

**INTERNATIONAL CYANIDE
MANAGEMENT CODE**

ORICA MINING SERVICES

**BAG TO BULK TRANSFER
FACILITY**

Pre-Operational Summary Audit Report

Callao, Peru

2019

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DETAILED AUDIT REPORT

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INFORMATION ON THE AUDITED OPERATION

Name of Cyanide Production Facility: Orica Mining Chemicals Bag to Bulk Transfer Facility, Ventanilla, Peru

Name of Facility Owner: Orica Australia Pty Ltd.

Name of Facility Operator: Orica Australia Pty Ltd.

Name of Responsible Manager: Frank Valverde - Manufacturing Plant Lead Sparge

Address: Av. Dionisio Derteano 144, P.20, San Isidro, Lima, Perú

State/Province: Lima

Country: Peru

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LOCATION DETAIL AND DESCRIPTION OF OPERATION:

Orica is a global leader in the manufacture and distribution of sodium cyanide to the mining industry. It's manufacturing facility in Yarwun, Queensland, supplies sodium cyanide to key mining regions in Latin America, Africa and Oceania.

Orica Mining Services Peru S.A. operates a Box to Sparge Transfer Facility in Neptunia's empty containers warehouse located at Ventanilla Callao, Perú, since June 2007. Due to business requirements, Orica will continue its cyanide transfer operations in a new sparge plant located nearby, for which in early 2019 began the construction of an entirely new plant with state-of-the-art technology, located at Alconsa containers warehouse, also at Ventanilla. At the date of the audit, the new plant was in final operation tests and Orica estimates it will begin operations in early January 2020.


To the same as the previous installation, the new facility will manage cyanide briquettes packed in double bags, one of polyethylene and the other of polypropylene of 1,135 kilograms that are contained in wooden box which arrive to Callao port in 20' containers with 20 boxes each.

The containers after the import process are transported by land to the warehouse (own or with a third company). After arrival at warehouses, the container will be sent according to need and / or request to the transfer plant.

On the arrival of the vehicle transporting the container up to the transfer plant, the container will be removed from the vehicle by a reach stacker of 40 tons capacity. From this location the sodium cyanide will be distributed by Orica in isotanks to their using sparge technology.

The isotanks of the sparge system will be charged with the sodium cyanide contained in the

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boxes through the transfer plant. Each isotank will transport up to 22.7 tons of sodium cyanide by transport terrestrial on the road.

Orica's transfer facility in Lima, Peru was constructed to supply mine site customers in Peru with cyanide transported within sparge isotanks. The transfer facility comprises a purpose-built structure that houses material handling equipment and there are associated facilities (a partly open warehouse protecting sea containers containing boxed cyanide, change rooms, equipment storage, office, ablutions, guard house and yard area) located within the *Alconsa* container warehouse at Callao.

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Auditor's Finding

The operation is

- in full compliance**
- in substantial compliance
- not in compliance


with the International Cyanide Management Code.

| | |
|---------------------------|--|
| Audit Company: | Bruno Pizzorni www.bpizzorni.com |
| Lead / Technical Auditor: | Bruno Pizzorni E-mail: bpizzorni73@gmail.com |
| Date(s) of Audit | October 29, 2019 |

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Certification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Certification Auditors.

I attest that the Audit Report accurately describes the findings of the certification audit. I further attest that the certification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Certification Protocol for Cyanide ICMC Production and using standard and accepted practices for health, safety and environmental audits.

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1.0 PRODUCTION VERIFICATION PROTOCOL AUDIT FINDINGS

Principle 1 – Operations:

Design, construct and operate cyanide production facilities to prevent release of cyanide

Production Practice 1.1: Design and construct cyanide production facilities consistent with sound, accepted engineering practices and quality control/quality assurance procedures.

The operation is **in full compliance with** **Production Practice 1.1**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The facility maintains records of quality control and quality assurance programs implemented during construction of cyanide production and storage facilities for the structures that were assembled locally within Peru.

Appropriately qualified personnel reviewed facility construction. Formal engineering companies oversaw the quality dossier including topographic survey, excavations, geomembrane installation, concrete works, and metal structure installation.

The materials used for construction of cyanide production facilities are compatible with the reagents used and the processes employed. Stainless steel is used for process equipment that meets cyanides during box to bulk transfer operations. The isotanks into which cyanides will be transferred are constructed in carbon steel. The cyanide solution pump and associated hoses and pipework are fabricated from a range of materials including poly vinyl chloride, mild steel and rubber.


Automatic systems, visual controls and safety features are installed to prevent releases due to power outages or equipment failures.

The transfer operation area and the reach stacker ramp will be managed on a concrete surface that can minimize seepage to the subsurface. Asphalt surfaces protect the ground throughout in the warehouse areas where boxes of cyanide and boxes of used packaging materials will be handled.

The facility has installed features and developed procedures to prevent the overfilling of cyanide process and storage vessels. Operators may readily see whether the transfer hopper has enough capacity to hold a bag of cyanides before introducing it to the hopper for discharge.

Secondary containments are provided. The isotank loading bay is a secondary containment. It is sealed with concrete and curbs to increase its effectiveness in containing any cyanides spilled during filling.

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Spill containment measures are provided for all cyanide solution pipelines. All cyanide solution pipelines are located within the paved and indoors area of the transfer facility.

Production Practice 1.2: Develop and implement plans and procedures to operate cyanide production facilities in a manner that prevents accidental releases.

The operation is **in full compliance with** **Production Practice 1.2**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The transfer facility is in process to adapt his procedures that describe the standard practices necessary for its safe and environmentally sound operation, from the actual operation to the new transfer plant, matter of this audit. These procedures will address such matters as process description, the use of personal protective equipment (PPE) and cyanide test kits, and pre-transfer inspections, among others.

The transfer facility is in process to adequate the existing procedures from the actual operation to those required on the new plant. These include contingencies during upsets in its activities that may result in cyanide exposures or releases. The procedures will cover scenarios outside normal operational control that increase the risk of cyanide exposures or releases.

The transfer facility will be managed subject to a procedure to identify when site operating practices have or will be changed from those on which the initial design and operating practices were predicated. Orica Mining Chemicals, including the transfer facility, has adopted the Orica Model Procedure for Modifications.

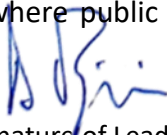
Preventive maintenance programs will be implemented, and activities documented for equipment and devices necessary for cyanide production and handling. Periodic inspections will be undertaken by facility personnel under the supervision of the facility supervisor.

Process parameters will be monitored with necessary instrumentation. The plant has two fixed HCN gas monitors and on beginning operations, personnel will count with portable HCN monitors, which will be calibrated periodically, according to the manufacturer's specifications.

The transfer facility will have environmentally sound procedures to prevent unauthorized/unregulated discharge to the environment of any cyanide solution or cyanide-contaminated water that is collected in a secondary containment area. Also, will have procedures for disposal of cyanide or cyanide-contaminated solids. The procedures will detail that cyanide packing and all hazardous solid wastes including the used bags, PPE and other contaminated waste arising from housekeeping.

Cyanide will be stored with adequate ventilation as the new transfer facility includes a roof covered yard where they will place the cyanide for the transfer operation. This is an open space with good ventilation, where public access is prohibited. To avoid or

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minimize the potential for exposure of cyanide to moisture, the boxes to transfer to isotanks and empty boxes will be kept under this roofed area. Cyanide will be stored in a secure area where public access is prohibited. The transfer facility is a secured compound. Security is 24 hours 7 days per week.

There are procedural arrangements to ensure that the cyanide supplied by Orica in Peru is packaged as required by the political jurisdictions through which loads will pass.

Production Practice 1.3: Inspect cyanide production facilities to ensure their integrity and prevent accidental releases.

The operation is **in full compliance with Production Practice 1.3**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The transfer facility will conduct routine inspections of tanks, valves, pipelines, secondary containments and all other cyanide production and storage facilities where necessary.

As Orica Plant Manage stated, inspection frequencies will be set to be enough to assure that equipment will be is functioning within design parameters.

Inspections will be documented identifying specific items to be observed and will include the date of the inspection, the name of the inspector, and observed deficiencies. The nature and date of corrective actions will be documented on the inspection forms which will be retained.

Principle 2 – Worker Safety:

Protect workers' health and safety from exposure to cyanide

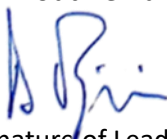
Production Practice 2.1: Develop and implement procedures to protect plant personnel from exposure to cyanide.

The operation is **in full compliance with Production Practice 2.1**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The site will develop formal procedures describing safe practices, and with enough level of detail according to the risks involved with the task to minimize worker exposure during normal plant operations, non-routine and emergency operations; and maintenance related activities.

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The transfer facility will be the corporate database accessed through its intranet that allows to register and control any changes to operating practices regarding the original design. This is a system to which all employees have access and different areas (those required depending on the case) approve the change after evaluating them through a series of questions that include health, safety and environmental considerations. This database will be available for the new plant operation.

Orica's mode of operation for the transfer facility includes soliciting workers input in developing and evaluating health and safety procedures, which will be also implemented for the new plant operation.

The transfer facility uses monitoring devices to confirm that controls are adequate to limit worker exposure to HCN gas to 4.7 ppm (5 mg/m³) or less, as cyanide. Two fixed HCN gas monitors have been installed in the new plant, workers will use portable gas detectors on-site to monitor areas or tasks where the concentration of cyanide gas can exceed 4.7 ppm.

The HCN monitoring equipment will be maintained, tested and calibrated in a manner consistent with the directions of the manufacturer. The facility will calibrate their HCN monitors according to the established.

The transfer facility has identified areas and activities where workers may be exposed to HCN gas or sodium cyanide dust and requires the use of personal protective equipment as necessary in these areas: transfer facility, waste cyanide bag storage area and warehouse areas where cyanide boxes are transferred in and out of shipping containers.

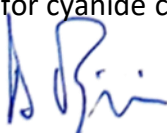
The transfer facility will have provisions to ensure that a buddy system is used. The arrangements will consist of one pair of employees on the lower level preparing bags for transfer, one employee on the upper level controlling the transfer, one supervisor and a security guard who is responsible for ensuring that unauthorized personnel do not gain access to the facility during a transfer.

The new transfer facility when operating, will have the same personnel working in the actual operation. Orica does assess the health of employees to determine their fitness to perform their specified tasks prior to commencing employment.

The new transfer facility has a place to change clothes and a clothing change procedure for employees, contractors and visitors to areas with the potential for cyanide contamination of clothing. The procedure requires once the operators have completely completed the operation to fill isotanks in the corresponding shift, the disposable suits, considered contaminated, should be removed in the respective area, which will be placed in the container at the Waste Storage zone.

Warning signs advising workers that cyanide is present. At locations where exposure to harmful concentrations of cyanide are possible, the operation has demarcated the area with a line. PPE requirements to enter areas within the line are clearly identified through use of signage and will be also identified in Standard Operating Procedures, training, etc. Personnel are prohibited from smoking, eating and drinking, and having open flames in some areas where there is the potential for cyanide contamination. Signs are displayed

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at the entrances to the transfer facility building that prohibit open flames, eating and drinking.

Production Practice 2.2: Develop and implement plans and procedures for rapid and effective response to cyanide exposure.

The operation is **in full compliance with** **Production Practice 2.2**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The facility is in process on developing specific written emergency response plans and procedures to respond to cyanide exposures. At the date of the audit, the Emergency Response Plan (ERP) was being developed in conjunction with the owner of the land and locator, *Alconsa*.

Two showers, low-pressure eye wash stations and non-acidic fire extinguishers are located strategically at the transfer facility. One station is located outside the transfer area on the ground level of the transfer facility. Dry powder fire extinguishers were observed throughout the transfer facility. No carbon dioxide fire extinguishers were observed.

The transfer facility will have oxygen, antidote and a means of communication readily available for use in the plant.


The new transfer facility will apply a similar inspection plan as the actual transfer operation, for its first aid equipment to assure that it is available when needed. Will continue using fortnightly and weekly inspection checklists, adapted to the new installations. The antidote kit contents, and first aid equipment will be checked by the transfer facility Supervisor using check sheets.

Material Safety Data Sheets (MSDS) and first aid procedures on cyanide safety are in the language of the workforce (Spanish) and will be available to workers on beginning operations in the transfer facility. Such as in the actual operation, all procedures including the MSDS will be in a file in the new transfer facility office for access to all employees.

Storage tanks, containers and piping containing cyanide are identified to alert workers of their contents and the direction of flow. Shipping containers packed with cyanide boxes (IBCs) and sparge isotanks delivered for transfer operations are clearly labelled as to their contents through emergency information panels (EIPs).

Similar decontamination procedure from the existing operation will be applied for employees, contractors and visitors leaving areas with the potential for skin exposure to cyanide, where will included the availability of a dressing room for employees now.

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The transfer facility will have its on-site capability to provide first aid assistance to workers exposed to cyanide, reinforced by the locator *Alconsa* capabilities who has a medical topic on site that will also be available to Orica in case of any emergency.

The new transfer facility will have a similar procedure developed and tailored for the actual operation, to transport exposed workers to locally available qualified, off-site medical facilities.

The transfer facility will alert alerted local hospitals, clinics, of the potential need to treat patients for cyanide exposure. The notification will be conducted through letters and meetings, including site visit to hospitals, to ensure that the medical facility has adequate, qualified staff, equipment and expertise to respond to cyanide exposures.

Such as with the current operation, mock emergency drills will be conducted periodically in the new transference plant, on beginning operations, to test response procedures for various exposure scenarios.

The current ERP requires each simulation drill to be evaluated and a report produced, including a photographic record, chronological record, final recommendations, and to incorporate lessons learned into response planning if necessary.

Procedures to investigate and evaluate cyanide exposure incidents will be in place to determine if the transfer facility's programs and procedures to protect worker health and safety and to respond to cyanide exposures are adequate or need to be revised.

Principle 3 – Monitoring:

Conduct environmental monitoring to confirm that planned or unplanned releases of cyanide do not result in adverse impacts.

Production Practice 3.1: Conduct environmental monitoring to confirm that planned or unplanned releases of cyanide do not result in adverse impacts.

The operation is **in full compliance with** **Production Practice 3.1**
 in substantial compliance with
 not in compliance with


Summarize the basis for this Finding/Deficiencies Identified:

The transfer facility does not have a direct discharge to the ocean or other surface water. Waste liquid is generated indirectly via condensation of atmospheric moisture and by draining residual liquor contained in isotanks returned from mine sites.

The Orica Off-site Facilities Manager advised that the transfer facility does not have an indirect discharge to surface water. Seepage is unlikely to be generated from the transfer facility for the following reasons:

Orica has been issued with an Environmental Assessment Certificate for operating the transfer facility. The certificate obliges Orica to conduct health, safety and

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environmental monitoring. The environmental monitoring component is linked to the monitoring commitments made in the EIA and does not reference groundwater monitoring requirements or groundwater compliance points.

The facility is not yet in operation. The environmental monitoring component is linked to the monitoring commitments made in the EIA and does not reference groundwater monitoring requirements or groundwater compliance points.

The transfer facility does not have a direct or indirect discharge to surface water and groundwater and, as such the Auditor does not consider that monitoring contemplated by this question is warranted.

Monitoring will be conducted at frequencies adequate to characterize the medium being monitored. Surface and groundwater will not be monitored. The transfer facility does not have a direct or indirect discharge to surface water and ground water and, as such surface and groundwaters will not be monitored.

Principle 4 – Training:

Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner

Production Practice 4.1: Train employees to operate the plant in a manner that minimizes the potential for cyanide exposures and releases.

The operation is **in full compliance with Production Practice 4.1**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:


The facility provides training to his workers to understand the hazards of cyanide and refresher training is periodically conducted. Workers from the current transfer operation will be the same that will operate the new plant. Instruction material deals with risks of cyanide, poisoning symptoms, alert and first aids, medical treatment, investigation of facility failures, cyanide emergencies and cyanide recognition.

The current transfer facility has trained the workers, which will be the same in the new Plant. They have been trained in the use of PPE and when and where this equipment is required.

In occasion of the audit, current operators from the transference plant had already began their training on site at the new transfer facility, to perform their normal production tasks with minimum risk to worker health and safety and in a manner that prevents unplanned cyanide releases. Prior on beginning operations, all personnel will have completed training on the new installations.

The training elements necessary for each job are identified in the current Standard Operating Procedures (SOPs), which will be tailored for the new operations.

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Appropriately qualified personnel provide the training. The Plant Supervisor gives training to the transfer facility operators. He has extensive experience in gold mining operations.

Employees are trained prior to being allowed to work with cyanide. Current procedures states that the transfer facility is not able to be used until all operators have been trained in the task that they are conducting.

Such as in the current operation, the new transfer facility will evaluate the effectiveness of cyanide training by testing. Evaluation quizzes are used to evaluate the effectiveness of Cyanide Awareness Training.

Production Practice 4.2: Train employees to respond to cyanide exposures and releases.

The operation is **in full compliance with Production Practice 4.2**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:


Orica trains transfer facility workers in the procedures to be followed if a cyanide release is discovered. The current ERP notes all cyanide transfer facility personnel are to be trained how to recognize an emergency, notify the emergency response team and practice in implementing the Plan. Also specifies that emergency response personnel must be trained to cope with emergencies

Once the ERP is developed, Orica will train its workers at the new facility to respond to exposure to cyanide and drills will be performed to test and improve their response skills. The current ERP requires simulation drills in the implementation of the Plan to be carried out to test the procedures, equipment, and resources described in the ERP, and to train personnel in emergency responses. Drills are planned to be conducted periodically.

Emergency drills will be evaluated from a training aspect to determine if personnel have the knowledge and skills required for effective response, and training procedures revised if deficiencies are identified. The purpose of the simulation drills is to test the procedures, equipment, and resources described in the ERP, and to determine if personnel have the knowledge and skills required for effective response.

Training records are retained throughout an individual's employment documenting the training they have received, including the names of the employee and the trainer, the date of training, the topics covered. The records are maintained in an Excel spreadsheet-style database.

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Principle 5 – Emergency Response:

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

Production Practice 5.1: Prepare detailed emergency response plans for potential cyanide releases.

The operation is **in full compliance with Production Practice 5.1**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The transfer facility is developing an Emergency Response Plan (ERP) based on the current ERP and in coordination with its locator *Alconsa*. The Plan is being developed to provide guidance on emergency response in an opportune, safe and efficient way for the following scenarios: catastrophic release of hydrogen cyanide, releases during loading and transfer operations, releases during fires and explosions, pipe, valve and tank ruptures, power outages and equipment failures and overtopping of tanks and waste treatment facilities.

The Plan describes specific response actions for emergency situations, use of cyanide antidotes and first aid measures for cyanide exposure, control of releases at their source, containment, assessment, mitigation and future prevention of releases.

Production Practice 5.2: Involve site personnel and stakeholders in the planning process.

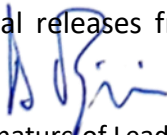
The operation is **in full compliance with Production Practice 5.2**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The transfer facility involves its workforce and stakeholders in the emergency response planning process, including potentially affected communities, in the emergency response planning process. In occasion of the audit, the Emergency Response Plan (ERP) was being developed in conjunction with the owner of the land and locator, *Alconsa*. An upcoming meeting was established between the Health & Safety (H&S) coordinators of both companies, where the agenda to be addressed was the following: review of operational risks, contingency plan, risk review, emergency organization, maintenance work, access and security.

The facility has no community or neighboring near being identified as likely to be affected, based on a review of potential releases from the transfer facility and the

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distances involved. The transfer facility is in the *Alconsa* container warehouse which is, in turn, located within an industrial area. The closest residential community is approximately 500 m from the *Alconsa* gate. The involvement of *Alconsa* is identified as part of the emergency management rather than as an affected community.

The transfer facility will involve local response agencies in the emergency planning and response process. The ERP clearly describes the role of outside responders (Civil Defense authorities, Callao Fire Department, Police and medical facilities). The transfer facility will alert local hospitals about the new location of the transference plant.

The transfer facility has an established process to engage in regular consultation or communication with stakeholders to assure that the Plan addresses current conditions and risks. The ERP will be reviewed annually to remain applicable to the transfer facility's current conditions and risks.

Production Practice 5.3: Designate appropriate personnel and commit necessary equipment and resources for emergency response.

The operation is **in full compliance with** **Production Practice 5.3**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Plan designates primary and alternate emergency response coordinators with authority to commit resources if required. According to the Contingency Plan, the Head of Operations will approve any expenditures required to address any emergency

The Plan identifies Emergency Response Team. The transfer facility Supervisor as the head of the Incident Command System. The Incident Command System is based on five functions providing support in the areas of Command, Operations, Planning, Logistics and Administration and Finance.

The Plan notes all cyanide transfer facility personnel are to be trained on how to recognize an emergency, notify the emergency response team and practice in implementing the Plan.


The Plan contains clear flow charts describing the call out procedures for emergencies. Appendix A details 24-hour contact information for all internal and external persons involved in the Emergency Response.

The Plan clearly specifies the duties for all Emergency Response Team (ERT) positions.

The Plan includes a list of the emergency response equipment which is available at the Plant.

A procedure is in place to inspect emergency response equipment and assure its availability when required as required in the Plan.

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The Plan clearly describes the role of outside responders (Civil Defense authorities, Callao Fire Department, Police and medical facilities). Apart from *Alconsa*, the local community do not have a designated role within the emergency response procedures.

The Plan describes the role of outside responders (Civil Defense authorities, Callao Fire Department and medical facilities). Apart from *Alconsa* who Orica's landlord at the facility, neighboring community members do not have designated roles within the emergency response procedures. Orica has determined that the role required of these organizations is such that they do not need to be involved in all mock drills.

Production Practice 5.4: Develop procedures for internal and external emergency notification and reporting.

The operation is **in full compliance with Production Practice 5.4**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Plan contains flow charts describing the call out procedures for emergencies. Management, contractors, emergency response team, outside response providers and medical facilities are included within the flow charts. Duties for all positions and entities listed within the Contingency Plan are clearly described.

The Plan describes the procedure to notify the external support of Civil Defense and Firefighters of Callao, to achieve a more effective emergency response, which allows Orica to coordinate even the evacuation of neighbors, who could potentially be affected by the emergency event.

Production Practice 5.5: Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.


The operation is **in full compliance with Production Practice 5.5**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Plan does describe specific, appropriate remediation measures, such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris, and provision of an alternate drinking water supply.

The Plan will prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water.

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The ERP address the potential need for environmental monitoring to identify the extent and effects of a release, and include sampling methodologies, parameters and, where practical, possible locations. It contains generic information of environmental monitoring and test methods for cyanide on surfaces, in water and soil.

Production Practice 5.6: Periodically evaluate response procedures and capabilities and revise them as needed.


The operation is **in full compliance with Production Practice 5.6**
 in substantial compliance with
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The ERP contains provisions for periodically reviewing and evaluating its adequacy, and they are being implemented. It states that it is required to be updated in the event of a drill and/or emergency if deficiencies are identified.

Mock emergency drills will be conducted periodically at the new transference plant to test response procedures for various exposure scenarios. For the current operation, Orica conducted several drills: a cyanide contamination simulation, a simulated tsunami threat involving securing and evacuating the site and a cyanide release simulation. In all cases the scenarios were analyzed, and recommendations developed.

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