RF Exposure Guidelines for MERA Sites

All MERA sites are required to meet FCC guidelines for public exposure and controlled area RF emissions.
"High RF level" means an intensity of RF radiation, whether from single or multiple sources, which exceeds the [FCC] guidelines.

Of special concern are those water tank sites and fire lookouts which could expose employees to elevated RF levels during maintenance and fire lookout operations. The sites of specific concern are: the proposed Sugarloaf tank site, Forbes Hill tank site, and the Mt. Barnabe fire lookout.

FCC Guidelines for Evaluating Exposure to RF Emissions
In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP. The new guidelines represent a consensus view of the federal agencies responsible for matters relating to public safety and health The new MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk. The new FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. The decision as to which tier applies in a given situation should be based on the application of the following definitions.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. For purposes of applying these definitions, awareness of the potential for RF exposure in a workplace or similar environment can be provided through specific training as part of an RF safety program. Warning signs and labels can also be used to establish such

awareness as long as they provide information, in a prominent manner, on risk of potential exposure and instructions on methods to minimize such exposure risk.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

As a general principle, if areas of high RF radiation levels are publicly marked and if access to such areas is impeded or highly improbable (remoteness and natural barriers may be pertinent) then it may be presumed that the facilities producing the RF radiation do not significantly affect the quality of the human environment and do not require the filing of an [E]nvironmental [A]ssessment.

The Sugarloaf water tank situation is illustrated by the following FCC example where:

> High RF levels are produced in areas where intermittent maintenance and repair work must be performed by employees or others.

[FCC] guidelines apply to workers engaged in maintenance and repair of equipment which may be in areas of high RF levels. The circumstances may require corrective action to reduce exposure. Legal releases signed by workers willing to accept high exposure levels are not acceptable and may not be used in lieu of corrective measures. A convenient rule to apply to all situations involving RF radiation is the following: (1) Do not create high RF levels where people are or could reasonably be expected to be present, and (2) prevent people from entering areas in which high RF levels are necessarily present. Fencing and warning signs may be sufficient in many cases to protect the general public. Unusual circumstances, will require more elaborate measures. Intermittent reductions in power, increased antenna heights, modified antenna radiation patterns, site changes, or some combination of these may be necessary, depending on the particular situation.

To insure safety for all MMWD employees, MERA will:

1). Meet all FCC guidelines,
2). Post adequate notification at the site,
3). Provide pertinent literature to MMWD for dissemination to employees,
4). Take initial readings to insure compliance with FCC guidelines,
5). Measure compliance when and/or if any changes are made in RF levels,
6). Make changes to meet any future FCC mandated emission guidelines,
7). Reduce power levels at the site during certain maintenance activities, and
8). Provide a RF radiation monitor during sustained maintenance operations.