Lehigh Univeristy would like to submit mycobacteriophage Nenae for QC. We have reviewed all gaps and they are valid. We would like the following areas investigated by the QC team further.

We deleted the following gene products present in the original phamerator and autoannotation file: gp13 (7808-7924), gp33 (26637-26768), gp37 (27508-27642), gp48 (32029-32205), gp62 (37359-37931), gp72(42136-42465).

We also added a number of genes to the Nenae genome. We added a gp30 (25369-25776) to close a large gap, this gene product is also present in Redi. gp60 (38129-38248) was added due to homology with Redi gp60 and PhancyPhin gp60. This gene is very small however, and lacks coding potential in this region. We also added gp70 (42103-42411) because it is present in all N cluster phages, there is also strong coding potential in this region.

We had a few genes not save the correct BLASTp data in DNAmaster. Gp28 (24414-25067) Q1:S1 with Redi gp28, gp32 (26262-26819) is Q1:S1 with Redi gp32, gp41 (9081-9987) is Q1:S1 with Redi gp41.

Additional areas of investigation are listed below.

gp7-12 (5753-7807) were called as head-to-tail connectors based on homology with newly annotated N cluster phages (PhancyPhin, Phrann, Xeres). The older N cluster phages do not have these genes annotated as head-to-tail connectors.

gp14-15 (9081-9987) is a +1 translational frameshift. We would like this investigated for accuracy.

gp34 (27216-27431) has homology to Redi gp34. Redi gp34 is annotated as a YcfA domain. Phages that were annotated more recently do not call any function. There is however HHpred data to support this is a Toxin in the HICA3 toxin-antitoxin sustem. We have not called any function for this gene product but think it warrents further investigation.

gp65(40186-40851) has hhpred data for a viral protein but no function is called in any annotated mycobacteriophages. We have not called any function but this may warrant additional investigation.