ERRATA SHEET

ADDENDUM NO. 1 TO ORDER NO R9-2005-0091 NPDES NO. CA0107336

WASTE DISCHARGE REQUIREMENTS FOR SEAWORLD SAN DIEGO

The following changes have been made to tentative Addendum No. 1 to Order No. R9-2005-0091. Some changes/corrections below are shown in **bold and underline**/~~strikeout~~ format to indicate added and removed language, respectively.

Errata #	SECTION	REVISION
1.	Findings	The following text has been added as finding No. 1 and remaining findings have been renumbered accordingly: **On November 19, 2004, Anheuser Busch Inc. submitted a report of waste discharge (RWD) for the renewal of an NPDES permit to discharge up to 9.36 million gallons per day of treated wastewater from SeaWorld San Diego. The discharge consists of wastewater from exhibit pools, intermittent flows during pool drainage and cleaning operations, runoff from landscape irrigation, and facility wash down water. Order No. R9-2005-0091 was adopted by this Regional Board on April 13, 2005 and does not include any requirements for the aerial fireworks displays.**
2.	Finding No. 1	The following text will be revised as follows: On October 26, 2006, Brown and Caldwell submitted an incomplete report of waste discharge (RWD) on behalf of SeaWorld, San Diego for the discharge of waste to Mission Bay associated with their fireworks program. Additional information was requested on December 7, ~~2007~~ **2006** and received on January 19, 2007 to make the application complete. **Addendum No. 1 to Order No R9-2005-0091 specifically applies to the discharge of waste associated with the aerial fireworks displays. Addendum No. 1 to Order No. R9-2005-0091 does not include any changes of existing requirements of Order No. R9-2005-0091 for the discharge of treated wastewater.**
3.	Finding No. 2	The fireworks are launched from a barge located in the Pacific Passage Zone of Mission Bay, between Fiesta Island and the Sea World Shorelines. The average fireworks show lasts 5 to 6 minutes and dispenses approximately 250 shells **(3-inch and 4-inch)**; special events, such as the 4th of July and New Year's Eve, may dispense between 1,000 and 1,750 shells **(mostly 3-inch and 4-inch and some larger). The average total weight of firework related material that are used in shows at SeaWorld is 129 kilograms (kg) and the**

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		annual July 4th show is 993 kg. SeaWorld subcontracts the logistics of fireworks, operations, transportation, setup, ignition and cleanup **and currently subcontracts that** to Fireworks America, a licensed pyrotechnics company based in Lakeside, CA.
4.	Finding No. 3	Typical fireworks constituents include aluminum, magnesium, strontium, barium, sodium, potassium, iron, copper, sulfate, nitrate and perchlorate. ~~These constituents have a potential to adversely impact and/or contribute to degradation of water and sediment quality within Mission Bay.~~ In addition, debris from unexploded shells as well as paper, cardboard, wires and fuses from exploded shells can also adversely impact the quality within Mission Bay. The area affected by these debris can vary depending on wind speed and direction, size of the shells, and other environmental and anthropogenic factors. **These constituents have a potential to adversely impact and/or contribute to degradation of water and sediment quality within Mission Bay.**
5.	Finding No. 4	After each aerial fireworks display, crews conduct sweeps to gather floating debris from spent fireworks using handheld fishnets **and a boom with a net off the bow**. In addition, the fireworks barge is swept immediately after each show to prevent solid waste and debris from being swept into the water by the wind. Unexploded fireworks are disposed of by **the fireworks subcontractor, who is currently** Fireworks America. Fireworks debris deposited on Fiesta Island **mainland** is collected from the shorelines each morning following the aerial fireworks display. Solid waste typically consists of paper, paperboard or cardboard shells, and marginal amounts of wires and fuses.
6.	Finding No. 5	Sea World conducted annual fireworks related monitoring of sediment and water quality parameters between 2001-2006. The final monitoring report prepared for Sea World, by Science Applications International Corporation, concluded that there were no significant spatial or temporal patterns in concentrations ~~of critical metals~~ **key fireworks related metals** in sea water or sediments in Mission Bay. It was also concluded that there is no indication of fireworks residue accumulation in the water or sediment of Mission Bay.
7.	Section III Discharge Prohibitions	~~I. The discharge of waste from the aerial fireworks display shall be free of settleable material or substances that may form sediments, which will degrade benthic communities or other aquatic life.~~ **I. The rate of deposition of inert solids and the characteristics of inert solids in Mission Bay sediments shall not be changed such that benthic communities are degraded.**
8.	Attachment A-Definitions	The following text will be added to Attachment A: **Degrade: Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only**

<table>
<tr><th>Errata #</th><th>SECTION</th><th>REVISION</th></tr>
<tr><td></td><td></td><td><u>ones affected.</u></td></tr>
<tr><td>9.</td><td>Section III Discharge Prohibitions</td><td>~~J. Fireworks aerial displays shall be limited to the following dates: Easter through Labor Day and New Year's Eve of each year and shall not to exceed a maximum of 150 fireworks aerial displays per calendar year.~~

J. Fireworks aerial displays shall be in accordance with the following schedule and shall not exceed a maximum of 150 displays per calendar year:

<table>
<tr><th>Display Type</th><th>Approximate Show Length</th><th>Shell Average</th><th>Maximum Nights Per Year*</th></tr>
<tr><td>Typical</td><td>6 minutes</td><td>250 shells</td><td>129</td></tr>
<tr><td>Special</td><td>12 minutes</td><td>1000 shells</td><td>15</td></tr>
<tr><td>Major</td><td>20 minutes</td><td>1750 shells</td><td>6</td></tr>
</table>

*The maximum number of nights per year for a greater intensity display type may be transferred to a lesser intensity display type, provided that the total number of display nights does not exceed 150. Display intensity is defined by the approximate show length and average number of shells. Transferable display types are therefore limited to: 1) major to special; 2) special to typical; and 3) major to typical. Fireworks that reduce noise should be used.</td></tr>
<tr><td>10.</td><td>Section F.1</td><td>The following text has been deleted:

Beginning in April 2008, the Discharger shall implement a fireworks monitoring program that will continue until September 2010.</td></tr>
<tr><td>11.</td><td>Section F.3</td><td>Section F.3 has been modified as follows:

~~The following shall constitute the water quality monitoring locations:~~

<table>
<tr><th>~~Station Number~~</th><th>~~Location~~</th></tr>
<tr><td>~~RSW-001R~~</td><td>~~Area south of crown point shore and north of Vacation Isle shore~~
~~**Reference Station**~~</td></tr>
<tr><td>~~RSW-001~~</td><td>~~Pacific Passage, 20 feet from the fireworks barge and in the direction of the fireworks deposition zone~~</td></tr>
<tr><td>~~RSW-002~~</td><td>~~Pacific Passage, center of the deposition zone as determined after each event~~</td></tr>
</table></td></tr>
</table>

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		~~RSW-003~~ | ~~Pacific Passage, the outermost area of the fireworks deposition zone, at a point farthest away from the barge~~ **The Discharger Shall submit for review and approval a Monitoring Location Plan to monitor water and sediment chemistry, sediment toxicity, and benthic infauna. The Monitoring Location Plan shall be submitted to the Regional Board no later than March 31, 2008. The fireworks monitoring program shall begin no later than July 2008 and continue through July 2010.** **The Monitoring Location Plan shall include, at a minimum, 3 locations within the fireworks deposition zone and 1 reference location.**
12.	Section F.4	The following footnote No. 2 will be revised as follows: Samples shall be collected and analyzed ~~in January and July of each year~~ **twice per year, once during the period of January-March and once during the period of July-Labor Day**. Semiannually means at least once during the ~~months of January and July~~ **first and third quarters. Water samples shall be collected immediately following a fireworks event.**
13.	Section F.5	**Sediment Characteristics.** ~~The Discharger shall prepare a monitoring plan that identifies the locations of sediment monitoring. A minimum of 3 locations representative of the area of greatest potential impact and within the fireworks deposition zone shall be selected. All monitoring locations shall be approved by the Regional Board.~~
14.	Section F.6	**Infauna.** ~~The Discharger shall prepare a monitoring plan that identifies the locations of benthic infauna monitoring. A minimum of 3 locations representative of the area of greatest potential impact and within the fireworks deposition zone shall be selected. All monitoring locations shall be approved by the Regional Board.~~ For analysis of benthic infauna, two replicate samples of bottom sediment shall be collected and analyzed in January and July from a minimum of 3 locations. The benthic infaunal samples shall be collected using a 0.1-square meter modified Van Veen gran sampler. These grab samples shall be separated from those collected for sediment analyses. The samples shall be sieved using a 1.0 millimeter mesh screen. The benthic organisms retained on the sieve shall be fixed in 15 percent buffered formalin, and transferred to 70 percent alcohol within 2 to 7 days of storage. These organisms may be stained using Rose Bengal to facilitate sorting. Infaunal organisms, obtained during benthic monitoring shall be counted and identified to as low a taxon as possible. a. Number of species per 0.1-square meter b. Total number of species per station c. Total numerical abundance

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		d. Benthic Response Index (BRI) e. Swartz's 75 percent dominance index f. Shannon-Weiner's diversity index g. Pielou eveness (J) In addition to the community parameters, an annual evaluation shall be performed that includes more detailed statistical comparisons including community, temporal, and spatial analyses. Methods may include, but are not limited to, various multivariates, such as cluster analysis, ordination, and regression. Additionally analyses shall also be conducted, as appropriate, to elucidate temporal and spatial trends in the data. An additional array of 10 randomly selected ~~stations~~ **locations within the fireworks deposition zone** shall be sampled and analyzed annually for sediment chemistry and benthic infauna. The same procedures must be followed as outlined in F.5 and F.6, with the exception of the number of samples collected at each ~~station~~ **location**. Only one sample is required from each of the 10 randomly selected ~~stations~~ **location**. The ~~stations~~ **locations** shall be reselected each year by ~~USEPA~~ **SeaWorld** using **the methods set forth in** USEPA**'s** probability-based Environmental Monitoring and Assessment Program. The area shall extend throughout the Pacific Passage. **All randomly selected locations shall be approved the by Executive Officer.** ~~The random benthic sampling requirement may be suspended as part of a resource exchange agreement to allow for participation in the Southern California BIGHT Regional Monitoring Surveys at the discretion of the Executive Officer. The benthic sampling may only be canceled for the year in which the BRIGHT Survey is conducted.~~
15.	Section F.8	An aerial 8 ½ x 11 map that clearly outlines the fireworks deposition zone shall be prepared ~~for each sampling event~~ **by SeaWorld each year and approved by the Regional Board.**
16.	Tentative Order (global)	Other typographical errors and other minor corrections to the wording in the tentative Order have been or will be made prior to sending out the final version.