

PEAK 1999 ANNUAL REPORT

Introduction

In response to community concerns over the discharge of waste materials downstream of the Strickland River, the Porgera Joint Venture (PJV) engaged an independent group of experts, managed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), to carry out a study on the riverine impact of the Porgera mine. This study was completed in 1996 and while it commended the PJV for its efforts in many areas of environmental management, it also made certain recommendations for improvement in order to enhance its environmental management. In the interest of transparency and public accountability, the PJV decided to establish the Porgera Environmental Advisory Komiti (PEAK) to oversee and supervise the recommendations of the group of experts.

The primary function of PEAK is to enhance the understanding and provide transparency of Porgera's environmental (physical and social) issues with external stakeholders and to assist in its environmental performance and public accountability.

PEAK will make sure that the following things happen;

- That the recommendations of the CSIRO managed independent review of Porgera's riverine impact are overseen and implemented,
- That annual environmental monitoring reports and general trends in the data are reviewed by PEAK and
- That any environmental issues raised by external sources are reviewed and considered by the PJV.

Summary of Achievements

Peak had a very successful year in 1999. Two meetings were held during 1999, together with a number of informal site visits by individual and group members to address specific issues of interest or concern. In April, PEAK met in Port Moresby and at Porgera in October. During the October meeting, PEAK visited Aluni Village in the Southern Highlands Province and Gaua Village in the West Sepik Province. Both of these villages are located in the upper reaches of the Strickland River. The consultation with the community was successful and PEAK's main functions and roles were explained to the community. The PEAK members also recorded many comments from those large community meetings.

During the year, at the recommendation of PEAK, and also as a means of extending community consultation, a contingent of landowners from Lake

Murray and Nomad visited the mine site at Porgera. By all accounts this visit was a great success and more visits like this are anticipated.

Web-site

A public Internet web-site for PEAK was established and information about the organisation is now accessible by all interested stakeholders. The web-site is also connected to the Placer Dome web-site and in time, with the approval of the relevant organisations, it will be connected via hyperlinks to web-sites of members represented on PEAK. The web-site contains PEAK's terms of reference, profiles on membership, an Issues and Action section that comes out after every meeting and summaries of relevant reports. The web-site is reviewed and updated regularly to reflect the issues affecting PEAK.

Sub-committees

Several sub-committees were established to allow PEAK to work more efficiently. Currently the sub-committees are; Community Consultation, Communication/Web-site Committees and Mine Technical Issues.

Foundation Chairperson

Ms Meg Taylor, the foundation Chairperson, resigned last year to take a new posting with the World Bank in Washington. Her significant contributions in the formation and establishment of PEAK are gratefully acknowledged. PEAK congratulates Ms Taylor on her new appointment and wishes her all the best in her future endeavours.

Reports

PEAK received several reports during the year. The following were submitted to the committee:

- Metal Leaching and Acid Rock Drainage (ARD)
Porgera has a large data set on ARD and metal leaching. The report concluded that ARD is not a concern at Porgera and that through a proactive approach to waste rock management, metal leaching will not become a concern in the future. The report stated that the natural carbonate in the sediment and the surrounding areas would neutralise acid that may be generated by sulfide minerals. As well, the report outlined a material management plan that has the capability of preventing metal leaching. Mitigating factors include the availability of

- high acid neutralising capacity, high rainfall and natural dilution processes as well as receiving water bodies having a significant metal attenuating capacity.
- **Health Program for Porgera**
In partnership with the World Alliance and WHO, this program is designed to treat tropical diseases along the Porgera/Lagaip/Strickland Riverine systems. It will also provide basic health care in remote areas. Implementation of the program will be community-based and will strive to achieve the goals of sustainable development, capacity building and partnership. The main diseases of concern were identified as malaria, filariasis and intestinal parasites, TB and tropical ulcers.
 - **Geotechnical Report on Dump Stability**
The report presented to PEAK showed how the Kogai dump has been engineered to be stable. Based on the design philosophy of continual observation, the current strategy will ensure that there is sufficient storage capacity and that long-term stability is assured. The dumps are managed with a view to continual improvement in monitoring and design optimisation. For the long-term the objective is to continually improve the technical, social and environmental aspects of the waste dump so that they are ultimately passed back to the landowner in a productive and sustainable form.
 - **Sediment Transport Monitoring**
The issues addressed in this study were the extent and impact of the erodible dumps, riverbed sediment aggradation and sediment deposition on river floodplains and off-river water bodies.

Of the mine derived suspended sediment, 50% is derived from the erodible dumps and 50% from the tailing. The report concluded that no major sedimentation impacts could be observed along the Porgera-Lagaip-Strickland River system. Sediment monitoring on the river will continue and further work is planned to improve the knowledge of sediment behaviour in the river system.

- **Sustainability Plan for Porgera Valley**
The landowners, the Enga Provincial Government and the Porgera Joint Venture have formulated a District Plan (Sustainability Plan) for the Porgera Valley. The plan is based on six sectoral pillars identified as, Justice, Education, Infrastructure, Primary Industries, Service & Industry and Community Development. Social monitoring will be incorporated into the operation of the plan. It is intended to have the plan fully operational by the end of 2000.

Members

Two new members have joined PEAK and the membership has increased by one. In total, the following continue to be members of PEAK.

Dr Graeme Batley	Commonwealth Scientific and Industrial Research Organisation
Dr Max Finlayson	Environmental Research Institute of the Supervising Scientist
Mr Michael Kiap	PNG University of Technology
Mr Pawa Limu	Office of Environment & Conservation
Mr Michael Rae	World Wide Fund for Nature (Australia)
Mr Gerard Saleu	Papua New Guinea Institute for Medical Research
Dr Ronald Seib	The Melanesian Institute for Pastoral and Socio-Economic Service
Mr Mel Togolo	Placer Dome Asia Pacific
Ms Ani Topurua	PNG Department of Mining
Mr Evert van den Brand	Porgera Joint Venture

Two new members were invited to join PEAK on the basis that, as individuals as well as the organisations they represent, will bring to PEAK further opportunities to provide transparency to the activities of the Porgera Joint Venture, particularly in the PNG domestic NGO community.

They are Messrs. Yati Bun and Lester Seri both of whom have agreed to join PEAK.

Yati Bun is the Executive Director of Foundation for People and Community Development. A graduate of the Papua New Guinea University of Technology with a Bachelor of Science, Yati has a Masters of Science degree from the University of Edinburgh, United Kingdom. He has a strong background in forestry science and has a keen interest in ecological sustainability. His professional interest in the areas of biology and ecology will be valuable to PJV's environmental management.

Lester Seri is the Acting Executive Director and Program Director of Conservation Melanesia. A science graduate from the University of Papua New Guinea, he has broad experience in dealing with environmental issues. Lester's professional interest is in the areas of conservation, biodiversity, biogeography, mammalogy, ecology, sustainable resource development and management and sustainable rural development. His contributions will add value to the PJV's environmental management of Porgera's riverine impact.

Major Issues

PEAK's attention in 1999 continued to focus on riverine tailing and rock waste disposal and how they impact on both the downstream river systems and the community. Community and social issues were deliberated on extensively during 1999. Several community consultations took place during the period. Feedback from PEAK members on issues raised at those meetings will be of great value to PJV.

Recommendations CSIRO Review

The PJV continued to report on its program to implement on the recommendations of the CSIRO review and continually improve its environmental performance.

Highlights

- The Erodible Dump Model (EDPM) was re-calibrated using the 1998 dump survey data by external consultants. The re-calibrated model allows controlled dumping in the Anawe and Anjolik dumps with the overall aim of preventing the dump toes prograding to the head of the Porgera River.
- Data recovery at the hydrometric stations along the river system continued to improve during the year from 65% in 1995 when the CSIRO review was carried out to 90% in 1999.
- Monitoring in the floodplain was extended by re-establishing monitoring station SG4 on the Strickland River in July 1999. The station will be

operated on a similar status as SG3, SG2 and SG1. More emphasis will be placed on this station in 2000 and beyond.

- Water quality sample preparation at SG3 compliance station was improved by filtering and preserving samples in the field.
- Tailing sampling improved from the previous 3 hours per day spot sampling method to a proportional sampling method where proportional samples are collected over a period of 12 hour shifts using a sampling cutter placed in the discharge stream.
- A review of methods of cyanide analysis by external consultants contributed to improvement of PJV's analytical methods in cyanide analysis.

Sago Sampling

During 1999 the people from Lake Murray, Nomad and Strickland River areas made an allegation to PEAK that their sago supply was contaminated through trace metal uptake. PEAK asked the PJV to investigate the allegations. PJV collected 120 samples of processed sago meal for testing. Half of the samples were sent to the Department of Primary Industry's Research Institute in Brisbane and the other half to the Australian Government Analytical Laboratories in Sydney. When received, the results will be communicated to the communities on the Strickland River and Lake Murray, as well as feedback to the PEAK members.

Dietary Survey

In response to the concern of communities over the type and quality of various foods, Dr. Peter Sapak of the Department of Community Medicine, PNG School of Medicine carried out a dietary survey in the Lake Murray area. The fieldwork for this survey was carried out during the Christmas and New Year period. It should be completed by the second quarter of 2000. This important information will be linked to the planned health program proposed by PJV for the area.

Future Plans

PEAK will continue to oversee the PJV's environmental and sustainability performance and how it responds to the community's social and environmental concerns relating to the Porgera Mine.

Yati Bun

Chairman -PEAK