IOWA DEPARTMENT OF NATURAL RESOURCES
FIELD SERVICES AND COMPLIANCE BUREAU
FIELD OFFICE #2 - MASON CITY IOWA

DATE: **August 9, 2024**

TO: **The Record**

FROM: **Jeremy Klatt** JK

SUBJECT: **Diesel Fuel in Sewage Basement Backup**
City of Eagle Grove

This office was forwarded a report from the National Response Center (NRC) on July 8, 2024. The NRC had received a call from Kyla Gomez that stated she had diesel fuel in her basement at 719 NW 4th Street. The City of Eagle Grove had received heavy rainfall (~4 inches) in a short period of time the previous evening.

This office has previously handled similar calls from Ms. Gomez and her husband Andrew Menke regarding the matter (2014, 2019, 2021). Union Pacific (UP) has an oil/water separator that discharges to the same sewer line as the Menke/Gomez residence. The residence experiences periodic incidents of sewage entering their basement when the sewer system becomes overwhelmed by rainfall. This office has previously determined that the oil/water separator discharge has low concentrations of diesel fuel and motor oil; this discharge was deemed to be legal and UP has an agreement with the City of Eagle Grove to discharge the wastewater.

I traveled to the Gomez residence on July 8, 2024, and spoke with Ms. Gomez. She showed me her basement, which had water across the floor a few inches deep (see photo 1). The water was being pumped out of the basement at the time that I observed it. Ms. Gomez reported that they had evacuated their home the previous evening due to diesel odors.

I also observed the basement of Elizabeth Houser at 710 4th Street (see photo 2). I estimated that Ms. Houser's basement had 1-2 feet of sewage in the basement. Ms. Houser reported that she also evacuated her house the previous evening due to diesel odors in the house. Lastly, I spoke with Briley Buhr and her husband who live at 715 NW 4th Street; they also reported sewage and a diesel odor in their basement and that they left their house the previous evening due to the diesel odors.

I obtained lab samples from the Gomez basement and from the Houser basement. The samples had a faint diesel fuel odor.

I traveled to the UP oil/water separator; Anthony Larry with HMR was on-site. He reported that he was preparing to set up to pump oil/water separator effluent to a frac tank that was brought onto the site. Mr. Larry didn't have a lot of details and suggested I talk to Justice Paulsen.

Justice Paulsen reported that HMR was called by UP at 930 pm on July 7 to assist with mitigating the flooding of UP's oil/water separator. He reported that operation of the oil/water separator is handled by Ryan Cochran with Jacobs.

I contacted Ryan Cochran to determine if the oil/water separator was discharging to the sewer during and after the storm. He reported that a discharge did occur the previous evening and was ceased after the maximum allowable daily rate was achieved at about 1030 PM. He reported that after midnight the discharge was resumed and ceased at 2:50 AM.

Mr. Cochran reported that his associate Jon Wessleman would be on-site soon. When Mr. Wessleman arrived, we observed the manhole where the pump that pumps the separator effluent to the sanitary sewer is located. There was some water in the manhole with some brown floating material that is indicative of petroleum and a sheen (see photo 3). No discharge was occurring at the time of observation. A lab sample of this water was collected.

OA-2 sample results confirmed the presence of diesel fuel in the oil/water separator manhole and in both basements. The diesel fuel concentration in the Menke and Houser basements was 3.2 ppm and 2.9 ppm; respectively. The concentration found in the UP lift station was 200 ppm. This concentration in the UP lift station was much higher than previous results (e.g. <1 ppm in 2019).

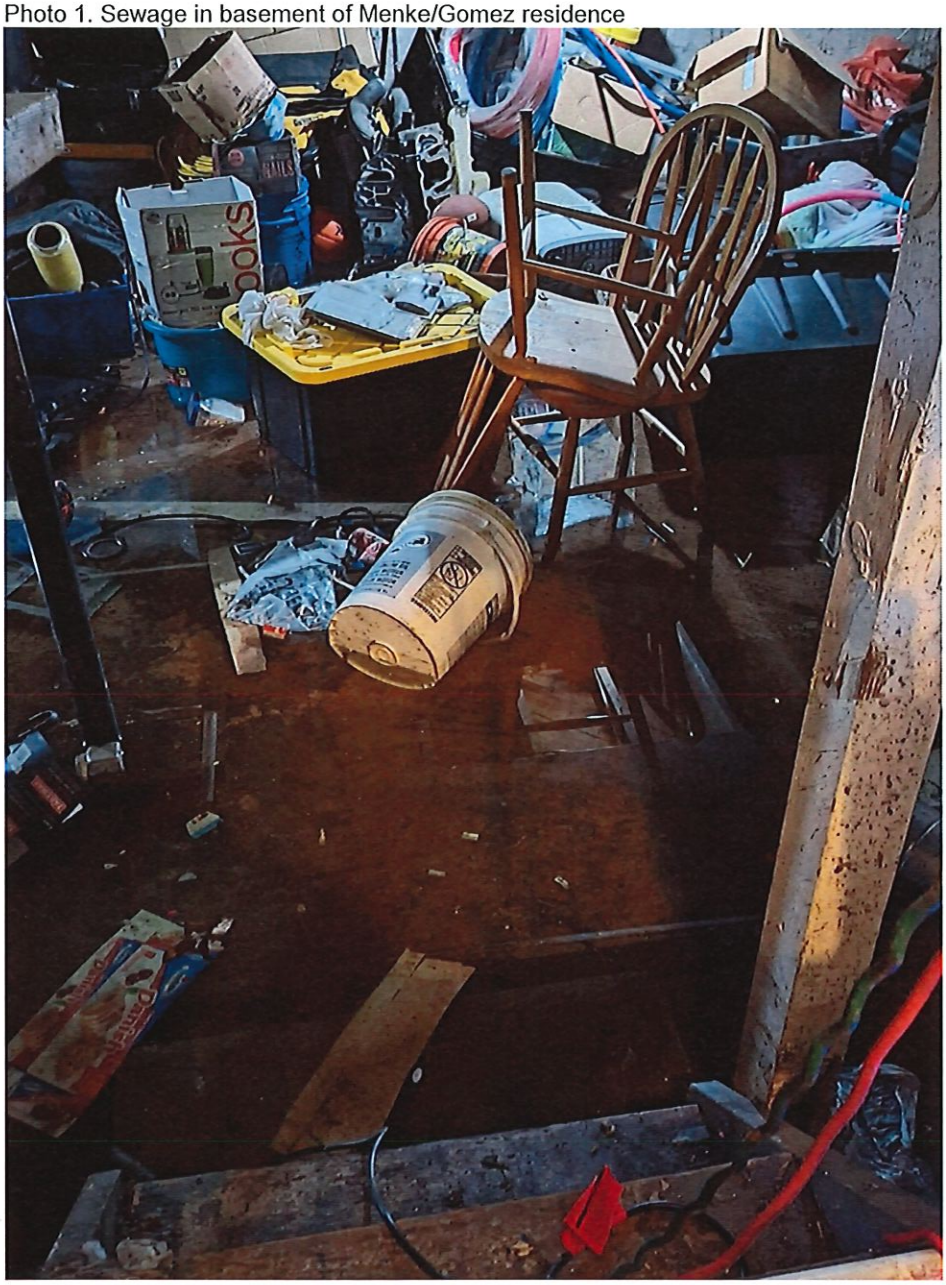
On July 12, 2024, I received an event summary from Jennifer Bradfield Clark with UP (see attached). On July 15, 2024, I received five photos from Tyler Parker with UP including the flooded secondary containment system before and after clean up (see photo 1-5). On July 18, 2024, I received the results of their split sample, which had a similar diesel fuel concentration (149 ppm).

On July 29, 2024, I sent Mr. Parker an email requesting that UP evaluate their discharge to ensure it is not a prohibited discharge to a sanitary sewer (see attached email).

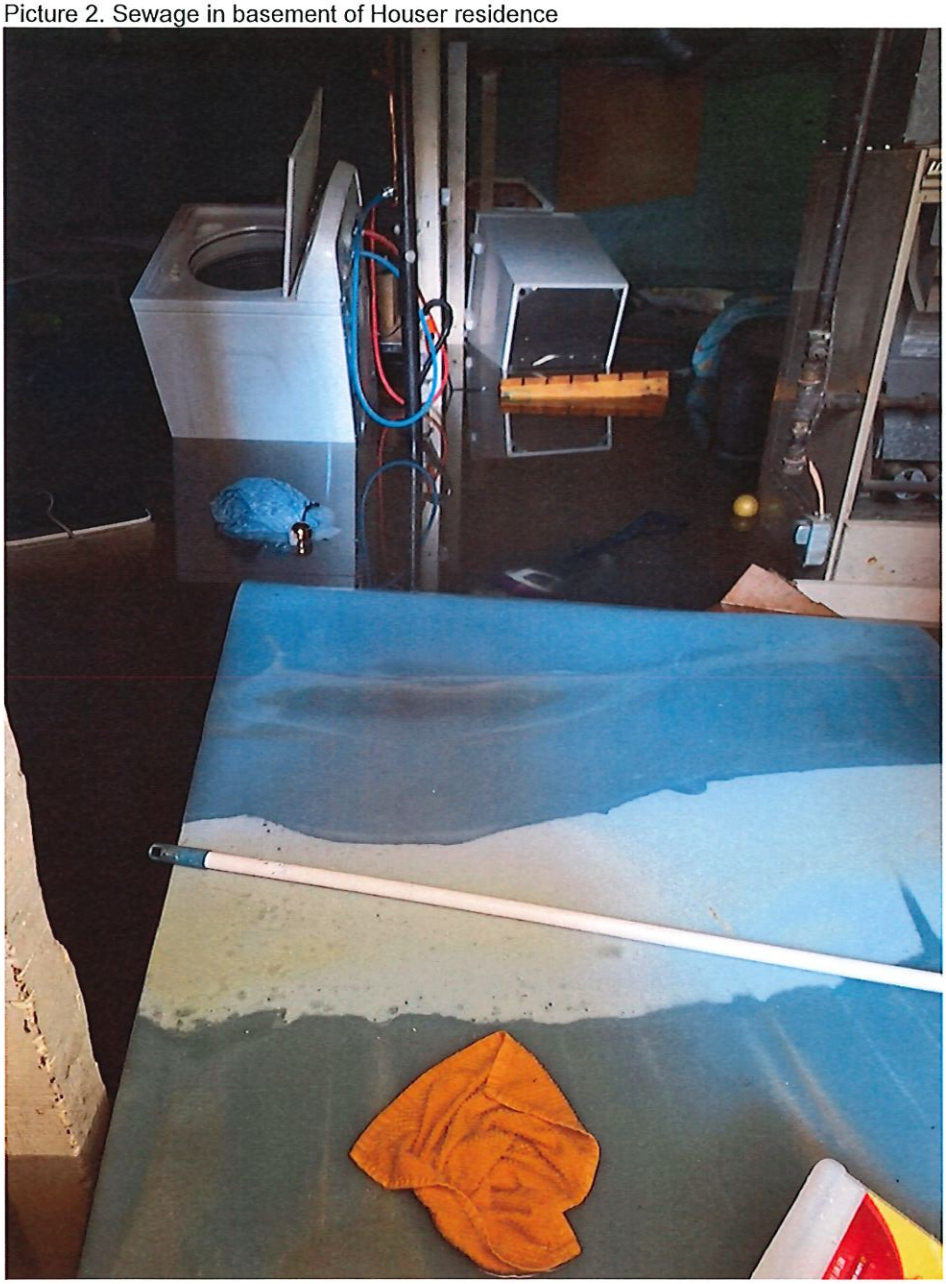
On August 2, 2024, I spoke with Eagle Grove's City Manager Bryce Davis about the City of Eagle Grove's I/I work. Approximately 5 years ago, after a similar incident involving diesel fuel and sewage backups in the same neighborhood, the DNR required that the City submit a summary of the I/I work that was planned during the next five years. According to the written response, there was to be I/I work completed in each of the next five years. However, during our phone conversation Mr. Davis reported that only the 2020 project was completed and that no I/I work had been completed since that time. I informed Mr. Davis that the DNR would be seeking an Administrative Order that required the City to completed some I/I work.

An NOV was sent to the City of Eagle Grove dated August 12, 2024.

Photo 1. Sewage in basement of Menke/Gomez residence



Picture 2. Sewage in basement of Houser residence



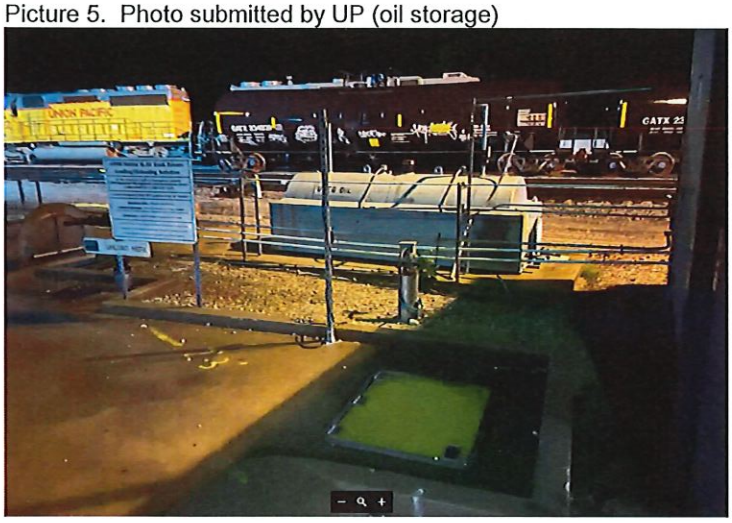
Picture 3. UP Lift Station with Petroleum Product on Surface of Water



Picture 4. Photo submitted by UP (flooded containment)



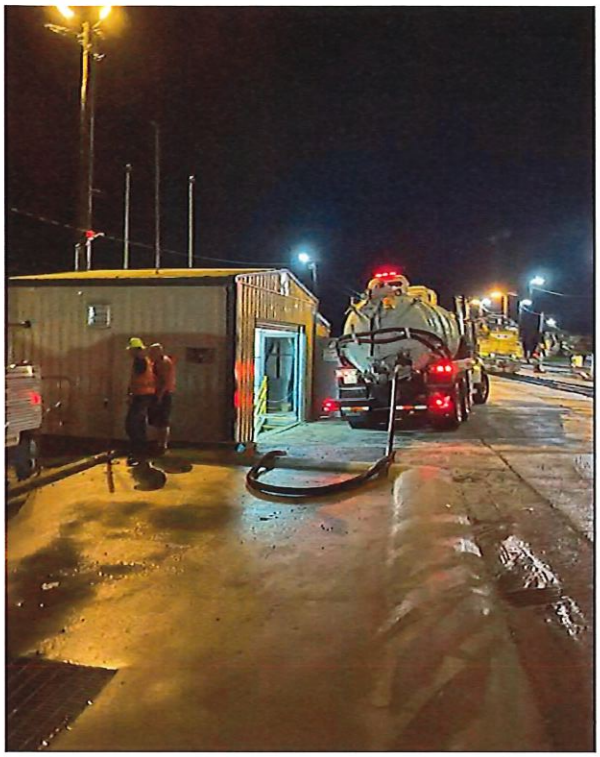
Picture 5. Photo submitted by UP (oil storage)



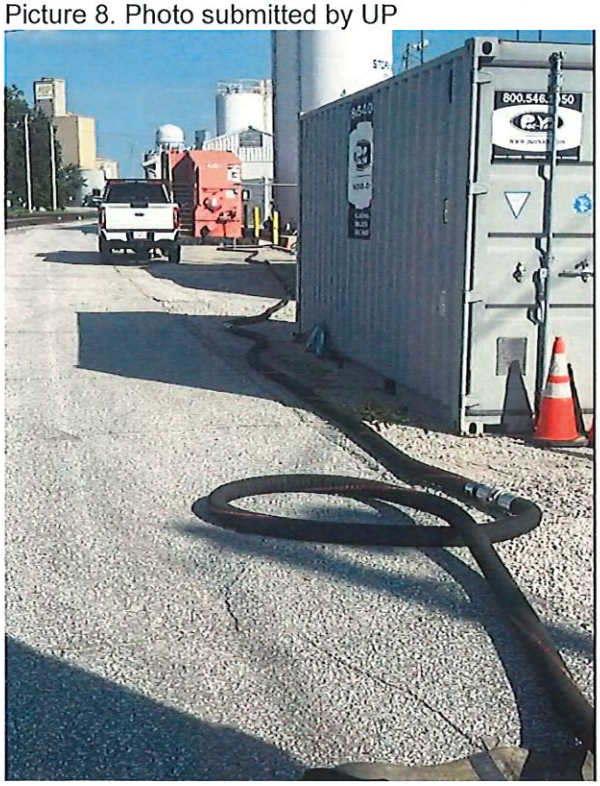
Picture 6. Photo submitted by UP (clean-up containment)



Picture 7. Photo submitted by UP



Picture 8. Photo submitted by UP



THE UNIVERSITY OF IOWA | STATE HYGIENIC LABORATORY

ANALYTICAL REPORT

1-800-421-IOWA (4692)

Collection Location	Collector and Phone	Client Reference	Accession #
menke	klatt jeremy 641/424-4073		2462128
MENKE,	Collected 2024-07-08 13:54	Received 2024-07-10 09:00	Project 04wqfs
Report To IDNR-FO 2 2300 15TH ST SW MASON CITY, IA 50401-5630			Sample Description waste water Sample Type Non-Drinking Water Sample Source Sample Note(s) 1, 2

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Total Extractable Hydrocarbons, Iowa OA-2			*3*
Gasoline	**<100**	**100**	
Mineral spirits	**<100**	**100**	
Kerosene	**<100**	**100**	
Diesel fuel	**3200**	**100**	
Motor oil	**<100**	**100**	
Total Extractable Hydrocarbons	**3200**	**100**	

SAMPLE AND ANALYSIS NOTES

1. Sample exceeded required temperature upon receipt.
2. Unless otherwise noted, the sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.
3. The chromatographic profile of the sample extract did not match this laboratory's fuel or oil standards. Quantitation is based on this laboratory's diesel fuel standard.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Total Extractable Hydrocarbons, Iowa OA-2	2024-07-16 15:28 JDA	3200	2024-07-17 12:13 TGC	
2. Prep by Separatory Funnel, Iowa OA-2	2024-07-12 11:18 JDA	3200	2024-07-17 12:13 TGC	

DESCRIPTION OF UNITS

ug/L = Micrograms per Liter

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Michael A. Pentella, Ph.D., D(ABMM), Director; IOWA ENVIRONMENTAL LAB ID #027

The result(s) of this report relate only to the items analyzed. Where the laboratory has not been responsible for the sampling stage the results apply only to the sample as received. This report shall not be reproduced except in full without the written approval of the laboratory. If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500.

THE UNIVERSITY OF IOWA | STATE HYGIENIC LABORATORY

ANALYTICAL REPORT

1-800-421-IOWA (4692)

Collection Location	Collector and Phone	Client Reference	Accession #
basement	klatt jeremy 641/424-4073		2462132
	Collected	Received	Project
	2024-07-08 13:35	2024-07-10 08:45	04wqfs

Report To	Sample Description	Sample Type	Sample Source	Sample Note(s)
IDNR-FO 2 2300 15TH ST SW MASON CITY, IA 50401-5630	waste water	Non-Drinking Water		1, 2

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Total Extractable Hydrocarbons, Iowa OA-2			*3*
Gasoline	**<100**	**100**	
Mineral spirits	**<100**	**100**	
Kerosene	**<100**	**100**	
Diesel fuel	**2900**	**100**	
Motor oil	**<100**	**100**	
Total Extractable Hydrocarbons	**2900**	**100**	

SAMPLE AND ANALYSIS NOTES

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ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Total Extractable Hydrocarbons, Iowa OA-2	2024-07-16 16:27 JDA	3200	2024-07-17 12:13 TGC	
2. Prep by Separatory Funnel, Iowa OA-2	2024-07-12 11:18 JDA	3200	2024-07-17 12:13 TGC	

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THE UNIVERSITY OF IOWA | STATE HYGIENIC LABORATORY

ANALYTICAL REPORT

1-800-421-IOWA (4692)

Collection Location	Collector and Phone	Client Reference	Accession #
up manhole	klatt jeremy 641/424-4073		2462133
	Collected	Received	Project
	2024-07-08 15:15	2024-07-10 08:45	04wqfs

Report To

IDNR-FO 2

2300 15TH ST SW
MASON CITY, IA 50401-5630

Sample Description	Sample Type	Sample Source	Sample Note(s)
waste water	Non-Drinking Water		1, 2

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Total Extractable Hydrocarbons, Iowa OA-2			*3*
Gasoline	**<3000**	**3000**	
Mineral spirits	**<3000**	**3000**	
Kerosene	**<3000**	**3000**	
Diesel fuel	**200000**	**3000**	
Motor oil	**<3000**	**3000**	
Total Extractable Hydrocarbons	**200000**	**3000**	

SAMPLE AND ANALYSIS NOTES

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ANALYSIS INFORMATION

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DESCRIPTION OF UNITS

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BUILDING AMERICA®

July 12, 2024

Mr. Jeremy Klatt
Iowa Department of Natural Resources

RE: Union Pacific Railroad – Eagle Grove Industrial Wastewater

Mr. Klatt:

As requested, below you will find a timeline and summary of events relevant to the July 6 and 7, 2024 rain event which affected operations at Union Pacific's (UP's) Eagle Grove, Iowa industrial wastewater treatment plant (WWTP).

On Sunday, July 6, 2024, the Eagle Grove Yard received approximately 7 inches of rain in a short period of time. As a result, the on-site wastewater treatment plant was unable to process the incoming excess volume of wastewater at the effluent limit permitted. This resulted in a surge tank containing oily water to overflow into secondary containment, as designed. No part of the overflow escaped secondary containment. During this time, the contract operator, Jacobs, had a manager on site (Mr. John Wesselmann), to maintain operations of the plant.

At approximately 9:30PM CST on July 6, 2024, UP contacted Haz-Mat Response, Inc (HMRI) to dispatch a crew to Eagle Grove to recover the oily water mix from secondary containment. Additionally, UP directed HMRI to provide a 21,000-gallon frac tank on-site to provide additional storage for the treatment plant. A second frac tank was ordered on the following day, at approximately 12:00 noon.

By approximately 12:00 midnight on July 7, 2024, HMRI crews had staged the aforementioned frac tank and recovered approximately 3,000 gallons of oily water from the WWTP's secondary containment structure. Once completed, pressure washers were utilized to clean secondary containment and rinse water was containerized in the on-site frac tanks. Recovery operations were completed at approximately 4:00 AM CST on July 7, 2024.

UP has confirmed that the WWTP's secondary containment structure has operated as designed, and that no fugitive product left containment. Visual observations performed by both HMRI and Jacobs confirm this finding. Since no release of fugitive product to the environment was observed, no disposal records will be developed or produced. On July 8, 2024, at approximately 6:30AM CST, Tyler Parker, UP Environmental, spoke with Nate Brockman with the City of Eagle Grove POTW to request permission to discharge. Mr. Brockman indicated that the city was significantly backed up and that UP should not discharge until it receives authorization from the City. UP has complied with this request. No industrial wastewater has been processed at the Eagle Grove facility since Monday, July 8, 2024, beginning at approximately 2:30AM CST. Moreover, there has been no fixed fueling, or on-site fuel storage at this facility since September 2023.

UNION PACIFIC CORPORATION
1900 Epps Avenue
Fort Worth, TX 76104

Please direct further inquiries into this matter or other operations at the WWTP to Mr. Tyler Parker. Mr. Parker can be reached at 816-398-1595 or Taparker@up.com. In addition, please provide copies of all laboratory analytical results associated with investigations into this matter to Mr. Parker.

Sincerely,

Jennifer Bradfield Clark

Director – Fuel & Environmental Field Operations

IOWA

Klatt, Jeremy <jeremy.klatt@dnr.iowa.gov>

Update on UP Eagle Grove Separator Effluent Discharge

1 message

Klatt, Jeremy <jeremy.klatt@dnr.iowa.gov> Mon, Jul 29, 2024 at 12:30 PM
To: Tyler Parker <taparker@up.com>
Cc: Nate Brockman <n.brockman@eaglegroveia.org>, Robert Lunda <egstdept@goldfieldaccess.net>, Trent Lambert <trent.lambert@dnr.iowa.gov>, Sheila Bly <sheila.bly@dnr.iowa.gov>

Tyler -

Just to follow up on our conversation this morning. My main concern at this point is that the diesel concentration found in the UP lift station was quite high (200 ppm) and has an unknown source. The DNR had previously determined that very low concentrations of diesel fuel could be legally discharged to the sanitary sewer. This was based off of previous sampling of separator effluent, which was <1 ppm in 2019.

As we discussed, federal regulation prohibits certain pollutant discharges to a sanitary sewer (40 CFR Part 403.5(a) and (b)). The law specifically prohibits discharge which results in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems is prohibited. I understand that some residents that experienced sewer backups during this recent event evacuated their homes due to the presence of diesel fumes. So there is potential that the UP discharge could be prohibited on these grounds.

Prior to resuming discharge to the sewer, I am requesting that UP demonstrate that their discharge is not violating any of these sanitary sewer discharge prohibitions. I believe that will be difficult without identifying the source of the diesel.

In addition, if UP does resume discharging to the sewer, I believe that under no circumstances should separator effluent be discharged to the sanitary sewer when residents on the sewer line are experiencing sewage entering their homes through surcharged sewer lines. The City and UP need to develop a procedure to prevent this from occurring again.

I understand that UP is in the process of investigating the source of the diesel. Please provide me any updates on this matter.

Thanks,
Jeremy

Jeremy Klatt
Environmental Specialist Senior
Field Services & Compliance Bureau
2300 15th St. SW, Mason City, IA 50401
641-424-4073
jeremy.klatt@dnr.iowa.gov
www.iowadnr.gov

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