

PT Freeport Indonesia Response to Montgomery Watson Harza 2005 Audit Recommendations

PTFI Response to MWH 2005 Audit Recommendations

AI Number	Report Section Reference	Recommendation (black) and PTFI Response (blue)
1	3.1, Sustainable Development Program	<p>a. Integrate ICMM implementation guidance through appropriate updates to PTFI’s EMS.</p> <p style="color: blue;">Elements of the ICMM principles have been incorporated into the PTFI Environmental Policy Statement, and EMS procedures and documents have been revised to provide for acknowledgment and implementation of commitments to the principles. [Closed]</p> <p>b. Consider broadening scope of EMS to “ESMS.”</p> <p style="color: blue;">At this time, the respective missions of PTFI’s Environmental Management and Social Development programs are judged sufficiently distinct as to be best served by separate management organizations and systems structured to meet their particular needs. [Closed]</p> <p>c. Adjust EMS as necessary to support routine generation of data for incorporation in GRI reports.</p> <p style="color: blue;">The current PTFI Environmental Management System and related documentation support the generation of routine environmental data suitable for GRI reporting requirements. Future adjustments to the EMS will be considered wherever further experience with GRI reporting may reveal opportunities for improvement. [Closed]</p>
2	3.2.1, EMS –Policy	<p>a. Review the current version of the PTFI Environmental Policy, revise to clearly endorse the FCX Environmental Policy as well as the ICMM Principles.</p> <p style="color: blue;">As a subsidiary of Freeport-McMoRan Copper and Gold Company (FCX), PTFI is committed to comply with the FCX Environmental Policy, as well as with the ICMM principles to which FCX has subscribed. An explicit acknowledgement of the applicability of the FCX policy to PTFI has been incorporated into the preamble to the PTFI Environmental Policy Statement, and the Policy has been expanded to address elements of the ICMM principles. [Closed]</p> <p>b. Adjust COPs and SOPs as necessary to accommodate any PTFI Environmental Policy refinements.</p> <p style="color: blue;">PTFI’s implicit endorsement of the ICMM principles has been incorporated into an expanded revision of COP-2 (Legal Requirements and Voluntary Commitments). The ICMM Principles themselves, along with the commitments that they invoke, have been included in related documentation [Closed]</p>

3	3.2.2, EMS – Planning	<p>a. Modify COP-04 to require a more actionable level of detail in AP’s, quantification of environmental objectives wherever possible, and establishment of appropriate performance indicators or metrics to facilitate the tracking of progress.</p> <p>COP-4 has been extensively revised and is now supplemented by a new Standard Operating Procedure (SOP-E 4-1) which includes a new model format for the Action Plans and guidance to facilitate the establishment of appropriate targets. [Closed]</p> <p>b. Modify COP-04 and SOP-E01-01 as necessary to emphasize that actions should, over time, lower the risk factors associated with individual aspects.</p> <p>The mitigation of environmental impacts and the reduction of risks posed by environmental aspects are well established as the essence of the continual improvement driven by these and other parts of the EMS. Nevertheless, wording has been modified in COP-4 and SOP-E 4-1 to make even clearer that the purpose of the environmental programs that address aspects and impacts is to achieve continual improvement in environmental performance and to advance PTFI’s Environmental Objectives. [Closed]</p> <p>c. Modify COP-04 to specifically require training in AP requirements and activities.</p> <p>Experience has shown that the training and the skill sets of the workforce are generally well suited to carry out the activities that typically comprise the Action Plans. Should an Action Plan require extraordinary skills and training, measures will be taken to provide such at the time. [Closed]</p> <p>d. Modify COP-04 to permit area-specific aspects/impacts identification efforts as a non-mandatory option, applicable to the prioritization of projects that are funded by area-specific discretionary budgets.</p> <p>This point is addressed in the new revision of COP-4, and in SOP-E 4-1. [Closed]</p> <p>e. Include reevaluation of this management area in the scope of future internal EMS audits to ensure that the risk evaluation/AP scheme defined by COP-04 and SOP-E01-01 is delivering the intended results.</p> <p>The efficacy of the system has been and will continue to be routinely examined in the conduct of regular internal audits, as well as in connection with the annual Management Review. [Closed]</p>
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4	3.2.3, EMS – Implementation and Operation	<p>a. Refine COP-05 and related QMS SOPs to require training in the SOPs, Work Instructions, and other work-controlling documents related to specific jobs.</p> <p>Elements of relevant SOPs are included in each of the environmental training modules used for induction training. In addition, information sessions are conducted throughout the year by the Environmental Department as needed to ensure that employees are well informed of revisions to procedures as they are made. PTFI's daily supervisor-subordinate interface also provides ongoing job-specific awareness of the requirements of SOPs and Work Instructions that are relevant to an employee's work. These points are addressed in a new revision to COP-5. [Closed]</p> <p>b. Incorporate SOP/Work Instruction-specific training records into the new QMS competency database.</p> <p>Appropriate training records are being kept. [Closed]</p> <p>c. Revise Section 1.3 of the PTFI EMS Manual to ensure that all SOPs, Work Instructions, and other critical work-controlling documents are issued in both English and Bahasa Indonesia versions; consider the side-by-side formatting conventions used in the current draft of the TAMS Manual.</p> <p>The latest revisions of the EMS Manual and COP-8 provide for dual-language documentation of critical elements of the EMS. PTFI is working toward the gradual achievement of a fully bilingual set of all critical EMS documents, particularly SOPs and Work Instructions. All new SOPs and Work Instructions will be issued in both languages. [Closed]</p> <p>d. Modify COP-04 to require a more actionable level of detail [see Section 3.2.2(a)], and ensure that, where appropriate, Action Plan-specific training requirements are added to training programs.</p> <p>See responses to Items (a) and (c) under Section 3.2.2 of the Audit Report. [Closed]</p> <p>e. In the scope of future internal EMS audits, include examination of a broad sample of contracts for inclusion of environmental management considerations per SOP-CA 13-1.</p> <p>Previous internal EMS audits have examined contracts, as recommended. Future internal audits will likewise continue to sample contracts for conformance with SOP-CA 13-1. SOP-CA 13-1 and SOP-E 19-1 have been revised to incorporate a new procedure to provide the Contracts Department with feedback related to environmental aspects of contractor performance in order to facilitate enforcement of environmental terms of contracts. [Closed]</p>
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5	3.2.4, EMS – Checking	<p>a. Review and revise COP-19 and associated SOPs to institute a consistent corrective/preventive action process for the resolution of all internal and external audit findings; consider the RPCA process as a model.</p> <p>The issues that require preventative or corrective action are of such variety and degrees of impact that they do not all warrant a rigid implementation of the RPCA process. PTFI employs several procedures for achieving corrective and preventative action which include mechanisms for ensuring resolution, and which are suited to the needs of the situations to which they apply. Criteria for invoking the implementation of the rigorous RPCA process have been developed, and this process will continue to be used whenever the situation requires it, resulting in more timely response to audit findings. [Closed]</p> <p>b. Ensure that appropriately qualified Environmental Department staff are systematically engaged in the development and implementation of appropriate corrective/preventive action responses for all audits.</p> <p>Although the level of involvement may vary according to need, qualified Environmental Department staff is always involved in the development and implementation of corrective and preventative actions stemming from environmental audits and inspections. Care will be taken to ensure that this practice is continued. [Closed]</p> <p>c. After implementation of recommendations (a) and (b), explore potential to revise the frequency of the external environmental audit from three years to five years.</p> <p>A possible revision in the frequency of External Environmental Audits has been under internal consideration for several years, and will continue to be explored, as appropriate. [Closed]</p>
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6	3.2.5, EMS - Management Review	<p>a. Review and revise COP-20 as necessary to ensure that the input requirements of ISO 14001:2004 Section 4.6 are considered in the management review scoping process.</p> <p>COP-20 has been revised to include every element required by Section 4.6 of the Standard on a point-by-point basis. [Closed]</p> <p>b. Revise COP-20 to require development of a comprehensive Annual EMS Performance Report (by or at the direction of the Manager) as the basis of the management review process.</p> <p>This practice has been formalized in a revision of COP-20. [Closed]</p> <p>c. Revise COP-20 to ensure that the output requirements of the management review meeting include a copy of the Annual EMS Performance Report, final approved Action Plans for the upcoming year, and a memorandum to file documenting the final recommendations and decisions of the Management Review team.</p> <p>COP-20 has been revised to ensure that the content of the documentation of Management Review meetings appropriately includes the Annual EMS Performance Report, final approved Action Plans for the upcoming year, and a memorandum of final recommendations. [Closed]</p>
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7	3.3, Regulatory Compliance Status	<p>a. Update the PTFI regulatory requirements registers to incorporate the regulations noted in Section 3.3.</p> <p>The cited regulations were reviewed. It was determined that most were already included in the appropriate Registers. Those few that were not already included were reviewed for pertinence to the EMS, and the Registers were revised as part of regular, ongoing review and updating. [Closed]</p> <p>b. Modify COP-02 (or generate a new COP) to address maintaining access to current versions of “other” (voluntary) requirements, as well as how such requirements are to be applied or considered with respect to PTFI’s environmental aspects; refine COP-01 and SOP-E-01-01 as necessary to maintain consistency.</p> <p>The stated objective in COP-2 already acknowledges a commitment to voluntary standards to which the company subscribes. However, the language of the COP has been modified to address more explicitly the maintenance of access to current versions of such voluntary standards and the commitments which they invoke. [Closed]</p> <p>c. Continue to seek regulatory approval for a definition of compliance at the southern extent of the ModADA.</p> <p>PTFI continues to clarification of this issue with the relevant Indonesian agencies. [Closed]</p> <p>d. Continue to pursue resolution of all long-outstanding regulatory issues (e.g., fly ash, lime plant waste oil combustion, diesel generator NOX emissions); maintain full records of all related correspondence. Undertake all of the demonstration projects permitted by Letter No: B-6483/Dep.IV/LH/12/2005, “Letter of No Objection to Use of Fly Ash and Tailings as Construction Material,” and, results permitting, seek approval for long-term beneficial use.</p> <p>PTFI is committed to clarifying all outstanding environmental permitting and regulatory compliance issues and is actively pursuing such matters. [Closed]</p>
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8	3.4.1, BMP Assessment Exploration Activities	<p>a. Refine the PTFI EMS Plan to extend EMS applicability to exploration activities once initiated.</p> <p>After review of this issue, it has been decided to bring exploration activities under the umbrella of the PTFI EMS. However, because exploration activities are conducted by PT MineServe, a distinct company, separate and apart from PTFI, exploration will be included in that part of the overall scope of the EMS which is not a candidate for certification under the ISO 14001 Standard. PT MineServe's procedures and guidelines for addressing the environmental aspects and impacts of its exploration activities are being integrated into the PTFI EMS documentation. [Closed]</p> <p>b. Re-initiate physical examination of a representative sample of exploration sites in the scope of the next internal compliance/EMS audits.</p> <p>Auditor visits to exploration sites have been and will continue to be part of the internal environmental audit program to the extent allowed by logistical practicalities and safety concerns. [Closed]</p> <p>c. Evaluate existing exploration SOPs for currency, as well as accuracy of document approval/distribution controls and other EMS interfaces.</p> <p>Environmental guidelines for conducting exploration activities are embodied in a PT MineServe SOP (along with safety and health guidelines). The SOP was reviewed and found to be adequate. A reformatted version was drafted to bring the document in line with the formatting and document control guidelines for other EMS documents. [Closed]</p> <p>d. Incorporate environmental aspects and impacts associated with exploration activities in the next aspects/impacts register updates.</p> <p>Environmental aspects and impacts associated with exploration activities have been identified and are being incorporated – along with referenced controls – into a current updating of the Register of Environmental Aspects and Impacts. [Closed]</p>
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9	3.4.2, BMP Assessment Overburden Management	<p>a. As soon as operationally feasible, instrument the Lower Wanagon OBS to validate geotechnical and geochemical performance against established design parameters; modify monitoring program to require water levels and water quality sampling on a daily basis.</p> <p>A long-term program for monitoring and managing the Lower Wanagon Overburden Stockpile is in place. It addresses geotechnical and geochemical performance, as well as monitoring water levels and water quality. Visual and manual methods will be progressively replaced by instrumentation as the parts of the OBS are completed. [Closed]</p> <p>b. Codify contingency plans for the Wanagon OBS as SOPs; develop to a final design level and include detailed emergency scheduling and planning to address implementation of appropriate corrective/preventive actions if the dewatering system should fail.</p> <p>A formal risk assessment working group routinely examines all issues related to overburden management. Data related to the Wanagon OBS continue to be developed and evaluated. Conclusions drawn from formal risk assessment analyses form the basis for follow-up actions. The contingency plan for the Wanagon OBS is in final development [Closed]</p> <p>c. Re-evaluate the current stockpile run-out model to link sensitivity of rising water levels in the OBS to slope instability.</p> <p>This re-evaluation has been completed. [Closed]</p> <p>d. As part of PTFI's Action Plans for 2006, schedule installation of additional piezometers at the toe of the Carstensch OBS and appropriate portions of the stockpile in order to improve pore pressure data; piezometers should be strategically located within zones having the greatest potential for movement from increased phreatic levels.</p> <p>The program of developing additional pore pressure data for Carstensch OBS is established [Closed]</p>
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10	3.4.3, BMP Assessment – Stormwater and Groundwater Management	<p>a. Increase number of monitoring wells as necessary to improve confidence in the groundwater flow model.</p> <p>Groundwater flow modeling is an ongoing effort, with monitoring wells being added as needed to develop additional data for the model. [Closed]</p> <p>b. See 9(b) above; codify contingency plans for the Wanagon OBS as SOPs; develop to a final design level and include detailed emergency scheduling and planning to address implementation of appropriate corrective/preventive actions if the dewatering system should fail.</p> <p>See response to 9(b) above. [Closed]</p> <p>c. Complete a mine-wide SMP, subject to periodic reviews and updates to ensure its continuing adequacy relative to changing mine conditions; continue the slope stability monitoring program for the Grasberg pit as well as mandatory visual inspections after significant (> 12hr/10 year) storm events.</p> <p>PTFI has developed integrated stormwater management plans for active areas of the mine and mill. These catchments are routinely monitored and management plans are updated as appropriate. SOPs are codified which define specific rainfall thresholds that initiate specific responses during and following rainfall events. Slope stability is constantly monitored by a variety of instrumentation and observation.</p> <p>The final SMP at the mine areas includes construction of sediment traps, diversion structures, concrete ditches and pumping system (completed). The mine SMP is designed to capture all surface waters from the mine area and divert them to Ertsberg Pit, the Wanagon Basin, the HEAT Road area, or to de-watering wells that discharge from portals in the mill area. Construction of all drainage structures is on-going.</p> <p>A mill-site SMP has been developed, with Engineering 100% complete. Construction has been largely completed on the Macken Ditch side of the valley. Work on the Markovic side of the valley has been initiated. Work will be functionally complete at the end of 2007, with improvements and enhancements on-going. [Closed]</p> <p>d. Continue use of the Ertsberg pit as a stormwater collection pond; reconstruct the surface water diversion channel at the eastern side of the mill area to fully accommodate the design storm event and to avoid critical mill facilities and foundations.</p> <p>Use of the Ertsberg Pit for both stormwater collection and water storage will continue. Dredging of pit sediment is required for sustainable operations. A dredge has been procured and will be commissioned in 3rd Quarter 2007. [Closed]</p>
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		<p>e. Repair the Macken ditch (stormwater conduit at the mill) to ensure the functionality of the box culvert system.</p> <p>Areas of greatest risk and exposure have been completely repaired or replaced. Engineering is complete and construction initiated for lower priority items. [Closed]</p> <p>f. Install new monitoring wells in the new west levee to confirm phreatic levels and obtain additional baseline groundwater quality data.</p> <p>The program to confirm phreatic levels and obtain additional baseline data on groundwater quality data is established. [Closed]</p> <p>g. Update the Portsite SMP to include site grading and stormwater discharge management plans and supporting SOPs.</p> <p>Implementation of the Portsite SMP continues. Updating the design of the water discharge system is required because of substantial additional loading. The updated plan will be completed in 2007 for implementation in 2008. [Closed]</p>
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<p>11</p>	<p>3.4.4, BMP Assessment – Tailings Transport and Disposal</p>	<p>a. Investigate alternatives for diverting the Otomona River away from the ModADA after completion mining operations; engineering studies for the most appropriate diversion alternative should be undertaken as soon as possible in order to gain the greatest potential environmental, social, operational, and cost benefits.</p> <p>An internal team has been formed to define and fully evaluate evolving Otomona River diversion options, including their potential impacts and associated needs for long-term programs to manage the impacts. [Closed]</p> <p>b. Further evaluate the hydraulic parameters of the new Ajkwa Diversion between the old and new west levees; PMF and appropriate geotechnical considerations should be incorporated into the evaluation.</p> <p>The program has been established. [Closed]</p> <p>c. Further evaluate the geotechnical stability of the new west levee with respect to those portions of the levee constructed on deposited tailings material.</p> <p>This program has been established [Closed]</p> <p>d. Continuously evaluate and refine the groundwater flow and transport model for the ModADA and maintain a comprehensive groundwater database.</p> <p>Monitoring wells and instrumentation continue to be added to further develop the knowledge base relating to groundwater levels and groundwater flow. (Also see 3.4.4 (b) and (c).) [Closed]</p> <p>e. Consider evaluating all seismic geotechnical parameters in view of the recent large-magnitude earthquake in the New Ireland region of the island of New Guinea.</p> <p>A detailed seismic evaluation for the COW was completed by a third party in 2002 using parameters judged to be adequately protective. [Closed]</p> <p>f. Evaluate and refine the roles and responsibilities of the Environmental Department, TRMP staff, and the Agricultural Task Force to minimize any functional redundancies and encourage interdepartmental communications.</p> <p>The activities of these groups, as related to operations in the Lowlands, have been reorganized and are now coordinated by a Tailings Retention and Reclamation Group. [Closed]</p> <p>g. Complete the TAMS Manual on schedule, and develop/expand the TIAP SOP to address both the ModADA and the Ajkwa Diversion channel.</p> <p>The TAMS Manual was completed by the end of 2005. The Tailings Incident Action Plan (TIAP) SOP has been amended to address both the ModADA and Ajkwa Diversion channel. [Closed]</p>
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		<p>h. Expedite the completion of all trials/demonstration projects permitted by Letter No: B-6483/Dep.IV/LH/12/2005, “Letter of No Objection to Use of Fly Ash and Tailings as Construction Material”; if results of such trials are supportive, seek authorization to continue such beneficial uses over the long term.</p> <p>As approved by the Ministry of Environment, demonstrations of beneficial uses for fly ash and tailings are currently underway. Applications have been identified. Definitive projects await final test results and conclusion of current negotiations for authorization of uses from GOI agencies. [Closed]</p> <p>i. Extend and reevaluate ModADA transect data to support development of predictive profile for depositional patterns of small pockets of isolated pyrite-enriched sediments in the upper reaches of the ModADA.</p> <p>The transect sampling program was extended into the upper reaches of the deposition area. [Closed]</p>
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12	3.4.5, BMP Assessment – Management of ARD	<p>a. Increase the number of monitoring wells to increase confidence in the groundwater flow model, by installing piezometers in existing boreholes to the extent possible.</p> <p>Groundwater flow modeling is an ongoing effort, with monitoring wells and instrumentation being added as needed to improve the data base for the model. [Closed]</p> <p>b. See 9(b) and 10(b) above; codify contingency plans for the Wanagon OBS as SOPs; develop to a final design level and include detailed emergency scheduling and planning to address implementation of appropriate corrective/preventive actions if the dewatering system should fail.</p> <p>See response to 3.4.2 (b). [Closed]</p> <p>c. Continue to measure surface and groundwater quality in the monitoring stations and groundwater wells down gradient of the OBS/Fairy Lake boundary.</p> <p>This established monitoring program continues. [Closed]</p>
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13	3.4.6, BMP Assessment – Mine Closure and Reclamation	<p>a. Accelerate the construction schedule for the Otomona Diversion to complete major construction in concert with the raising of the east levee system.</p> <p>As stated in the response to 3.4.4 (a), an internal team has been formed to define and fully evaluate evolving Otomona River diversion options, including their potential impacts and associated needs for long-term programs to manage the impacts. Once the preferred options are identified, an economic and operational evaluation will determine the scheduling of engineering and construction works so as to minimize impacts on tailings management practices, as well as long term environmental and social impacts, [Closed]</p> <p>b. Accelerate the closure schedule for the Wanagon and Carstensch OBS's and other areas and facilities as resources are economically and operationally available following completion of Grasberg surface mining in order to minimize closure liabilities.</p> <p>Closure of the overburden stockpiles cannot proceed as long as they are still active. However, per its Closure Management Plan, PTFI intends to proceed with closure of the OBS's as final stack faces become available. When surface mining is complete, full closure and reclamation of the OBS's will be implemented while PTFI continues to mine underground, in order to minimize remaining closure obligations at termination of operations. [Closed]</p>
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14	3.4.7, BMP Assessment – Hazardous Materials Storage/Management	<p>a. Complete the Ammonia Nitrate Storage Facility capital improvements as planned and reevaluate as part of the scope of the next internal environmental compliance audit.</p> <p>Capital improvements have been completed. [Closed]</p> <p>b. Complete more detailed geotechnical investigations on the slope above the 1.5M and 3.0M gallon diesel tanks at the west side of the mill area; undertake any remedial measures, modifications to SOPs, or other improvements expeditiously, based on the results of the investigation.</p> <p>Following the MWH site inspection, at the end of 2005 Underground Geotech reviewed both of the fuel tanks' potential exposure to rock falls using field inspection data, historical rock-fall data, and rock fall analysis. Falling rock characteristics used in the assessment were based on actual rock falls in this area. These analyses showed that protection for the 1.5M gallon fuel tank is adequate. Additional protection for the 3M gallon tank is being added.</p> <p>Additional procedures are in place to ensure the long term safety of the 3M gallon fuel tank. These include regular site inspection and assessment by UG Geotech, and taking photographs of the section of the wall/cliff where potential falling rocks are located. Using line mapping, probable boulder size distribution is estimated, and if boulders are observed larger than the size used in the rock fall analysis, the analysis is re-run and re-assessed. The current Site Management Plan is considering relocation of diesel storage in 2010. [Closed]</p>
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15	3.4.8, BMP Assessment – Hazardous/Nonhazardous Waste Management	<p>a. Accelerate decommissioning of the air-curtain incinerator at MP-73; consider establishing a pilot-scale bio-diesel production plant to recycle food grease from the Tembapapura and Ridge Camp mess halls.</p> <p>All air curtain incinerators have been decommissioned. PTFI recycles used material where practical, but there are no plans to install bio-diesel facilities at this time. [Closed]</p> <p>b. Evaluate remaining capacity of MP-78 landfill and implement engineered improvements to permit continuing use while alternate sites can be evaluated, planned, and developed.</p> <p>Remaining life at the present landfill is estimated to be 20 years. [Closed]</p> <p>c. MP-74 Heavy Vehicle Shop renovations should be completed as soon as possible to contain stormwater carrying spilled or leaking fuel or lubricants.</p> <p>This shop is now due to be relocated to MP 66. Reconstruction of the shop at MP 74 is planned as part of meeting the anticipated growth in demand for facilities to support expanding Underground operations, with appropriate environmental controls for the area included the project design. [Closed]</p> <p>d. Complete all demonstration projects permitted by Letter No: B-6483/Dep.IV/LH/12/2005, “Letter of No Objection to Use of Fly Ash and Tailings as Construction Material.” Continue efforts to obtain approvals for unrestricted long-term beneficial use of fly ash; incorporate stormwater runoff from fly ash areas into routine monitoring program.</p> <p>See response to 3.4.4 (h).[Closed]</p> <p>e. Continue to seek regulatory resolution of diesel generator emissions standards with regard to exemptions from the 2000 limits; continue to evaluate NOx control technologies for new generator sets and incorporate into procurement specifications as appropriate.</p> <p>PTFI continues to seek resolution of this issue. [Closed]</p>
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16	3.4.9, BMP Assessment Emergency Preparedness and Response Program	<p>a. From existing catchment models, establish and maintain an integrated stormwater/surface water management plan that is subject to frequent reviews/updates to keep pace with changing mining operations; continued requirements for regular field inspections of the pit and other critical areas to confirm the adequacy of engineered water control systems.</p> <p>PTFI has developed integrated stormwater management plans for active areas of the mine and mill. All catchments are routinely monitored and management plans updated as appropriate. SOPs are codified which define specific rainfall thresholds that initiate specific responses during and following rainfall events. Slope stability is constantly monitored by a variety of instrumentation and observation. [Closed]</p> <p>b. Ensure that emergency response planning continues to include prompts for taking immediate corrective/preventive action if monitoring indicates water levels or other critical conditions exceed normal operating levels; codify mandatory response practices as SOP's.</p> <p>Emergency response planning, inspections, and codified responses continue to be updated as additional information becomes available. [Closed]</p> <p>c. Complete safety and security barrier refurbishments at the Ammonia Nitrate storage facility as soon as possible.</p> <p>Project complete. [Closed]</p> <p>d. Construct a safety/security fence around the 230 kV transformers at the coal plant.</p> <p>Project complete. [Closed]</p> <p>e. See item 14 (b); complete detailed geotechnical investigations on the slope above the 1.5M and 3.0M gallon diesel tanks at the west side of the mill area; undertake any remedial measures, modifications to SOPs, or other improvements expeditiously, based on the results of the investigation.</p> <p>See response to 3.4.7 (b). [Closed]</p> <p>f. practical in the future, evaluate options for relocating diesel storage facilities towards more central areas of the mill site; evaluate and refine COP-10 and COP-12 with regard to the adequacy of controls over the siting of facilities with significant environmental aspects, especially with regard to geotechnical safety and stability.</p> <p>The current Site Management Plan is considering relocation of diesel storage in 2010. Without limitation, COP-10 specifies that consideration must be given to all the environmental and technical aspects and impacts of projects (e.g., geotechnical safety and stability of proposed project locations) as part of the design and engineering process. It also specifies that consideration of significant aspects and impacts shall be documented in the relevant Authorization for Expenditure (AFE) for all new projects.</p> <p>COP-12 (and the associated AFE approval form) is intended to ensure that all AFE's are subject to the review and approval of numerous technical staff, including the Technical Services Vice President, Environment Manager and Safety</p>
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		Manager, who must be satisfied that there are no environmental, technical, or safety objections to the project design. [Closed]
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<p>17</p>	<p>3.4.10, BMP Assessment – Biodiversity Considerations/Management of Ecological Impacts</p>	<p>a. Continue establishment of permanent plots in the highland areas where mining is complete; monitor against similar communities outside the COW area (e.g., Bakopa Valley, Fairy Lakes Valley).</p> <p><i>PTFI’s established highlands reclamation monitoring program continues to monitor and compare plots in the active and inactive mining area with similar communities surrounding the mine. [Closed]</i></p> <p>b. Continue ongoing consultations with local and regional governments in order to define the potential range of eventual land uses in the ModADA; consider the potential for the ModADA to serve as a biological buffer between the Lorentz National Park and the growing population , increased agriculture, and other demographic characteristics associated with Timika.</p> <p><i>Identification and demonstration of potential end land uses (including vegetation as a buffer zone) and the associated consultations are on-going [Closed]</i></p> <p>c. Ensure long-term strategies for ModADA to employ plant species that do not concentrate metals to levels of concern.</p> <p><i>The established demonstration and monitoring programs continue, with results being used, in part, to determine best land-use practices for the ModADA at end of mine life [Closed]</i></p> <p>d. Continue monitoring of metals uptake by plants and aquatic organisms in the ModADA and Ajkwa estuary to assess any potential risks to human health and wildlife.</p> <p><i>The established monitoring programs continue as part of long-term risk management and identification of suitable end land use practices. [Closed]</i></p> <p>e. Examine and, as necessary, refine current policies regarding employee maintenance of non-indigenous species in gardens and fishponds.</p> <p><i>Regular review and revision of current policies is an established element of PTFI’s environmental management practices. [Closed]</i></p> <p>f. Continue current efforts to integrate monitoring data (e.g., Highland reclamation monitoring plots, wildlife observations, aerial photographic analyses of Ajkwa Island expansion) and GIS modules into ENVIBASE.</p> <p><i>The progressive integration of new information into the environmental data base (ENVIBASE) is an ongoing endeavor. [Closed]</i></p>
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