demonstrate the operation's good-faith efforts to comply with the Code. It therefore is possible for a relatively minor deficiency, such as failure to maintain required documentation, to result in a finding of substantial or even non-compliance if allowed to go on for an unreasonably long time, while a full compliance finding could result from a more serious problem that was identified and corrected immediately.

Response:

Regardless of the cause of a deficiency or the severity of an impact, a rapid and effective response is necessary for an operation to be found in full compliance. This should include corrective actions to address the immediate deficiency, a determination of the root cause of the deficiency, the implementation of measures to prevent its reoccurrence, and follow-up evaluations as needed to ensure that the remedy remains effective.



TRANSPORTATION GUIDANCE

On-going compliance efforts:

An operation's efforts to maintain full compliance are indicative of its commitment to manage cyanide responsibly, and may therefore provide context with respect to a deficiency. An operation that identifies a deficiency during a three-year audit cycle as part of an interim audit or review of its Code compliance is more likely to be viewed as fully compliant than one that evaluates its compliance only immediately before or during a recertification audit. Although not required by the Code, operations that conduct their own internal or third-party audits or program reviews demonstrate to their workforce that responsible cyanide management is an integral part of operation rather than something that needs attention only every three years. This focus can enhance worker support for the Code and the operation's compliance.

These audits or reviews can also identify potential problems before they occur and prevent a slow, incremental deterioration of the operation's cyanide management programs that may otherwise go unnoticed until a serious incident occurs. As a result, the operation may maintain full compliance with the Code rather than falling into substantial compliance. Interim assessments should eliminate the need for a major compliance effort immediately prior to the recertification audit and create a record of continuous compliance, which then provides context to any isolated deficiencies that may be observed during the next Cyanide Code certification audit. Most importantly, interim reviews and audits conducted between certification audits help operations meet the Code's ultimate goal of enhanced protection of workers, communities and the environment.

Other factors:

Another factor for the auditor's consideration is the point in the three-year audit cycle at which the deficiency occurred. A finding of full compliance is more easily justified when a deficiency that occurred early in the audit cycle has not reoccurred, because it suggests that the operation's response has adequately addressed the root cause of the deficiency. However, if the same problem had occurred just prior to a recertification audit, the adequacy of the response may be less clear, and a finding of substantial compliance may be more appropriate to allow the operation additional time to demonstrate its full control of the situation.

While the specific cause and duration of the incident, as well as the operation's response, are critical factors in determining the operation's compliance status, a secondary consideration in determining the compliance of a transport operation that has experienced a significant cyanide incident is whether it provided the required notice to ICMI within 24 hours of the incident. Compliance with the notification requirements indicates that the operation is focused on its responsibilities under the Code and the identification of out-of-compliance situations, while the lack of the necessary notification suggests that Code compliance is not a high priority for the operation. Auditors therefore should determine whether an operation that has had an incident requiring notification to ICMI has made the appropriate notification.

Findings, Compliance Status and Summary Audit Report:

Once a deficiency has been fully corrected, a finding of substantial compliance loses its significance because there is no need for a Corrective Action Plan. Therefore, an operation that



TRANSPORTATION GUIDANCE

has corrected a deficiency and has had sufficient time to demonstrate that its remedy is effective, should typically be found in full compliance and be fully certified.

However, if the operation's response to a past deficiency was not complete or effective, or the deficiency was sufficiently recent that the auditor cannot be certain of the effectiveness of the response, a finding of substantial compliance should be made and the operation should be found and certified in substantial compliance, subject to implementation of a Corrective Action Plan. The same three criteria for a finding of substantial compliance during an initial audit also apply to a recertification audit: the transport operation must have made a good-faith effort to comply with the Code, the deficiency must be correctable within one year, and the situation cannot present an immediate or substantial risk to health or the environment. If any of these three criteria are not met, the operation must be found in non-compliance and cannot be recertified.

Because recertification audits evaluate compliance over a three-year period, the auditor's responses and findings should indicate, where necessary, that the operation provided evidence demonstrating continuous implementation of its procedures over the current three-year audit period. As one example, in the case of routine facility inspections, the auditor should indicate that representative inspection records were reviewed for the three-year period following the previous Code audit to verify whether the operation maintained continuous compliance over the entire audit cycle.

The Summary Audit Report of a recertification audit must include one additional statement that is not required in the Summary Audit Report for an initial certification. For a cyanide transportation operation found in full compliance with the Code, the report must indicate whether the operation had any significant cyanide incidents or other compliance issues since its previous certification and identify where in the report such information can be found. For a cyanide transportation operation found in substantial compliance or non-compliance, the report must identify the Transport Practice(s) on which the finding was based.

One of the following two statements must be included directly following the overall compliance finding for an operation found in full compliance during a recertification audit:

“This operation has not experienced any compliance issues during the previous three-year audit cycle.”

or

“This operation has experienced compliance issues during the previous three-year audit cycle which are discussed in this report under Transport Practice(s) _____.”

The following statement should be included directly following the overall compliance finding for an operation found in substantial compliance during a recertification audit:

“This operation was found in substantial compliance with the Cyanide Code based on the audit findings discussed in this report under Transport Practice(s) _____.”



TRANSPORTATION GUIDANCE

The following statement should be included directly following the overall compliance finding for an operation found in non-compliance during a recertification audit:

“This operation was found in non-compliance with the Cyanide Code based on the audit findings discussed in this report under Transport Practice(s) _____.”



TRANSPORTATION GUIDANCE

Cyanide Transportation Guidance

Principle 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.

1. Does the transporter implement a process or procedure for selecting transport routes that minimizes the potential for accidents and releases or the potential impacts of accidents and releases? Does the process or procedure consider:
 - a) Population density?
 - b) Infrastructure (roadway, rail, port) construction and condition?
 - c) Pitch and grade?
 - d) Prevalence and proximity of water bodies and fog?

Truck Transport

Truck transporters must evaluate alternative transport routes and to the extent practical, select the one that minimizes both the potential for accidents and releases and the potential impacts of such accidents and releases if they do occur. The evaluation should consider the issues identified in the question as well as any others that may affect the relative risks of the various routes being evaluated, such as natural hazards (landslides, flooding, volcanic activity, etc.) and security issues. The auditor should be able to review evidence that such a selection process was used. This may include a written procedure or policy that calls for such an evaluation, documentation that the procedure was used in selecting the route used by the transporter, and the results of the selection process.

In many cases, the evaluation and selection of routes may be limited by, or otherwise depend on the actual availability of alternatives, jurisdictional designations of preferred or required routes for transport of dangerous goods, or other jurisdictional requirements on such transport. The auditor must take these restrictions into account when determining whether the transporter's process or procedure effectively addresses the question.

It also should be recognized that the auditor is not expected to challenge the selected route or otherwise judge the decision made as a result of the evaluation unless that decision calls into question the legitimacy of the procedure itself. That is, the Code requires that the transporter have a route evaluation procedure or process, and as long as the outcome of the process is a reasonable one, the specific route selected is not within the auditor's purview.

Consigners

Consigners must have a process for evaluating and selecting routes and the transportation supply chain components necessary for transport on those routes. When a consignor arranges for transport by multiple carriers, such as rail and shipping lines and ports, the



TRANSPORTATION GUIDANCE

consignor must evaluate alternatives for the overall transport system to minimize risks. The most preferable overall routes may not be the ones with the best port facilities, as the risks posed over the entire route, including the overland portion, must be considered during the consigner's route selection process. For example, shipment overseas may involve truck and rail transportation to a port, marine shipping to a port on another continent and then rail or truck transport to a mine. The consignor would be expected to evaluate available options for different ports, marine carriers, rail lines and truck transporters to identify routes that minimize the potential for accidents and releases. These route selection activities by the consigner should be evaluated as part of the Code certification audit of the consigner's activities.

If a consignor performs the route selection process for, or otherwise provides direct assistance to a contracted trucking company in its evaluation and selection of a transport route, these activities also should be addressed when auditing the consigner.

It should be recognized that the auditor is not expected to challenge the selected route or otherwise judge the decision made as a result of the evaluation unless that decision calls into question the legitimacy of the procedure itself. The Code requires that the transporter have a route evaluation procedure or process, and as long as the outcome of the process is a reasonable one, the specific route selected is not within the auditor's purview.

2. Does the transporter implement a procedure to evaluate the risks of selected cyanide transport routes and take the measures necessary to manage these risks?

Truck Transport

Even the best route available to transport cyanide may have some portions or features that present an increased risk of accidents or potential impacts, such as steep grades, sharp turns, narrow or rough roads, or proximity to surface water resources. The transporter's procedures should include an evaluation of the selected route to determine if extra precautions are necessary at points along the route. Areas posing increased risks should be identified and the necessary precautions, such as reducing vehicle speed, should be documented for driver training.

Auditors should review the transporter's procedures to ensure that the risks of selected routes are evaluated, necessary extra precautions are documented, and drivers receive appropriate training.

Consigners

Once the route for a supply chain has been selected, the consignor should exercise due diligence in determining if the cyanide shipment will be handled safely by any ports, ships, and rail facilities selected or if additional measures must be implemented. For example, if a port lacks a secure storage area for off-loaded dangerous goods, the consignor may need to make special arrangements to pick up the cyanide shipment as soon as it is off-loaded and have it taken to a more secure temporary storage location until it is transported to the mine site.



TRANSPORTATION GUIDANCE

Evidence of the implementation of these measures would be through interviews, records of the consignor's evaluation, and implementation and documentation of procedures to mitigate the identified risks.

3. Does the transporter implement a process or procedure to periodically reevaluate routes used for cyanide deliveries or does the transporter have a process for getting feedback on route condition from the transporter's operators?

Truck Transport

The transporter should have a procedure to periodically reevaluate the route used for cyanide transport to confirm that no new risks have developed. This may be a formal administrative review, a process whereby the driver reports on route conditions, or periodic inspection of the routes. No frequency for the review is specified, although many transporters have processes to evaluate routes annually, or when changes are identified by drivers travelling a route. The review procedure, records of reviews and documentation of any resulting modifications to the route or transport procedures should be available for the auditor's review.

Consigners

Consignors should have a procedure to periodically reevaluate their supply chain to confirm that no new risks have developed. This may be a formal administrative review or periodic inspections of supply chain components to review conditions. No frequency for the review is specified, although many consignors have processes to evaluate routes annually, or when changes are made in components of supply chains. The consignor's review procedure, records of reviews and documentation of any resulting modifications to the supply chain should be available for the auditor's review.

4. Does the transporter document the measures taken to address risks identified with the selected routes?

Truck Transport

Any procedures that have been developed to address risks along the selected route should be documented in writing both for driver training and as a reference. Features such as sharp turns, areas of proximity to surface water, rail crossings or areas of high population density may all require special precautions. The auditor should review transporter documentation that addresses management of risks along the selected route.

Consigners

If a consignor's evaluation of its selected supply chain route has identified the need for additional safeguards to address deficiencies in rail and/or port operations or other aspects of its supply chain, implementation of these measures should be documented for the auditor's review. However, it must be recognized that the consignor's lack of control over these facilities may limit its ability to implement these measures.



TRANSPORTATION GUIDANCE

5. Does the transporter seek input from applicable governmental agencies, communities and other stakeholders as necessary in the selection of routes and development of risk management measures?

Truck Transport

The nature and degree of consultation with applicable governmental agencies, communities, and other stakeholders will depend on a number of route-specific factors. Compliance with the Code does not require the transporter to seek input from every individual or community along a cyanide delivery route. The intent of the provision is that the consultations enable the transporter to accurately evaluate potential routes for their relative risk, identify the risks that exist along the chosen route, and determine the measures necessary to manage this risk. In some situations, consultation with transportation agencies, emergency response providers, or other local or regional authorities may be sufficient. Whatever the nature of the consultation, the transporter should have records to demonstrate to the auditor that input has been sought and acted on as appropriate.

Consigners

Community or stakeholder consultations are not contemplated with respect to the use of rail lines and terminals, or ports and shipping companies as part of a supply chain. However, a consignor's procedures for the selection and oversight of trucking companies included in its supply chain should ensure that trucking companies seek such input in their selection of routes, unless the consigner itself takes responsibility for this activity. If a consignor assists its contracted trucking companies in consultations with communities, stakeholders and governmental agencies, these activities should also be addressed in the audit of the consignor.

6. Where routes present special safety or security concerns, does the transporter use convoys, escorts or other additional safety or security measures to address the concern?

Truck Transport

The use of convoys or escorts is typically more appropriate where road conditions are poor, where there are recognized security concerns, or where the potential need for immediate emergency response is relatively high. If such conditions exist and no special safety or security measures are in place, the transporter should be prepared to justify the decision that such measures are unnecessary. However, unless there are demonstrated issues that appear to require the use of convoys, escorts or other special safety precautions, there may be no basis for the auditor to conclude that such measures are necessary.

Consigners

The use of convoys, escorts or other additional safety or security measures to address special safety or security concerns should be part of the consigner's selection and oversight for any trucking companies in its supply chain. Consignors should have procedures to determine whether the trucking companies it plans to use evaluate the safety and security of their routes and use convoys or escorts when necessary. Consignors also should



TRANSPORTATION GUIDANCE

implement procedures for ongoing oversight of trucking companies used in their supply chains to ensure compliance with this provision of the Code.

7. If the transporter contracts other entities to conduct any of the activities required in Transport Practice 1.1, does it implement procedures to make the contractor aware of the applicable Code requirements and ensure that the contractor complies with those requirements?

Truck Transport

The requirements of the Code, and the questions in the Transportation Verification Protocol, apply to all entities involved in cyanide transport, including any companies contracted by a trucking company to conduct activities addressed in this Transport Practice. It will therefore be necessary for the transport auditor to evaluate the on-the-ground compliance of any subcontractors with designated responsibilities for compliance with this Transport Practice.

The auditor should verify that truck transporters that use contractors to conduct activities addressed in this Transport Practice have made those contractors aware of their responsibilities, and that the truck transporter takes measures to ensure that its contractors are implementing the measures necessary for compliance. The trucking company should provide the auditor with documentation that contractors have been notified of their responsibilities with regard to compliance with this Transport Practice, that the transporter verifies the contractor's compliance efforts, and that the contractor complies with applicable Code requirements. Auditors should review the transporter's procedures for notifying contractors of their responsibilities and for verifying the contractor's activities and compliance under this Transport Practice.

Consigners

A consignor's supply chain typically consists of contracted entities such as trucking companies, rail lines, marine carriers and ports. Consignors should have procedures for selecting the transporters used in the supply chain and overseeing their activities to ensure compliance with this Transport Practice. Selection procedures should evaluate the capacity of individual components of the supply chain, such as ports, marine carriers, rail carriers, and trucking companies, to meet applicable Code requirements. The consigners oversight procedures should ensure that such supply chain components are aware of their responsibilities under this Transport Practice, have procedures to meet these responsibilities, and operate in compliance with the Code.

Auditors should review the consignor's procedures and evaluate any contracted entities having designated responsibility for compliance with this Transport Practice.



TRANSPORTATION GUIDANCE

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.

1. Does the transport company use only trained, qualified and licensed operators to operate its transport vehicles and other cyanide handling equipment?

Truck Transport

Transporters must be able to demonstrate that personnel operating its cyanide transport vehicles and handling equipment, such as trucks, forklifts and cranes, have been properly trained and, in jurisdictions requiring a specific license to operate this equipment, are appropriately licensed. Auditors should review the transporter's documentation to verify that its drivers are properly trained and licensed for transport of cyanide.

Consigners

Unless a consignor operating a supply chain is itself a trucking company, it will not directly employ transport vehicle operators. However, a consignor should have procedures to ensure that its contracted trucking companies require the use of trained and licensed drivers, and should have oversight procedures to ensure that its contracted trucking companies comply with this provision. Auditors should review the consignor's procedures and evaluate the on-the-ground compliance of its contracted cyanide transporters with the provisions of this Transport Practice.

2. Have all personnel operating cyanide handling and transport equipment been trained to perform their jobs in a manner that minimizes the potential for cyanide releases and exposures?

Truck Transport

All personnel operating cyanide handling and transport equipment (e.g., trucks, forklifts, cranes) should be trained to perform their assigned tasks in a safe and environmentally sound manner. Truck drivers should be trained on the procedures for loading and off-loading their trucks (if that is part of their job function), and forklift and crane operators must be trained on moving loads without rupturing or damaging cyanide containers. However, such training need not be cyanide-specific; training that addresses safe management of hazardous materials and loads during transport and handling can be acceptable if it covers the appropriate issues.

The Code does not require that the training or its documentation be in any specified form. However, the auditor must be able to verify that such training has been provided and that it has included the elements appropriate for the nature of the transport and responsibilities of the operator. Therefore, some type of training materials (e.g., standard operating procedures, a list of necessary training elements) as well as documentation that operators have received the training (e.g., training records, sign-off sheets) will typically be necessary. In addition to reviewing such records, the auditor should interview equipment operators to verify that they have received the specified training.



TRANSPORTATION GUIDANCE

Consigners

Consignors may be involved in training operators of cyanide handling and transport equipment in two situations. A truck transporter that is a consignor would train its own employees, and a consignor may assist in training the personnel of a contracted transporter in its supply chain. In these cases, the consignor should have documentation of the training for review by an auditor.

Even if not directly involved in training transport personnel, a consignor should implement procedures to ensure that its contracted carriers require training of employees in the safe handling of cyanide and also should have oversight procedures to ensure that the contracted carriers conduct such training. Auditors should review the consignor's procedures and evaluate the compliance of its contracted cyanide transporters with the provisions of this Transport Practice.

3. If the transporter contracts other entities to conduct any of the activities required in Transport Practice 1.2, does it implement procedures to make the contractor aware of the applicable Code requirements and ensure that the contractor complies with those requirements?

Truck Transport

The requirements of the Code, and the questions in the Cyanide Transportation Verification Protocol, apply to all entities involved in cyanide transport, including any companies contracted by a trucking company to conduct activities addressed in this Transport Practice. It will therefore be necessary for the transport auditor to evaluate the on-the-ground compliance of any contractors with designated responsibilities for compliance with this Transport Practice.

The auditor should verify that truck transporters that use contractors to conduct activities addressed in this Transport Practice have made those contractors aware of their responsibilities, and that the truck transporter takes measures to ensure that its contractors are implementing the measures necessary for compliance. The trucking company should provide the auditor with documentation that contractors have been notified of their responsibilities with regard to compliance with this Transport Practice, that the transporter verifies the contractor's compliance efforts, and that the contractor complies with applicable Code requirements. Auditors should review the transporter's procedures for notifying contractors of their responsibilities and for verifying the contractor's activities and compliance under this Transport Practice.

Consigners

Consignors should have procedures for selecting the transporters used in the supply chain and overseeing their activities to ensure compliance with this Transport Practice. Selection procedures should evaluate the capacity of individual components of the supply chain, such as ports, marine carriers, rail carriers, and trucking companies, to meet applicable Code requirements. The consignor's oversight procedures should ensure that such supply chain



TRANSPORTATION GUIDANCE

components are aware of their responsibilities under this Transport Practice, have procedures to meet these responsibilities, and operate in compliance with the Code.

Auditors should review the consignor's procedures and evaluate any contracted entities having designated responsibility for compliance with this Transport Practice.

Transport Practice 1.3

Ensure that transport equipment is suitable for the cyanide shipment.

1. Does the transport company only use equipment designed and maintained to operate within the loads it will be handling?

Truck Transport

Truck transporters should have records documenting the load-bearing capacities of its transport equipment and its maximum cyanide load weight available for the auditor's review. This includes equipment such as forklifts and cranes as well as over-the-road vehicles.

In addition to the general preventive maintenance program addressed under Transport Practice 1.4, the transporter should implement maintenance activities specific to ensuring that its transport equipment retains a load-bearing capacity adequate for the anticipated load. This may include periodic planned maintenance, inspections or testing as well as having in place appropriate specifications for equipment and parts that may be replaced during maintenance.

In addition to reviewing documentation of these capacities and procedures as evidence of compliance, the auditor also should review maintenance records and interview maintenance personnel to verify that the transporter's procedures are followed. If the trucking company contracts out its vehicle maintenance activities to a third-party, the truck transporter should provide the auditor with documentation that it has informed the contractor of applicable Code requirements. The auditor should review the contractor's records and/or interview its employees to verify its compliance with this provision.

Consigners

A consignor's procedures for selecting transport contractors should require that transport equipment be designed and maintained to operate within the loads it will be handling, and the consignor's oversight procedures should ensure that the transporters within the supply chain comply with this provision. Auditors should review the consignor's selection and oversight procedures and evaluate the compliance of its contracted cyanide transporters, as well as the compliance of any subcontractors servicing the consignors' contract carriers.

2. Are there procedures to verify the adequacy of the equipment for the load it must bear?

Truck Transport

In addition to the ensuring that the manufacturer's rating of the loading capacity of transport equipment is adequate, the transporter also should verify that the load bearing



TRANSPORTATION GUIDANCE

capacity of its equipment is adequate by inspecting and testing its equipment to identify signs of stress or overloading. This may be done as part of the transporter's routine preventive maintenance inspection program or may be subcontract to a third-party maintenance provider. The auditor should consider evidence such as documentation of inspections and interviews with maintenance personnel or equipment operators in evaluating compliance with this provision.

Consigners

A consignor should have contractor selection and oversight procedures that address the need to inspect and/or test its cyanide handling and transport equipment to verify that its load bearing capacity is adequate for the shipments it will handle. Auditors should review the consignor's selection and oversight procedures and evaluate the compliance of its cyanide transporters and/or subcontracted third-party maintenance providers with the provisions of this Transport Practice.

3. Are there procedures in place to prevent overloading of the transport vehicle being used for handling cyanide (i.e., overloading a truck, ferry, barge, etc.)?

Truck Transport

Systems or procedures should be in place to ensure that equipment is not loaded in excess of its design. These may include limits on the number of cyanide Intermediate bulk containers that can be loaded on a given piece of equipment, calculations demonstrating that a tanker or isotainer fully loaded with product is below the load-bearing limit of the transport unit, or other means such as weight scales by which overloading can be prevented. Transporters should retain records demonstrating that the procedure achieves this goal, and the auditor also should interview operators as appropriate to verify that the procedure is implemented.

Consigners

A consignor's selection and oversight procedures should ensure that its transport contractors implement measures to prevent overloading their transport vehicles. Auditors should review the procedures of the consignor and its contractors to verify compliance with this provision.

4. If the transporter contracts other entities to conduct any of the activities required in Transport Practice 1.3, does it implement procedures to make the contractor aware of the applicable Code requirements and ensure that the contractor complies with those requirements?

Truck Transport

The requirements of the Code, and the questions in the Transportation Verification Protocol, apply to all entities involved in cyanide transport, including any companies contracted by a trucking company to conduct activities, such as maintenance activities, addressed in this Transport Practice. It will therefore be necessary for the auditor to evaluate contractors having designated responsibilities for compliance with this Transport Practice.



TRANSPORTATION GUIDANCE

The auditor should verify that truck transporters that use contractors to conduct activities addressed in this Transport Practice, such as maintenance activities, have made those contractors aware of their responsibilities, and that the truck transporter takes measures to ensure that its contractors are implementing the measures necessary for compliance. The trucking company should provide the auditor with documentation that contractors have been notified of their responsibilities with regard to compliance with this Transport Practice, that the transporter verifies the contractor's compliance efforts, and that the contractor complies with applicable Code requirements. Auditors should review the truck transporter's procedures for notifying contractors of their responsibilities and for verifying the contractor's activities and compliance under this Transport Practice.

Consigners

Consignors should have procedures for selecting the transporters used in the supply chain and overseeing their activities to ensure compliance with this Transport Practice. Selection procedures should evaluate the capacity of individual components of the supply chain, such as ports, marine carriers, rail carriers, and trucking companies, to meet applicable Code requirements. The consigners oversight procedures should ensure that such supply chain components are aware of their responsibilities under this Transport Practice, have procedures to meet these responsibilities, and operate in compliance with the Code.

Auditors should review the consignor's procedures and evaluate the compliance of any contracted entities having designated responsibility for compliance with this Transport Practice.

Transport Practice 1.4

Develop and implement a safety program for transport of cyanide.

1. Are there procedures to ensure that the cyanide is transported in a manner that maintains the integrity of the producer's packaging?

Truck Transport

Transporters should have handling and inspection procedures to ensure that the integrity of cyanide packaging is maintained during shipment, as well as during loading and unloading (if the transporter's responsibility). The auditor should review these procedures, inspect shipments and interview equipment operators for evidence of compliance with this provision.

Consigner

A consignor's selection and oversight procedures should ensure that its transport contractors implement procedures to ensure that the integrity of the packaging of the cyanide they transport is maintained during handling and transport. Auditors should review the procedures of the consignor and its contractors, inspect shipments and interview equipment operators to verify compliance.



TRANSPORTATION GUIDANCE

2. Are placards or other signage used to identify the shipment as cyanide, as required by local regulations or international standards?

Truck Transport

Cyanide shipments must be identified with the placards or other signage required by those jurisdictions through which it will pass. The auditor should inspect the placards and other signage used to identify the presence of cyanide on transport vehicles in evaluating compliance with this provision.

Consigners

Contractors transporting cyanide as part of a consignor's supply chain should implement procedures to ensure that the shipment is identified as required by applicable regulations. A consignor's selection and oversight procedures should ensure that its contracted transporters implement these procedures. Special labeling, marking and placarding requirements applicable to transport by sea are included under Transport Practice 1.5.

Auditors should review consignor and contractor procedures and to the extent practical, inspect the labeling of cyanide packaging to verify compliance with this provision.

3. Does the transporter implement a safety program for cyanide transport that includes (where appropriate or applicable):
 - a) Vehicle inspections prior to each departure/shipment?
 - b) A preventive maintenance program?
 - c) Limitations on operator or drivers' hours?
 - d) Procedures to prevent loads from shifting?
 - e) Procedures by which transportation can be modified or suspended if conditions such as severe weather or civil unrest are encountered?
 - f) A drug abuse prevention program?
 - g) Retention of records documenting that the above activities have been conducted?

Truck Transport

Transporters should implement safety programs addressing the elements of this question. The Code does not specify the scope or details of the various elements of a safety program. The auditor should determine if the program reasonably addresses each identified issue as necessary to ensure the safe transport of cyanide and considering the specific circumstances presented by the transport route.

Depending on the ownership of transport equipment and contractual obligations, transporters may have responsibility for preventive maintenance of truck trailers, tankers and isotainers as well as the truck tractor itself. While the frequency of various preventive maintenance activities is not specified in the Code, the Code does expect that these activities be scheduled and documented, along with the basis for the maintenance frequency, such as hours of operation, or set time periods between maintenance. Auditors should review maintenance records and interview employees to determine compliance with this provision.



TRANSPORTATION GUIDANCE

The auditor also should evaluate the compliance of any third parties contracted by the transporter for any elements of these safety programs, such as vehicle maintenance, by reviewing relevant documentation and/or interviewing its employees.

Consigners

A consignor's selection and oversight procedures should ensure that the transporters within the supply chain implement safety programs addressing the elements of this question applicable to their transport activities. The Code does not specify the scope or details of the various elements of a safety program. The auditor should determine if the consignor's procedures and the transporter's safety programs reasonably address the identified issues as necessary to ensure the safe transport of cyanide, taking those differences into account and considering the specific circumstances presented by rail and marine transport and the operations of ports and rail yards.

4. If the transporter contracts other entities to conduct any of the activities required in Transport Practice 1.4, does it implement procedures to make the contractor aware of the applicable Code requirements and ensure that the contractor complies with those requirements?

Truck Transport

The requirements of the Code, and the questions in the Transportation Verification Protocol, apply to all entities involved in cyanide transport, including any companies contracted by a trucking company to conduct activities addressed in this Transport Practice. It will therefore be necessary for the auditor to evaluate the compliance of contractors with designated responsibilities for compliance with this Transport Practice.

The auditor should verify that truck transporters that use contractors to conduct activities addressed in this Transport Practice have made those contractors aware of their responsibilities, and that the truck transporter takes measures to ensure that its contractors are implementing the measures necessary for compliance. The trucking company should provide the auditor with documentation that contractors have been notified of their responsibilities with regard to compliance with this Transport Practice, that the transporter verifies the contractor's compliance efforts, and that the contractor complies with applicable Code requirements. Auditors should review the truck transporter's procedures for notifying contractors of their responsibilities and for verifying the contractor's activities and compliance under this Transport Practice.

Consigners

Consigners should have procedures for selecting the transporters used in the supply chain and overseeing their activities to ensure compliance with this Transport Practice. Selection procedures should evaluate the capacity of individual components of the supply chain, such as ports, marine carriers, rail carriers, and trucking companies, to meet applicable Code requirements. The consigner oversight procedures should ensure that such supply chain components are aware of their responsibilities under this Transport Practice, have procedures to meet these responsibilities, and operate in compliance with the Code.



TRANSPORTATION GUIDANCE

Auditors should review the consignor's procedures and evaluate any contracted entities having designated responsibility for compliance with this Transport Practice.

Transport Practice 1.5

Follow international standards for transportation of cyanide by sea.

1. Are shipments of cyanide by sea transported in compliance with the Dangerous Goods Code of the International Maritime Organization?

Truck Transport

This provision does not apply to transport of cyanide by truck.

Consigners

To the extent practical, consignors with supply chains that include international transport of cyanide by sea should have selection and oversight procedures that ensure that the shipping company providing such transport complies with this provision.

The International Maritime Organization's (IMO) Dangerous Goods (DG) Code (2018 Edition, Amendment 39) places a number of requirements on the transport of cyanide by sea. In most cases, the cyanide producer or the consignor of the shipment will be responsible for implementing these requirements. Several of the requirements apply to the vessel itself and should be addressed as part of the Due Diligence Investigations to be conducted by the consignor. The following provisions of the DG Code are to be addressed under this question, as applicable, and if the supply chain includes ocean transport, the auditor should have a copy of the DG Code available for reference.

- a) Is the cyanide shipment packaged as required by Part 4 of the IMO DG Code and according to the packaging instructions and packaging provisions indicated on the DG List?

Part 4 of the IMO DG Code describes the required packaging for cyanide. Specific instructions and additional packaging provisions for various types of packages are included in columns 5 through 12 of the DG List, which is found in Chapter 3.2 of the DG Code.

- b) Are cyanide packages marked as required by Section 5.2.1 of the IMO DG Code and according to the labeling requirements indicated on the DG List?

Section 5.2.1 of the IMO DG Code identifies the marking required for cyanide packages that will be transported by sea. The proper shipping name and UN number must be marked on each package. The shipping names and UN numbers for the most widely used solid cyanide is: Sodium Cyanide, UN #1689. Consult the IMO DG List in Chapter 3.2 of the DG Code for the proper shipping names and UN numbers of other cyanides.



TRANSPORTATION GUIDANCE

Each cyanide package also must be marked with the triangular Marine Pollutant marker. See Section 5.2.1.6.3 of the DG Code for this marker and its required color and size specifications.

- c) Are cyanide packages labeled as required by Section 5.2.2 of the IMO DG Code and according to the labeling requirements indicated on the DG List?

In addition to the marking required under Section 5.2.1 of the DG Code, each cyanide package must be labeled with the skull and crossbones marker used for Class 6.1 toxic substances. This marker is shown, and its required colors and specifications are described in Section 5.2.2.2 of the DG Code.

- d) If cyanide is shipped in cargo transport units, are the units placarded and marked as required by Chapter 5.3 of the IMO DG Code?

A cargo transport unit is defined in Section 1.2.1 of the DG Code as “a road freight vehicle, a railway freight wagon, a freight container, a road tank vehicle, a railway tank wagon or a portable tank.” Chapter 5.3 of the DG Code requires that freight containers, semi-trailers and portable tanks must have one placard on each side and one on each end of the unit. The placard is an enlarged version of the skull and crossbones marker used for Class 6.1 toxic substances. The size and color of the required placard is specified in Section 5.3.1.2.1.

The proper shipping name must be displayed on both sides of tank transport units and bulk containers, but no size or color is specified. The UN number must be displayed either on or adjacent to the placards, and specifications for the size and color of these markings are found in Section 5.3.2.1.2. Additionally, the Marine Pollutant triangle marking must be displayed on cargo transport units as specified in Section 5.3.2.3.

- e) Has a dangerous goods transport document been prepared with the information required under Chapter 5.4 of the DG Code?

The consignor of the shipment or the entity packaging the cyanide for shipment must prepare a dangerous goods transport document that includes the following information, as required in Chapter 5.4 of the IMO DG Code:

- Name and address of consignor and consignee, and date the document was prepared, or the shipment was given to the initial carrier;
- Dangerous Goods Description, including:
 - Proper Shipping Name (if the container is empty but not decontaminated, the words “empty uncleaned” must be placed before the shipping name);
 - UN Number;
 - Hazard Classification;
 - Packaging Group;



TRANSPORTATION GUIDANCE

- For cyanide, identification as a Marine Pollutant;
- Total weight or volume and number and kind of packages;
- A certification or declaration that the consignment is acceptable for transport and that the goods are properly packaged, marked and labeled, and in proper condition for transport in accordance with the applicable regulations. The required text for this certification is: "I hereby declare that the contents of this consignment are fully and accurately described above by the Proper Shipping Name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations."

The certification must be signed and dated by the consignor or the entity packaging the cyanide for shipment. Facsimile signatures are acceptable where applicable laws and regulations recognize the legal validity of facsimile signatures. An example of the required dangerous goods description is: Sodium Cyanide, class 6.1, UN 1689, P002, MARINE POLLUTANT. No specific format for the dangerous goods transport document is required, and any format is acceptable as long as it includes the necessary information.

- f) If the cyanide is packed or loaded into a container, has a "container/vehicle packing certificate" been prepared meeting the requirements of Section 5.4.2 of the DG Code?

When dangerous goods are packed or loaded into any freight container (as defined in Section 1.2.1 of the DG Code) or vehicle, those responsible for packing the container or vehicle shall provide a "container/vehicle packing certificate" specifying the container/vehicle identification number(s) and certifying that the operation has been carried out in accordance with the following conditions:

- The container/vehicle was clean, dry and apparently fit to receive the goods;
- Packages which need to be segregated in accordance with applicable segregation requirements have not been packed together onto or in the container/vehicle;
- All packages have been externally inspected for damage, and only sound packages have been loaded;
- Drums have been stowed in an upright position, unless otherwise authorized by the competent authority, and all goods have been properly loaded and, where necessary, adequately braced with securing material to suit the mode(s) of transport for the intended journey;
- Goods loaded in bulk have been evenly distributed within the container/vehicle;
- The container/vehicle and packages are properly marked, labeled and placarded, as appropriate; and
- A dangerous goods transport document has been received for each dangerous goods consignment loaded in the container/vehicle.

A container/vehicle packing certificate is not required for portable tanks.



TRANSPORTATION GUIDANCE

In most cases, the cyanide will be packaged by the producer, who will be responsible for implementing the requirements of questions a) through f), above. Transportation auditors will need to determine whether the entity responsible for cyanide packaging has procedures in place to ensure that the cyanide is labeled, marked, placarded and accompanied by the necessary documentation, as required by the IMO DG Code, and whether these procedures are being implemented.

Due Diligence Investigations

In addition to the above questions, and as discussed under Transport Practice 1.1, consignors of overseas shipments of cyanide must exercise due diligence during their overall route selection and evaluation process to determine if the cyanide shipment will be handled safely by ships and port facilities. The following three provisions of the IMO DG Code, which directly apply to transport of cyanide aboard ships, should be addressed in any Due Diligence Investigation conducted as part of the Supply Chain certification. The investigation should, to the extent practical, evaluate whether the port and/or shipping company have the necessary procedures and whether these procedures are being implemented. Where deficiencies are identified, the consignor may have to implement additional procedures to ensure that the cyanide is managed responsibly. However, it is acknowledged that the extent to which the consignor can fully and effectively evaluate management measures at a port or on board a ship, and implement additional management procedures, may be limited.

- g) Does the ship carrying the cyanide have a list or manifest identifying the presence and location of the cyanide or a detailed stowage plan including this information, as required under Section 5.4.3.1 of the DG Code?

Pursuant to Section 5.4.3.1 of the DG Code, a ship carrying cyanide must have a special list or manifest identifying the presence of cyanide and its stowage location. A detailed stowage plan, which identifies dangerous goods by hazard class and sets out the location of all dangerous goods and marine pollutants, may be used in place of such a special list or manifest. This list or manifest must include the information found in the dangerous goods transport document as well as the stowage location and the total quantity of the cyanide.

- h) Does the ship carrying the cyanide have cyanide emergency response information, as required under Section 5.4.3.2 of the DG Code?

Emergency response information must be available on the ship at all times in the event of an accident or incident involving cyanide. This information must be immediately accessible in the event of an incident and available away from packages containing the cyanide. The information may be included on the list, manifest or stowage plan required pursuant to Section 5.4.3.1 of the DG Code, in a separate document such as a safety data sheet, or in separate plans and procedures such as the *Emergency Response Procedures for Ships Carrying Dangerous Goods* or the *Medical First Aid Guide for Use in Accidents Involving Dangerous Goods*.



TRANSPORTATION GUIDANCE

- i) Does the ship comply with the stowage and separation requirements of Part 7 of the DG Code?

As part of their due diligence investigation, consignors should evaluate the shipping company's compliance with Part 7 of the DG Code, which establishes requirements for the stowage and separation of dangerous goods such as cyanide while aboard ship. Pursuant to the general provisions of Chapter 7.1 for stowage of category B materials, cyanide can be stowed either on deck or below deck. After off-loading, the area used for cyanide stowage must be inspected for signs of contamination, and if contamination is observed, the area must be cleaned before being used again. Cyanide stowage must be separated from stowage of acids, as defined in Chapter 7.2 of the DG Code. Pursuant to Chapter 7.4, cargo transport units (as defined above at question d) containing cyanide must be inspected for external signs of damage, leakage or sifting of contents before being loaded. If damage, leakage or sifting is found, the cargo transport unit must not be accepted for shipment until it has been repaired.

Transport Practice 1.6

Track cyanide shipments to prevent losses during transport.

1. Do transport vehicles have means to communicate with the transport company, the mining operation, the cyanide producer or distributor and/or emergency responders, as appropriate?

Truck Transport

Communication by radio, mobile phone, satellite phone or other means are all acceptable under the Code. The auditor should verify that the transport vehicle is required to carry communications equipment (e.g., a written procedure or list of necessary equipment), and that the procedure is being implemented (e.g., a completed checklist of required equipment for each shipment). Additionally, vehicle operators should have pre-determined contact information (e.g., a written procedure or list of phone numbers) for emergency notification of the appropriate individuals and organizations, and entities along the route, as necessary to mobilize the appropriate response capabilities.

Consigners

A consignor's selection and oversight procedures should ensure that the transporters within its supply chain can communicate with the consignor and with emergency responders, as appropriate, during transport. Auditors should review the procedures of the consignor and its contractors to verify compliance with this provision.

2. Is the communication equipment (e.g. GPS, mobile phones, radios, pagers) periodically tested to ensure it functions properly?

Truck Transport

Any communication equipment available to the vehicle operator should be tested periodically. The transporter should have a written requirement for such testing to ensure that it is done, and records should be retained demonstrating that the procedure is



TRANSPORTATION GUIDANCE

implemented. This can be as simple as including a fully charged and tested mobile phone on a pre-transport checklist and retaining copies of completed checklists for the auditor's review.

Consigners

A consignor's selection and oversight procedures should ensure that transporters within its supply chain periodically test their communications equipment. Auditors should review the procedures of the consignor and its contractors, review contractors' testing or inspection records, and inspect contractors' activities to verify compliance with this provision.

3. Have communication blackout areas along transport routes been identified? Are special procedures implemented for the blackout areas?

Truck Transport

The Code does not prevent the use of communications equipment such as mobile phones in situations where there is a blackout area along the route. However, in such cases, the transporter should develop and implement procedures to account for these areas, such as calling in prior to entering the blackout area and immediately after leaving it. The auditor should interview operators and inspect trip records to verify that such a procedure is being implemented.

Consigners

A consignor's selection and oversight procedures should ensure that the transporters within its supply chain have a means of communication at all times and locations when transporting cyanide. Auditors should review the procedures of the consignor and its contractors and interview contractor employees to verify compliance with this provision.

4. Are there systems or procedures to track the progress of cyanide shipments?

Truck Transport

Transporters should be able to track the progress of their cyanide shipments. This may be accomplished through the same means of communication identified above (e.g., periodic mobile phone contact or text messaging), through use of global positioning systems, reports from checkpoints along the route, or other means. Transporters should address these in a written procedure and should retain trip records for the auditor's inspection. Evidence of compliance may also consist of interviews with operators and observation of the procedure in the field.

Consigners

A consignor's selection and oversight procedures should ensure that the transporters within its supply chain have systems or procedures to track the progress of cyanide shipments. Auditors should review the procedures of the consignor and its contractors, observe contractor activities and interview contractor employees to verify their compliance with this provision.



TRANSPORTATION GUIDANCE

5. Does the transporter implement inventory controls and/or chain of custody documentation to prevent loss of cyanide during shipment?

Truck Transport

The transporter should have a system to ensure that cyanide shipments arrive at their destination intact. Some type of inventory control or chain of custody procedure should be used, and its nature and sophistication will be dependent on the specifics of the transport process. Direct shipment completed with no stops may only require confirming that the initial inventory arrives in full and intact at the destination. Shipments that involve interim storage and/or the transfer of cyanide from one truck to another should utilize a chain of custody procedure with a sign-off at each transfer. Inspection of locks or seals on cargo area doors or sea containers may be appropriate in many situations.

The transporter should have a written inventory control or chain of custody procedure and the auditor should review its implementation through inspection records and/or other documentation completed during the course of a shipment and through interviews with operators.

Consigners

Consignors should be able to confirm that all cyanide loaded on the first transporter in its supply chain is delivered to the terminus of its supply chain. A consignor may implement such a system itself or may include inventory controls or chain of custody documentation as part of its procedures for selection and oversight of its contracted carriers. Auditors should review the consignor's procedures and their implementation as well as those of its contractors and interview employees to determine compliance with this provision.

6. Are shipping records indicating the amount of cyanide in transit and Safety Data Sheets available during transport?

Truck Transport

In addition to an inventory control or chain of custody program, all shipments of cyanide should be accompanied by shipping papers identifying the amount of cyanide in the load and by Safety Data Sheets describing the necessary precautions for handling of cyanide. The transporter's procedures should require that this information be available during transport. The auditor should review the transporter's procedures requiring that this information accompany each cyanide shipment and verify their implementation by interviewing operators and observing this documentation during transport of cyanide.

Consigners

A consignor's selection and oversight procedures should ensure that transporters within its supply chain have procedures requiring that cyanide shipments are accompanied by shipping papers identifying the amount of cyanide in the load and by Safety Data Sheets describing the necessary precautions for handling of cyanide. Auditors should review the procedures of the consignor and its contractors and observe this documentation during transport of cyanide to determine compliance with this provision.



TRANSPORTATION GUIDANCE

7. If the transporter contracts other entities to conduct any of the activities required in Transport Practice 1.6, does it implement procedures to make the contractor aware of the applicable Code requirements and ensure that the contractor complies with those requirements?

Truck Transport

The requirements of the Code, and the questions in the Transportation Verification Protocol, apply to all entities involved in cyanide transport, including any companies contracted by a trucking company to conduct activities addressed in this Transport Practice. It will therefore be necessary for the auditor to evaluate the compliance of contractors with designated responsibilities for compliance with this Transport Practice.

The auditor should verify that truck transporters that use contractors to conduct activities addressed in this Transport Practice have made those contractors aware of their responsibilities, and that the truck transporter takes measures to ensure that its contractors are implementing the measures necessary for compliance. The trucking company should provide the auditor with documentation that contractors have been notified of their responsibilities with regard to compliance with this Transport Practice, that the transporter verifies the contractor's compliance efforts, and that the contractor complies with applicable Code requirements. Auditors should review the truck transporter's procedures for notifying contractors of their responsibilities and for verifying the contractor's activities and compliance under this Transport Practice.

Consigners

Consignors should have procedures for selecting the transporters used in the supply chain and overseeing their activities to ensure compliance with this Transport Practice. Selection procedures should evaluate the capacity of individual components of the supply chain, such as ports, marine carriers, rail carriers, and trucking companies, to meet applicable Code requirements. The consignors oversight procedures should ensure that such supply chain components are aware of their responsibilities under this Transport Practice, have procedures to meet these responsibilities, and operate in compliance with the Code.

Auditors should review the consignor's procedures and evaluate any contracted entities having designated responsibility for compliance with this Transport Practice.

Principle 2 | INTERIM STORAGE

Design, construct and operate cyanide interim storage sites to prevent releases and exposures.

For purposes of the audit, "interim storage sites" and "trans-shipping depots" refer to facilities where cyanide is held temporarily when changing carriers or transport modes. Truck and rail terminals and port facilities are examples of interim storage sites and trans-shipping depots. Activities such as parking a cyanide transport vehicle for the night while en route do not involve interim storage. However, parking a truck carrying a cyanide load at a truck or rail terminal or a port for transfer to another truck, train or ship would constitute interim storage unless such a



TRANSPORTATION GUIDANCE

transfer took place within a short period of time (hours as opposed to a day or more). Storage in a warehouse, as defined in the Code's *Definitions and Acronyms* document, is a production activity and must be evaluated for compliance using the Cyanide Production Verification Protocol.

Transport Practice 2.1

Store cyanide in a manner that minimizes the potential for accidental releases.

For port facilities that act as trans-shipping depots, and when rail or ship transport involves interim storage sites or interim storage occurs at ports, the questions under Transport Practice 2.1 may be addressed to the extent practical by the consignor's Due Diligence Investigation, and the information included in the Due Diligence Investigation for those facilities.

1. Are warning signs posted alerting workers 1) that cyanide is present; 2) that smoking, open flames, eating and drinking are not allowed and 3) what personal protective equipment must be worn?

Truck Transport

Personnel handling or otherwise working around cyanide during transport should be alerted to the presence of cyanide and reminded of the various prohibitions regarding its use and the personal protective equipment needed for its handling. The specific location, size and number of signs should be evaluated in conjunction with the overall safety program at the interim storage facility and the training that the workforce receives.

The auditor's observation of signage in and around an interim storage facility would be the primary means of verification. Interviews with site personnel and review of the overall safety and training programs with respect to cyanide safety may also be important in determining how the workforce has been alerted to the presence and risks of cyanide.

Consigners

If a supply chain includes interim storage facilities, the consignor's selection and oversight procedures should ensure that warning signs are posted alerting workers at those facilities to the presence of cyanide, prohibiting smoking, open flames, eating and drinking, and identifying the personal protective equipment required to work in the facility.

The auditor's observation of signage around the facility would be the primary means of verification, and the specific location, size and number of signs should be evaluated in conjunction with the overall safety program at the interim storage facility and the training that the workforce receives.

2. Are there security measures in place to prevent unauthorized access to cyanide, such as lockouts on valves and fenced and locked storage of solids?

Truck Transport

Cyanide should be stored in a manner that prevents access by the public. This could be within its own fenced and locked area or within the boundary of the interim storage area if



TRANSPORTATION GUIDANCE

it is fenced and access is controlled. Where liquid cyanide is stored, valves should be locked or otherwise properly sealed. The auditor should evaluate the adequacy of security measures through a site inspection.

Consigners

A consignor's selection and oversight procedures should ensure that transporters in its supply chain store cyanide in a manner that prevents access by the public. This could be within its own fenced and locked area or within the boundary of the interim storage area if it is fenced and access is controlled. Where liquid cyanide is stored, valves should be locked or otherwise properly sealed. The auditor should review the consignor's procedures and evaluate the adequacy of security measures at interim storage facilities.

3. Is cyanide separated from incompatible materials such as acids, strong oxidizers and explosives with berms, bunds, walls or other appropriate barriers to prevent mixing?

Truck Transport

Separation of incompatible materials is a standard practice in the management of hazardous materials and is a critical consideration with regard to cyanide storage. The main materials of concern are acids, strong oxidizers like chlorine, and explosives. The auditor should observe how cyanide and incompatible materials are managed and check the flow paths that released materials would follow to verify that releases from separate storage areas will not commingle in a drainage or containment common to both storage areas.

Consigners

Separation of incompatible materials is a standard practice in the management of hazardous materials and is a critical consideration with regard to cyanide storage. The main materials of concern are acids, strong oxidizers like chlorine, and explosives. A consignor's selection and oversight procedures should be evaluated to ensure that the consigner has processes in place to ensure that its supply chain components safely store cyanide. Management of cyanide and incompatible materials and the flow paths that released materials would follow should be observed to verify that releases from separate storage areas will not commingle in a drainage or containment common to both storage areas.

4. Is cyanide stored in a manner designed to minimize the potential for contact of solid cyanide with water (e.g., under a roof, off the ground, or in specially designed containers)?

Truck Transport

Solid cyanide should be stored in buildings or other roofed and enclosed structures to prevent contact with precipitation. Water systems for potable use, safety showers or any other purpose that are present in cyanide storage areas should be designed such that leaks or other potential releases will not come in contact with cyanide containers. Enclosed storage is not required for cyanide in tanks, isotainers, sea containers or other containers that are designed for outside storage. Auditors should inspect interim storage facilities to determine compliance with this provision.



TRANSPORTATION GUIDANCE

Consigners

Solid cyanide should be stored in buildings or other roofed and enclosed structures to prevent contact with precipitation. Water systems for potable use, safety showers or any other purpose that are present in cyanide storage areas should be designed such that leaks or other potential releases will not come in contact with cyanide containers. Enclosed storage is not required for cyanide in tanks, isotainers, sea containers or other containers that are designed for outside storage. Auditors should review the consignor's selection and oversight procedures and inspect interim storage facilities to determine compliance with this provision.

5. Is cyanide stored with adequate ventilation to prevent build-up of hydrogen cyanide gas and cyanide dust?

Truck Transport

Enclosed areas where cyanide is stored should have ventilation that prevents the build-up of cyanide dust and hydrogen cyanide gas. Determining the adequacy of ventilation is not intended to require an engineering-level evaluation, but rather visual confirmation that enclosed storage areas such as buildings which function as interim storage are, in fact, ventilated in the event that cyanide is released and/or comes in contact with water. Auditors should inspect interim storage facilities to determine compliance with this provision.

Consigners

Enclosed areas where cyanide is stored should have ventilation that prevents the build-up of cyanide dust and hydrogen cyanide gas. Determining the adequacy of ventilation is not intended to require an engineering-level evaluation, but rather visual confirmation that enclosed storage areas such as buildings which function as interim storage areas are, in fact, ventilated in the event that cyanide is released and/or comes in contact with water. Auditors should review the consignor's selection and oversight procedures and inspect interim storage facilities to ensure that this is considered by the consigner in selecting supply chain components.

6. Are there systems in place to contain any spilled cyanide materials and minimize the extent of a release?

Truck Transport

The floor and walls of an enclosed interim storage area typically provide sufficient secondary containment for truck trailers containing packaged solid cyanide in Intermediate Bulk Containers and drums. Secondary containment is not needed for cyanide containers built specifically for outside storage such as isotainers and sea containers containing Intermediate Bulk Containers. However, if individual Intermediate Bulk Containers or drums of cyanide are removed from these containers in outside areas, measures should be in place to control potential releases of solid cyanide.

If an interim storage facility is used for storing liquid cyanide, for example in isotainers or tanker trucks, secondary containment must be available and sized to contain the volume of



TRANSPORTATION GUIDANCE

the largest single container of cyanide in storage as well as any precipitation that would also be collected. Documentation should be available confirming adequate containment capacity. The auditor should ensure that any cyanide released to the secondary containment would not mix with low pH water or other incompatible material.

The auditor should inspect interim storage facilities to ensure that any cyanide released from its packaging would be contained.

Consigners

The floor and walls of an enclosed interim storage area typically provide sufficient secondary containment for truck trailers containing packaged solid cyanide, such as Intermediate Bulk Containers and drums. Secondary containment is not needed for cyanide containers built specifically for outside storage such as isotainers and sea containers containing Intermediate Bulk Containers. Auditors should also review consignors' selection and oversight procedures to ensure that the consigners consider containment of cyanide releases in evaluating the transporters within its supply chain.

Principle 3 | EMERGENCY RESPONSE

Protect communities and the environment through the development of emergency response strategies and capabilities.

In evaluating a transporter's emergency response strategies and capabilities, the auditor must recognize that different approaches may be appropriate in different locations, and that for long transport routes, emergency response capabilities may vary greatly along the routes. In areas with robust emergency response capabilities, transporters of dangerous goods such as cyanide often rely on these in-place external services. A single telephone call may trigger a rapid and comprehensive response by prepared and well-trained personnel capable of managing cyanide and other hazardous materials emergencies. This response may even include a pre-planned command structure, with the local authorities having designated incident command authority once on the scene. In areas lacking an established response infrastructure, it may be necessary for cyanide transporters, consignors, or mining operations to have their own emergency response equipment and personnel available with the cyanide shipment, and be more directly responsible for response and remediation actions. The nature of the transporter's emergency response program will be highly dependent on such local circumstances. Auditors must evaluate this element of the Code with an understanding both of what strategies and capabilities are necessary, and what expectations are appropriate, given the route and location-specific circumstances.

The Transport Practices and questions under this principle apply to interim storage sites as well as cyanide in transport. Emergency response elements should be included as practical in a consignor's Due Diligence Investigations of rail and ocean transport and rail yards and ports.



TRANSPORTATION GUIDANCE

Transport Practice 3.1

Prepare detailed emergency response plans for potential cyanide releases.

1. Does the transporter have an Emergency Response Plan?

Truck Transport

This question simply asks if there is an Emergency Response Plan. Details of the Plan are addressed in subsequent questions. Although this and subsequent questions refer to “emergency response plans,” the term is used generically and as with all Code provisions regarding management plans, there is no requirement that the necessary information be compiled in any specified format, such as a single plan, or a specialized document addressing cyanide only.

Auditors should verify that the trucking company has a written plan for responding to emergencies that may occur during its cyanide transport activities.

Consigners

Consigners should have written plans to respond as necessary to any incidents that may occur while cyanide is being transported within their supply chain. All cyanide transporters included in a supply chain should have written plans for responding to emergencies that may occur during their cyanide transport activities.

Consignors that have designated roles in emergency response, for any of the supply chain transporters, should have documentation pertaining to those roles available for the auditor’s review.

2. Is the Emergency Response Plan appropriate for:

- a) The transportation route?
- b) The physical and chemical form of the cyanide?
- c) The method of transport?
- d) The transport infrastructure (e.g., condition of the road, railway, port)?
- e) The design of the transport vehicle or interim storage facility?

Truck Transport

A transporter’s Emergency Response Plan should reflect the issues presented by the particular transport route, the method of transport,, the transport facilities and equipment, and any interim storage facilities. The emergency scenarios described in the Plan should be specific to the delivery route taken, the condition of the road, the physical and chemical form of the cyanide handled, and the transport vehicles used.

The auditor should review the Plan to verify that it appropriately considers these factors in identifying potential emergency scenarios and necessary response actions.

Consigners

Consigner emergency response plans should be appropriate for the role of the consigner in the types of incidents that may occur while cyanide is being transported within its supply



TRANSPORTATION GUIDANCE

chain. Consigners should have selection and oversight procedures to ensure that their contractors' Emergency Response Plans consider the specific types of emergencies that may occur during cyanide transport within the supply chain, with appropriate consideration of its delivery route, conditions of transport infrastructure (such as roads, railways, ports, interim storage facilities), the physical and chemical form of the cyanide handled and the transport equipment used.

Auditors should verify that the consignor's selection and oversight procedures include evaluating whether its contractors' Emergency Response Plans meet this provision.

3. Does the plan include descriptions of response actions, as appropriate for the anticipated emergency situation?

Truck Transport

The Plan should describe the nature of the response actions to be taken for the types of emergency situations identified. The level of detail will depend on the nature of the potential emergencies identified in the Plan and the available response capabilities. In some cases, the immediate response to be conducted by transport personnel may be limited to notification of authorities and calls for aid.

While it is typically impossible to pre-plan a response to a release during transport with great specificity, transporters should include as much detail as they reasonably can, particularly for potential releases in locations along the route that have been identified as presenting increased risks. For example, the response for a release that occurs as cyanide is transported along a river would likely involve notifications to downstream authorities, which would not be applicable to releases at other locations.

In countries with in-place response infrastructures, emergency response may be conducted by personnel trained to respond to a variety of hazardous materials incidents. These highly trained responders may rely on generic response manuals rather than specific cyanide transport Emergency Response Plans. This is an acceptable option where these response services are available and effective.

The auditor should review the Plan to verify that, to the extent practical, it describes specific response actions to be taken for the types of potential release scenarios identified.

Consigners

The consigner's selection and oversight procedures should ensure that its contractors' Emergency Response Plans describe responses to the emergency scenarios identified in the Plan.

Auditors should review consignors' selection and oversight procedures to verify that they require contractors' Emergency Response Plans to describe specific actions to be taken in response to the cyanide emergencies identified in their Plans, and should also review contractors' Plans to verify that appropriate information is provided.



TRANSPORTATION GUIDANCE

4. Does the plan identify any external entities having designated roles in emergency response, such as emergency responders, medical services or communities? Does the plan identify the roles of any such external responders and have any external responders having specified roles been notified of their roles?

Truck Transport

External responders are frequently involved in emergency response for releases occurring during cyanide transport because the transporter may not have its own full-scale response capability available throughout the entirety of its transport routes. A transporter's Emergency Response Plan may therefore include such entities as external hazardous materials responders, local police and fire departments, and medical facilities located along the route.

Public entities such as police and fire departments, and medical services such as hospitals and ambulance services in many cases provide emergency response support as part of their routine activities and responsibilities. Although such public entities may be identified in Emergency Response Plans, this question is primarily directed at external service providers that have designated roles that are beyond their typical emergency response activities, or are contracted, such as a contracted ambulance services, security services, or other contracted first responders. Auditors should review the transporter's Emergency Response Plans to verify that external responders having designated roles are identified.

Documentation advising such external responder of their roles should be available for the auditor's review.

Consigners

The consigner's Emergency Response Plan should identify any external responders having designated emergency response responsibilities.

Auditors should also review the consignor's selection and oversight procedures to verify that they require their contractors to identify the roles of any external responders having designated emergency response responsibilities in their Emergency Response Plans, and should review contractors' Plans to verify that this information is provided as appropriate.

Transport Practice 3.2

Designate appropriate response personnel and commit necessary resources for emergency response.

1. Does the transporter provide initial and refresher emergency response training to appropriate personnel?

Truck Transport

The transporter should provide initial and periodic refresher training to its personnel with designated responsibilities for responding to emergencies during transport and interim storage of cyanide. The training should address all anticipated response activities including



TRANSPORTATION GUIDANCE

calling for assistance, use of personal protective equipment and first aid for cyanide exposure. At a minimum, the elements of this training should be documented in training materials, and records including the individuals trained and the nature and date(s) of training should be retained. The auditor should review this documentation and interview designated response personnel to evaluate compliance with this provision.

Consigners

All transport personnel with designated emergency response responsibilities should receive initial and periodic refresher training for responding to emergencies during transport and interim storage of cyanide. The training should address all response activities included in emergency response procedures, such as calling for assistance, use of personal protective equipment and first aid for cyanide exposure. At a minimum, the elements of this training should be documented in training materials, and records including the individuals trained and the nature and date(s) of training should be retained. The consignor's selection and oversight procedures should ensure that all contractors in its supply chain provide such training to employees that are identified in its response plans as having these responsibilities.

Auditors should review the Plans of all carriers in a supply chain to verify that such training is required and review training records and interview employees to verify that the necessary training has been provided. Auditors should also review the consignor's selection and oversight procedures to verify that they require training for emergency responders.

2. Are there descriptions of the specific emergency response duties and responsibilities of personnel?

Truck Transport

The specific duties and responsibilities of response personnel should be identified in the Emergency Response Plan or otherwise documented so that expectations are clear and there is a basis for training of these personnel. Auditors should review the transporter's Plan to verify that this information is included.

Consigners

The Emergency Response Plans of all transportation entities in a consignor's supply chain should include descriptions of the specific duties and responsibilities of all personnel tasked with cyanide emergency response. Consignors should confirm that its contractors Plans include this information through their selection and oversight procedures.

Auditors should review contractor Emergency Response Plans to verify that this information is provided, as appropriate, and determine whether this requirement is addressed in the consignor's selection and oversight procedures.

3. Is there a list of all emergency response equipment that should be available during transport or along the transportation route?



TRANSPORTATION GUIDANCE

Truck Transport

Transporters should have a list of the emergency response equipment that must accompany the cyanide load or that must be available along the transport route. The list can be part of the Emergency Response Plan or maintained separately as a checklist for inventorying the equipment. Auditors should review the transporter's documentation to verify compliance with this provision. Auditors should indicate not only whether the operation has a list, but also whether it includes equipment appropriate for the activities that are called for in the emergency response plan.

Consigners

Although consigners may not participate directly in emergency response activities, through review and evaluation of transporter capabilities, consigners should have systems to ensure that the transporters operating within its supply chain are aware of and have implemented this requirement. Consigners that participate directly in emergency response should have a list of emergency response equipment that they should have available. The list can be part of the Emergency Response Plan, maintained separately as a checklist for inventorying the equipment, or otherwise be available. Consigners' selection and oversight procedures should confirm that their contractors comply with this provision.

Auditors should determine whether the consignor's selection and oversight procedures address this requirement, and determine whether transport supply chain entities have this information available.

4. Does the transporter have available the necessary emergency response and health and safety equipment, including personal protective equipment during transport?

Truck Transport

Transporters should confirm and document that the necessary emergency equipment noted in the preceding question is available for each cyanide shipment. The auditor should review completed emergency equipment checklists, observe shipments, and/or interview appropriate personnel to verify compliance with this provision.

Consigners

Consigners that directly participate in emergency response activities within their supply chains should have available any necessary emergency equipment noted in the preceding question. This item should be included in the consignor's procedures for oversight of its contractors. The auditor should review the consignor's procedures and emergency equipment checklists or interview appropriate personnel to verify compliance with this provision.

5. Are there procedures to inspect emergency response equipment and assure its availability when required?

Truck Transport

The emergency response equipment identified in the transporter's Plan should be inspected and/or tested regularly so that it will be available in good working order when needed for



TRANSPORTATION GUIDANCE

use. The transporter should organize this program in a manner which ensures that the inspections and tests will be performed as scheduled and should retain records for the auditor's review. The auditor should review these records and verify that the equipment is in good working order during transport of cyanide.

Consigners

Entities in a consignor's supply chain should regularly inspect and/or test the emergency response equipment identified in their Plans so that the equipment will be available in good working order when needed for use, and should retain records of these activities. The auditor should verify that the consigner has a process in place, such as periodic review of the transporters within its supply chain, to ensure that those transporters inspect emergency response equipment and assure its availability when needed for use.

6. If the transporter contracts other entities to conduct any of the activities required in Transport Practice 3.2 or has designated other entities to conduct emergency response activities, does it clearly delineate its roles and responsibilities and those of the contractor or other entity during an emergency response?

Truck Transport

A transporter that contracts other entities to conduct any of the activities required under this Transport Practice or has designated other entities to conduct emergency response actions identified in its Plan should ensure that the contractors are aware of their responsibilities and are in compliance with the applicable provisions of this Transport Practice. The auditor should review the trucking company's documentation advising its contractors of their roles in a cyanide emergency and records of any oversight it conducts to ensure the contractors' compliance.

Consigners

A consignor's selection and oversight procedures should ensure that contractors in its supply chain are aware of their responsibilities under the Code with respect to cyanide emergencies and take the measures necessary to prepare for emergencies. Auditors should verify that both the consignor and the entities within its supply chain comply with this provision.

Transport Practice 3.3

Develop procedures for internal and external emergency notification and reporting.

1. Are there procedures and current contact information for notifying appropriate entities such as the cyanide producer, the customer, regulatory agencies, external response providers, medical facilities and potentially affected communities of an emergency?

Truck Transport

Transporters should have procedures and current contact information for necessary internal notification and external notifications in the event of a cyanide emergency during transport or interim storage.



TRANSPORTATION GUIDANCE

Auditors should review a transporters notification and contact information to verify compliance with this provision.

Consigners

The consignor's selection and oversight procedures should ensure that the necessary notification and contact information is provided in its contractors' plans for emergency response.

Entities included in a consignor's supply chain should have procedures and current contact information to notify appropriate parties in the event of a cyanide emergency during transport or interim storage.

2. Are systems in place to ensure that internal and external emergency notification and reporting procedures are kept current?

Truck Transport

Truck transporters should have a system in place to ensure that emergency contact information is kept current. This may be a provision in the Emergency Response Plan for annual or more frequent review of the entire plan, a procedure focused specifically on the periodic updating of contact information, a procedure to test each contact number on a regular basis, or other means that accomplish this goal. The auditor should review the procedure and verify its implementation through review of documentation and interviews.

Consigners

Consigners should have systems in place to ensure that emergency contact information is kept current. This may be a provision in the Emergency Response Plan for annual or more frequent review of the entire plan, a procedure focused on the periodic updating of contact information specifically, a procedure to test each contact number on a regular basis, or other means that accomplish this goal. Auditors should verify that a system for keeping emergency response contact information is being maintained.

Consigners should provide evidence that transporters within a supply chain have systems for keeping emergency contact information current.

3. Does the operation have a procedure for notifying ICMI of any significant cyanide incidents, as defined in ICMI's *Definitions and Acronyms* document? Have all such significant cyanide incidents that have occurred been reported to ICMI?

A cyanide emergency that constitutes a "significant cyanide incident" as defined in the Code's *Definitions and Acronyms* document requires notification to ICMI pursuant to Section VI.A. of the Code's *Signatory and Certification Process* and as agreed to by the signatory company in ICMI's *Signatory Application Form*.



TRANSPORTATION GUIDANCE

Truck Transport

The Emergency Response Plan or other documentation should include a requirement and details to notify ICMI of any significant cyanide incidents, as defined in ICMI's *Definitions and Acronyms* document. Operations should have evidence that ICMI has been notified when such incidents have occurred. Any incidents meeting the definition of a significant cyanide incident that have not been reported should be reported to ICMI prior to submission of the draft audit reports to ICMI.

Consigners

The Consigner's Emergency Response Plan or other documentation should include a requirement and details to notify ICMI of any significant cyanide incidents, as defined in ICMI's *Definitions and Acronyms* document. Consigners are responsible for reporting any significant cyanide incidents that occur during transportation by a component of their supply chain, such as by a trucking company, marine carrier or rail carrier, or at a port. Consigners should have evidence that ICMI has been notified when such incidents have occurred. Any incidents meeting the definition of a significant cyanide incident that have not been reported should be reported to ICMI prior to submission of the draft audit reports to ICMI.

Consigners should provide evidence that the transporter components of a supply chain are aware of their responsibilities to report significant cyanide incidents to the consigner.

Transport Practice 3.4

Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

1. Are there procedures for remediation, such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill cleanup debris?

Truck Transport

If the transporter conducts its own remediation actions, it should have procedures for remediation detailing how activities such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill cleanup debris will be conducted.

In many cases, a truck transporter will not be directly involved with the cleanup and remediation of a cyanide spill that occurs during transport or interim storage. Ultimate cleanup of releases that occur during transport would likely be contracted out to commercial chemical remediation contractors. Where commercial chemical remediation contractors or other external responders are expected to provide this service to the transporter, they should be identified in the transporter's Emergency Response Plan or other documentation, and auditors should verify that they are available to carry out remediation activities.



TRANSPORTATION GUIDANCE

The auditor should review any remediation elements included in the Plan or other documentation and evaluate their implementation through records of previous releases and responses and/or interviews with personnel. In situations where remediation would be carried out by contractors, the auditor should verify that the remediation contractor has procedures to provide for safe and environmentally sound remediation and management and disposal of cyanide waste materials.

Consigners

If the consigner conducts its own remediation actions, it should have appropriate procedures detailing how activities such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill cleanup debris will be conducted.

In many cases, neither the consigner nor the entities transporting cyanide in the supply chain will be directly involved with the cleanup and remediation of a cyanide spill that occurs during transport or interim storage. Cleanup of releases that occur during transport would likely be contracted out to commercial chemical remediation contractors. Where commercial chemical remediation companies or other outside responders are expected to provide this service to the contractor, they should be identified in the consigner's Emergency Response Plan or other documentation so they can be activated as soon as practical.

The contractor's plans for remediation of cyanide releases during transport and interim storage should be evaluated as part of the consignor's selection and oversight procedures.

The auditor should review any remediation elements included in a contractor's Plan or other documentation and evaluate their implementation through records of previous releases and responses and/or interviews with personnel. The auditor should review the consignor's selection and oversight procedures and the remediation company's management and disposal procedures to ensure that remediation is addressed appropriately.

2. Does the procedure prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water?

Truck Transport

Use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide once it has entered surface waters is both counter-productive and of limited effectiveness. The transporter's Emergency Response Plan or other documentation should specifically prohibit their use in surface water. If the transporter will use a commercial emergency response contractor in the event of a release to surface water, the contractor's response procedures should include this same prohibition.



TRANSPORTATION GUIDANCE

The auditor should review the transporter's procedures, as well as those of any commercial remediation contractors that would respond, and interview vehicle operators as appropriate, to determine compliance with this provision.

Consigners

Use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide once it has entered surface waters is both counter-productive and of limited effectiveness. The Emergency Response Plan of the consigner should specifically prohibit their use in surface water, as should the response plans of any commercial emergency response contractors designated by the consigner for such response. The consigner should also have an oversight system to ensure that supply chain transporters are aware of this requirement.

Auditors should review the consigners response plan and documentation to verify that the consigner has made its supply chain transporters aware of this requirement.

Transport Practice 3.5

Periodically evaluate response procedures and capabilities and revise them as needed.

1. Are there provisions for periodically reviewing and evaluating the Plan's adequacy and are they being implemented?

Truck Transport

Potential release scenarios and necessary response actions can vary over time for a variety of reasons, including changes to transport routes, changes to the form of cyanide transported, and changes to the types of transport equipment used. The transporter should have a process to ensure that the Emergency Response Plan is reviewed, evaluated and updated as necessary to account for such changes. The auditor should evaluate the process and its implementation by reviewing documentation of any changes to the Plan and through interviews with appropriate personnel.

Consigners

Potential release scenarios and necessary response actions can vary over time for a variety of reasons, including changes to transportation routes, changes to the form of cyanide transported, or changes to the transportation equipment. Consigners should have processes to ensure that their own Emergency Response Plans are reviewed, evaluated and updated as necessary to account for such changes. As part of their selection and oversight procedures, consigners should evaluate whether their contractors have such procedures.

The auditor should evaluate a consigner's Plan review process and its implementation by reviewing documentation of any changes to the Plan and through interviews with appropriate personnel. Auditors should verify that the consigner evaluates whether its supply chain components implement a process for review of their Emergency Response Plans.



TRANSPORTATION GUIDANCE

2. Are there provisions for periodically conducting mock emergency drills and are they being implemented?

Truck Transport

There is no substitute for hands-on response training to familiarize personnel with the necessary procedures. On an annual basis truck transporters should conduct or otherwise be involved in mock emergency drills that simulate transport-related cyanide exposures and releases so they are better prepared in the event that actual exposures and releases occur. The drills should be evaluated to determine if response procedures are adequate, response equipment is appropriate, and personnel are properly trained. Written documentation of these evaluations should be retained and used as a basis for whatever changes to procedures, equipment or training are necessary. The auditor should review this documentation and interview applicable personnel to determine compliance with this provision.

Consigners

There is no substitute for hands-on response training to familiarize personnel with the necessary procedures. On an annual basis consigners should conduct or otherwise be involved in mock emergency drills that simulate transport-related cyanide exposures and releases within their supply chain so they are better prepared in the event that such incidents occur. The drills should be evaluated to determine if response procedures are adequate, equipment is appropriate, and personnel are properly trained. Written documentation of these evaluations should be retained and used as a basis for whatever changes to procedures, equipment or training are necessary.

The auditor should review a consigner's documentation regarding mock drills and interview applicable personnel to verify compliance with this provision. The consignor's selection and oversight procedures should be reviewed to verify that they consider implementation and evaluation of mock emergency drills by supply chain components.

3. Are provisions in place to evaluate and revise the Emergency Response Plan after any cyanide-related emergency requiring its implementation? Have such reviews been conducted?

Truck Transport

A transporter's response procedures should be reviewed and evaluated following any incident that triggers implementation of the Emergency Response Plan. The Plan or other policy documents should include a commitment for such review, and any Plan evaluations and recommendations for Plan revision should be documented. Auditors should determine if the transporter's response plans have the necessary evaluation procedures and review documentation of such reviews and revisions, if applicable.

Consigners

Consigners should review and evaluate their response procedures following any incident that triggers implementation of their Emergency Response Plan. The Plan or other policy documents should include a commitment for such review, and any Plan evaluation and



TRANSPORTATION GUIDANCE

recommendations for Plan revision should be documented. The transporters' procedures for review and evaluation of their Plans should be evaluated as part of the consignor's selection and oversight procedures.

Auditors should determine compliance with this provision by reviewing the consignor's evaluation of its Plan following any mock drills or incidents requiring implementation of the Plan.

