

# **Radiant Fuel Company, Incorporated Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0001236**

## **INTRODUCTION**

In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's response to comments (RTC) received on the draft NPDES permit (MA0001236). The RTC explains and supports EPA's determinations that form the basis of the final permit. The Radiant Fuel Company draft permit public comment period began August 15, 2005 and ended on September 13, 2005. Comments were received from:

1. William E. Baird, P.E. LSP, President, WEB Engineering Associates, Inc., on behalf of the permittee;
2. Cindy Delpapa, Stream Ecologist, Massachusetts Riverways Program.

The final permit has changed from the draft permit based on comments received. EPA's decision-making process has benefitted from the various comments and the additional information submitted. The information and arguments did not result in any substantial new changes to the permit. However, a few improvements and changes are detailed in this document and reflected in the final permit. A summary of the changes made in the final permit is listed below. The analyses underlying these changes are explained in the responses to individual comments.

1. Part I.A.21 of the draft permit has been removed from the final permit because EPA has determined that the demonstration provided by the permittee (commenter 1) fulfills the alternative method requirement of Part I.A.21.
2. EPA has clarified that there are no sampling requirements for those catch basins on the permittee's property other than for Outfall 001, by editing the first paragraph in Part I.B.1 of the permit.

## **RESPONSE TO COMMENTS ON THE DRAFT NPDES PERMIT**

### **Comments received from WEB Engineering**

#### **Comment 1:**

The draft NPDES permit indicates that the permittee shall control the water flow rate through the oil/water separator and install a continuous recording flow meter or meters and manually control the flows through the separator or demonstrate other means of control that prevents the flows from exceeding the maximum design flow rate.

Attached to this letter are volume calculations associated with the 100 year storm for 5 minutes, 15 minutes, and one hour duration events. These calculations are based upon the square footage serviced by the separator which essentially includes the loading, off-loading and rack areas at the facility and the area in front of the office building. These areas have been bermed to isolate them from the rest of the facility in order to contain and treat (by means of the oil/water separator system) storm water that falls in the collection area.

On September 7, 2005, direct measurements were taken of the size of the collection area to determine square footage serviced by the oil/water separator. The collection area was determined to be 2,750 square feet in area. (This is a significant difference versus the 6,000 square foot

number given in the draft permit and we have been unable to determine exactly where the original 6,000 number came from.) Given this information, the total gallons of storm water collected during the 100 year storm events described above can be calculated at a rate of flow per minute entering the separator system.

The worst case scenario for the 100 year storm event is the 100 year five minute storm event which indicates up to 0.5 inch of storm water could be generated. This equates to a flow rate entering the oil/water separator of 171.42 gallons per minute. The fifteen minute and hour duration 100 year storm events are significantly less.

The maximum design flow rating for the oil/water separator is 500 gallons per minute which can be considered the "instantaneous flow rate" or flow rate limit for Outfall 001 per the EPA Fact Sheet. Given these calculations, the 100 year storm events don't even approach the maximum flow rate for this oil/water separator system. In addition, if the system is valved to reduce flow rates entering the separator, water may backup into the collection area and beyond and defeat the purpose of the system.

It is therefore respectfully requested that the suggested addition of flow meters and valve equipment be removed from the permit requirements as the use of such equipment would impede water flows and possibly cause the berm and oil/water separator system to malfunction. It is also requested that reporting of Daily Maximum Rainfall and the Monthly Average for Rainfall in the Discharge Monitoring Reports, remain unchanged.

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

EPA reviewed the flow calculations and the flow diagram provided by the commenter. EPA finds that this demonstration fulfills the draft permit's requirement to submit an alternative method of flow control to the oil/water separator to ensure that the flow never exceeds the design flow rate (see Part I.A.21 of the draft permit). Specifically, the demonstration provided with this comment ensures that the 500 gallons per minute maximum design flow rating for the oil/water separator will not be exceeded during a worst case, 5 minute 100 year storm scenario. Therefore, Part I.A.21 of the draft permit has been removed from the final permit.

In the calculation, a key factor is the limited containment area for the oil/water separator. The commenter corrected the 6,000 square foot containment area value cited in the draft permit with a measured area of 2,750 square feet. EPA notes that the 6000 square foot value was submitted by Radiant in an electronic correspondence dated May 5, 2005.

Also, as requested in this comment, the reporting of Daily Maximum Rainfall and the Monthly Average for Rainfall in the Discharge Monitoring Reports, remain unchanged. The monitoring for Flow Rate and Total Flow at Outfall 001 when discharging also is retained in the final permit.

#### **Comment 2:**

There are three other catch basins or storm drains associated with the Radiant Fuel property. There is a storm drain located in front of the garage doors area (west of the building); and there is a catch basin/storm drain arrangement located southwest of the building. All of these drains and catch basins are tied into the City of Newton storm water system which carries storm water from Washington Street to Cheese Cake Brook to a single outfall located at the northwest corner of the Radiant Fuel building. All of these receptacles collect water from automobile parking areas and driveways that are not part of any exposed oil transfer operations, storage facilities, or

subject to any other oil source specifically associated with the Radiant Fuel Company. Radiant Fuel conducts no maintenance and washing of trucks exposed to storm water nor any other operation that would increase the likelihood of petroleum entering the Newton storm water system. As such, the water quality runoff to these catch basins is no different from the storm water collected by the catch basins that serve the heavily urbanized area along Washington Street. Radiant Fuel therefore respectfully requests that no formal sampling of other catch basins or drains be required in the re-issued Permit.

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

EPA agrees with the commenter that catch basins that collect water from areas that are not exposed to oil transfer operations, exposed to storage facilities, or subject to any other oil sources specifically associated with the Radiant Fuel Company do not need to be sampled. EPA has clarified this by editing the first paragraph in Part I.B.1 of the permit.

In the draft permit this paragraph reads: “ The permittee shall amend its Storm Water Pollution Prevention Plan (SWPPP) to include the monitoring required by this permit, which includes the monitoring of Outfall 001, and each storm water catch basin that is not treated by the O/W separator. Radiant shall assure the SWPPP is consistent with SWPPP requirements of Part 4 of EPA’s NPDES Storm Water Multi-Sector General Permit for Industrial Activities and Sector P - Land Transportation, Subsector - Petroleum Bulk Stations and Terminals (see 65 FR 64,746 (October 30, 2000)). Additionally, the SWPPP shall include the best management practices (BMPs) appropriate for this specific facility to control storm water discharges from activities that could contribute pollutants to waters of the United States through storm water.”

In the final permit, this paragraph has been modified to read: “The permittee shall amend its Storm Water Pollution Prevention Plan (SWPPP) to include the monitoring required by this permit. Radiant shall assure the SWPPP is consistent with SWPPP requirements of Part 4 of EPA’s NPDES Storm Water Multi-Sector General Permit for Industrial Activities and Sector P - Land Transportation, Subsector - Petroleum Bulk Stations and Terminals (see 65 FR 64,746 (October 30, 2000)). Additionally, the SWPPP shall include the best management practices (BMPs) appropriate for this specific facility to control storm water discharges from activities that could contribute pollutants to waters of the United States through storm water. The SWPPP shall address each storm water catch basin, including Outfall 001 and those that are not treated by the O/W separator.”

EPA has retained the requirement that the Storm Water Pollution Prevention Plan (SWPPP) address these Outfalls, along with Outfall 001, with appropriate best management practices (BMPs) and the other requirements of Part I.B. However, there are no specific catch basin sampling requirements for the catch basins on the permittee’s property other than Outfall 001.

### **Comment 3:**

The Storm Water Pollution Prevention Plan (SWPPP) will, however, be updated to include best management practices which will prevent any actions which might have an impact on the storm water collection system associated with the above mentioned catch basins and storm drains. This will include periodic inspections to insure that no potential sources of contaminants will be stored or operated within the collection areas of these basins and drains. In addition, the SWPPP will be updated to describe and ensure the implementation of practices that are to be used to reduce the potential pollutant loadings in storm water coming from the Radiant Fuel facility.

### **Response to Comment 3:**

This comment is consistent with the requirements of Part I.B of the draft permit. The comment is acknowledged, and no change has been made to the final permit.

### **Comments Received from Massachusetts Riverways Program**

#### **Comment 4:**

The discharge monitoring data currently shows this facility has had some instances when oil and grease concentrations have been slightly elevated, though well within permit limitations, and other instances when O&G concentrations have been negligible. This variability suggests the current monthly monitoring requirement may not be adequate to capture the nature of the discharges and a grab sample may not provide a representative sample of the oil and grease discharged over the course of a storm. We believe it would be more protective of the receiving water to sample every storm resulting in more than ¼ inch of rainfall and to have a composite sample of the discharge. Sampling could alternatively be done during the initial first flush when the concentration of oil and grease in the runoff is likely to be greatest

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

As indicated in the EPA NPDES Permit Writer's Handbook, the intent of establishing a monitoring frequency is "to establish a frequency of monitoring that will detect most events of non-compliance without requiring needless or burdensome monitoring." After a review of the oil and grease monitoring results from recent years, EPA has retained the monthly sampling requirement in this case. EPA considered the requirements of EPA's Multi-Sector General Permit in defining the required storm water sampling event for obtaining representative samples for this permit. (See Multi-Sector General Permit (MSGP) for Industrial Activities, 65 FR 64746, October 30, 2000). These MSGP requirements include a storm event threshold of at least 0.1 inch of precipitation and that a grab sample be taken in the first 30-minutes of the storm if practicable. These requirements increase the likelihood of capturing the first flush of storm water pollution.

Composite sampling is not appropriate for parameters such as oil and grease that are likely to be affected by the compositing process. EPA has determined that grab sampling is more appropriate in this situation. No change has been made in the final permit.

#### **Comment 5:**

The Fact Sheet mentions the impaired status of the receiving waters and the observations made during a site visit of a sand bar formation in the vicinity of Radiant Fuel offices. Given the problem with siltation in the brook and the existence of a sand bar, a total suspended solids load limit would afford more protection to the impaired water way than a concentration limitation alone. A TSS load limit would be advisable should the Radiant outfall potentially be contributing to either of these noted problems in the brook

**Response to Comment 5:**

EPA disagrees that a mass load limit would provide more protection. For example, a maximum daily load permit limit would be developed by multiplying the permitted TSS concentration times the permitted maximum daily flow and using a conversion factor.

The oil water separator has a design flow of 500 gallons per minute. In order for an oil water separator to work properly, its design flow must not be exceeded. Therefore, EPA has used this critical value as the basis for the permit limit.

In order to accurately report a daily maximum mass load, the total daily flow needs to be determined. In this case, the only flow from the facility is during storm events. Since storm events are intermittent in nature, more sophisticated monitoring equipment would need to be installed and maintained at the facility in order to accurately determine the total daily flow. EPA believes that, at this time, requiring additional monitoring equipment is unnecessarily burdensome to the permittee. However, in the event that a Total Maximum Daily Load (TMDL) is developed for the receiving water, EPA will revisit this issue.