Illicit Discharge

Ammonia

\( \text{NH}_3 \)
IDDE

• Received a call from the Irving Fire Department about a heavy ammonia smell coming from a storm drain inlet box at the 1500 blk of Brentwood Dr.

• This is a residential area with some light commercial North of the neighborhood.
Upon arrival, we noticed a smell that smelled just like smelling salts.

We referred to our storm drainage maps to determine where it could be coming from.

South of the neighborhood, the creek is accessible so we took a ammonia test with a HACH test kit and the results were off the charts. >8ppm
Blue line represents the path of the main storm drain

>8ppm ammonia sample

1500 Blk Brentwood
We began to trace upstream following our maps, and noses, popping manholes looking for the source.

On the North side of Airport Frwy, we found an area where the runoff from several industrial complexes enters the main stem of this storm drain system.

Ammonia readings were taken at this location with off the chart readings.
>8 ppm ammonia sample

Arrows show direction of runoff from industrial sites
The source of the ammonia was quickly traced to a beverage company.

Irving FD was called to our location and Irving's FD Hazmat team responded.

Contact was made with employees of the Industry and the Hazmat team made entry to find a source.
There was also a heavy ammonia smell in the sanitary sewer system so members of Irving’s pretreatment team responded to the scene.

While the hazmat team searched inside, we searched the perimeter of the industry and this is what we found.
IDDE
• The Industry was doing maintenance on their refrigerant system and had to empty the ammonia from the system.

• Failed procedures caused a drum to overflow and enter the MS4.
A dam was built downstream of the original call by the Public Works Dept.

The product traveled approximately 1 ½ miles downstream.
The Industry had an environmental cleanup company clean the spill. The spill was contained and remediated throughout the night.

A citation and a compliance order was issued to the Industry.
Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.

(Winston Churchill)
Links about NH3


- https://agrilifeextension.tamu.edu/library/farming/preventing-theft-of-anhydrous-ammonia/
COMPLAINT ABOUT OIL SPILL

FIRE DEPARTMENT FIRST ON THE SCENE
OIL SPILL?
OIL SPILL?
FIRE DEPARTMENT TEST STRIPS SHOWED NO HYDROCARBONS

• PH TEST STRIPS SHOWED A LOW PH AROUND 6

• VISCOSITY WAS VERY THIN UNLIKE OIL

• SMELLED UNLIKE OIL AND MORE LIKE DECAYING ORGANIC MATTER
BUT FROM WHERE?
UNDER THE PLAYGROUND?
RAIN CAUSED? YES!
A STORM POURED .45” OF RAIN THAT MORNING

FRESH NEWLY PLACED MULCH HAD TOO MUCH TO DRINK AND LEACHED ALL THE DYE IN THE MULCH
WE VACUUMED UP ALL THE RUNOFF JUST ABOVE A STORM INLET. CASE STUDY CLOSED. NICE FISH!