

DOCKETED

Docket Number:	18-AAER-02
Project Title:	Appliance Efficiency Standards Rulemaking for Portable Electric Spas and Battery Charger Systems
TN #:	223000
Document Title:	Coverplay, Inc. Comments on Portable Electric Spas Appliance Efficiency Standards Rulemaking
Description:	N/A
Filer:	Jessica Lopez
Organization:	Coverplay, Inc.
Submitter Role:	Public
Submission Date:	3/19/2018 4:55:59 PM
Docketed Date:	3/19/2018



E. Jess Tudor
Coverplay, Inc.
Central Point, OR 97502

March 15, 2018

California Energy Commission
Sacramento, CA 95814
Ms. Jessica Lopez

CEC Ruling on Portable Spas, AAER-02.

Dear Jessica Lopez,

As the invited member of the rule making committee for portable spas I want to say I found it a pleasure to collaborate with Gary Fernstrom, Chad Worth, Ben Fischel, Betty Chrisman and others going back to include Michael Martin in 2008. I advised Emerging Technologies, Pacific Gas and Electric and the California Energy Commission of testing data produced during that decade. As an inventor, I am dedicated to improving energy efficiency including that of the portable spa, an appliance carelessly paired with Styrofoam/PVC spa covers. During that period I reported most of the energy lost was from the gap between the spa and the hard foam board cover obscured by a vinyl flap and from convection loss at its dual hinged gap. Subsequent ambient testing revealed water permeation from interstitial gaps in the foam compounding the inefficiency of Styrofoam as an insulator for heated and sanitized outdoor spas. A review of the Cal Poly University spa energy report for P.G. & E. in 2008 provides evidence questioning the efficacy of dual hinged spa covers as 65% of new spas tested with them did not comply with CEC standards for sale in CA. Adding full length gussets to the dual hinge area in response to that report does little to improve them, as, "Lipstick on a pig". A more relevant ambient test to include evaporation was conducted in 2010 as spas are typically outdoors. Using instruments authorized by Gary Fernstrom from the Tool Lending Library in California, we electronically recorded all aspects of that winter test and submitted those discs with my written report and findings to P.G. & E. in April of that year.

Spa owners complain of water heavy, smelly spa covers and some have replaced their foam covers 5 or 6 times in 15 to 20 years as they become unmanageable, others leave them on the spa to collapse. Spa dealers and spa cover retailers acknowledge the failure but blame the consumer for physical damage or spa chemical imbalance. Damage can play some part but the universal problem with EPS foam is water saturation from condensation. Covers can be as heavy with water as to require two fit adults to open just half their spa. Water is a great conductor of heat; this silent energy thief can use 2 to 3 times more energy on stand-by power and renders the cover the bane of the spa appliance. Spa cover retailers visit local landfills monthly with trailers of water soaked spa covers. A photograph of this polluting devastation from this misuse of EPS foam is included in my reports as the average spa cover represents 3520 Styrofoam cups...none of it recyclable.

Manufacturers offer up to a 10 year warranty on their spas yet this proposed ruling allows them to avoid compliance after the date of sale just as their foam spa covers begin to fail. Styrene foam and PVC vinyl are considered incompatible with strong oxidizers by Material Safety Data Sheets yet are provided with the spa by the manufacturer. They degrade and fill with water from condensation the first month converting a once dry insulating cover into a wet energy conductor making claimed CEC energy ratings untrue.

Consumers guided by the CEC logo energy label but paying higher than claimed energy costs would be misled and poorly served by this Commission's current proposal.

As more water heavy, styrene/vinyl covers are discarded to CA landfills, future generations will become more affected by the ever increasing volume of this cycle of unimpeded pollution. EPS foam board is resistant to photolysis (500 years) and can eventually end up in the ocean when broken into pieces as many are. Avian and aquatic lives are constantly at risk with the beads from that careless behavior as the supervisors of San Francisco know all too well. It seems discarded Styrofoam from other cities like Sacramento finds a path to their, "Bay Area" despite their 2016 ban.

California's Proposition 65 was created to protect citizens from being exposed to chemicals without their knowledge or an understanding of their lethality by proper labeling. PVC has been on that list since 1987 as a carcinogen and styrene was added in April 2016. Ironically these two chemicals are incompatible with each other by MSDS warnings yet coexist in industry spa covers exposing the very citizens seeking health and wellness from hydrotherapy to dangerous VOC's. It occurs to us the California DEQ should have an interest in these spa covers not properly labeled for consumers to consider before purchase. The Frank Lautenberg Chemical Safety Act of 2016 has the EPA listing two of the top ten most dangerous chemicals to include asbestos and HBCD, a Persistent, Bio-accumulative Toxin banned in 152 countries but still used here in America in EPS/XPS styrene foam board. Some people remember asbestos when it too was used as an insulator! Providing a safer, sustainable alternative to Styrofoam has the interest of citizens in at least 62 California cities and government facilities including the city and county of San Francisco that voted to ban all Styrofoam in 2016.

This appeal to the CEC before its final ruling is intended to help CA citizens avoid ever increasing spa energy costs for stand-by ready power and health consequences associated with toxic chemicals in Styrofoam/PVC vinyl spa covers. We should all be wary when important energy/health information encounters ambivalence or resistance from anyone or group when public welfare is at stake.

Evidence exposing the disastrous choice of Styrene foam/ PVC vinyl to insulate sanitized hot water spas is obvious and compelling especially when millions of those covers are already in landfills for 2000 years. To allow this to continue unabated defies logic when safer, more efficient alternatives are available.

This Commission could improve spa energy use simply by discouraging the continued use of dual hinged covers. Suggestions from this member of the rule making committee have been outlined and submitted in 2016, derived from years of data to better protect California citizens and their energy resources.

If this legislative body is indifferent to these solutions, then at least establish a, "Health tariff" (\$150 per cover) to provide proper disposal of imported Styrofoam/PVC vinyl covers and interrupt 35+ years of sustained pollution. The CEC should then mandate all Styrene/PVC vinyl spa covers be labeled, "Toxic, Carcinogenic" to forewarn the unsuspecting public, particularly the vulnerable young, pregnant women and those with compromised immune systems. Consumers should also be made aware of the non-recyclable nature of used spa covers.

I thank those I consulted with at P.G. & E. and the CEC, including those in the appliance division for their interest in my efforts and the opportunity to help benefit citizens of California and the nation in a meaningful way.

Sincerely yours,

E. Jess Tudor
Design Engineer
Coverplay, Inc.
www.coverplay.com