

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA", and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Radiant Fuel Company, Inc.

is authorized to discharge from a facility located at

**1211 Washington Street
West Newton, Massachusetts 02465**

to receiving water named

Cheese Cake Brook / Charles River Watershed (MA72)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective sixty days from the date of signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on September 22, 1999.

This permit consists of 14 pages in Part I including effluent limitations, monitoring requirements, and 35 pages in Part II including General Conditions and Definitions.

Signed this 15th day of November, 2005

Linda M. Murphy, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge treated storm water runoff to Cheese Cake Brook, through **Outfall Serial Number 001**. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Surface Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate ⁽³⁾	gpm	----	500 gpm	When Discharging	Estimate
Total Flow ⁽⁴⁾	Mgal/ Month	Report Monthly Total	----	When Discharging	Estimate
Number of Discharge Days	days	----	Report	When Discharging	Calculated
Total Suspended Solids (TSS)	mg/L	30	100	1/Month ⁽²⁾	Grab
Oil and Grease (O&G) ⁽⁵⁾	mg/L	----	15	1/Month ⁽²⁾	Grab
pH	S.U.	----	6.5 to 8.3 ⁽⁶⁾	1/Month ⁽²⁾	Grab

See page 4 for explanation of footnotes.

Part I.A.1. Continued

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Polynuclear Aromatic Hydrocarbons (PAHs) ⁽⁷⁾					
Benzo(a)anthracene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Benzo(a)pyrene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Benzo(b)fluoranthene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Benzo(k)fluoranthene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Chrysene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Dibenzo(a,h)anthracene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	Report	Quarterly ⁽²⁾	Grab
Naphthalene	µg/L	----	Report	Quarterly ⁽²⁾	Grab

See page 4 for explanation of footnotes.

Footnotes:

1. All samples shall be collected from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (i.e., greater than 0.1 inch rainfall) storm event. All samples are to be grab samples taken within thirty (30) minutes of the initiation of the discharge from the outfall(s) where practicable, but in no case later than within the first hour of discharge from the outfall(s). Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: after treatment in the Oil/Water (O/W) separator but before the effluent is discharged into and/or mixes with the storm water collection system.
2. Sampling frequency of 1/month is defined as the sampling of one (1) storm event (as defined above in Footnote No. 1) in each calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) storm event (as defined above in Footnote No. 1) in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with one of the monthly monitoring events.** The permittee shall submit the results to EPA of any additional testing done to that required herein, if it is conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR §122.41(l)(4)(ii).
3. For Flow Rate, the maximum daily value represents the estimated maximum instantaneous flow rate identified by the facility as passing through the O/W separator for each day that storm water is discharged during the reporting period. The maximum instantaneous flow rate, which is to be reported in the units of gallons per minute (gpm), is based on the treatment capacity of the O/W separator.
4. For Total Flow, the value reported represents the estimated sum of the flow for each day that storm water is discharged during that month. The total monthly flow rate shall be calculated based upon the summation of daily flow results and shall be reported in the units of millions of gallons/month (Mgal/month). The permittee shall also report the total number of days during the reporting period in which there was a discharge from Outfall 001.
5. Oil and Grease shall be measured using EPA Method 1664.
6. See Part I.A.3. for a description of the pH limits.
7. See Part I.A.15. regarding Minimum Levels for reporting of Polynuclear Aromatic Hydrocarbons (PAHs).

Part I.A. (Continued)

2. The discharges either individually or in combination shall not cause a violation of State Water Quality Standards of the receiving waters.
3. The pH of the effluent shall not be less than 6.5 nor greater than 8.3 standard units and not more than 0.5 units outside of the background range at any time unless these values are exceeded as a result of natural causes. There shall be no change from background conditions that would impair any use assigned to this Class B water.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The discharge shall not contain a visible oil sheen, foam, nor floating solids at any time.
6. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
7. There shall be no discharge of tank bottom water alone or in combination with storm water discharge.
8. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
9. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
10. The permittee shall inspect, operate, and maintain the O/W separator at the facility to ensure that the Effluent Limitations and Conditions contained in this permit are met. The permittee shall ensure that all components of the facility's Storm Water Pollution Prevention Plan including those which specifically address the operation and maintenance of the O/W separator and other components of the storm water conveyance system are complied with.
11. Chemicals (i.e. disinfecting agents, detergents, emulsifiers, etc.), and bioremedial agents including microbes, shall not be added to the collection and treatment systems without prior approval by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) to prevent hydrocarbon and/or particulate matter carryover into the Cheese Cake Brook.

12. There shall be no discharge of any sludge and/or bottom deposits from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, O/W separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.
13. The bypass of storm water runoff, wash water, or water used at the facility from treatment through the oil/water separator is prohibited except where necessary to avoid loss of life, injury, or severe property damage. Each bypass shall be sampled for all of the effluent characteristics identified in Part I.A.1. of this permit (i.e., monthly and quarterly) and the results reported to EPA within forty-five (45) days of the initiation of the bypass. These bypass reporting requirements are in addition to those already identified in 40 Code of Federal Regulations (CFR) §122.41(m).
14. EPA may modify this permit in accordance with EPA regulations in 40 CFR §122.62 and §122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
15. The reporting of Polynuclear Aromatic Hydrocarbons (PAHs) as described in the effluent limits for Outfall 001 will be based on the Minimum Level (ML) of reporting. The ML is defined as the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points. This level corresponds to the lower points at which the calibration curve is determined based on the analysis of the pollutant(s) of concern in reagent water. PAH analysis shall include the following compounds and their respective MLs as identified in parenthesis for each compound: benzo(a)anthracene (<0.05 µg/L), benzo(a)pyrene (<2.0 µg/L), benzo(b)fluoranthene (<0.1 µg/L), benzo(k)fluoranthene (<2.0 µg/L), chrysene (<5.0 µg/L), dibenzo(a,h)anthracene (<0.1 µg/L), indeno(1,2,3-cd)pyrene (<0.15 µg/L), and naphthalene (0.2 µg/L).
16. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. This laboratory case narrative shall include a copy of the laboratory data sheets for each analyses (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.

17. All existing manufacturing, commercial, mining and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
- a. That any activity has occurred or will occur which would result in the discharge, on a routine basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels:”
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
 - b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels:”
 - (1) Five hundred micrograms per liter (500 ug/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7).
 - (4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
 - c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
18. Wastewater Treatment System Flow Control
- a. Written notification and approval by EPA and the MassDEP shall be required, should the permittee propose changes to the storm water conveyance or treatment system which has the potential to cause the maximum design flow rate through the O/W separator to be exceeded.

19. Toxics Control

- a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.
- b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

20. Hydrostatic Test Water Discharges

- a. The discharge of hydrostatic test water is prohibited in this permit.

B. BEST MANAGEMENT PRACTICES/STORM WATER POLLUTION PREVENTION PLAN

1. 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.

The SWPPP for the discharge should address all potential sources of pollutants in the petroleum bulk station including, but not limited to, the fuels stored and equipment and vehicle maintenance that have the potential to spill or could contribute to the discharges. In addition, the SWPPP shall continue to describe and ensure the implementation of practices, which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

2. The amended SWPPP shall be completed and signed **within 90 days after the effective date of this permit**. Radiant is required to fully implement the SWPPP for all outfalls, including the catch basins that drain to Cheese Cake Brook without treatment. The original SWPPP and the amended SWPPP become enforceable elements on and after the effective date of the permit. Consequently, the SWPPP is as enforceable as any effluent limit.

3. The permittee shall maintain, update and implement the Storm Water Pollution Prevention Plan (SWPPP) to account for any changes that occur at the facility which could impact the plan. The permittee shall be required to provide an annual report that includes the proper certification to EPA and the MassDEP documenting that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with the SWPPP. The report with the proper certification shall be signed in accordance with the requirements identified in 40 CFR §122.22 and a copy of the certification will be sent each year to EPA and MADEP **within 30 days of the annual anniversary of the effective date of the permit**. The permittee shall keep a copy of the most recent SWPPP at the facility and shall make it available for inspection by EPA and MassDEP.
4. The SWPPP shall contain the following elements:
 - a. Pollution Prevention Team
 - b. Site Description
 - c. Receiving Waters and Wetlands
 - d. Summary of Potential Pollutant Sources
 - e. Spills and Leaks
 - f. Sampling Data
 - g. Storm Water Controls
 - i. Description of Existing and Planned Best Management Practices (BMP)
 - ii. BMP Types to be Considered
 - iii. Non-Structural BMPs
 1. Good Housekeeping
 2. Minimize Exposure
 3. Preventive Maintenance
 4. Spill Prevention and Response Procedures
 5. Routine Facility Inspections
 6. Employee Training
 - iv. Structural BMPs
 1. Sediment and Erosion
 2. Management of Runoff
 3. Example BMPs
 - v. Other Controls

Details of each element, above, can be found in Section 4 of the Storm Water Multi-Sector General Permit at 65 FR 64812-64815 (October 30, 2000).

5. The SWPPP shall include, at a minimum, the following items:
 - a. Description of Potential Pollutant Sources - The SWPPP must provide a description of potential sources which may be reasonably expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutant draining the facility. The description must address each pollutant for which monitoring is required (see Sections I.A.1. above). The SWPPP must identify all activities and significant materials, which may potentially be significant pollutant sources. The SWPPP shall include:
 - i. A drainage site map indicating: a delineation of the drainage area of each storm water outfall, each existing structural control measure to reduce pollutants in storm water runoff, locations where significant materials are exposed to storm water, locations where significant leaks or spills have occurred, a delineation of all impervious surfaces, all surface water bodies, all separate storm sewers, and the locations of the following activities where such areas are exposed to storm water: fueling stations, vehicle and equipment maintenance and/or cleaning areas, material handling areas, process areas and waste disposal areas;
 - ii. A topographic map extending one-quarter of a mile beyond the property boundaries of the facility;
 - iii. An estimate of the overall runoff coefficient for the site, determined by an acceptable method, such as area weighting;
 - iv. A narrative description of significant materials that have been treated, stored or disposed of in a manner to allow exposure to storm water between the time of three (3) years prior to the issuance of this permit to the present; method of on-site storage or disposal; materials management practices employed to minimize contact of these materials with storm water runoff between the time of three (3) years prior to the issuance of this permit and the present; materials loading and access areas; the location and description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and description of any treatment the storm water receives;
 - v. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at the facility three (3) years prior to the effective date of this permit to the present;
 - vi. For each area of the facility that generates storm water discharges with a reasonable potential for containing significant amounts of pollutants, a

- prediction of the direction of flow and an estimate of the types of pollutants, which are likely to be present in storm water;
- vii. A summary of existing sampling data describing pollutants in storm water discharges from the facility; and
 - viii. A list of any allowable non-storm water discharges, except discharges from fire fighting activities that are known or are reasonably expected to be present at the site. Allowable non-storm water discharges are limited to fire hydrant flushings; external building washdown that do not use detergents; lawn watering; uncontaminated ground water; springs; air conditioning condensate; potable waterline flushings; irrigation drainage; and foundation or footing drains where flows are not contaminated with process materials, such as solvents, or contaminated by contact with soils, where spills or leaks of toxic or hazardous materials has occurred. If any of these discharges may reasonably be expected to be present and to be mixed with storm water discharges, they must be specifically identified and addressed in the facility's SWPPP.
- b. Storm Water Management Controls - The facility must develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness for implementing controls listed in the SWPPP must reflect identified potential sources of pollutants at the facility. The description of storm water management controls must address the following minimum components, including a schedule for implementing such controls:
- i. Pollution Prevention Team - The SWPPP must identify a specific individual(s) within the facility organization as members of a team that are responsible for developing the SWPPP and assisting the facility manager in its implementation, maintenance, and revision. The SWPPP must clearly identify the responsibilities of each team member. The activities and responsibilities of the team must address all aspects of facility's SWPPP.
 - ii. Risk Identification and Assessment/Material Inventory - The SWPPP must assess the potential of various sources at the facility to contribute pollutants to storm water discharges associated with the industrial activity. The SWPPP must include an inventory of the types of materials handled. Each of the following must be evaluated for the reasonable potential for contributing pollutants to runoff: loading and unloading operations, outdoor manufacturing or processing activities, significant dust or particulate generating processes, and on-site waste disposal practices. Factors to consider include the toxicity of chemicals;

quantity of chemicals used, produced, or discharged; the likelihood of contact with storm water, and the history of significant leaks or spills of toxic or hazardous pollutants.

- iii. Preventative Maintenance - A preventative maintenance program must involve inspections and maintenance of storm water management devices (i.e. oil/water separator, catch basins, track mats) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdown or failures resulting in discharges of pollutants to surface waters.
- iv. Good Housekeeping - Good housekeeping requires the maintenance of a clean orderly facility.
- v. Spill Prevention and Response Procedure - Areas where potential spills can occur and their accompanying drainage points, must be identified clearly in the SWPPP. The potential for spills to enter the storm water drainage system must be eliminated whenever feasible. Where appropriate, specific material handling procedures, storage requirements, and procedures for cleaning up spills must be identified in the SWPPP and made available to the appropriate personnel.
- vi. Storm Water Management - The SWPPP must contain a narrative consideration of the appropriateness of traditional storm water management practices. Based on an assessment of the potential of various sources at the facility to contribute pollutants to the storm water discharge, the SWPPP must provide that measures, determined reasonable and appropriate, must be implemented and maintained.
- vii. Sediment and Erosion Prevention - The SWPPP must identify areas which, due to topography, activities, or factors, have a high potential for significant soil erosion and identify measures to limit erosion.
- viii. Employee Training - Employee training programs must inform personnel responsible for implementing activities identified in the SWPPP, or otherwise responsible for storm water management at all levels, of the components and goals of the SWPPP. Training should address topics such as spill response, good housekeeping and material management practices. The SWPPP must identify periodic dates for such training.
- ix. Visual Inspections - Qualified facility personnel must be identified to inspect designated equipment and facility areas. Material handling areas must be inspected for evidence of, or the potential for, pollutants entering the drainage system. A tracking or follow up procedure must be

used to ensure that the appropriate action has been in response to the inspection. Records of inspections must be maintained for five (5) years.

- x. Recordkeeping and Internal Reporting Procedures - Incidents such as spill, or other discharges, along with other information describing the quality and quantity of storm water discharges must be included in the records. All inspections and maintenance activities must be documented and maintained on site for at least five (5) years.

- c. Site Inspection - An annual site inspection must be conducted by appropriate personnel named in the SWPPP to verify that the description of potential pollutant sources required under Part I.B.1. is accurate, that the drainage map has been updated or otherwise modified to reflect current conditions, and controls to reduce pollutants in storm water discharges identified in the SWPPP are being implemented and are adequate. A tracking or follow-up procedure must be used to ensure that the appropriate action has been taken in response to the inspection. Records documenting significant observations made during the site inspection must be retained as part of the SWPPP for a minimum of five (5) years.

- d. Consistency with Other Plans - Storm water management controls may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the CWA or Best Management Practices (BMP) Programs otherwise required by an NPDES permit and may incorporate any part of such plans into the SWPPP by reference.

- e. Amending the SWPPP - The permittee shall immediately amend the SWPPP whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the State; a release of reportable quantities of hazardous substances and oil; or if the SWPPP proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges.

C. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported monthly on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the completed reporting period.

Signed and dated originals of these, and all other reports required herein, shall be submitted to EPA at the following address:

Environmental Protection Agency, Region 1
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
One Winter Street
Boston, MA 02108

and

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

D. STATE PERMIT CONDITIONS

1. This discharge permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap.21, §43.
2. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as a NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.