

**RESPONSE TO COMMENTS  
REGARDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION  
SYSTEM PERMIT MODIFICATION FOR  
ALDEN RESEARCH LABORATORY, INC  
MA0028801**

**INTRODUCTION**

On August 21, 2008, the New England office of the U.S. Environmental Protection Agency (EPA) submitted for public notice a draft National Pollution Discharge Elimination System (NPDES) permit modification (draft permit modification) to Alden Research Laboratory, Inc. (Alden). EPA and Massachusetts Department of Environmental Protection (MassDEP) solicited public comments on the draft permit modification from August 21, 2008 through September 19, 2008.

The draft permit modification would authorize and set limits for the discharge of filtered water from fish testing tanks at two additional outfalls. The facility proposes to discharge to Chaffins Brook.

During the public-notice (comment) period EPA received comments in writing from Brian J. McMahon, Senior Environmental Engineer for Alden Research Laboratory, Inc.

In accordance with the provisions of 40 C.F.R. § 124.17, this document presents EPA's responses to comments, including all significant comments, received on the draft permit modification and details any changes made to the final permit modification as a result of the comments.

EPA's decision-making for this permit modification has benefited from the comments submitted. The information and arguments submitted in the comments resulted in a number of improvements to the permit modification. In addition, EPA noted some errors in the permit modification which were corrected. Changes from the Draft Permit Modification, summarized below, are reflected in the final permit modification. These changes do not represent significant changes from the draft permit modification.

**Changes Made in the Final Permit Modification**

1. The list of revisions between the final permit (issued July 15, 2006) and final permit modification (page 1) was updated to reflect changes made in response to comments provided by the permittee.
2. Water quality-based limits based on dissolved metals are expressed as total recoverable metal. The copper limit reported in Part I.A.2 of the draft permit was translated into total recoverable copper using the freshwater criteria conversion factor for copper (0.96), but was incorrectly expressed as total dissolved copper. The final permit correctly reports this limit as total recoverable copper.

3. An additional requirement was added to Part I.A.10 prohibiting the discharge of drugs, feed, or pesticides.
4. References to discharge of holding tanks, drugs, medications, pesticides, or feed were removed from the narrative requirements in Part I.B. Parts I.B.2., I.B.3.a(1), and I.B.3.e(1) were eliminated. Part I.B. was renumbered to reflect these revisions.

## **RESPONSE TO COMMENTS**

### **Comment 1: Draft permit modification (page 4)**

Please revise note footnotes are on page 5.

#### **Response to Comment 1**

The final permit modification on page 4 has been altered as follows:

“See page 5 for explanation of footnotes.”

### **Comment 2: Draft permit modification (page 7)**

Part I.A.10. There shall be no discharge of untreated wastewaters from fish holding tanks, bag filters, filter backwash, and associated equipment.

*Alden:* We are not requesting to discharge water from the holding facilities. Therefore, this is not applicable to the permit amendment and we request that this be changed from fish holding tanks to fish testing tanks.

#### **Response to Comment 2**

EPA acknowledges that the permit modification applies only to discharge from the fish testing tanks in Buildings 6 and 15. These tanks are used to conduct fish testing experiments, in which fish are tested for typically for less than 6 hours and then removed. Water from the fish holding tanks is treated and transported off-site to Blackstone Treatment Facility (see Fact Sheet page 5). The permit requirement at Part I.A.10 is intended to specifically prohibit discharge from holding tanks to the receiving water, thus clarifying that only wastewater from fish testing tanks shall be discharged to Chaffins Brook. Therefore, this requirement is applicable and has been included in the final permit modification. The final permit modification at Part I.A.10 states “[t]here shall be no discharge from fish holding tanks, bag filters, filter backwash, and associated equipment. There shall be no discharge of drugs, feed, or pesticides.”

### **Comment 3: Draft permit modification (page 7)**

Part I.A.11. The permittee shall notify EPA and the State within 24 hours upon the occurrence of any water quality induced mortality of greater than 25 percent in any aquatic species held at the facility (excluding larval fish) during a single mortality event not related to research being reporting.

*Alden:* Only healthy fish can/will be tested in the test tanks. Fish holding facilities/tanks are separate from the testing facilities and we are not requesting to discharge water from the holding facilities. Therefore, this requirement is not applicable to the permit amendment and we request that it be removed from the permit.

### **Response to Comment 3**

EPA acknowledges that the permit modification applies only to discharge from the fish testing tanks and that only healthy fish will be tested. This requirement is intended to notify EPA of unusual mortality events that may be related to water quality in the fish testing tanks that would be discharged to Chaffins Brook, and is not meant to apply to fish holding tanks. EPA also corrected a spelling error. The final permit modification has been altered to specify that only those mortality events in the fish testing tanks need notification:

“The permittee shall notify EPA and the State within 24 hours upon the occurrence of any water quality induced mortality of greater than 25 percent in any aquatic species in the fish testing facilities (excluding larval fish) during a single mortality event not related to research being conducted.

### **Comment 4: Draft permit modification (page 9)**

#### Part I.B.1 Structural Failure and/or Damage to Fish Testing or Holding Tanks

The permittee must notify EPA and MassDEP in accordance with the following procedures when there is a “reportable failure” (as defined below) in, or damage to, the structure of an aquatic animal containment system (e.g., holding or testing tanks) or its wastewater treatment system that results in an unanticipated discharge of pollutants to waters of the United States.

a. For this facility, a reportable failure applies only to active holding and testing tanks (containing fish and flowing water) and their ancillary components and refers to the collapse or damage of a unit or its wastewater treatment system; damage to pipes, valves, and other plumbing fixtures, and damage to or malfunction of screens or physical barriers in the system, which would prevent the system from containing water, sediment, and the aquatic animals being held. Wastewater treatment systems include tanks used for temporary storage of wastewater and/or settled solids removed from active holding and testing tanks.

*Alden:* The fish holding facilities/tanks are separate from the testing facilities and we are not requesting to discharge water from the holding facilities. Therefore, this requirement,

with respect to fish holding tanks, is not applicable to the permit amendment and we request that the reference to the fish holding tanks be removed from the permit.

#### **Response to Comment 4**

This permit requirement was intended to notify EPA and MassDEP of damage to structural units that may result in unintentional discharge to Chaffins Brook, either from fish testing and holding tanks. However, Alden’s comment clarifies that water from fish holding tanks is treated separately from fish testing tanks and cannot result in a discharge, even unintentional, to the receiving water. Therefore, any reference to holding tanks has been removed from the narrative requirements and the final permit modification has been altered as follows:

##### “Part I.B.1 Structural Failure and/or Damage to Fish Testing Tanks

The permittee must notify EPA and MassDEP in accordance with the following procedures when there is a “reportable failure” (as defined below) in, or damage to, the structure of an aquatic animal containment system (i.e., fish testing tanks) or its wastewater treatment system that results in an unanticipated discharge of pollutants to waters of the United States.

- a. For this facility, a “reportable failure” applies only to active testing tanks (containing fish and flowing water) and their ancillary components and refers to the collapse or damage of a unit or its wastewater treatment system; damage to pipes, valves, and other plumbing fixtures, and damage to or malfunction of screens or physical barriers in the system, which would prevent the system from containing water, sediment, and the aquatic animals being tested. Wastewater treatment systems include tanks used for temporary storage of wastewater and/or settled solids removed from active testing tanks.”

Note that the prohibition of discharge from holding tanks has been retained in Part I.A.10.

#### **Comment 5: Draft permit modification (page 9)**

##### Part I.B.2. Spills

In the event of a spill of drugs, pesticides, or feed that results in a discharge to water of the United States, the permittee must provide an oral report of the spill to EPA and MassDEP within 24 hours of its occurrence and a written report to these agencies within 7 days in accordance with Section D of the Standard Conditions of this permit. The report shall identify and estimate the quantity of the material spilled.

*Alden:* Drugs, pesticides, or feed are not used in the testing facilities. Therefore, this is not applicable to the permit amendment and we request that this be removed from the permit.

### **Response to Comment 5:**

This permit requirement was intended to notify EPA and MassDEP of accidental spills of drugs, pesticides, or feed that may result in unintentional discharge to Chaffins Brook, even though these pollutants are not specifically administered in fish testing tanks. However, Alden's comment clarifies that the fish holding facilities in Buildings 6 and 15 are completely separate systems and cannot result in discharge to the receiving water, even unintentionally. As a result, this narrative requirement has been removed from the permit and instead an additional requirement has been added at Part I.A.10 specifically prohibiting the discharge of drugs, pesticides, and feed.

### **Comment 6: Draft permit modification (page 9)**

#### Part I.B.3. Best Management Practices Plan

The permittee shall develop a plan to identify Best Management Practices (BMPs) to be followed in operating the testing facility, using medications and other chemicals, cleaning the flume, screens, and other equipment, and disposing of any solid waste. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. The BMP plan, at a minimum, shall include the following provisions:

*Alden:* Medication or drugs are not used in the testing facilities. Therefore, this is not applicable to the permit amendment and we request that this be removed from the permit.

### **Response to Comment 6:**

EPA acknowledges that no medications or feed is administered to fish in testing tanks and will not be included with discharge to Outfalls 003 and 004 under this permit modification. This requirement was intended to ensure that practices regarding medicines were included in the Best Management Practices Plan. However, Alden's comments clarify that no unintentional discharge of medicines will occur. Any reference to medications has been removed from this narrative requirement and instead an additional requirement has been added at Part I.A.10 specifically prohibiting the discharge of drugs. In addition, in the final permit modification the narrative requirement at Part I.B.2 has been altered as follows:

“The permittee shall develop a plan to identify Best Management Practices (BMPs) to be followed in operating the testing facility, using chemicals, cleaning the flume, screens, and other equipment, and disposing of any solid waste...”

### **Comment 7: Draft permit modification (page 10)**

- a. Solids control

(1) No feed shall be dispensed in fish testing tanks in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.

*Alden:* As stated previously, feeding is not conducted in the testing facilities. Therefore, this provision is not applicable to the permit amendment and we request that all requests for feed related data be removed from the permit.

### **Response to Comment 7**

EPA acknowledges that no feed is administered in testing tanks. The intention of this requirement was to prohibit feed from being administered in fish testing tanks in accordance with the permittee's existing practices. In the final permit modification this narrative requirement has been removed from the permit and instead an additional requirement has been added at Part I.A.10 specifically prohibiting the discharge of drugs, pesticides, and feed.

### **Comment 8: Draft permit modification (page 10)**

(2) In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of holding tanks, testing tanks, and bag filters, and procedures to minimize any discharge of accumulated solids during the inventorying, holding, or testing of aquatic animals at the facility.

*Alden:* There are no settling ponds, basins, or production systems, or holding tanks that are part of or integrated with testing tanks. Therefore this is not applicable to the permit amendment and we request that these be removed from the permit.

### **Response to Comment 8**

Any reference to settling ponds, basins, production systems, or holding tanks in the requirement at Part I.B.3.a(2) of the draft permit modification has been removed. In the final permit modification, the newly numbered Part I.B.2.a(1) has been altered as follows:

“Identify and implement procedures for routine cleaning of testing tanks and bag filters, and procedures to minimize any discharge of accumulated solids during the inventorying and testing of aquatic animals at the facility.”

### **Comment 9: Draft permit modification (page 10)**

d. Structural maintenance

(2) Conduct regular maintenance of the closed-loop recirculating systems, testing and holding tanks, and the wastewater treatment system in order to ensure that they are properly functioning.

*Alden:* The fish holding facilities/tanks are separate from the testing facilities and we are not requesting to discharge water from the holding facilities. Therefore, this is not applicable to the permit amendment and we request that it be removed from the permit.

### **Response to Comment 9**

This requirement was intended to ensure that improper maintenance would not result in an unintentional discharge from holding tanks to the receiving water. However, Alden's comments clarify that no unintentional discharge can occur because the holding tanks in Buildings 6 and 15 are a completely separate system. Thus, any reference to holding tanks in this requirement has been removed and Part I.B.2.d(2) of the final permit modification has been altered as follows:

“(2) Conduct regular maintenance of the closed-loop recirculating systems, testing tanks, and the wastewater treatment system in order to ensure that they are properly functioning.”

### **Comment 10: Draft permit modification (page 11)**

#### e. Recordkeeping

(1) In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.

*Alden:* No feeding has occurred or will occur in the testing facilities. Therefore this is not applicable to the permit amendment and we request that his be removed from the permit.

### **Response to Comment 10**

Because no feed will be administered in fish testing tanks, EPA does not anticipate uneaten feed to be discharged to the receiving waters. It is unnecessary to mandate representative feed conversion ratios and maintain records of feed management in order to minimize uneaten feed in discharge. This requirement has been removed from the final permit modification.

### **Comment 11: Draft permit modification (page 11)**

#### f. Training

(2) Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

*Alden:* No feeding has occurred or will occur in the testing facilities. Alden is not a fish production facility and the holding facility is separate from the testing facility.

Therefore, this is not applicable to the permit amendment and we request that production and feeding procedures be removed from the permit.

### **Response to Comment 11**

No water from production or holding tanks will be discharged to receiving waters, thus training under 40 CFR Part 451 (ELGs for concentrated aquatic animal production) is not necessary. This requirement has been removed from the final permit modification.

### **Comment 12: Fact Sheet (page 2)**

“The closed loop system includes both particulate filtration with high capacity bag filters (maximum filtration of 25 microns) and ultraviolet (UV) light for sterilization.

*Alden:* Maximum filtration filter opening size used in the facility is 100 micron. It is stepped down to 25 micron to polish the water. Please see item 1 of the letter to Danielle Gaito, dated Dec. 26, 2007.

Alden repeats this comment on page 5.

### **Response to Comment 12**

EPA acknowledges the error in the draft fact sheet and notes that the high capacity bag filters associated with the closed loop filtration systems have a maximum filtration opening size of 100 microns. See Fact Sheet page 2 and Page 5. However, the fact sheet cannot be changed after the public notice period. The clarification is made in this response for the record.

### **Comment 13: Fact Sheet (page 3)**

“Alden is the only authorized discharge, and no withdrawals occur on this reach.”

*Alden:* Water withdrawals do occur on this reach of Chaffins Brook, please see Fact Sheet, 2001 Reissuance document for description and Figures 11A Line Drawings of Outfall No. 1 and No. 2 from 2006 NPDES Permit indicating that stream water is withdrawn and used on the facility.

### **Response to Comment 13**

EPA acknowledges the error in the draft fact sheet. The Fact Sheet, 2001 Reissuance document states “[w]ater is taken from Chaffins Brook and passed once through either the calibration facility or the hydraulic model and then discharged to Chaffins Brook via one of two outfalls (page 2). Alden is the only withdrawal on this reach. The fact sheet cannot be changed after the public notice period, however, the clarification is made in this response for the record.

#### **Comment 14: Fact Sheet (page 9-10)**

Settling tanks are cleaned with a vacuum pump and solid wastes incinerated on the property.

*Alden:* Solid waste that is vacuumed from the settling tank to a waste tank for disposal at Blackstone Treatment Facility, euthanized fish are transported off the facility for incineration. No incineration takes place at our facility.

#### **Response to Comment 14**

EPA notes this comment. The Fact Sheet will not be reissued, although this response to comments serves as an addendum to the Fact Sheet. No changes have been made to the final permit modification as a result of this comment.

#### **Comment 15: Fact Sheet (page 9-10)**

“BMPs require the permittee to develop and employ methods for feed management, removal of accumulated solids, storage of drugs and pesticides, spill prevention, management of the wastewater treatment system, maintaining accurate records, and ensuring that all personnel receive proper training.”

*Alden:* As stated earlier these items (feed management, removal of accumulated solids, storage of drugs and pesticides) are not allowed to be used in the fish testing tanks therefore this is not applicable to the permit amendment therefore we request that they be removed from the permit.

#### **Response to Comment 15**

Any reference to holding tanks, feed, drugs, or pesticides have been removed from the narrative requirements and an additional requirement has been added to Part I.A.10 prohibiting the discharge of drugs, pesticides, or feed. See Responses to Comments 5, 6, 7, 8, and 9.

#### **Comment 16: Fact Sheet (page 10)**

“In addition to these practices, two additional categories have been added to the Draft Permit: ...(2) identifying and quantifying all aquaculture drugs and chemicals used at the facility.”

*Alden:* As stated earlier these items are not allowed to be used in the fish testing tanks therefore this is not applicable to the permit amendment therefore we request that they be removed from the permit.

#### **Response to Comment 16**

Discharge of these items is prohibited under Part I.A.10 of the final permit modification. EPA notes that although the fact sheet (page 10) states that this additional category was included, the draft permit modification contains no corresponding requirement. However, because discharge of these items is prohibited and the manner in which they are administered cannot result in unintentional discharge, no narrative requirement to identify and quantify all drugs and chemicals used at the facility is necessary. See Responses to Comments 5 and 6.