Genome Annotation Submission Cover Sheet

Preliminary Annotation Review Checklist 5-15-2018

Phage Name:	SaltySpitoon
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Additional emails: (For correspondence)	

Please check each box indicating completion of each task. If you are not sure how to do something, please see the Online Bioinformatics manual page "How to Pass Preliminary Review".

- ✔ 1. Does the genome sequence in your final contain the same number of bases and is it the same as the posted sequence on phagesdb.org?
- ✔ 2. Are all the genes “valid” when you click the “validate” button?
- ✔ 3. Have the genes been renumbered such that they go sequentially from 1 to the highest number?
- ✔ 4. Have all old BLAST hits been cleared, and all gene features reBLASTed?
- ✔ 5. Are the locus tags the"SEA_ PHAGENAME"?
- ✔ 6. Has the Documentation been recreated to match the information in the feature table?
- ✔ 7. Have tRNA ends been adjusted with web-based Aragorn and/or tRNAscan SE?
- ✔ 8. Has the frameshift in the tail assembly chaperone been annotated (where applicable?)

9. For the items below, generate a genome profile, and review the following. For the

YourPhageName_CompleteNotes.dnam5 file:

- ✔ a. Have any duplicate genes (or any with the same stop coordinate?) been removed?
- ✔ b. Does every gene have **one and only one** complete set of Notes
- ✔ c. Do the functions in the Notes match the official function list?
- ✔ d. Are all three lines of functional evidence described for EVERY gene?
- ✔ e. Do the notes contain the initial Glimmer/GeneMark data from the autoannotation?

For the YourPhageName .dnam5 file:

- ✔ a. Have any duplicate genes (or any with the same stop coordinate?) been removed?
- ✔ b. Is the Notes field empty (including hidden marks?)
- ✔ c. Do the function names in the Product field either match the official function list or say "Hypothetical Protein"?
- ✔ d. Is the Function field empty (including hidden marks?)

- ✔ 10. Did you use PECAAN to annotate your phage?

If, so please describe how in the text field after question 11.

11. Describe any issues or specific genes that you were unable to satisfactorily resolve, and warrant further inspection in the Quality Control review.

- PECAAN was used to organize the initial annotation and to help in functional annotation. Results were exported to DNA master for final quality control checks.

- Gp60 (33,431-33,703) is possibly part of the frameshifted tail assembly chaperone, but it wasn't annotated as such because there's no HHPred evidence or clear slippery sequence.

- Annotated gp62 (40,092-40,487) as a minor tail protein in part because of its position immediately downstream of the tape measure protein, but don't know if it's "large" enough to qualify.

- DNA Master Blast of gp66 (44884-50898) fails repeatedly. Blast search on the NCBI website gives q1:s1 hit with TomSawyer_64 (QGH78951.1) with 100% coverage and 99.95% identity.

- DNA Master Blast of gp187 (95784-95888) returns no hits, but Blast search on the NCBI website gives many q1:s1 hits with 100% coverage and identity.

- Not sure of the start for gp_258 (117753-117866). Called most annotated start, but start at 117747 gives longer ORF (and -35 bp gap) and q1:s1 alignment with Starbow_256 and MindFlayer_252 with 100% coverage and identity.