1.0 Site Visit

The Annual Inspection site visit was conducted on May 28, 2001. At the time of the visit, the weather was clear and calm.

2.0 Significant Observations

The following observations, considered to be relevant to the stability of the slope were made:

- Patched areas and distress to the highway (tension cracks in the shoulder were noted. Refer to Photo 1.
- Visual inspections downslope of the patched area did not indicate any other signs of movement.
- Maintenance Personnel reported that ongoing maintenance has been required in this area.
- Significant erosion protection measures have been undertaken in the upslope (east ditch). Refer to Photo 2.

3.0 Changes from Previous Visit

No significant changes from the previous assessment in 2000 were noted.

4.0 Discussion

The initial assessment of the slope failure at the site in 1988 indicated that it was confined to the road fill, and remedial works were implemented to improve the situation. However as of 1991 the problems were reoccurring and it was speculated that the problems were more extensive than originally thought. Investigations to assess the mode of a larger failure were apparently not conducted.

On the basis that the site has not been thoroughly investigated, and large movements have been observed in the past, further investigation has been considered warranted. AMEC is currently conducting such further investigations, including installation of instrumentation. The results of this work will be reported separately.

A review of air photos of the site does not suggest the presence of any larger instabilities at the site, however this does not eliminate that possibility.

5.0 Assessment

Although the extent and nature of the stability issues at the site have not been adequately defined, there is an ongoing movement at the site, requiring regular maintenance. Based on the presence of gentle terrain downslope and no indications of large deep seated movements on the aerial photographs, there does not appear to be a high risk of rapid movements

occurring, but until the mode is better defined, uncertainties will exist. On this basis the Probability Factor with respect to this slide is taken as 7 (pending the results of further investigation) since there is active movement within the highway, although the rate of movement is unknown.

A large portion of the southbound lane is continuing to be affected. Over recent years this has been adequately handled by patching. Based solely on this, significant losses to the highway would not be expected to occur rapidly, however, the initial failure t the site did produce a significant loss, and more significant slide cannot be discounted. On this basis a Consequence Factor of 4 is assigned to this slide.

Based on the above, the Risk Level at this site is calculated as 28.

6.0 Recommendations

It is recommended that further investigations be conducted at this site to define the mode of failure and its extent. It is suggested that such a program would include at least two to three boreholes and the installation of one or two slope indicators on the downslope side of the road. Analysis should included stability calculations; therefore, limited strength testing and cross-sectional surveys should also be conducted. This work is currently being conducted by AMEC and the results will be reported separately.

Installed slope indicator(s) should be added to the semi annual monitoring program.

The surface conditions of the road at this location should be carefully monitored by maintenance personnel. This would be in conjunction with slope indicator monitoring to provide as early detection of potential problems below the road as possible.

The Annual Assessment program already in place should be continued.