

**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korflesk, Director

May 12, 2010

Mr. Jay Taylor
Emery Oleochemicals LLC
4900 Este Avenue
Cincinnati, Ohio 45232-1419

**Re: Emery Oleochemicals LLC -- OH0137821; 1IF00018*BD -- CEI
NOTICE OF VIOLATION**

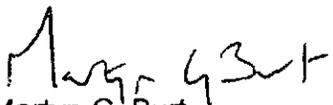
Dear Mr. Taylor:

On April 21, 2010, Marianne Piekutowski of this office met with Jerry Price and Mike Groh to conduct a compliance evaluation inspection (CEI) at the Emery Oleochemicals LLC facility. The purpose of this inspection was to evaluate compliance with the terms of the NPDES permit. Please note that the report, by its format, tends to highlight negative areas.

As indicated on the attached NPDES Compliance Inspection Report, all areas that were evaluated received a satisfactory rating except for "Effluent/Receiving Waters" which received a marginal rating. The reasons for this rating are provided in the attached report.

Thank you and your staff for the time extended during the inspection. If you have any questions, please contact Ms. Piekutowski of this office at 937.285.6108.

Sincerely,


Martyn G. Burt
Environmental Supervisor
Division of Surface Water

Enclosures

Cc: Jerry Price, Emery Oleochemicals LLC
Mike Groh, Emery Oleochemicals LLC



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State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
11F00018*BD	OH0137821	04/21/2010	C	S	2

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Emery Oleochemicals LLC 4900 Este Avenue Cincinnati, Ohio 45232-1419	10:00 am	11/1/2009 (Modification)
	Exit Time 12:20pm	Permit Expiration Date 02/28/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Jerry Price, Environmental Specialist Mike Groh, SH&E Manager	513.762.2568 513.762.2500	
Name, Address and Title of Responsible Official	Phone Number	
Jay Taylor, General Manager North America Emery Oleochemicals LLC 4900 Este Avenue Cincinnati, Ohio 45232-1419	513.762.2500	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	N	Flow Measurement	N	Pretreatment
N	Records/Reports	N	Laboratory	N	Compliance Schedule
S	Operations & Maintenance	M	Effluent/Receiving Waters	N	Self-Monitoring Program
S	Facility Site Review	N	Sludge Storage/Disposal	N	Other
N	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
See attached report.	
Inspector	Reviewer
 Marianne Piekutowski Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
5/12/10 Date	5/12/10 Date



Permit # : Error! Reference source not found.
NPDES #: Error! Reference source not found.

Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
- (b) Correct name and location of receiving waters..... Y
- (c) Do Categorical Standards apply?...If yes, list applicable standards.. Y

40 CFR 414 applies to MSD discharge.
- (d) Product(s) and production rates conform with permit application (Industries)..... NA
- (e) Flows and loadings conform with NPDES permit..... Y
- (f) Treatment processes are as described in permit application... Y
- (g) All discharges are permitted..... Y
- (h) Number and location of discharge points are as described in permit..... Y
- (i) Storm water discharges properly permitted..... Y

Comments/Status:

Outfall 035 has also been plugged. The next time the permit is acted on, this outfall will be eliminated.

Section F: Compliance

- (a) Any significant violations since the last inspection..... Y
- (b) Appropriate Non-compliance notification of violations..... Y
- (c) Permittee is taking actions to resolve violations..... Y
- (d) Permittee has a compliance schedule..... N
- (e) Compliance schedule contained in...N/A
- (f) Permittee is in compliance with schedule..... NA
- (g) Has biomonitoring shown toxicity in discharge since last inspection NA

Comments/Status:

a) The facility has had numerous Oil and Grease violations. The facility is working with EQM to find a solution including adding treatment for the storm water.



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Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a) Standby power available.....generator or dual feed NA

i. What does the back-up power source operate.....

NA

ii. How often is the generator tested under load.....

NA

(b) Which components have an alarm system available for power or equipment failures.....

NA

(c) All treatment units in service other than backup units..... NA

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

NA

(e) Any major equipment breakdown since last inspection..... NA

(f) Operation and maintenance manual provided and maintained..... NA

(g) Any plant bypasses since last inspection..... NA

(h) Any plant upsets since last inspection..... NA

Comments/Status:

There are currently no active treatment systems for the storm water. The facility is reviewing its options.



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Section H: Sludge Management

Not Applicable.

(a) Method of Sludge Disposal...

- Land Application
- Haul to Another NPDES Permittee
- Haul to a Mixed Solid Waste Landfill

*if one of the selected methods is land application, complete applicable charts.
Class A - Exception Quality Sewage Sludge (monitoring station 584)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options							
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 - Aerobic Bench Scale Analysis	Option 4 - Specific Oxygen Uptake Rate	Option 5 - Aerobic Time and Temperature	Option 6 - Alkali Addition	Option 7 - >75% Percent Solids without Unstabilized Solids	Option 8 - >75% Percent Solids with Unstabilized Solids
Alternative 1 - Time and Temperature Regime (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - High pH and High Temperature (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Other Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 4 - Unknown Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Composting (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Drying (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Treatment (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Thermophilic Aerobic Digestion (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Beta Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Gamma ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Pasteurization (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 6 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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Class B Sewage Sludge (monitoring station 581)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 - 38% Volatile Solids Reduction	Option 2 - Anaerobic Bench Scale Analysis	Option 3 - Aerobic Bench Scale Analysis	Option 4 - Specific Oxygen Uptake Rate	Option 5 - Aerobic Time and Temperature	Option 6 - Alkali Addition	Option 7 - >75% Percent Solids without Unstabilized	Option 8 - >75% Percent Solids with Unstabilized	Option 9 - Land Injection	Option 10 - Immediate Incorporation
Alternative 1 - Geometric Mean of Seven Fecal Samples (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Aerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Air Drying (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Anaerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Composting (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Lime Treatment (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (a) Has amount of sludge generated changed significantly since the last inspection..... NA
- (b) How much sludge storage is provided at the plant.....
- (c) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... NA
- (d) Any complaints received in last year regarding sludge..... NA
- (e) 5/8" screen at headworks for facilities that land apply sludge..... NA
- (f) Are sludge application sites inspected to verify compliance with NPDES permit..... NA
- (g) Is a contractor used for sludge disposal..... NA
 If so, what is the name of the contractor.....

Comments/Status:



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Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices operated and maintained..... NA
Type of device (e.g. weir with ultrasonic level sensor):
Rainfall from rain gauge times the surface area drained.
- (b) Calibration frequency adequate NA
(Date of last calibration: NA)
- (c) 24-hour recording instruments operated and maintained..... NA
- (d) Flow measurement equipment adequate to handle full range of flows..... NA
- (e) Actual flow discharged is measured..... NA
- (f) Flow measuring equipment inspection frequency
Daily Weekly monthly other **Not applicable**

Comments/Status:

These are discharges associated with storm water. Flows are estimated using the amount of rainfall times the surface area drained. The facility is considering putting in a weather system on the plant site. Currently using nearby rain gauge in St. Bernard.

Section I: Self-Monitoring Program (con't)

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
(see GLC page)
- (d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments/Status:

c) The pH is done on-site. There is a three point calibration of the pH meter. There is not a written SOP. Information provided to facility on what would be needed in an SOP. All other parameters analyzed at contract laboratory.
d) Records will be maintained for a minimum of three years. Have not had the permit that long.



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Section I: Self-Monitoring Program (con't)

Laboratory:

General

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... ?
- (b) Do SOP's include the following if applicable..... ?
 - Title
 - Scope and Application
 - Summary
 - Sample Handling and Preservation
 - Interferences
 - Apparatus and Materials
 - Reagents
 - Procedure
 - Calculations
 - Quality Control
 - Maintenance
 - Corrective Action
 - Reference (Parent Method)

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of know precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (d) If alternate analytical procedures are used, proper approval has been obtained..... NA
- (e) Analyses being performed more frequently than required by permit. N
- (f) If (e) is yes, are results in permittee's self-monitoring report..... NA
- (g) Satisfactory calibration and maintenance of instruments/equipment. ?
(see score from GLC page)
- (h) Commercial laboratory used..... Y

Parameters analyzed by commercial lab: **Oil & Grease, TSS, BOD5, COD, Metals, NH3-N, Fecal Coliform**
Lab name:

Cardinal Labs

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance sampling..... ?
Date:
- (b) Were any parameters "Unsatisfactory"..... ?
- (c) Reasons for "Unsatisfactory" parameters.....

Unknown

Comments/Status:



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Section J: Effluent/Receiving Water Observations

Outfall # 007

Outfall Description: Final outfall for storm water discharges from the Fatty Acid production area.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing.

Outfall # 013

Outfall Description: Final outfall discharging from the Utility area.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing.

Outfall # 016

Outfall Description: Final outfall discharging storm water from the Fatty Acid warehouse area.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing.

Outfall # 018

Outfall Description: Final outfall discharging storm water from the Fatty Acid warehouse area.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing.

Outfall # 025

Outfall Description: Final outfall discharging storm water from the office and hazardous waste storage areas.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing.

Outfall # 035

Outfall Description: Final outfall discharging storm water from the Ozonation area.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. This outfall has been sealed. Creek was clear and flowing.



Permit # : Error! Reference source not found.
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Outfall # 036

Outfall Description: Final outfall discharging storm water from the Ozonation area.

Receiving Stream: Mill Creek

Receiving Stream Description: Channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing.

Outfall # 039

Outfall Description: Final outfall discharging from the truck traffic area.

Receiving Stream: Mill Creek

Receiving Stream Description: Gunnite banks just prior to channelized concrete. There was no discharge the day of the inspection. Creek was clear and flowing. There were fish and turtle in this section of Mill Creek.

Comments/Status:

There was no flow from any of the outfalls the day of the inspection.

Section K: Multimedia Observations

- (a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
- (b) Do you notice staining or discoloration of soils, pavement or floors.. N
- (c) Do you notice distressed (unhealthy, discolored, dead) vegetation.. N
- (d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks..... N
- (e) Do you notice any unusual odors or strong chemical smells..... N
- (f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities..... N

If any of the above are observed, ask the following questions:

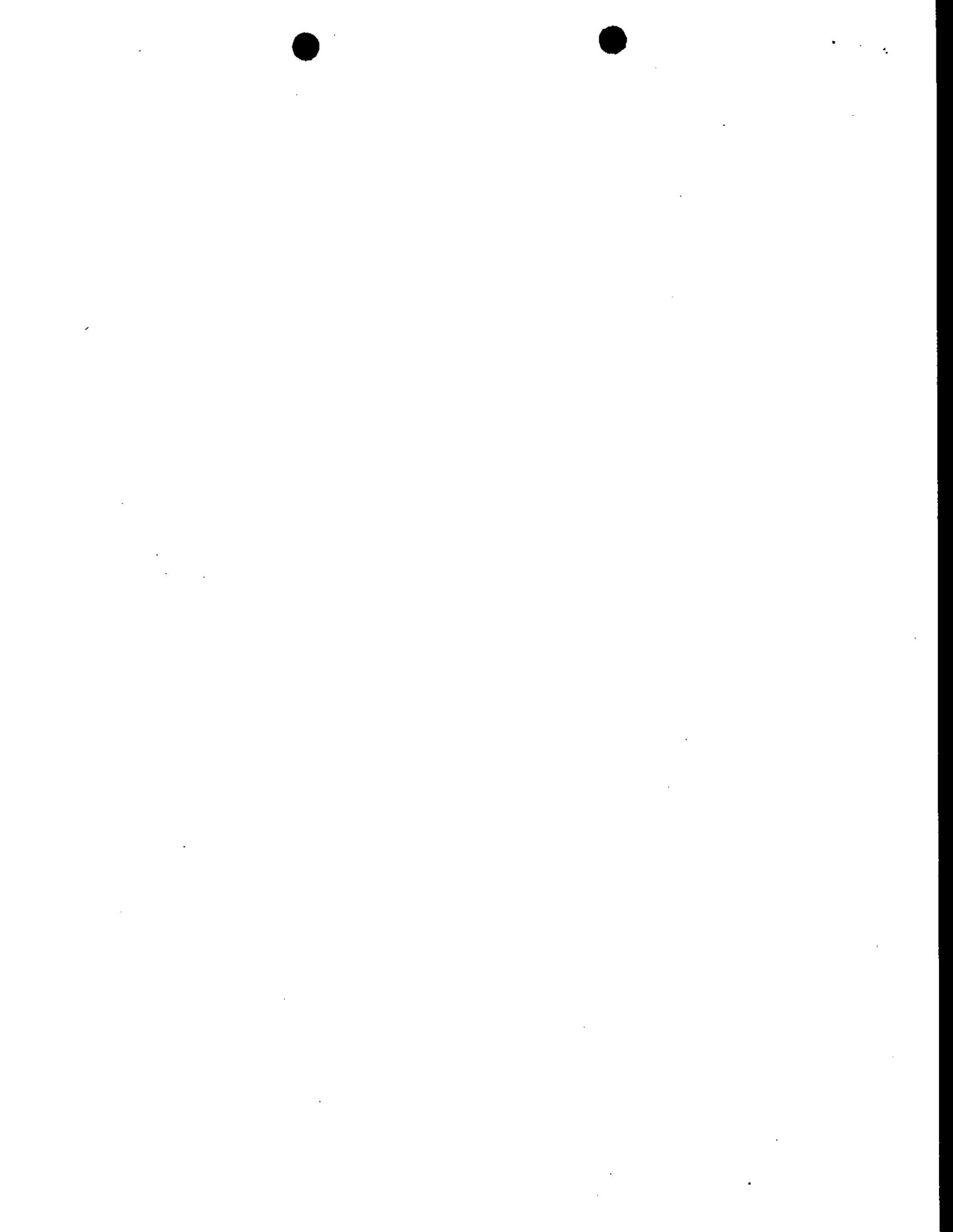
- (1) What is the cause of the condition?
- (2) Is the observed condition or source a waste product?
- (3) Where is the suspected contaminant normally disposed?
- (4) Is this disposal permitted?
- (5) How long has the condition existed and when did it begin?

Comments/Status:

Housekeeping efforts are improving on-site. Streets are being swept and cleaned. Trucks are required to have a spill kit to clean up any oil drips/leaks. Valves to outfalls have been replaced and removed to areas out of traffic.



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**EMERY OLEOCHEMICALS LLC
COMPLIANCE EVALUATION INSPECTION
DATE OF INSPECTION: April 21, 2010**

ITEMS FOR DISCUSSION:

The on-going Oil and Grease violations show the facility is in significant non-compliance (SNC) at outfalls 007 and 013. The steps needed to return the facility to compliance need to be addressed.

COMPLIANCE EVALUATION:

A rating of Marginal was given to the "Effluent/Receiving Waters" section because of the SNC determination at outfalls 007 and 013. The following is a list of violations since August 2009:

EFFLUENT LIMIT VIOLATIONS

Station No. 1 IF00018007

Parameter	Code	Date	Permit Limit	Reported
Oil and Grease, Hexane	00552	12/2/2009	10 mg/L	31.8 mg/L
Oil and Grease, Hexane	00552	3/12/2010	10 mg/L	64.7 mg/L

Station No. 1 IF00018013

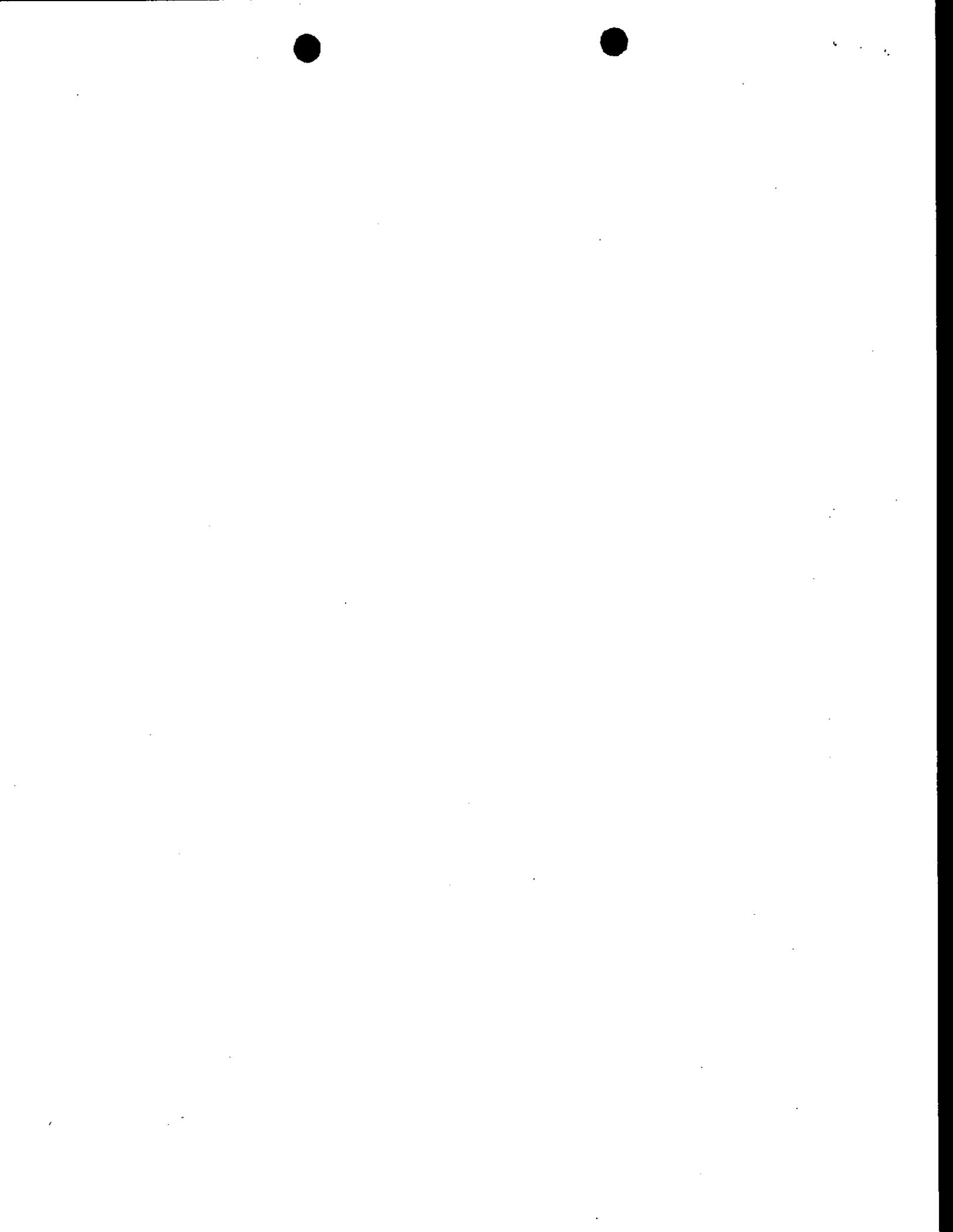
Parameter	Code	Date	Permit Limit	Reported
Oil and Grease, Hexane	00552	9/20/2009	10 mg/L	18.6 mg/L
Oil and Grease, Hexane	00552	10/2/2009	10 mg/L	13 mg/L
Oil and Grease, Hexane	00552	11/17/2009	10 mg/L	17.5 mg/L
Oil and Grease, Hexane	00552	12/2/2009	10 mg/L	22 mg/L
Oil and Grease, Hexane	00552	1/21/2010	10 mg/L	25.5 mg/L
Oil and Grease, Hexane	00552	2/5/2010	10 mg/L	27.3 mg/L
Oil and Grease, Hexane	00552	3/12/2010	10 mg/L	57.8 mg/L
Oil and Grease, Hexane	00552	4/23/2010	10 mg/L	10.9 mg/L

Station No 1 IF00018025

Parameter	Code	Date	Permit Limit	Reported
Oil and Grease, Hexane	00552	4/8/2010	10 mg/L	12.9 mg/L

Station No 1 IF00018039

Parameter	Code	Date	Permit Limit	Reported
Oil and Grease, Hexane	00552	2/4/2010	10 mg/L	19.5 mg/L



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Please be advised that failure to comply with the effluent limitations, or to satisfy monitoring or reporting requirements of your NPDES permit may be cause for enforcement action pursuant to the Ohio Revised Code Chapter 6111. The step(s) being taken to resolve these violations have been provided in the notification of violation provided by the facility. The frequency violations noted in previous inspections have been resolved.

As part of the inspection, there was a meeting with the facility's consultant. Emery has retained the services of EQM to help resolve the Oil and Grease violations. Also present at this meeting were John Wentz and Mike Arrozarena from EQM, and Gary Powell, Emery's corporate attorney. A variety of treatment technologies were being evaluated to treat the contaminated storm water. The oils and greases appear to be animal/plant based. When the HEM-SGT test for petroleum-based oils is run, the results show below the detection limit. This would be consistent with the types of materials used at the facility. The pilot test was discussed in addition to sampling. Emery performed additional Oil and Grease monitoring on April 23, 2010 to determine if there was a break point at which storm water needed treatment and then would not need treatment. The initial result showed 10.9 mg/L at outfall 013. The next sample was below detection. Emery may also want to look into green infrastructure as an option for its storm water. Retention in a biofiltration basin for rain water may provide an opportunity to reduce the amounts of pollutants.

OBSERVATIONS:

Emery Oleochemicals LLC (Emery) operations at the Cincinnati site produces oleochemicals (fatty acids and fatty alcohols) and ozone acids that are derived from renewable raw materials. The company also provides high performance system solutions for improving productivity and the environmental compatibility of complex manufacturing solutions for oil and gas exploration and other specific and speciality industrial applications. Products include Fatty Acids, Glycerin, Ozone Acids (Pelargonic and Azelaic Acids), and Oilfield Chemicals (based on Esters).

Oleochemicals are derived primarily from natural fats and oils. The facility's major raw materials are rendered animal tallow and vegetable oils. Animal tallow is a byproduct of the meat packing industry. These agricultural feedstocks are cyclically renewable, abundantly available, and tend to increase annually with the world's food supply. Tallow and other vegetable fats and oils account for more than three-fourths of Emery's feedstocks while other chemicals make up the remainder.

Emery receives, manufactures, and/or ships multiple types of chemicals at the Cincinnati plant. The primary raw materials for the Emery operations are tallow, vegetable oil, fatty acids, solvents and acids. These materials are generally stored in bulk storage tanks and containers located within covered areas. All warehouse drains



EMERY OLEOCHEMICALS LLC -- PAGE 3

are connected to the process sewer system and should not drain to the storm sewer system. In addition, all chemical bulk storage tanks are located within a secondary containment system. Most bulk storage tanks are located within a tank farm area, and utilize a barrier wall around the tank farm for containment purposes. The tank farm areas drain to the process sewer system for treatment prior to discharge to MSD.

Within the Fatty Acids Department, the following chemicals may be used and stored:

- Ammonia (used as a refrigerant and could drain to storm sewer during transportation);
- Biphenyl (used as a heat transfer fluid and drains to the process sewer);
- Methanol (used in manufacturing and could drain to storm sewer during transportation; the manufacturing uses drain to the process sewer);
- Nickel compounds (used in manufacturing and could drain to storm sewer during transportation; the manufacturing uses drain to the process sewer); and
- Sulfuric acid (used in manufacturing and could drain to storm sewer during transportation; the manufacturing uses drain to the process sewer).

Within the Ozone Department, the following chemicals may be used and stored:

- Ammonia (used as a refrigerant and could drain to storm sewer during transportation);
- Biphenyl (used as a heat transfer fluid and drains to the process sewer);
- Freon R22 (Used as a refrigerant and doesn't appear to be a storm water issue); and
- Manganese compounds (used in manufacturing and could drain to storm sewer during transportation; the manufacturing uses drain to the process sewer).
-

The storm water associated with Emery is discharged through two independent drainage systems. The storm water that has a potential to be contaminated with process chemicals is routed to a process sewer. This process sewer also receives wastewater from plant operations, and directs storm water and wastewater to the plant process wastewater system for treatment and subsequent discharge to MSD. In total, the process wastewater system accepts approximately 45% of all storm water on-site.

The storm water that is not likely to be contaminated with process chemicals is routed to the storm water system. The system collects approximately 55% of the storm water associated with the Cincinnati plant. This non-industrial related area collects storm water in numerous catch basins and manholes that discharge directly to both the east and west sides of Mill Creek. Storm water associated with Emery flows toward Mill Creek, and unless collected in the process sewer system, will be detained for inspection and released to the Mill Creek upon approval. This collection system utilizes a concrete wall around the storm water inlet, and a closed and locked valve within the storm water inlet. The storm water is collected during the rain event and the valve must be manually opened for the discharge of the collected storm water. Current exception to this

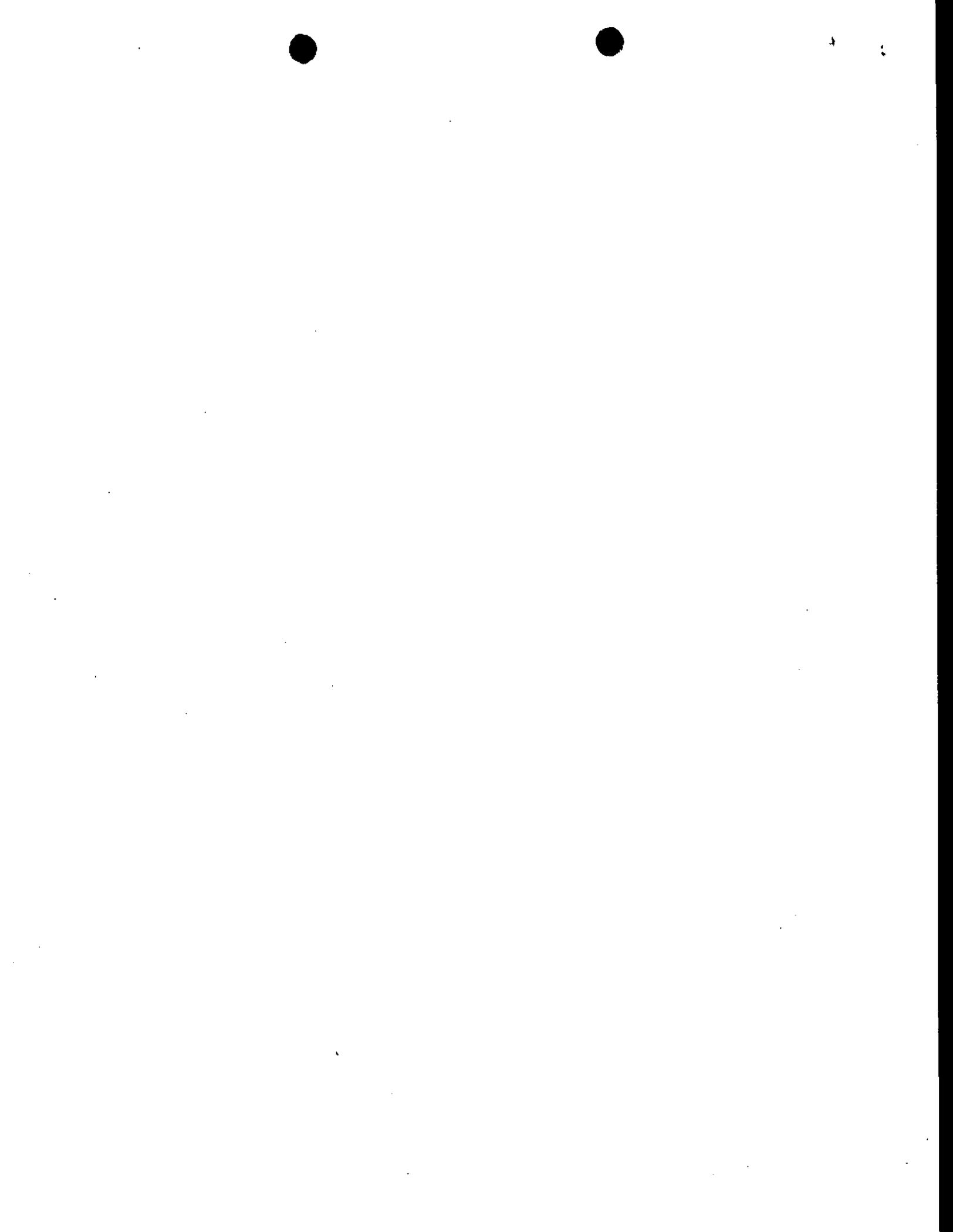


EMERY OLEOCHEMICALS LLC -- PAGE 4

collection, evaluation and discharge process is outfall 11F00018036 with the Ozone manufacturing area. In addition, the surface runoff that borders both the east and west side of Mill Creek is collected within secondary containment. This secondary containment consists of raised containment walls with valves that are closed, and must be manually opened to discharge the water after inspections to determine the water is free of contaminants.

Emery employs a number of traditional storm water management practices to control and manage the quality and quantity of storm water run-off:

- Within the Fatty Acid manufacturing area, the storm water catch basins contain valves that are maintained in the closed position. Following a storm event, the detained storm water is visually inspected for signs of contaminants. If approved, the detained storm water is then released to the storm water system and to Mill Creek. Also, within the Fatty Acid area, a full length containment wall has been constructed at the Mill Creek area. This wall has several openings to allow storm water runoff to drain to Mill Creek. These openings utilize a manual valve that is maintained in the closed position. Following a storm event, the detained storm water is visually inspected for signs of contaminants and if there is no sign of contaminants, the runoff is released to Mill Creek.
- Outfall 11F00018007 collects storm water runoff from the roofs of Buildings 19, 44 and 6A as well as surface water from the paved areas near these buildings. The collection area includes truck traffic that could transport supply items and chemicals and some hazardous chemicals in addition to coal and fly ash. Catch basins feeding this outfall incorporate the "catch, inspect and release" method for storm water. Roof drains drain directly to the outfall.
- Outfall 11F00018013 collects storm water runoff from paved surfaces between Buildings 32 and 73A, and from the roadway in front of and to the north of building 45A. This is a traffic area for delivery trucks and in-plant traffic. Catch basins feeding this outfall incorporate the "catch, inspect and release" method for storm water. This outfall has filter pads placed in the catch basin to remove solids. These are being replaced monthly.
- Outfalls 11F00018016 and 11F00018018 collect storm water runoff from the non-manufacturing roof tops and from paved traffic areas to warehouses. Catch basins feeding these outfalls incorporate the "catch, inspect and release" method for storm water. Outfall 11F00018016 did have a crack in the line. When it was dry, the facility noted a discharge coming out of the outfall. It was found to be ground water infiltration. The facility is looking at relining or replacing this pipe. There was no ground water discharging on the day of the inspection. Outfall 11F00018018 has a broken valve that is shut. This area is not being drained due to used pallet storage. The storm water pools in this area and then evaporates. Roof drains drain directly to the outfall.
- Outfall 11F00018025 collects storm water runoff from the non-manufacturing areas consisting of the facility cafeteria and office building and research laboratories as well as the visitor entrance to the site. The discharge from this



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outfall has been eliminated. Emery is looking at eliminating this outfall during the next permit renewal or modification, whichever would happen first.

- Outfall 11F00018039 collects storm water runoff from paved areas at the contractor and truck entrance to the site. This outfall also collects storm water from a paved parking area near the contractor entrance. An assessment of the areas notes that this area is not considered to be a source of potential pollution to the storm sewer system. However, monitoring is being required to verify this.
- Outfall 11F0001036 collects storm water runoff from the Ozone department. The sole source of storm water that feeds outfall 11F00018036 is catch basin CB36C which is located immediately north of the tank truck loading station. There is curbing to protect CB36C and the tank truck loading and unloading procedure instructs the operator to place a cover over this catch basin when loading or unloading is performed in the vicinity of this outfall. CB36D is located outside the secondary containment for Tank Farm 68. This tank farm has adequate secondary containment to contain the single largest tank in the event of a catastrophic failure of the primary containment.
- Outfall 11F00018039 is feed from several catch basins located within the main truck and contractor entrance to the plant. This outfall accepts storm water only from ground area that is not considered a production area. The catch basins feeding this outfall operate on a "catch and release" method as does other parts of the Emery facility.
- Outfalls 11F00018004, 11F00018006 and 11F00018009 have been eliminated and removed from the facility's NPDES permit.

The storm drains in the facility are painted yellow to identify that the area discharging to Mill Creek.

