

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

COMPLAINT OF GAMEFLY, INC.)
)
) Docket No. C2009-1

**SUPPLEMENTAL RESPONSES OF UNITED STATES POSTAL SERVICE
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,
INC.
(GFL/USPS-T4-4-9, 12, 13, 16, 23(a), 23(d), 23(f), 29, 31(a), 33(c), 37(a), 37(c)-
(d), 39, and 40(a))
(September 22, 2010)**

Pursuant to Rules 26 and 27 of the Commission's Rules of Practice and Procedure, Postal Service witness Robert Lundahl provides his supplemental responses to the following discovery requests from GameFly, Inc.: GFL/USPS-T4-4-9, 12, 13, 16, 23(a), 23(d), 23(f), 29, 31(a), 33(c), 37(a), 37(c)-(d), 39, and 40(a), filed on August 4, 2010.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

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September 22, 2010

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,
INC.

GFL/USPS-T4-4. Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to DVDs; damage to mail from processing it on AFCS, DBCS or other automated letter processing equipment; damage to polycarbonate or other plastic objects from material fatigue or mechanical impact; videogame disk composition; videogame production processes.

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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INC.

GFL/USPS-T4-5. Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to DVDs.

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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INC.

GFL/USPS-T4-6. Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to mail from processing it on AFCS, DBCS or other automated letter processing equipment.

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-7. Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to polycarbonate or other plastic objects from material fatigue or mechanical impact.

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-8. Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning videogame disk composition.

RESPONSE:

ATR did not conduct any studies specific to video game disc technology.

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INC.

GFL/USPS-T4-9. Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning videogame production processes.

RESPONSE:

ATR did not review any information specific to the production of video game discs.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE
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INC.

GFL/USPS-T4-12. This question concerns pages 3-11 of your testimony (USPS-T-4), where you discuss a number of factors that you contend affect the rate of DVD breakage. Please produce all studies, analyses, compilations of data, and other information quantifying the effect of each such factor on the rate of DVD breakage.

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-13. This question concerns pages 11-14 of your testimony (USPS-T-4), where you discuss various methods of reducing damage to DVDs from Postal Service equipment. Please produce all studies, analyses, compilations of data, and other information on the effectiveness of each such method in reducing damage to DVDs.

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-16. Please produce all studies, analyses, compilations of data, and other information quantifying the effect of manual vs. automated letter processing on the breakage rates of DVDs that have been designed, manufactured, handled and mailed in compliance with the recommendations on pages 3-14 of your testimony (USPS-T-4).

RESPONSE:

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

ATR has performed tests and analysis on an experimental basis only. ATR was not involved in the actual implementation of any remedial actions. Later discussions with Netflix reveal that Netflix has implemented most of the ATR recommendations, as described below.

[REDACTED]

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INC.

GFL/USPS-T4-23. On page 3, line 20, of your testimony (USPS-T-4), you state: "More recently, my firm was retained by Netflix to analyze DVD breakage."

(a) Please provide the scope of work and period of performance for this project.

(d) Please provide copies of all reports, briefings, analyses, workpapers and other documents that you or your firm provided to Netflix.

(f) How did your firm become aware that Netflix wanted to have a study performed to analyze DVD breakage?

RESPONSE:

(a) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

(d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

(f) Netflix contacted me directly.

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GFL/USPS-T4-29. On page 6, lines 16 and 17 of your testimony (USPS-T-4), you say “A clea[n]er inside diameter hole results in more durability, reduced damage, and more accurate playing.” Please provide the basis of this assertion, including any quantitative analysis which supports the assertion, the data underlying the analysis, the analysis plan, the results of the analysis, and the report(s) setting forth the results.

RESPONSE:

It is generally understood in failure analysis that surface defects act as stress concentrations when the part is under load. Cracks tend to form at stress concentrations and continued fatigue loading will encourage these cracks to propagate to the point of failure. ATR looked carefully at the quality of the ID on the DVDs since this is where the cracks formed that eventually led to the majority of the disc failures. The quality of the cut hole became a subject of concern and ATR performed several tests to evaluate the effect of a new cutter as compared with an older and presumably duller cutter. The test results indicated that there was a correlation. Newer and sharper cutters contributed to a longer fatigue life. Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-31. On pages 7-8 of your testimony (USPS-T-4), you state with respect to UV curing that:

Testing results were difficult to validate with the number of parameters that cannot be controlled. However, the damage to plastics caused by UV exposure is commonly understood, and Netflix also understood the likely ramification from too much UV exposure. Netflix reviewed its printing techniques and the exposure levels at all steps of the fabrication process. (See appendix ATR 4 for a summary chart of the improved printing techniques.)

(a) Please identify and produce the referenced testing results, along with the underlying study design, data and workpapers.

RESPONSE:

(a) ATR attempted to isolate the ultraviolet exposure effects by looking at different printing techniques. The screen printing process requires an ultraviolet cure cycle between each color layer. As a result, a one color print has fewer ultraviolet cure cycles than a five color printed label.

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GFL/USPS-T4-33. This question concerns page 10 of your study (USPS-T-4), in which you state that “ATR looked at impact failures as the predominant mechanism for the Blu-ray discs.”

(c) If so, please identify the client and the period of performance, and produce the study and workpapers.

RESPONSE:

(c) The client is Netflix. Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-37. On page 11, lines 24-25, of your testimony (USPS-T-4), you state: "ATR evaluated the use of reinforcement rings with an FEM study and later with actual destructive testing."

(a) For what client(s) did ATR perform these evaluations?

(c) Please produce the documents that defined the scope of the study or studies.

(d) Please produce the report of the results of the study or studies, the study plan(s), the underlying data, and any analysis methods.

RESPONSE:

(a) Netflix

(c) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

(d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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GFL/USPS-T4-39. On page 12, lines 12-15, of your testimony (USPS-T-4), you state: “ATR...recommended that these spindles be inspected and the manufacturing process should avoid excessive handling by the inside diameter or the use of jewel cases.”

- (a) To whom did ATR make these recommendations?
- (b) If ATR memorialized the recommendations in any documents, please produce them.
- (c) Please specify in quantitative terms how much handling is excessive?
- (d) On what data is your answer to part (c) based? Please produce the data and any studies or reports from the data were obtained[sic].
- (e) Please explain the relationship between damage to DVDs and the use of jewel cases, and produce all studies, analyses and data on which your response is based.
- (f) Do you contend that GameFly uses jewel cases for shipping or storing its DVDs? If your answer is anything but an unqualified no, please produce the information on which the answer is based.

RESPONSE:

- (a) Netflix
- (b) ATR did not memorialize these recommendations in any documents.
- (c) This is difficult or impossible to quantify. It is a cumulative fatigue problem so it is more useful to say that less handling is better.
- (d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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(e) Most jewel cases have some sort of central feature that captures the DVD by its inside diameter. Removing and replacing the DVD over these features can possibly damage the inside diameter of the DVD with small scratches causing stress concentrations where the stress is highest when the DVD is bent or flexed. Stress concentrations will accelerate crack formation and reduce the fatigue life of the DVD.

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(f) Gamefly's DVDs arrive in jewel cases from the manufacturer. Please see the response to GFL/USPS-T4-38(d).

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GFL/USPS-T4-40. On page 13, lines 10-12, of your testimony (USPS-T-4), you state, “Netflix has succeeded in reducing the amount of handling by developing automated internal handling processing and requiring minimal handling of its DVDs within the Postal Service processing network.”

(a) Please describe the specific methods of “automated internal handling processing” used by Netflix.

RESPONSE:

(a) Netflix understands the relationship between increasing the fatigue life of DVDs by reducing the number of stress cycles from material handling and sortation equipment, and took steps to minimize these stress cycles in its internal sorting operations.

Netflix implemented several different processes that could help reduce bending stresses in the service life of its DVDs.

[REDACTED]
