





**L** Remarks

Local Option

BC 4802 responded to the West Lake landfill for the report of a sump pump on fire. BC 4802 arrived on scene and reported to the front main entrance office building where this officer was unable to contact any employees or staff of the landfill outside or inside the building. This officer advised responding units to stage outside the main entrance while investigation was in progress. This officer immediately activated 4 gas and multi-radiac monitors while staged at the entrance to the landfill.

BC 4802 was then approached by a landfill operations manager shortly after arrival and advised that landfill staff is attempting to extinguish the fire at the sump pump location. This officer followed the operations manager back to the location of the fire while stopping approximately every 30-50 yards for air monitoring which continued to reveal no CO, H2S, O2 within normal range, and no other gasses that may have been present were detected within lower explosive limits of the device. The small fire was then noted and located in the southwest corner of the landfill near the rear gate #2 entrance where staff was continuing to attempt to extinguish the small fire with multiple dry-chemical fire extinguishers.

BC 4802 then positioned command vehicle at the gate of the rear entrance and advised other responding companies to proceed to gate #2 from the roadways outside of the landfill property. This officer immediately gathered additional information from the operations manager in regards to the equipment involved and I.A.P. for extinguishing the fire. This officer then noted that staff attempts to extinguish the fire were becoming unsuccessful and the fire was increasing in size.

BC 4802 then ordered Company 4824 to proceed right inside the rear gate entrance for positioning of a fire attack from a distant and safe location. Air monitoring continued during operations which revealed no CO, O2 within normal limits, no H2S and no other gasses that may have been present were detected within the lower explosive limits of the device. 4801 arrived on scene at this time.

Report: BC 4802 - SR

See initial company officer report below:

4824 responded to the above location for a report of sump pump fire. 4824 arrived on scene and staged per 4802 on St. Charles Rock Rd near the North entrance. 5025 was already on the scene staged. Per 4802, 4824 and 5025 were redirected to gate 2 which is located off Boenker rd. The landfill employees attempted to extinguish the fire with potable extinguishers but were unable. 4802 had 4824 pull just inside the landfill gate to extinguish the fire from a safe distance and not within the actual landfill area.

4824 pulled on scene through the south entrance. Once on scene, the 4 gas monitor was used to check air quality. No hazardous substances were detected. An attack line was pulled for fire control. Water and foam were applied to the fire from a safe distance. 5025 supplied 4824 with water from a private water hydrant. 5025's crew came onto the scene and staged at 4824 which was positioned a distance from the fire. 5025's gas monitor also had zero readings for any hazardous substances. After numerous attempts to extinguish the fire with water and foam from the handline at a distance, 4802 requested the deck gun be used. The deck gun was used to put water on the fire. 4801 on scene at this time.

I made contacted with Erin Fanning (Division Manager) 209-227-9531, who stated that the "Flare" was shut off. She also stated that all the gas valves around the fire were turned off. 4824 continued to apply water on the fire from the deck gun. Shortly afterwards the fire started to decrease in size and eventually went out. Erin Fanning advised me that they were now going to dump dirt on the pump to bury it. 4801 and 4802 were aware of all this information.

Erin advised me that they would start with the clean up now and that our services were not needed anymore. Since the fire was extinguished and there were no more hazards, 4824 left the site. JL

**B Property Details**

**B1** [ ] Not Residential  
Estimate number of residential living units in building of origin whether or not all units became involved

**B2** [ ] Buildings not involved  
Number of buildings involved

**B3** [ ] [ ]  None  
Acres burned (outside fires)  Less than one acre

**C On-Site Materials or Products**  None Complete if there were any significant amounts of commercial, industrial, energy, or agricultural products or materials on the property, whether or not they became involved

Enter up to three codes. Check one box for each code entered.

[ 520 ] [ Flammable gases, other ]  
On-site material (1)

[ ] [ ]  
On-site material (2)

[ ] [ ]  
On-site material (3)

**On-Site Materials Storage Use**

1 Bulk storage or warehousing  
2 Processing or manufacturing  
3 Packaged goods for sale  
4 Repair or service  
N None  
U  Undetermined

1 Bulk storage or warehousing  
2 Processing or manufacturing  
3 Packaged goods for sale  
4 Repair or service  
N None  
U Undetermined

1 Bulk storage or warehousing  
2 Processing or manufacturing  
3 Packaged goods for sale  
4 Repair or service  
N None  
U Undetermined

**D Ignition**

**D1** [ 60 ] [ Equipment or service area, other ]  
Area of fire origin

**D2** [ UU ] [ Undetermined ]  
Heat Source

**D3** [ 64 ] [ Flammable liquid/gas in container or pipe ]  
Item first ignited

Check box if fire spread was confined to object of origin.

**D4** [ 00 ] [ Type of material first ignited, other ]  
Type of material first ignited Required only if item first ignited code is 00 or <70

**E1 Cause of Ignition**  
Check this box if this is an exposure report

0 Cause, other (System generated code only, not used for data entry)  
1 Intentional  
2 Unintentional  
3  Failure of equipment or heat source  
4 Act of nature  
5 Cause under investigation  
U Cause undetermined after investigation

**E2 Factors Contributing to Ignition**

[ UU ] [ Undetermined ]  
Factor contributing to ignition (1)  
Factor contributing to ignition (2)

**E3 Human Factors Contributing to Ignition**  
Check all applicable boxes  None

1 Asleep  
2 Possibly impaired by alcohol or drugs  
3 Unattended or unsupervised person  
4 Possibly mentally disabled  
5 Physically disabled  
6 Multiple persons involved  
7 Age was a factor  
N  None  
Estimated age of person involved [ ]

1 Male 2 Female

**F1 Equipment Involved in Ignition**  
If equipment was not involved, skip to Section G

[ 344 ] [ Pump ]  
Equipment Involved

Brand [ ]  
Serial [ ]  
Model [ ]  
Year [ ]

**F2 Equipment Power Source**

[ 51 ] [ Compressed air ]  
Equipment Power Source

**F3 Equipment Portability**

1 Portable  
2  Stationary

Portable equipment normally can be moved by one or two persons, is designed to be used in multiple locations, and requires no tools to install.

**G Fire Suppression Factors**  
Enter up to three codes.

[ 300 ] [ On-site materials, other ]  
Fire suppression factor (1)

[ ] [ ]  
Fire suppression factor (2)

[ ] [ ]  
Fire suppression factor (3)

**H1 Mobile Property Involved**

1 Not involved in ignition, but burned  
2 Involved in ignition, but did not itself burn  
3 Involved in ignition and burned

[ ] [ ]  
Mobile property model

[ ] [ MO ] [ ]  
License Plate Number State VIN

**H2 Mobile Property Type and Make**

[ ] [ ]  
Mobile property type

[ ] [ ]  
Mobile property make

[ ]  
Year

**Local Use**  
Pre-Fire Plan Available

Some of the information presented in this report may be based upon reports from other agencies:

Arson report attached  
Police report attached  
Coroner report attached  
Other reports attached

**A** FDID: 09503 State: MO Incident Date: MM 11 DD 02 YYYY 2018 Station: Incident Number: 18-4804366 Exposure: 0

**NFIRS-9  
Apparatus  
or  
Resources**

B Apparatus or Resource	Dates and Times		Midnight is 0000	Sent	Number of People	Apparatus Use <small>Check ONE box for each apparatus to indicate its main use at the incident.</small>	Actions Taken <small>List up to 4 actions for each apparatus and each personnel.</small>	
	Dispatch	Arrival					Clear	
		<small>Check if the same date as Alarm date on the Basic Module (Block E1)</small>						
		<small>Month/Day/Year</small>	<small>Hour/Min</small>					
1 ID: 4824 Type: 11	Dispatch	X 11/02/2018	1703	Sent	X 0	Other X Suppression EMS	11	86
	Arrival	X 11/02/2018	1710					
	Clear	X 11/02/2018	1923					
2 ID: 5025 Type: 13	Dispatch	X 11/02/2018	1703	Sent	X 0	Other X Suppression EMS	73	74
	Arrival	X 11/02/2018	1709					
	Clear	X 11/02/2018	1921					
3 ID: 4802 Type: 92	Dispatch	X 11/02/2018	1703	Sent	X 0	Other X Suppression EMS	81	86
	Arrival	X 11/02/2018	1708					
	Clear	X 11/02/2018	1933					
4 ID: 4801 Type: 92	Dispatch	X 11/02/2018	1729	Sent	X 0	Other X Suppression EMS	81	86
	Arrival	X 11/02/2018	1754				83	
	Clear	X 11/02/2018	1919					
5 ID: 5002 Type: 92	Dispatch	X 11/02/2018	1737	Sent	X 0	Other X Suppression EMS	00	
	Arrival	X 11/02/2018	1739					
	Clear	X 11/02/2018	1918					

B Apparatus or Resource		Dates and Times		Midnight is 0000	Sent	Number of People	Apparatus Use	Actions Taken
		Check if the same date as Alarm date on the Basic Module (Block E1)					Check ONE box for each apparatus to indicate its main use at the incident.	List up to 4 actions for each apparatus and each personnel.
		Month/Day/Year	Hour/Min					
1	ID 4824 Type 11	Dispatch X 11/02/2018	1703		X	0	X Other X Suppression EMS	11 86
		Arrival X 11/02/2018	1710					
		Clear X 11/02/2018	1923					
Personnel ID	Name	Rank Or Grade	Action Taken	Action Taken	Action Taken	Action Taken		

B Apparatus or Resource		Dates and Times		Midnight is 0000	Sent	Number of People	Apparatus Use	Actions Taken
		Check if the same date as Alarm date on the Basic Module (Block E1)					Check ONE box for each apparatus to indicate its main use at the incident.	List up to 4 actions for each apparatus and each personnel.
		Month/Day/Year	Hour/Min					
2	ID 5025 Type 13	Dispatch X 11/02/2018	1703		X	0	X Other X Suppression EMS	73 74
		Arrival X 11/02/2018	1709					
		Clear X 11/02/2018	1921					
Personnel ID	Name	Rank Or Grade	Action Taken	Action Taken	Action Taken	Action Taken		

B Apparatus or Resource		Dates and Times		Midnight is 0000	Sent	Number of People	Apparatus Use	Actions Taken
		Check if the same date as Alarm date on the Basic Module (Block E1)					Check ONE box for each apparatus to indicate its main use at the incident.	List up to 4 actions for each apparatus and each personnel.
		Month/Day/Year	Hour/Min					
3	ID 4802 Type 92	Dispatch X 11/02/2018	1703		X	0	X Other X Suppression EMS	81 86
		Arrival X 11/02/2018	1708					
		Clear X 11/02/2018	1933					
Personnel ID	Name	Rank Or Grade	Action Taken	Action Taken	Action Taken	Action Taken		

B Apparatus or Resource		Dates and Times		Midnight is 0000	Sent	Number of People	Apparatus Use	Actions Taken
		Check if the same date as Alarm date on the Basic Module (Block E1)					Check ONE box for each apparatus to indicate its main use at the incident.	List up to 4 actions for each apparatus and each personnel.
		Month/Day/Year	Hour/Min					
4	ID 4801 Type 92	Dispatch X 11/02/2018	1729		X	0	X Other X Suppression EMS	81 86
		Arrival X 11/02/2018	1754					83
		Clear X 11/02/2018	1919					
Personnel ID	Name	Rank Or Grade	Action Taken	Action Taken	Action Taken	Action Taken		

B Apparatus or Resource		Dates and Times		Midnight is 0000	Sent	Number of People	Apparatus Use	Actions Taken
		Check if the same date as Alarm date on the Basic Module (Block E1)					Check ONE box for each apparatus to indicate its main use at the incident.	List up to 4 actions for each apparatus and each personnel.
		Month/Day/Year	Hour/Min					
5	ID 5002 Type 92	Dispatch X 11/02/2018	1737		X	0	X Other X Suppression EMS	00
		Arrival X 11/02/2018	1739					
		Clear X 11/02/2018	1918					
Personnel ID	Name	Rank Or Grade	Action Taken	Action Taken	Action Taken	Action Taken		

L Additional Remarks

Local Option

17:02:56 (Automatic by System): [1] [Geographic Area: 13570 ST CHARLES ROCK RD] [High] [All Responses] \*\*Dispatch 4802 on ALL calls\*\* NO unit shall enter the warm zone before a Pattonville Chief Officer arrives on scene and advises. 17:03:56 (API): [2] ETAs : 4802(01:55) | 5025(01:56) | 4824(04:05) 17:03:56 (PAGINGSERVICE): [3] Paging Groups Notified:48-All Calls 17:03:56 (PAGINGSERVICE): [4] Paging Groups Notified:48-Landfill Notification 17:04:18 (261): [5] SURFACE FIRE. SUMP PUMP ON FIRE. ATTEMPTING TO GET IT UNDER CONTROL AT THIS TIME 17:06:37 (269): [6] OPERATIONS TO TAC 13 17:08:37 (269): [7] 4802 INVESTIGATING UNITS STAGING AT ENTRANCE 17:12:30 (229): [8] \*\*PER PD: POLICE NOT RESPONDING UNLESS REQUESTED\*\* 17:14:26 (269): [9] 4802 MAKING WAY BACK STILL INVESTIGATING 17:21:11 (269): [10] 4802 SMALL FIRE AT SUMP PUMP 17:27:13 (269): [11] 4802 4824 TO PROCEED TO APPLY FOAM \*\*RADIO TRAFFIC MONITORED BY DISPATCH\*\* 17:28:49 (269): [12] 4802 4824 ENTERED GATE ONE LINE OFF 17:44:46 (Automatic by System): [13] [Appended, 17:45:00] [1] [Geographic Area: 13570 ST CHARLES ROCK RD] [High] [All Responses] \*\*Dispatch 4802 on ALL calls\*\* NO unit shall enter the warm zone before a Pattonville Chief Officer arrives on scene and advises. 17:45:00 (254): [14] Duplicate call appended to incident at 17:45:00 17:51:24 (269): [15] 4802 ONE LINE OFF GAS VALVES SHUT OFF NO EYES ON 4801 17:52:50 (269): [16] 4802 ALL UNITS SECURE 17:53:58 (276): [17] 4802 ALL VALVES SHUT OFF 18:08:52 (276): [18] SSW 3 mph 18:40:20 (269): [19] 4802 FIRE IS OUT DIRT CREWS COMING TO BURY AREA INVOLVED 18:43:04 (269): [20] 4802 COMMAND POST LOCATED AT GATE 2 AND BOENKER 18:54:51 (276): [21] 4802 ALL ACCOUNTED FOR, CLEANING UP, NO MORE CHECKS NEEDED 19:21:48 (276): [22] 4802 SITUATION RESOLVED, ANY OTHER CONCERNS WILL BE TAKEN CARE OF ON SITE, \*\*\*TAC ## HAS BEEN RELEASED AND IS NO LONGER ASSIGNED TO YOUR INCIDENT. USE N/S MAIN FOR ANY FURTHER COMMUNICATIONS\*\*\*

L Additional Remarks

Local Option

L Additional Remarks

Local Option

Fire Investigation of incident 18-4804366.  
11/5/18. I, Laurie Taylor (4803) responded to 13570 St Charles Rock Road to investigate a fire that occurred on the evening of 11/02/2018. I was accompanied by Matt LaVanchy (4801) to interview employees of Republic services who were present at the time of the event and to inspect the area where the fire occurred. Erin Fanning of Republic Services gave a presentation of the timeline of events and activities that occurred during the event. Ms. Fanning stated that at approximately 1615 she requested employee Matt to inspect the area for any problems from the thunderstorm that was in the area. There were no alarms of any kind going off. No one observed a lightning strike either visually or audibly. No one observed any trespassers or vandals inside the fenced area. System had been running normally. No issues over the weekend. Blankets had been installed 3 weeks earlier for insulation. CT25 had passed its daily inspection. A pneumatic pump is used to move liquid and gas through the condensate trap. No electric powered motors or appliances are used in this process. No electric energized lines of any kind are in the area of origin. Ms. Fanning described the fire as "daylighting" about 25 feet from CT25. Ms. Fanning called my office 11/15/18 to provide further clarification on the timeline of events. She stated the flares were shut down manually at 1740. Ms. Fanning directed Wayne Opfer out to the flare yard to the panel to shut down the flare. The main east and west compressors were shut down at 1803. Ms. Fanning stated there was noticeable flame reduction after the flares and compressors shut down. Ms. Fanning also stated at 1824 the auxiliary flare shut down as a result of the compressors being shut down. Matt stated he observed white smoke in the area of CT(condensate trap)25 at approximately 1651. He communicated this to Erin. He observed a flame approximately 1' in height coming from a pipe about 25' from CT25. 911 was called at 1703:54 (time received at CC911). Information given included "surface fire, sump pump on fire. Attempting to get it under control." During this time dry chemical extinguishers were utilized unsuccessfully to extinguish the fire. Steve Rogger Battalion Chief (4802) arrived on scene at 1708. He was initially unable to make entry to the landfill site due to lack of response from landfill employees. 4802 made entry 1720. He proceeded into the area with an air monitoring device. He observed a small fire in the southwest corner of the landfill. 4802 directed 4824 to respond in from gate #2 for extinguishment. 4824 assisted by 5025 utilize water and foam to extinguish the fire. Erin Fanning advised the "flare" was shut off as were other gas valves around the fire. Shortly after the flames went out. This incident was cleared at 2133:54. Refer to incident report 18-4804366 for more information.

Observation and inspection of incident site. This is a known landfill with long term subsurface smoldering event. A system of barriers (tarps/berms) and gas/liquid removal system has been in place for some time. The fire event that occurred 11/2/2018 happened in the southwest corner of the landfill. This area is close in proximity to Gate #2. No damage or failure of the fencing or gate at gate #2 observed. A large pile of black HDPE pipe is located under a tarp across the gravel service road from the event. These are sections of CT25 and headers connecting to CT25 as described by Erin Fanning. Several pieces have extensive charring and melting. A section of pipe identified as the header that "daylighted" has charring and has melted together. See image IMG\_2603 and IMG\_2634. Fire and heat damage observed to the "connection flange" identified as CT25 on the interior surface with damage heavier on one side than the other. Unable to determine which way it was oriented as it is no longer attached. The entire interior surface of CT25 is melted and charred below the section that was removed. See IMG\_2613. Several sections of removed pipe have evidence of burning to the interior surface. See IMG\_2630. Sections of the pipe that were identified as the area of "daylighting" have dry chemical extinguishing agent coating. See IMG\_2634. No evidence of mechanical impact in the area observed. No evidence or witness statements of intentionally set fire, mischief, or vandalism. The area is monitored by video camera. No evidence of lightning strike. Refer to CoreLogic Strike.net report #5416454. One cloud to ground strike was recorded approximately .5 miles from area of origin at 1615 on 11/2/2018. No electrical equipment in use or power lines down in or near the area of origin. No evidence of careless disposal of smoking products. While the exact ignition source and sequence is beyond the expertise of this investigator, the first fuel ignited is the gases contained within the pipes. The gases were heated to their ignition temperature below grade inside the pipes and sustained the flames that erupted from the surface header pipes. The "daylighted" pipe section allowed for air to be entrained into the lower pipes to sustain the fire. Once the flare system and compressors were shut down, as described by Erin Fanning, the fire was extinguished a short time after. The flammable gasses involved in this event may have come from the landfill or the pipes in use at the landfill itself or a combination. Heating of the pipe above 300 degrees Celcius (572-degrees F) causes decomposition of the pipe and flash of fumes may occur. This information is taken from the Safety date sheet provided by Republic services. The area of origin of this fire is CT25 and connecting header pipes. The cause of this fire is accidental by unknown system failure. Laurie Taylor Deputy Chief Fire Marshal



















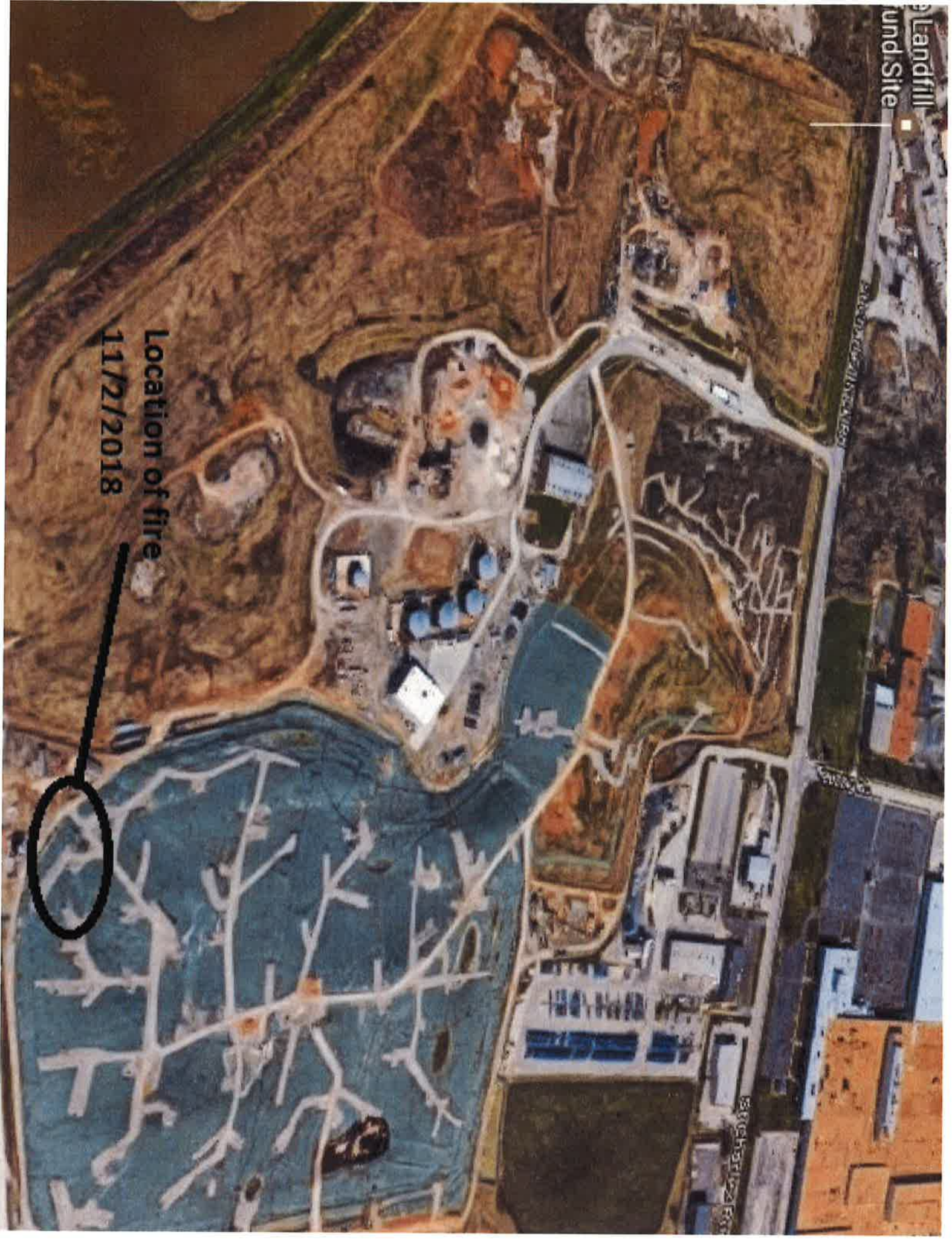






Landfill  
and Site

Location of fire  
11/21/2018





**Safety Data Sheet**  
**WL Plastics Polyethylene Pipe**  
**All Grades – All Colors – All Materials**  
SDS #: WL131

**Section 1 – Product and Company identification**

**Product Name** WL Plastics Polyethylene Pipe  
**SDS #** WL131  
**Product Description** Polyethylene Pipe (various colors, and with and without external color stripes, and with and without internal color layer)  
**Product Use** Component for conveying gases, liquids and other fluid media  
**Company Identification** WL Plastics Corporation  
3575 Lone Star Cir, Ste 300  
Fort Worth, TX 76177  
**24-Hour Emergency Telephone Number** CHEMTREC – 1-800-424-9300

Product Information: 1-435-867-8908  
Technical Information: 1-435-867-8908  
General Information: [www.wlplastics.com](http://www.wlplastics.com)

**Section 2 – Composition / Information on Ingredients**

INGREDIENT NAME	CAS NUMBER	AMOUNT
Polyethylene	9002-88-4	> 96% by weight
Polyethylene Hexene Copolymer	25213-02-9	> 96% by weight
Polyethylene Butene Copolymer	25807-34-7	> 96% by weight
May include carbon black	1333-86-4	0 - 4% by weight
May include flux calcined diatomaceous earth	68855-54-9	<1% by weight
May include crystalline silica (cristobalite)	14464-46-1	<1% by weight

**Section 3 – Hazards Identification**

**Emergency Overview** Physical Appearance:

- Black polyethylene pipe
- Black polyethylene pipe with external longitudinal contrasting color stripes
- Black polyethylene pipe with contrasting internal color layer
- Polyethylene pipe is supplied in straight lengths or coils

**Hazards of Product**

- This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- Injury or death can result from product falling from a height or unexpected movement during storage, unloading or handling. Call 1-435-867-8908 for unloading and handling instructions or obtain unloading and handling instructions from [www.wlplastics.com](http://www.wlplastics.com).
- Product surface can be slippery especially if there is water, snow or ice on the surface. Do not walk on product.
- May contain an ingredient that can cause cancer. See Section 11. Not expected to be harmful if all recommendations in this SDS are followed. See Section 7 and Section 8.
- EYE: Not expected to cause prolonged or significant eye irritation. If this material is heated, thermal burns may result from eye contact.
- SKIN: Contact with the skin is not expected to cause prolonged or significant irritation or cause an allergic skin response. If this material is heated, thermal burns may result from skin contact.
- INHALATION: Not expected to be harmful if inhaled. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the upper respiratory tract.
- INGESTION: Not expected to be harmful if swallowed.



**Safety Data Sheet**  
**WL Plastics Polyethylene Pipe**  
**All Grades – All Colors – All Materials**  
SDS #: WL131

**Section 4 – First Aid Measures**

- Eye contact:** Hot material: Flush eyes with plenty of cold water for at least 15 minutes. Do not remove contact lenses if worn. Seek medical assistance for mechanical removal of this material from the eye. The use of flush fluid, other than water, is not recommended.  
Cold material: Flush eyes with plenty of cold water. Get medical attention if irritation occurs.
- Skin contact:** Hot material: If burned by contact with hot material, flush skin immediately with large amounts of cold water. If possible, submerge area in cold water. No attempt should be made to detach polymer adhering to the skin or to remove clothing attached with molten material. Thermal burns require immediate medical attention.  
Cold material: Wash with soap and water.
- Inhalation:** If affected by fumes from heated material, remove from source of exposure and move the affected person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

**Section 5 – Fire Fighting Measures**

- Flammability of the Product:** May be combustible at high temperatures.
- |             |           |                 |                |
|-------------|-----------|-----------------|----------------|
| <b>NFPA</b> | Health: 0 | Flammability: 1 | Instability: 0 |
| <b>HMIS</b> | Health: 0 | Flammability: 1 | Instability: 0 |
- Auto-ignition temperature:** Greater than 343°C (649°F)
- Flash point:** Above 300°C (572°F) decomposition occurs and flash of fumes may occur.
- Products of combustion:** Products of combustion are carbon oxides (CO, CO<sub>2</sub>). May also contain low levels of aldehydes, ketones, organic acids or hydrocarbons.
- Unusual fire/explosion hazards:** High dust concentrations have a potential for combustion or explosion. This material is not explosive as defined by established regulatory criteria.
- Fire-fighting media and instructions:** In case of fire, use water spray (fog), foam or dry chemicals. Do not use water jet.
- Protective clothing (fire):** Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

**Section 6 – Accidental Release Measures**

- Protective measures:** Eliminate sources of ignition in vicinity of spilled material.
- Spill management:** If heated material is spilled, allow it to cool before proceeding with disposal methods. Shavings, chips or segments from cutting and cooled, spilled heated material may cause a slipping hazard. Isolate and contain to prevent entry into sewers and waterways. Sweep or vacuum shavings, chips, segments and cooled heated material and place in appropriate containers for disposal. Recycle where possible. Use appropriate safety equipment.
- Reporting:** USA regulations may require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

**Section 7 – Handling and Storage**

Read and observe all precautions published in WL101 *Joining And Field Procedures For Pipe* and WL111 *Unloading Guidelines For WL Plastics Polyethylene Pipe*. Call 1-435-867-8908 to obtain copies of WL101 and WL111 or obtain copies from [www.wlplastics.com](http://www.wlplastics.com).



**Safety Data Sheet**  
**WL Plastics Polyethylene Pipe**  
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**Section 7 – Handling and Storage (continued)**

**Precautionary measures:** Avoid heated material contact with eyes, skin and clothing. Avoid breathing vapor or fumes from heated material.

**Unusual handling hazards:** Potentially toxic / irritating fumes may evolve from heated material. At high temperatures, above 177°C (350°F), polyethylene can release vapors and gases that are irritating to mucous membranes of the eyes, mouth, throat and lungs. These substances may include acetaldehyde, acetone, acetic acid, formic acid, formaldehyde and acrolein. Based on animal data and limited epidemiological evidence, NTP, IARC (2A) and OSHA have listed formaldehyde as a probable human carcinogen. Following all recommendations within this SDS should minimize exposure to thermal processing emissions.

**Section 8 – Exposure Controls and Personal Protection**

Exposure limits:	Component	Exposure Limits	Form
	Particulates (Insoluble) Not Otherwise Specified (PNOS)	10 mg/m <sup>3</sup> TWA8 ACGIH	Inhalable fraction Particulate matter containing no asbestos and crystalline silica <1%
		3 mg/m <sup>3</sup> TWA8 ACGIH	Respirable fraction Particulate matter containing no asbestos and crystalline silica <1%
		5 mg/m <sup>3</sup> TWA8 OSHA	Respirable fraction
		15 mg/m <sup>3</sup> TWA8 OSHA	Total dust
<b>Personal protection:</b>	<b>Respiratory Protection:</b>	Use NIOSH-Approved respirator if unable to control airborne dust, fumes and vapor.	
	<b>Ventilation:</b>	Local exhaust ventilation is recommended for control of airborne dust, fumes and vapor, especially in confined areas.	
	<b>Other Protective Equipment:</b>	Wear gloves and suitable eye protection.	
<b>Engineering controls:</b>	If dust is generated, provide local exhaust ventilation to keep exposure to airborne contaminants below exposure limits.		

**Section 9 – Physical and Chemical Properties**

<b>Physical state and appearance:</b>	Polyethylene pipe is supplied in straight lengths or coils as black polyethylene pipe, or black polyethylene pipe with external longitudinal contrasting color stripes, or black polyethylene pipe with contrasting internal color layer, or yellow polyethylene pipe, or yellow polyethylene pipe with external longitudinal contrasting color stripes.
<b>Odor:</b>	Negligible
<b>pH:</b>	NA
<b>Vapor pressure:</b>	NA
<b>Vapor density (air = 1)</b>	NA
<b>Boiling point:</b>	NA
<b>Solubility (in water):</b>	Insoluble in water
<b>Melting point:</b>	100 - 135°C (212 - 275°F)
<b>Specific gravity:</b>	0.93 – 0.99
<b>Density:</b>	0.93 – 0.99 g/cm <sup>3</sup>



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**Section 10 – Stability and Reactivity**

<b>Chemical stability:</b>	This material is considered stable under ambient temperature and pressure and normally anticipated storage and handling conditions.
<b>Conditions to avoid:</b>	Avoid heating above recommended processing temperature.
<b>Incompatibility with other materials:</b>	None
<b>Hazardous decomposition products:</b>	Carbon oxides
<b>Hazardous polymerization:</b>	Hazardous polymerization will not occur

**Section 11 – Toxicological Information**

**Immediate Health Effects:**

<b>Acute oral toxicity:</b>	LD50 / Not known
<b>Acute dermal toxicity:</b>	LD50 / Not known
<b>Acute inhalation toxicity:</b>	LD50 / Not known
<b>Eye irritation:</b>	Not expected to be irritating to the eyes.
<b>Skin irritation:</b>	Not expected to be irritating to the skin.
<b>Sensitization:</b>	Dermal – not a sensitizer / human
<b>Additional toxicological information:</b>	<ul style="list-style-type: none"><li>○ This product contains POLYMERIZED OLEFINS. During thermal processing (&gt;177°C; &gt;350°F) polyethylene can release vapors and gases (aldehydes, ketones and organic acids) that are irritating to the mucous membranes of the eyes, mouth, throat, and lungs. Generally these irritant effects are transitory. However, prolonged exposure to irritating off-gases can lead to pulmonary edema. Formaldehyde (an aldehyde) has been classified as a probable human carcinogen by NTP, IARC (2A) and OSHA based on animal data and limited epidemiological evidence.</li><li>○ Pigments containing carbon black, lead chromate, nickel, antimony or titanium compounds may have been incorporated into this product. The International Agency for Research on Cancer (IARC) has classified carbon black as a Group B carcinogen (possibly carcinogenic to humans) based on sufficient evidence in animals and inadequate evidence in humans. However, the pigments in this product are bound in a polymer matrix that severely limits its extractability, bioavailability and toxicity. The lead chromate pigment is also silica-encapsulated as well as bound in a polymer matrix. None of these pigments is likely to cause adverse health effects under recommended conditions of use.</li><li>○ Product marked "NSF-61" is safe for use with potable water (drinking water for human consumption).</li></ul>

**Section 12 – Ecological Information**

<b>Ecotoxicity:</b>	This material is not expected to be harmful to aquatic organisms.
<b>Environmental fate:</b>	This material is not expected to be readily biodegradable.
<b>Mobility:</b>	This product has not been found to migrate through soils.
<b>Persistence and degradability:</b>	This product does not readily degrade. Under normal oxidation conditions, >99% of polyethylene will remain intact after exposure to microbial actions. Product will slowly change (embrittle) in the presence of sunlight, but will not fully break down. Product buried in landfill has been found to be stable over time. No toxic degradation products are known to be produced.
<b>Other ecological information:</b>	Wildlife may ingest waste cuttings, shavings, segments or chips. Although not toxic, such materials may physically block the digestive system, causing starvation or death.



**Safety Data Sheet**  
**WL Plastics Polyethylene Pipe**  
**All Grades – All Colors – All Materials**  
 SDS #: WL131

**Section 13 – Disposal Considerations**

**Disposal consideration / Waste information:** Recycle to process if possible. Waste cuttings, segments, chips and shavings should be swept up or vacuumed and placed in appropriate containers for disposal and to avoid runoff into waterways. This product as manufactured is a non-hazardous waste but may become contaminated upon use. If this material must be discarded, depending upon use and application, it may meet the criteria as hazardous waste as defined by the US EPA under RCRA (40 CFR 261) or other State or Local regulations. Consult an environmental professional to determine if local, regional or national regulations would classify this material or contaminated material as hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Dispose of in accordance with all applicable National, State, Provincial and Local regulations.

**Section 14 – Transport Information**

**US DOT** Not regulated as hazardous material or dangerous goods for transportation.  
**ICAO /IATA** Not regulated as hazardous material or dangerous goods for transportation.  
**IMO / IMDG** Not regulated as hazardous material or dangerous goods for transportation.  
**RID / ADR** Not regulated as hazardous material or dangerous goods for transportation.  
**TDG** Not regulated as hazardous material or dangerous goods for transportation.  
**Other transportation information:** The description shown may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**Section 15 – Regulatory Information**

<b>SARA 311/312 Categories:</b>	Immediate (acute) health effects	No
	Delayed (chronic) health effects	No
	Fire hazard	No
	Sudden release of pressure hazard	No
	Reactivity hazard	No

**Regulatory Status:**

Country	Inventory	Status
Australia	AICS	All components are included or otherwise exempt from inclusion on this inventory.
Canada	DSL	All components are included or otherwise exempt from inclusion on this inventory.
Canada	NDSL	
China	IECS	All components are included or otherwise exempt from inclusion on this inventory.
European Union	EINECS	All components are included or otherwise exempt from inclusion on this inventory.
European Union	ELINCS	
European Union	NLP	
Japan	ENCS	All components are included or otherwise exempt from inclusion on this inventory.
Korea	ECL	All components are included or otherwise exempt from inclusion on this inventory.
Philippines	PICCS	All components are included or otherwise exempt from inclusion on this inventory.
United States	TSCA	All components are included or otherwise exempt from inclusion on this inventory.







**Type 75 Butterfly Valve**

**Specifications**

**Sizes:** 18" - 24"  
**Models:** Wafer Style  
**Operators:** Gear  
**Bodies:** PP and PVDF  
**Discs:** PP and PVDF  
**Seats:** EPDM, FKM and Nitrile  
**Seals:** Same as seating material  
**Stems:** 403 and 316 stainless steel, titanium, Hastelloy C<sup>TM</sup>, etc.

† Trademark of Cabot Corporation

**Standard Features (Sizes 18" - 24")**

- Standard model (18" - 24") has polypropylene body, disc and EPDM seat.
- 403 stainless steel stem has full engagement over the entire length of the disc and is a non-wetted part totally isolated from the media.
- Bubble-tight seating.
- Only abrasion resistant, solid plastic disc and elastomeric liner are wetted parts

**Options:**

- Pneumatically and electrically actuated with accessories
- Lug style (stainless steel 304 and 316) as blocking and end-of-line applications
- Stems in 316 stainless steel, Titanium, Hastelloy C<sup>®</sup>, etc.
- 2" square nut on gear
- Stem extensions (single stem and two-piece stem)
- Locking device
- Chain operators
- Manual limit switch

**Caution**

- Never remove valve from pipeline under pressure.
- Always wear protective gloves and goggles.

**Parts List (Sizes 18" - 24")**

PARTS			
NO.	DESCRIPTION	PCS.	MATERIAL
1	Body	1	PP, PVDF
2	Disc	1	PP, PVDF
3	Seat	1	EPDM, FKM, Others
4	O-Ring (A)	2	EPDM, FKM, Others
5	O-Ring (B)	2	EPDM, FKM, Others
6	O-Ring (C)	1	EPDM, FKM, Others
7	Stem	1	Stainless Steel, 403
7a	Key (A)		Stainless Steel, 403
25	Gear Box	1	Cast Aluminum Alloy*
28	Bolt (A)	4	Stainless Steel 304
29	Bolt (D)	4	Stainless Steel 304
30	Stand	1	Steel*
1a	Ring	2	Steel*

**Sample Specification**

All solid thermoplastic butterfly valves (18" thru 24") shall be of the lined body design and bubble-tight seal (meeting or exceeding Class VI as defined by American National Standard Institute) with only the liner and disc as wetted parts. The disc shall be of solid, abrasion-resistant plastic, have double o-ring seals on top and bottom trunnions of the same material as the valve liner. Liner shall be molded and formed around the body, functioning as a gasket seal with convex ring design on each side of the valve for lower bolt tightening torque. Stem shall be of 403 stainless steel, non wetted and have engagement over the full length of the disc. PP shall conform to ASTM D4101 Cell Classification PPO210B67272 and PVDF conforming to ASTM D3222 Cell Classification Type II. PP and PVDF bodies shall be rated to 75 psi, size 18", and 50 psi, sizes 20" and 24" at 70° F. Butterfly valves shall be wafer style, as manufactured by Asahi/America Inc.

FOR TROUBLESHOOTING, REFER TO PAGE 38.





Weather Verification Services

## STRIKEenet<sup>®</sup> Report

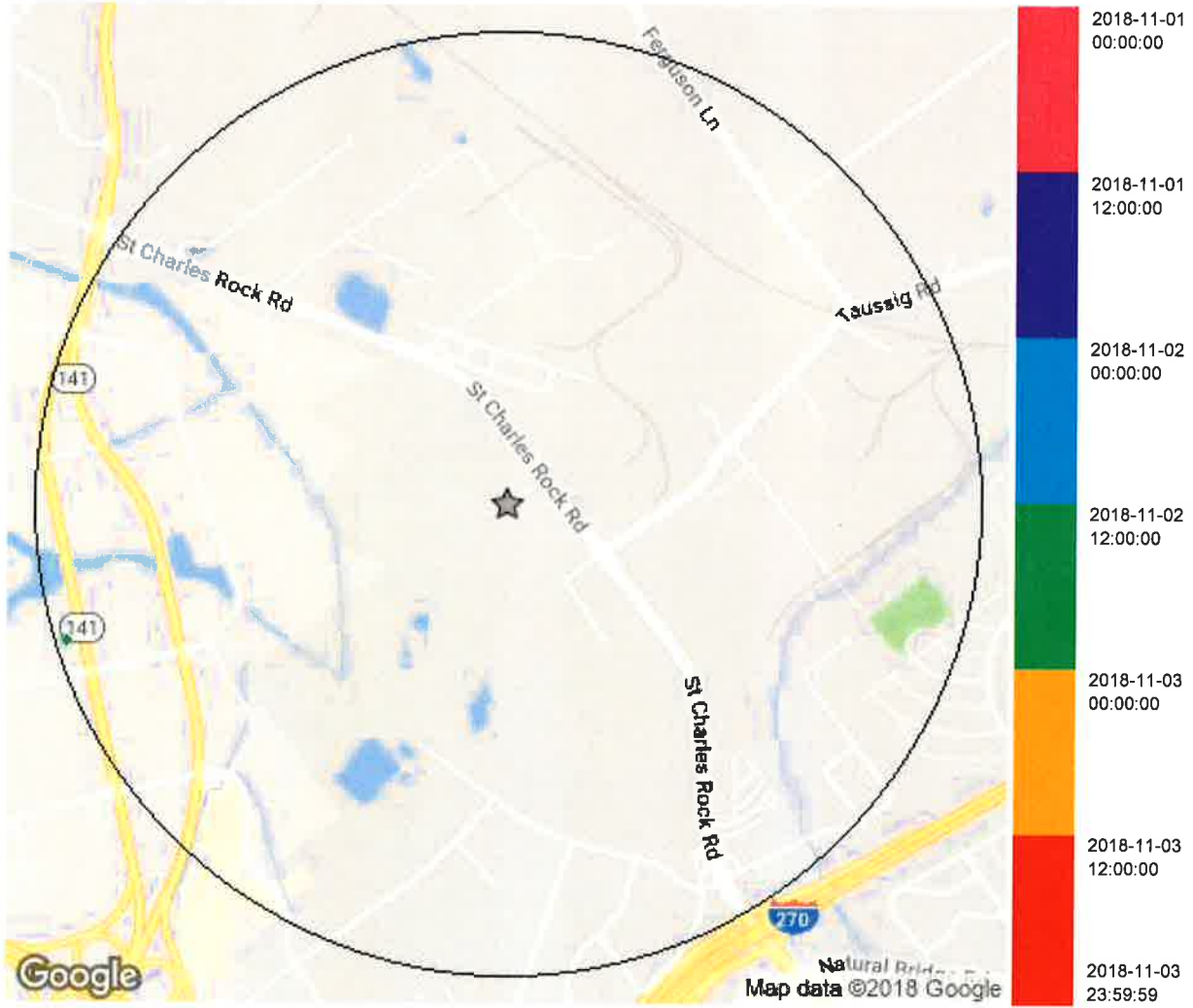
Claim or Reference #	18-4804366
Insured/Property Owner	Landfill/Republic Services
STRIKEenet Report #	5416454
Address	13570 St Charles Rock Rd Bridgeton, MO 63044
Coordinates	Latitude 38.7708392, Longitude -90.4433687
Search Period	Thu, Nov 01, 2018 00:00 US CDT to Sat, Nov 03, 2018 23:59 US CDT
Search Radius	1 mi (2 km)
Report Generated	Nov 5, 2018 at 20:49:13 GMT

### Summary

STRIKEenet verified the presence of 1 cloud-to-ground lightning strokes detected within 1 mile of the property for the dates inquired.

Thank you for using STRIKEenet to validate lightning. Your report was generated by CoreLogic using data from Vaisala's National Lightning Detection Network<sup>®</sup> (NLDN), the most comprehensive lightning strike archive database in North America.

# Lightning Stroke Map



## Confidence Ellipses For Lightning Strokes



Lightning Confidence Ellipse Map indicates with 99% certainty that the recorded lightning event contacted the ground within the bounds of the ellipse.

## Key Results

Lightning Strokes Detected within 1 mi (2 km)	1
---	---

### Number of Strokes Detected by Time Period

Period	# of Strokes
Thu, Nov 01, 2018 00:00 US CDT to Thu, Nov 01, 2018 12:00 US CDT	0
Thu, Nov 01, 2018 12:00 US CDT to Fri, Nov 02, 2018 00:00 US CDT	0
Fri, Nov 02, 2018 00:00 US CDT to Fri, Nov 02, 2018 12:00 US CDT	0
Fri, Nov 02, 2018 12:00 US CDT to Sat, Nov 03, 2018 00:00 US CDT	1
Sat, Nov 03, 2018 00:00 US CDT to Sat, Nov 03, 2018 12:00 US CDT	0
Sat, Nov 03, 2018 12:00 US CDT to Sat, Nov 03, 2018 23:59 US CDT	0

## Lightning Strokes

Date	Time (CDT)	Peak Current (kA)	Distance from Center (mi/km)	Latitude	Longitude
Nov 2, 2018	16:15:35	-9.1	1/1.6	38.7666	-90.46062

## About STRIKEnet®

Unlike other lightning verification methodologies, The STRIKEnet Report uses 25-plus years of lightning data acquired from the U.S. National Lightning Detection Network® (NLDN) and the Canadian Lightning Detection Network (CLDN). First introduced by Vaisala, Inc. in 1989 and later enhanced by the 2014 CoreLogic acquisition of Weather Fusion—a value-added reseller of Vaisala's STRIKEnet® Report—the lightning verification data that powers the STRIKEnet Reports is industry-recognized as the standard for accuracy based on thousands of peer-reviewed citations.

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