MA0029327
RESPONSE TO PUBLIC COMMENTS

Agri-Mark, Inc. West Springfield, Massachusetts

On October 30, 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 Agri-Mark, Inc. for the issuance of a permit to discharge from their West Springfield Massachusetts facility to Bagg Brook. The public comment period for this draft permit expired on November 28, 2003. Comments were received from the following:

Agri-Mark, Inc., dated October 31, 2003
Levy Engineering, Agri-Mark's consultant, dated November 28, 2003
Commonwealth of Massachusetts Riverways Programs, dated November 24, 2003

After a review of the comments received, EPA has made a final decision to issue the permit authorizing these discharges. 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.

Agri-Mark and Levy Engineering

Agri-mark has received their new permit limits. Currently Agri-Mark discharges into a storm sewer located on the property of Agri-Mark. This 60" storm sewer collects water from a very urbanized area of West Springfield and discharges to Bagg Brook located approximately 1,000 feet from the property.

Comment 1

The proposed permit requires a pH range of 6.0 - 9.0, {a pH difference of 0.5 su,} *and a maximum of 3 degrees Fahrenheit difference in the water temperature before and after discharge to Bagg Brook. We currently have no information on the impact of the existing storm flows on the Brook without Agri-Mark. Since our current operation is not continuous, Agri-Mark will attempt to collect some information on the temperatures and pH prior to the end of the 30 day comment period.*

Agri-Mark is also concerned with regard to the requirement of sampling at Bagg Brook. Agri-Mark does not own land adjacent to Bagg Brook. The requirement to sample upstream and downstream will depend on legal access to a sampling location and the physical ability to collect a sample safely during all weather conditions.

Comment 2

The following table is the temperatures measured by Agri-Mark in the past month. The Cow water was discharged on three of the days of the monitoring. In appears from these results that there is at least a 3 degree differential from the storm water outfall to upstream values, and this is true if Agri-Mark is operating or not operating. We request that temperature monitoring at Bagg Brook be deleted from the permit.

Date	***time***	***Bagg Br upstream***	***Bagg Br Storm Outfall***	***Bagg Br Downstream***	***Agri-Mark Outfall***
11/07/03	*12:55*	*53*	*55*	*53*	*Not Oper*
11/08/03	*1pm*	*48*	*51*	*49*	*Not Oper*
11/9/03	*1pm*	*44*	*51*	*45*	*54*
11/12/03	*2pm*	*48*	*53*	*48*	*Not Oper*
11/13/03	*1:40pm*	*47*	*52*	*47*	*Not Oper*
11/25/03	*12pm*	*46*	*49*	*46*	*Not Oper*
11/26/03	*1pm*	*45*	*52*	*46*	*58*
11/28/03	*1pm*	*43*	*50*	*44*	*57*

The "Agri-Mark outfall" is the sampling station prior to leaving the Building.

Agri-Mark would be willing to provide a continuous monitor of the temperature. Agri-Mark would prefer to monitor within the plant. The actual discharge manhole is located in the middle of the truck receiving area. If the permit required Agri-Mark to monitor "prior to discharge to the City storm sewer", then an internal monitor could be used. As can be seen from the above chart, the current temperature readings are 54, 58, 57 degrees Fahrenheit.

Response 1 and 2

EPA recognizes the obstacles of collecting instream samples and the complications associated with off site stormwater discharges. EPA and MA DEP have removed instream sampling for pH and temperature in the draft permit.

Comment 3

Agri-Mark is currently reviewing the permit limits. There is a total mass limit for the BOD and this will restrict flow for the discharge. If the water quality limit is 5 pounds per day of BOD, which is substantially less then the previous limit, then Agri-Mark requests the limitations on flow of 0.12 MGD and 0.17 MGD be removed.

Response 3

EPA and MA DEP feel that the more restrictive mass limits in addition to retaining the existing flow limits are necessary to preserve water quality in Bagg Brook, a waterbody with limited dilution. No change has been made to the draft permit.

Commonwealth of Massachusetts Riverways Programs

Staff at the Riverways Programs, MA Department of Fish and Game, has reviewed the draft NPDES permit for Agri-Mark, Inc Facility discharging to Bagg Brook and the Connecticut River. We appreciate the opportunity to review and comment on the draft NPDES permits. Protecting the health of the state's rivers and estuaries is the driving force behind the Riverways Programs' work. The potential for point source pollution discharges to negatively impact our waterways heightens the role of the NPDES permits in resource protection efforts.

Comment 1

The pH range allowed in this permit reflects national standards for this industrial category but do not reflect Massachusetts Class B Water Quality Standards. The range should be adjusted to reflect the state's pH standards for this Class B waterways, especially given the dilution for this discharge is assumed to be zero and Bragg Brook is an impaired water. The permit admirably adds a maximum deviation of pH from the receiving waters at 0.5 s.u. but this condition should not obfuscate the fact MA Class B waters should have a pH of between 6.5 and 8.3 s.u. The permit does not provide details about how the pH of the receiving water will be determined to back-calculate what the acceptable pH would be for the effluent. Will the pH monitoring follow the temperature monitoring requirements which only require a mid-day grab sample but do not specify a location, a sample taken from the main flow of the river or what to do when Bragg Brook has no or little flow? Is twice per month monitoring sufficient to capture the affect the effluent is having on the pH regime of the brook? The draft permit seems to state the deviation of 0.5 s.u. is not measured directly in the effluent stream but in the receiving water, presumably after mixing, when there is flow available in the receiving water to dilute the discharge. This could mean a long reach of Bragg Brook could have a greater than 0.5 pH deviation while mixing is occurring when stream flows are low or negligible. This could lead to both chronic and acute problems to the health and diversity of the aquatic ecosystem.

Response 1

The pH limits of 6.0 - 9.0 s.u. for Outfall 001 in the draft permit are consistent with federal regulations listed in Chapter 40 of the Code of Federal Regulations Section 405, Subpart I *Condensed Milk Subcategory*. However, the pH limits of 6.0 - 9.0 s.u. in the draft have been changed to 6.5 to 8.3 s.u. in order to be which consistent with the Massachusetts Water Quality Standards for Class B waters.

EPA and MA DEP agree that the permit does not indicate where background pH and temperature levels will be measured. Due to the lack of accessibility to the Brook and complications with off site stormwater discharges, EPA has removed the instream pH requirements. Footnotes 3, 4, and 5 on Permit Page 3 of 6 have been removed from the draft permit.

Comment 2

The Fact Sheet mentions the permittee installed a turbidity meter on the effluent line. Is there any data available on the turbidity of the effluent? Given the negligible to no dilution available for the effluent, turbidity should be a consideration in the protection of water quality

and aesthetics of the receiving waters. As the Fact Sheet indicates, Bagg Brook- Connecticut River confluence is already listed as an impaired waterway due in part to high suspended solids and Bagg Brook is a low flow water body. If the monitoring done to date shows the effluent to have high turbidity, the problem should be remediated by incorporating a turbidity limit in the NPDES permit since TSS and BOD concentrations and loadings may not accurately reflect the opaqueness or turbidity of the effluent.

Response 2

Agri-Mark does have a turbidimeter on the discharge. It is an indicator of the discharge; there is no recorder. Consequently, there is no historical data available. The turbidimeter is set to alarm if the measurement exceeds 15 NTU. Levy Engineering stated that there has never been an alarm. No change has been made to the draft.

Comment 3

Given the low flow of the receiving water the decision to maintain the flow limits at 0.12 and 0.17 mgd is sound. As the Fact Sheet states, Bragg Book and its confluence with the Connecticut River are listed as impaired waters and, until a TMDL is completed, the allocation of pollutants from point and nonpoint sources is not known so an increase in effluent could exacerbate the existing impairments. Until a TMDL is completed and allocations assigned, it would be premature to allow an increase in flow or pollutant loads to Bragg Brook.

Response 3

The information submitted by The Commonwealth of Massachusetts Riverways Programs is now part of the permit record.

Comment 4

The permittee is required to monitor temperature both upstream and downstream of the discharge to determine temperature changes. The draft permit provides only some guidance as to how and where the temperature should be taken and the $\triangle T$ calculated. The sampling should be done as to reasonably represent the temperature of the waterway. Every effort should be made to take the temperature of the water in the main stream flow, not in still or backwaters or an eddy or at the surface where weather may affect water temperatures to a greater extent than in deeper waters. In situ rather than a grab sample would better reflect existing conditions. How will upstream water temperature be determined and the $\triangle T$ calculated if there is no flowing water upstream of the discharge, (the Fact Sheet notes Bragg Brook is a low flow stream)? Should temperature monitoring coincide with the expected hottest and coldest part of the day during which discharge from the facility is occurring rather than a blanket mid-day requirement? Does 3 °$\triangle T$ apply regardless of the temperature of the receiving water- the effluent can be no more than 3° warmer or colder than ambient receiving water conditions? Twice per month sampling seems inadequate to capture the variability of water temperatures seen in a river over a thirty to thirty-one day period. Temperature monitoring is simple and a weekly requirement does not seem to be an onerous schedule given the need to protect the receiving water and the negligible dilution afforded the effluent. At the very least there should be a continuous monitoring or daily monitoring of the effluent temperature to make sure the

83°F maximum is not exceeded and if the effluent is likely to be considerably cooler or warmer than ambient water conditions if sampling of the river upstream and downstream of the discharge is not practical.

Response 4

The instream temperature monitoring requirements have been removed from the draft. See Agri-Mark Response 1 and 2. EPA agrees that more frequent effluent monitoring is appropriate. The frequency for temperature has been changed from twice per month to once per week.

Addition to final permit:

The permit requires the permittee to monitor for total nitrogen [Kjeldahl, nitrite and nitrite] twice per year to provide effluent data on the amount of total nitrogen discharged from the facility. All permittees in the Connecticut River watershed will have total nitrogen monitoring requirements in theri NPDES permits in order for the permit agencies to establish a data base on the nitrogen loadings to the Connecticut River watershed for all point source discharges. This is part of an on-going evaluation to establish a mechanism to reduce nitrogen loadings in all waterbodies which are tributary to Long Island Sound which includes the Connecticut River watershed in Massachusetts. The required monitoring is a low cost requirement and is appropriate in view of the on-going program.