

MA0110329
RESPONSE TO PUBLIC COMMENTS

Trio Algarvio, Incorporated, New Bedford, Massachusetts

On September 18, 2003, the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MA DEP) released for public notice and comment, a draft National Pollutant Discharge Elimination System (NPDES) permit developed pursuant to an application from Trio Algarvio, Inc., for the re-issuance of a permit to discharge non contact cooling water (NCCW) and treated re-circulation reject water from its fish raceways to New Bedford Inner Harbor. The public comment period for this draft permit expired on October 17, 2003. Comments were received from the following:

Mass Fabricating & Welding, dated September 22, 2003
Commonwealth of Massachusetts, Division of Marine Fisheries, dated October 9, 2003
Trio Algarvio, dated October 15, 2003
The Coalition For Buzzards Bay, dated October 16, 2003

After a review of the comments received, EPA has made a final decision to issue the permit authorizing this discharge. The following response to comments describes the changes that have been made to the permit from the draft and briefly describes and responds to the comments on the draft permit. Clarifications which EPA considers necessary are also included below. A copy of the final permit may be obtained by writing or calling Jonathan Britt, EPA Massachusetts NPDES Permits Program (CPE), 1 Congress Street, Suite 1100, Boston, MA 02114-2023; telephone: (617) 918-1563.

Mass Fabricating & Welding comment

Comment 1

My name is Paul Weckesser, owner of Mass Fabricating & Welding, Inc. and [I] am an abutter of Trio Algarvio, Inc. I have noticed a legal advertisement in the New Bedford Standard-Times regarding Trio Algarvio, Inc.'s application for a permit to discharge their effluence into the New Bedford harbor. Public notice number MA-044-03, permit number MA0110329. It is my request that you deny Trio Algarvio, Inc., the right to discharge their waste into the harbor.

As an abutter of Trio Algarvio, Inc., I have noticed many times, and have photographs, of foreign substances being discharged from Trio Algarvio into the harbor of New Bedford. On occasion I have noticed a sheen on the water, much like that from a petroleum based product, under Trio Algarvio's discharge pipe after they have discharged their effluence into the water. When Trio Algarvio discharges their effluence into the harbor I notice that the effluence is not clear or clean like a reasonable person would assume to be water, but instead the discharge generally contains a white foam which spread around the immediate area and clings to the sides of the fishing vessels for a short while.

I must confess I am a little confused about the need for Trio Algarvio to request a permit to discharge their waste into the harbor as they have been doing so since I purchased the property next to Trio Algarvio several years ago. While I don't like the idea of anyone discharging any substance into the harbor I had always thought that Trio Algarvio had permission to do so.

Enclosed with this letter is a photo, of several, showing the discharge from Trio Algarvio. I do not know what the substance Trio dumps into the harbor, but I am sure it is not entirely clean water. Furthermore, Trio Algarvio's discharge is within 25 feet of my bulkhead. When Trio Algarvio discharges their effluence it becomes trapped against my bulkhead until the tide drops and eventually pulls the waste into the middle of the harbor.

In my opinion, New Bedford has spent a lot of time, money and effort to clean the harbor, once one of the most polluted of the country. At this point, we are finally beginning to reduce and reverse the damage from polluters and we should not allow any discharge whatsoever into the harbor for any purpose. This includes pure fresh water unless it has gone through a filtration process that is guaranteed to remove any and all possible pollutants. If Trio Algarvio wishes to discharge clean water, then why don't they simply do what every other industry must do and send their discharge through the sewer system so that it may be treated properly?

I am afraid if you allow Trio Algarvio to discharge their effluence into the harbor they will not, as the past has indicated, limit themselves to just pure and clean water. No only do I request you to deny their application for a permit to discharge into the harbor, I ask that you order their outflow pipe to be capped off preventing their ability to discharge anything into the harbor.

Thank you for taking a moment of your time to address my concerns.

Response 1

For clarification purposes, Trio Algarvio was issued a National Pollutant Discharge Elimination System (NPDES) five year permit to discharge treated waters to the New Bedford Harbor on March 20, 1996 and expired March 20, 2001. In 2001 Trio fulfilled their obligation by re-applying for the re-issuance of their five year NPDES permit. The 1996 permit has been administratively continued until a new permit is issued.

We believe that the limitations and conditions in the final permit protect water quality, including aesthetics. If the permittee discharges pollutants in excess of those limitations it will be subject to enforcement action, including penalties. If you observe discharges from their outfall(s) which cause aesthetic conditions such as those in the picture, you should contact the appropriate state and federal agencies. The appropriate names and addresses are listed below.

Mr. Steven Couto
US EPA Compliance Section
617-918-1765

Ms. Angela Miller
MA DEP South East Regional Office
508-946-2827

Footnote 7 has been added to the draft permit, which requires the permittee to perform visual

inspections in the area of each outfall on a weekly basis and on days of raceway cleaning.

Trio Algarvio comment

Comment 1

We have reviewed the Draft Permit MA0110329 for Trio Algarvio, Inc. These comments are submitted for review, consideration, and hopefully inclusion in the final permit.

We have specific concerns regarding the Discharge Limitation for Total Flow. This is referenced in several places throughout the draft permit and the Fact Sheet. Specifically, we note references in the Draft as follows:

Page 3 Total Flow, Average Monthly Limit of 34,000 gpd

Page 5 Footnote # 6;

and in the Fact Sheet as follows:

Page 7 Flow – Outfall 001 and 002.

As noted, the original permit was for a flow limit of 150,000gpd. This draft reduces this limit to current operational level, which is 34,000gpd. This limit severely restricts the flow, preventing any further growth of this facility. Although the goal of this facility is to make it a commercially viable fish farm, we have not reached that goal, and will be prevented from attaining it if we are limited to current practice. As Trio is the first, and to my knowledge, currently the only, summer flounder growout farm using saltwater recirculating technology, our growth has been slow and tentative, but deliberate. We are not operating at a commercially viable level at this point, although that was, and still is, our objective. Any growth, or movement toward that objective would place us in violation of our permit limit.

In reviewing the Fact Sheet, we were impressed by the “Anti-backsliding” paragraph on Page 11. As written, our operations would be limited to our current practices, and no growth would be allowed. This does not take into consideration the nature of our facility or of the fledgling nature of the aquaculture industry. We don’t believe that a downward deviation is appropriate at this point, since we are still in a growing mode, and anticipate, based on our experience to be in a growing mode for perhaps 5-10 more years.

The original permit was written knowing the anticipated needs of the facility as designed, 100,000gpd, and the production limits of the wells, 150,000gpd. With our current knowledge, culled from our experiences and that of others, we would recommend changing the limits to 80,000gpd average flow, with 150,000gpd as the maximum. This would allow for our anticipated growth, and yet would reflect the efficiencies we have developed with our saltwater recirculating system.

Your effort to write an appropriate permit is very much appreciated.

Response 1

Federal regulations found at 40 CFR Section 122.45(b) require that limitations and conditions for existing discharges be based on reasonable estimates of actual production. For new discharges,

production may be based on projections. The effluent limitations for the previous permit were based on estimates, since you were a new discharger. Now, eight years after the issuance of the original permit, your limits should be based on actual production. For flow, we would normally establish the limit based on your actual discharge flows, but since flow monitoring was not reported as required by the permit, we initially proposed to include a limit based on the actual installed pumping capacity of 34,000 gpd.

However, since your comment indicates that you have not yet achieved a commercially viable production level, but believe you may during the term of this permit, we will authorize the discharge of an average monthly flow 80,000 gpd and a maximum daily flow of 150,000 gpd, consistent with your request. The flow limits has been changed accordingly on page 3 of 9, and in footnote 6. As you will see in our responses to comments from the Coalition for Buzzards Bay, we have shortened the term of the permit to 2 years, and will be reevaluating this issue at the end of the permit term.

Antibacksliding regulations would not necessarily prohibit an increase in permit limits if such an increase was the result of a material and substantial alterations or additions to the permitted facility, such as an increase in production. Any increase would be subject to antidegradation requirements which generally prohibit any lowering of water quality.

Commonwealth of Massachusetts, Division of Marine Fisheries

Comment 1

The Division of Marine Fisheries (MarineFisheries) has reviewed the draft NPDES permit (MA0110329) that allows Trio Algarvio, Inc., to discharge once through non-contact cooling water and treated recirculation reject water from fish raceways into the receiving waters of New Bedford Harbor. MarineFisheries believes the control measures, monitoring requirements, and discharge limitations in the draft permit will serve to better protect marine fishery resources in the receiving waters. MarineFisheries reserves the right to amend this finding should discharge conditions other than those stipulated in the draft permit take place and requests timely notification should this occur.

Response 1

The information submitted by MarineFisheries is now part of the permit record.

The Coalition For Buzzards Bay

The Coalition for Buzzards Bay (“The Coalition”) has reviewed the September 18, 2003 draft permit for Trio Algarvio, Inc. (“Trio Algarvio”) to discharge under the National Pollutant Discharge Elimination System (NPDES), and offers the following comments.

The Coalition is a non-profit membership organization dedicated to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed. We represent more than 2,400 individuals, families, organizations and businesses in southeastern Massachusetts who are interested in maintaining the health and ecological vitality of Buzzards Bay.

The Trio Algarvio facility discharges pollutants from its aquaculture operations into New Bedford Harbor - one of the most impaired estuaries in the Buzzard Bay watershed. The facility discharges both “non contact” cooling water and water that has been recirculated through its fish raceways; its discharged wastewater notably includes nitrogen, oxygen-deprived water, and heavy metals.

Comment 1

As an initial matter, the draft permit appears to be based on the false premise that Trio Algarvio’s discharges are irrelevant to the problem of pollution in New Bedford Harbor. Indeed, the Fact Sheet (at page 4) includes the following sweeping and incorrect statement regarding the facility: “The 1998 303(d) report states that the New Bedford Inner Harbor, from the Coggeshall Street Bridge to Hurricane Barrier (Buzzards Bay River Basin MA95-42), is not attaining water quality standards due to Priority Organics, Metals, Nutrients, Organic enrichment/low dissolved oxygen, and Pathogens...The Trio Algarvio facility does not cause or contribute to any of the identified impairments.” (Emphasis added). The draft permit’s fact sheet itself contradicts this statement, acknowledging on the preceding page that the water used by Trio Algarvio for cooling and then discharged, untreated, into the Harbor via Outfall 001 is “oxygen deprived, and is rich in iron, ammonia, and calcium.” See Fact Sheet at page 3 (emphasis added). These are among the very same pollutants that are known to have caused the documented impairment of the receiving waters. Though the data presented with the Fact Sheet does not include sufficient information to distinguish the pollutants in Outfall 002 from those contained in Outfall 001, the discharge of (treated) fish raceway recirculation water through this second outfall presumably also contains nitrogen (as nitrates) and other pollutants, including suspended solids. Particularly given the impaired state of the receiving waters, it is critical that monitoring requirements and discharge limits be set for these pollutants in connection with both of the Trio Algarvio outfalls.

Response 1

The permittee does contribute pollutants to New Bedford Harbor for which the receiving water is in non attainment. These loadings are low compared to other sources, and we do not believe that they contribute to observed impacts. We do however concur with your concerns that these pollutants be monitored so we can reevaluate their impact during the next permit reissuance. As is discussed in greater detail in the following responses, we are shortening the term of the final permit and increasing the monitoring requirements. See Responses 2 and 3 below.

Comment 2

Nitrogen Monitoring Requirements and Limits Are Critical For Discharges To Inner New Bedford Harbor Estuary. Inner New Bedford Harbor is among the most eutrophic embayments within Buzzards Bay, with nitrogen pollution being of particular concern. These problems have been well documented by more than a decade of water quality monitoring and data collection by the University of Massachusetts School for Marine Science and Technology (SMAST) and the Coalition. See, e.g., Howes, Dr. Brain et al., Baywatchers II (December 1999) at 95-99; Baywatchers III (May 2002). The nitrogen overloading of this estuary has produced fish kills in the upper estuary, complete loss of aquatic habitats such as eelgrass throughout the Harbor, and other ecological and aesthetic impacts such as reductions in water clarity and bad odors. Despite dramatic improvements in Harbor health in recent years (due primarily to improvements in sewage treatment in the City of New Bedford), the symptoms of excessive nitrogen loading persist in New Bedford Harbor today and threaten to undo years of progress toward the restoration of water quality. Currently beyond its limits, New Bedford Harbor is incapable of accepting additional nitrogen pollution without serious declines in water quality and marine species.

New Bedford Inner Harbor is included on the Massachusetts list of waters not attaining water quality standards pursuant to Federal Clean Water Act Section 303(d). The listed pollutants include priority organics, metals and nutrients. A Total Maximum Daily Load ("TMDL") for Inner New Bedford Harbor, which necessarily will evaluate all sources of nitrogen to the estuary and establish maximum daily load allocations for both point sources and non point sources, is expected to be completed within two years.

While the data appended to the draft permit's Fact Sheet is limited (and only includes data for ammonia as nitrogen, rather than nitrites, nitrates, or total Kjeldahl Nitrogen), it is likely that the discharges from Trio Algarvio's two outfalls are contributing to the problem of nitrogen overloading in New Bedford Harbor. We therefore urge that discharge limits be set for the facility upon completion of the TMDL for the estuary, and strongly urge the implementation of increased nitrogen monitoring requirements in the interim. Presently, the facility is only required to monitor ammonia as nitrogen, and even then only with respect to Outfall 002. Since the cooling water that ultimately is discharged through Outfall 001 is known to contain ammonia, the lack of a monitoring requirement for this pollutant at Outfall 001 makes no sense. Likewise, the lack of monitoring requirements for other forms of nitrogen - which should be expected to be produced by an aquaculture facility such as Trio Algarvio's - seem anomalous. At a minimum, the facility should be required to monitor and report total nitrogen discharge from both outfalls on a monthly basis.

Response 2

EPA and MA DEP agree that there is a need develop a total nitrogen data base on the effluent. Monitoring once per quarter for ammonia nitrogen and total nitrogen has been added to both outfall 001 and outfall 002. The relatively low flow from the facility projects that the loading of nitrogen from the facility is low in comparison to other total nitrogen contributors thus quarterly monitoring is deemed sufficient. Weekly monitoring of dissolved oxygen has also been added to both outfalls.

The monitoring requirements will be reviewed as part of the next permit renewal process.

Comment 3

The Duration Of The Permit Should Be Shortened To Two Years. *The draft permit has a proposed expiration date of September 30, 2007 - a term of approximately three and one-half years. According to the Fact Sheet (at page 2), the draft permit's proposed expiration date is based on the five year cycle of the Massachusetts DEP Watershed Initiative. However, this basis is far from compelling in view of considerations strongly favoring a shorter term for this permit. For the same reasons that a shorter term recently was adopted for the Fairhaven WWTP NPDES permit (Permit No. MA0100765) (i.e., so that appropriate nitrogen limits can be set as soon as a TMDL has been completed for the receiving waters), we believe the term of the Trio Algarvio permit should be shortened to a period of two years from the effective date. (See Response to Public Comments for Draft NPDES Permit MA 0100765 at p. 2). As noted above, a TMDL for Inner New Bedford Harbor is expected to be completed within two years. It thus makes sense to shorten the duration of the permit so that a new permit can be issued - with realistic limits on nitrogen - shortly after the TMDL is complete. This will also allow a reasonable period of time for more data collection based on the facility's expected compliance with proposed monitoring requirements.*

At the same time, we urge the EPA to ensure that the TMDL is in fact completed within this two year time frame, so that a nitrogen limit can be set that is based on a comprehensive analysis of all Harbor nitrogen sources, including the Trio Algarvio's discharges.

Response 3

EPA and MA DEP agree that the permit should be shortened to coincide with both the target completion date of the TMDL, and other discharge permits in this watershed. The expiration date has been changed from September 30, 2007 to two years from the effective date.

Comment 4

The Permit Should At Least Require Monitoring For Heavy Metals. *The draft permit sets neither a discharge limitation nor reporting requirement for any heavy metals. Considering that the facility's reported data suggest reasonable potential for zinc toxicity (with a reported zinc concentration of 0.1793 mg/l in the one data sample provided), the permit should at least include a monthly monitoring requirement for this heavy metal which can be toxic to aquatic life.*

The draft permit also fails to set any monitoring requirement or discharge limitation for iron, despite the perception that the cooling water used in the facility and discharged through Outfall 001 "is rich in iron". See Fact Sheet at page 3. No data is provided to suggest the present level of iron concentration in the facility's wastewater stream. Nonetheless, since the cooling water is known to contain iron and apparently is not treated prior to discharge, a monthly monitoring requirement should be set for iron as well.

Response 4

EPA and MA DEP have included a quarterly monitoring requirement for zinc in the final permit. There is no salt water water quality criteria for iron therefore monitoring for iron is not included in the final permit.

Comment 5

Miscellaneous. The Coalition also wishes to note that some of the headings under the category “Discharge Limitation” for Outfalls 001 and 002 (on pages 2 and 3 of the draft permit) are confusing and seem to be in error. The column headings “Average Monthly” and “Maximum Daily” are repeated twice in each table, without apparent reason. Thank you for allowing this opportunity to submit comments on the draft NPDES permit for the Trio Algarvio facility.

Response 5

The table(s) on pages 2 and 3 of the draft permit are organized to reflect the layout of a Discharge Monitoring Report (DMR) which will be required to be submitted to EPA. The left two columns are generally used for mass limits, if applicable, and the right set of column are for concentration limits. EPA agrees that mass and concentration limits can be combined using one set of columns. By reproducing the DMR layout, the permittee is aware of which box(es) need to be completed (those showing a limit), and which boxes remain closed or no limit imposed (indicated in the draft by *****).