



GENERAL INSPECTION REPORT (Non-NPDES)

Type of Inspection Complaint	WQM Permit Number	County Bucks	Municipality Lower Makefield Township
Name and Location of Facility or Pollution Incident Bright Farms Complaint			Entry Time/Date 11/08/16
			Exit Time/Date 11/08/16
Name, Address of Responsible Party LMT Greenhouse, LLC		Title	
754 Stony Hill Road		Telephone	Contacted
Yardley, PA 19067		347-561-2286	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
SUMMARY OF VIOLATIONS/RECOMMENDATION/COMMENTS:			
<p>#1 – A video provided by a complaint showed an unpermitted discharge of red tinted water to the ground by LMT Greenhouse, LLC. During the DEP’s inspection there was evidence of a discharge of water to the ground adjacent to the driveway. There was erosion evidence on the ground from the location of the discharge in the video out into the field. There was some red tinted water flowing under the door of the facility and flowing out of the plant bins onto the ground. These conditions are unpermitted discharges and are in violation of Section 301 and 307 of the Clean Streams Law.</p> <p>#2 - There were several bags of unknown material also stored outside. These represent a potential for pollution and are in violation of Title 25 Chapter 91.34 (a) of the Rules and Regulations of the DEP. The bags should be moved inside the building or inside one of the trailers.</p>			
Compliance Assistance Provided <input checked="" type="checkbox"/>			
Pollution Prevention Activity <input checked="" type="checkbox"/>			
Sample No.	Location	Field Measurements and Observations	
Inspector Name Bernard Krasnisky	Inspector Signature <i>Bernard Krasnisky</i>	Title Water Quality Specialist	Date 11/08/16 Telephone 484-250-5134
Name of Person Interviewed Jason Jackson	Signature of Person Interviewed	Title Head Grower	Date 11/08/16 Telephone 347-561-2286
This document is official notification that a representative of the Department of Environmental Protection, inspected the above facility or site. The findings of this inspection are shown above and on any attached pages.			
Any violations which were uncovered during the inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses of the discharge and review of Department records. Notification will be forthcoming, if such violations are noted.			



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Today I conducted a complaint inspection regarding the Bright Farms, LMT Greenhouse, LLC and the discharge of tinted red water to the ground in the adjacent field. I was accompanied by Mr. Jason Jackson, Head Grower, with LMT Greenhouse, LLC. I made the following observations:

- #1 - The video provided by the complainant showed an unpermitted discharge of red tinted water to the ground along the side of the driveway that flowed down gradient along the path adjacent to the tree line. I inspected the area of the discharge identified in the complaint. The ground alongside the entrance did not have any residual red liquid but was slightly wet and had evidence of runoff. The evidence of run-off followed the same path described by the complainant's video and flowed down gradient adjacent to the tree line towards a small pond on the adjacent property. The grass in the path adjacent to the tree line was slightly wet. There was evidence of run-off and an erosion ditch on the grass along the path in the direction of the small pond. The discharge of red tinted pond water to the ground is an unpermitted discharge of Industrial Waste and a violation of Section 301 and 307 of the Clean Streams Law.** I inspected the small pond. The pond water was not red in color but brown due to sediment discharge into it. The pond has a discharge pipe that discharges to the ground and field adjacent to it. The pond does not discharge to a stormwater collection system or stream. The slope between the pond's discharge and the surrounding area was minimal and the distance to the nearest stream was significant.
- I inspected the Bright Farms hydroponic greenhouse operation. **#2 - Outside near the entrance to the facility there were bins of cut plants waiting to be hauled offsite. There was small volume of red tinted water flowing out of the door near the entrance onto the pavement and ground, and some red tinted water leaking from the bins. This is also an unpermitted discharge of Industrial Waste.** The bins with plant material should be drained inside the facility and red tinted water should not be discharged outside.
- #2 - There were several bags of unknown material also stored outside. These represent a potential for pollution and is in violation of Title 25 Chapter 91.34 (a) of the Rules and Regulations of the DEP. The bags should be moved inside the building or inside one of the onsite trailers.** I also observed one sealed 55 gallon drum and 2 sealed containers of nitric acid. As long as these containers are sealed they are permitted to be outside. However, Bright Farms should take the necessary steps to ensure no material is spilled from these containers onto the ground. There was also a dumpster for plastic and municipal waste which is not in violation.
- The Bright Farms LMT Greenhouse has 7 48,000 gallon ponds that are used to grow multiple types of plants for consumption such as arugula, kale, spinach, basil and Lettuce. The ponds are initially filled with well water. Fertilizers are added to the well water such as potassium nitrate and calcium nitrate. The red color of the water comes from iron. Every Monday samples of the pond water are collected and sent to a laboratory for analysis especially for the Total Iron concentration which is required to be below 5.0 mg/L or ppm. Samples of the well water are also taken weekly. The seeds are placed on trays with groves for the vermiculite and peat moss media. The trays float on the surface of the ponds. As the chlorides build up in the pond approximately 1-2 inches of the


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top layer of water is pumped out and the ponds are filled with fresh water. This water is pumped with a 4 inch pump and hose and is the source of the water seen in the submitted video by the complainant.

5. There are 4 or 5 drains located inside the facility that discharge to the sanitary sewer system and are pumped by the Environmental Ejector Pump to the Lower Makefield Township Sanitary Sewer Collection System. The Greenhouse system was previously an NFT System which used lower volumes of water. There is a board washer and harvest machine that both discharge small volumes to the sanitary sewer system. The board washer uses a quaternary ammonia solution to clean the boards. The water is recirculated to a tank where it is reused. Some of the wash water is discharged to the sanitary sewer system via a drain under the board washer.
6. The Harvest Machine separates the leafy front part of the plants from the back parts using a saw. The leafy finished product is packaged and moved into refrigeration. **The back parts of the plants are placed into the bins that were observed outside. I recommend draining these bins inside the facility and ensuring they do not leak before moving them outside.**
7. The Seed Machine is used to place seeds on the grow boards and applies 1 layer of well water. There is a large storage tank for well water and rain water.
8. I requested that LMT Greenhouse, LLC determine the maximum amount of flow that can be discharged via their ejector pump. I contacted Lower Makefield Sewer Administrator and asked for them to follow up with LMT Greenhouse and determine if your wastewater can be discharged to the sanitary sewer system. Until approval is obtained to discharge to the sanitary sewer any pond water that needs to be removed should not be discharged onto the ground but disposed of in another manor such as hauling offsite. I also requested LMT Greenhouse, LLC provide the most recent sample results of the pond water and well water going back 6 months if possible.

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Photographs



1. The path adjacent to the tree line with evidence of erosion, 11/08/16.



2. The ground adjacent to the driveway.



3. Evidence of flow and some wet grass adjacent to the driveway, 11/08/16.



4. The pond in the field approximately 100 yds from the driveway.

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5. Evidence of erosion along the path adjacent to the treeline towards the pond.



6. The pond.



7. The pond's discharge was dry and goes to a field.



8. The edge of the field the location of the pond's discharge.

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9. The board washer, soap and associated sanitary sewer drain.



10. The hydroponic greenhouse ponds.



11. The greenhouse interior, 11/08/16.



12. Some red material on the ground from the water flowing under the door and the bins.

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13. Water flowing under the door.



14. Bins of plant material that will be composted.



15. The sewer ejector pump.