



Spill Characteristics and DNR Enforcement Efforts at Somerset CAFO, 1993–2021

SPILL AND ENFORCEMENT TOTALS

SPILL CHARACTERISTICS						MISSOURI DNR ENFORCEMENT EFFORTS				
Est. Volume of Reported Spills (gal.) ¹	Total Reported Spills	Reported Spills w/ Unknown Volume	% Spills w/ Unknown Volume	Avg. Spill Volume (gal.) ²	Avg. Annual Spill Volume, Past 30 Yrs. (gal.) ²	Letters of Warning	Notices of Violation	Spills w/o Onsite Response	% Spills w/o Onsite Response	Volume of Spills w/o Onsite Response (gal.) ¹
591,550	46	18	39%	21,127	19,718	0	5	14	30%	30,300

¹ These totals do not include reported spills of unknown volume. For details about spill calculation, see the Methodology section of the Rap Sheet (sraproject.org/SmithfieldMORapSheet)

² Average volumes were calculated for known spills (i.e., excluding spills of unknown volume).

SOMERSET—REPORTED WASTE SPILLS AND VIOLATIONS

DATE	ESTIMATED GALLONS SPILLED	DESCRIPTION
6/22/1993	unknown	Agency records indicate a spill from a waste transport pipeline.
7/14/1994	unknown	Agency records indicate a citizen complaint about wastes from an aerial sprayer unit sprayed onto county roads and vehicles.
7/25/1994	unknown	Agency records indicate a second citizen complaint about wastes from an aerial sprayer unit sprayed onto county roads and vehicles.
7/26/1994	unknown	Agency records indicate a third, second party, citizen complaint about wastes from an aerial sprayer unit sprayed onto county roads and vehicles. DNR finally recommends moving the unit.
8/11/1994	9,000	Agency records indicate an aerial waste sprayer unit overturned and spilled wastes into a tributary of Little Medicine Creek and onto neighboring property.
8/29/1996	unknown	State of Iowa complaint to Missouri DNR regarding PSF spraying roads and drainages: PSF barricaded roads, PSF dragged waste pipelines across roads, Iowa might require permits. DNR did not respond on site to investigate the incident.
3/16/1997	1,000	Agency records indicate a ruptured waste pipeline. DNR did not respond on site to investigate the incident.
5/13/1997	2,000	NOV #0445NE: A gasket failure during land application in Iowa spilled wastes into a tributary of West Fork Medicine Creek in Iowa and Missouri.
9/3/1997	500–1,500	Agency records indicate a worker failed to connect a waste pipeline and wastes spilled into a field.
10/7/1997	100	Agency records indicate a plugged pipeline spilled wastes onto the ground near the buildings. DNR did not respond on site to investigate the incident.
6/4/1998	2,000	Agency records indicate a hay crew cut a waste pipeline riser causing a spill.

8/10/1998	4,000	Agency records indicate a waste pipeline clamp failed and resulted in a spill. A crew built an emergency dam to contain the spill.
3/5/1999	2,000–3,000	Agency records indicate a broken waste pipeline spilled into a “diversion ditch.” A crew built an emergency dam to contain the spill.
8/4/1999	2,500–4,000	Agency records indicate a blown pipeline clamp spilled wastes onto a leased neighboring property.
4/4/2000	-----	<p>“NOV #0834NE: “Failure to Perform Stormwater Monitoring Within 24 Hours of Land Application”</p> <p>NOV #0835NE: “Failure to Report Other Chemicals Used at the Facility”</p> <p>NOV #0838NE: “Failure to Submit Accurate Discharge Monitoring Reports (DMRs) of the July 28, 1999, Discharge from Whitetail Facility”</p> <p>DMR Report on the 1999 Annual Records Review: “PSF failed to accurately report the required parameters from wastewater discharges as required by the existing permit. During a July 28, 1999, discharge of processed waste into Sandy Creek from the Whitetail facility, NERO [DNR Northeast Regional Office] staff collected samples for ammonia. The results of the NERO samples at the down gradient property boundary were nearly 500 times as high as those listed in the [company] report for the same day at the same sample location.”</p> <p>Ten of eleven facilities reviewed were determined to be in noncompliance.</p>
4/26/2000	-----	U.S. EPA NOV issued: U.S. EPA issues PSF a Notice of Violation of the federal Clean Air Act alleging that PSF annually emits several hundred tons of potentially hazardous air pollutants including hydrogen sulfide and particulate matter from its hundreds of confinement buildings and open-pit waste lagoons. USEPA also cites PSF’s failure to apply for air pollution permits as required by law.
4/7/2001	15,000	Agency records indicate pipeline plug of “unknown origin” near a lagoon backed wastes up into four barns and spilled into emergency containment.
7/11/2001	unknown	NOV #1211NE: An aboveground pipeline ruptured during land application and spilled wastes into a tributary of West Fork Medicine Creek. An emergency dam was constructed in the stream to contain the spill.
7/17/2001	1,000	NOV #1212NE: An aboveground pipeline to a traveling gun irrigation system ruptured and spilled wastes into a tributary of West Fork Medicine Creek causing a fish kill. An emergency dam was constructed in the stream to contain the spill.
8/12/2001	2,000	Agency records indicate a plugged pipeline at Somerset Site H Barn 1 spilled wastes into emergency containment.
9/28/2001	>1,000	Agency records indicate overapplication and runoff of wastes into a grassed waterway. Emergency dams and an emergency containment pit were constructed to contain the spill.
11/7/2001	-----	<p>“Agency records indicate a DNR investigator wrote, “as discussed the NERO [Northeast Regional Office] has identified several occasions in which the land application map was not current. I did a quick review of the individual [inspection] files for the Site Specific Permits at PSF and found the following..</p> <p>Inspection Date / Site</p> <p>11-06-01 Terre Haute—land application over last four days not reflected on map</p> <p>10-11-01 Hedgewood—several days of application in new season, no map yet on site</p> <p>08-08-01 Whitetail—prior days (sic) application by contract app not reflected on map</p> <p>08-01-01 Green Hills—land map could not be located by PSF env. staff to inspect</p> <p>06-11-01 Peach/Perkins—map was not current from October 2000 app on FI</p> <p>08-28-00 Somerset—map was not current.””</p>
4/9/2003	>1,000	Agency records indicate a plugged pipeline spilled wastes out of a cleanout riser and into emergency containment.
2/26/2005	5,000–10,000	Agency records indicate a plugged pipeline backed up into four barns and spilled wastes into freshly dug emergency dams and into the emergency containment system.

5/7/2007	unknown	Agency records indicate that the emergency containment pit at Site M was being drained via an underground pipeline system when a plugged pipeline spilled wastes into and through the emergency containment system and into a freshwater lake. Multiple emergency dams were constructed to help contain the spill.
4/5/2008	5,000	Agency records indicate a plugged pipeline spilled wastes from a barn into emergency containment.
9/18/2008	unknown	Agency records indicate overapplication and runoff of wastes during land application. The spill ran into a road right of way.
2/2/2009	unknown	Agency records indicate a human toilet ran over the weekend at the pole barn, spilling waste out of the holding tank, which froze on the ground. DNR did not respond on site to investigate the incident.
10/2/2009	5,000	Agency records indicate a plugged pipeline spilled wastes from Barn #5. An emergency containment pit was constructed but the excavator hit another pipeline, resulting in an even larger spill into emergency containment.
12/21/2010	1,000	Agency records indicate a plugged pipeline spilled wastes from barns #3 and #4. An emergency dam was constructed to contain the spill. DNR did not respond on site to investigate the incident.
5/5/2011	-----	Agency records indicate an email from PSF stated, "As part of our agreement with Missouri Attorney General Chris Koster we have agreed to closing certain barn sites within the PSF Farms known as Hedgewood, Locust Ridge and Somerset (all 1A farms) to population levels of a 1B farm...By the first week of 2012 we will have 22 Farm sites closed representing 176 individual barns."
5/17/2011	unknown	Agency records indicate a pipeline break during a waste transfer spilled wastes into the company's freshwater lake.
5/19/2011	-----	Agency records indicate a DNR correspondence to PSF states, DNR "has received your May 5, 2011, email regarding closure of certain barn sites...The mechanical systems at the barn sites are completely inoperable which all but eliminates the possibility of a spill or release of process wastewater from malfunctioning equipment. Therefore, the Department concurs with your plans to suspend twice daily inspections and the operation of secondary containments at the barns sites that are closed."
9/18/2011	2,000	Agency records indicate a plugged pipeline in a barn spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
12/20/2011	3,000	Agency records indicate a plugged pipeline in a barn spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
3/28/2012	-----	Agency records indicate a DNR Annual Records Review of PSF records noted, "The second item of the cover page was discussed, which is the estimated amount of manure, litter and wastewater generated in the previous twelve months. During the review of the individual facilities, it was found that this number was often higher than the design flow listed on the facility's Missouri State Operating Permit...Total gallons land applied was higher than the design flow."
3/28/2012	-----	Agency records indicate a DNR Annual Records Review of PSF records noted that the company failed to report the suspected causes of high ammonia readings [indicative of hog waste] in the company's emergency containment systems as required by their Missouri State Operating Permits. Nine facilities were determined to be in noncompliance.
5/15/2013	unknown	Agency records indicate a DNR inspector noted, "Ensure that the pool of wastewater in the pump house at Site P is removed and the drip stopped. Ensure that pigs are placed into the containers at the mortality transfer station...Fill in the [animal] burrows on the lagoon berm at Site L."
11/30/2015	-----	Agency records indicate that DNR received as-built plans for the AND system from an engineering firm. DNR responded to the hog company, "The information submitted documented that there were significant changes made from the issued construction permit during construction...it is imperative that modifications are not made during construction without prior approval."

11/30/2015	2,000	Agency records indicate a plugged pipeline between the barns and lagoon spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
12/11/2015	2,000	Agency records indicate a plugged underground pipeline between the barns and lagoon spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
4/22/2016	1,200	Agency records indicate a plugged pipeline between the barns and lagoons spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
7/12/2016	2,000	Agency records indicate a plugged underground pipeline between the barns and lagoons spilled wastes. An emergency dam was constructed to contain the spill before it reached the emergency containment system. DNR did not respond on site to investigate the incident.
8/15/2016	4,000	Agency records indicate a broken pipeline between the barns and lagoon spilled wastes. An emergency dam was constructed to contain the spill. DNR did not respond on site to investigate the incident.
8/18/2016	unknown	Agency records indicate a DNR inspector documented, "I observed a backhoe and fresh dug soil behind a confinement building. [Smithfield's] Mr. Boxley stated they had recently repaired a line that had become blocked and caused pressure to build up within the line that eventually failed and caused waste to flow across the ground towards the secondary containment. I observed an earthen dam to the west of the secondary containment...I observed the mortality area. I observed leachate to be leaking from the trailer where the mortalities are stored (Photo 1). The leachate traveled approximately 30 feet to the west before being absorbed into the ground... Mr. Boxley stated that sometimes trailers do not get sealed completely and leaks can occur." The facility was determined to be in noncompliance.
8/19/2016	2,000	Agency records indicate a plugged pipeline between the barns and lagoon spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
9/28/2016	10,000	Agency records indicate a broken pipeline riser between the barns and lagoon spilled wastes into emergency containment. DNR did not respond on site to investigate the incident.
4/13/2017	-----	Agency records indicate a DNR inspector noted, "Erosion gully prior to the secondary containment at Site S needs to be filled in and vegetation established."
9/7/2017	unknown	Agency records indicate a DNR inspector documented, "The facility had a spill at Site #O that was caused by a broken flush line. The flush water from the lagoon was released to the environment and soaked into the ground near the front of the barn. Upon review of the facility's morning and evening inspection checklists, I noted that the checklist indicated that there were no signs of a leak or seep from the barns even though a spill had occurred. The facility must ensure that morning and evening inspections are conducted and accurate information is documented following the inspection."
6/5/2018	-----	Agency records indicate a DNR inspector recommended that a small tree on the lagoon berm at Site H be removed, trees near the confinement barns be removed, and that the erosion gully of the toe of the berm at Site W be monitored and repaired as necessary.
8/9/2018	-----	Agency records indicate a DNR inspector noted, "Ensure all feed spills are cleaned up as discovered."
7/24/2019	unknown	Agency records indicate a DNR inspector documented, "At the loading area of the mortality transfer building, I observed where blood had run across the gravel driveway...Ensure that moving forward any blood or leachate from the mortality transfer building is cleaned up immediately upon discovery. The facility must also ensure that the transport trailers are liquid tight and no blood or leachate can drain from the trailers."

10/29/2019	unknown	Agency records indicate a DNR inspector noted, "I observed pooling hog effluent in the stormwater diversion ditch that drains to the emergency containment at Site #M and it appeared to be caused by a leaking riser...The dead haul trailer was observed to have a steady trickle of blood being released from the lift gate and the blood was pooling on the ground...I also found the morning and evening checklists did not accurately document the feed spills at multiple sites or the leaking riser at Site M that were discovered during the inspection."
3/12/2020	unknown	Agency records indicate a DNR inspector noted, "The facility must ensure that the dead haul trailer is completely sealed to prevent blood and leachate leakage. The pooled blood that is currently onsite must be collected and properly disposed...Ensure that feed spills are removed and properly disposed when discovered."
5/19/2020	unknown	Agency records indicate a DNR inspector documented, "At the time of the inspection, foam was observed blowing off of the primary aeration cell on the facility's AND system. The blowers were turned off prior to the inspection and the foam was contained. On the east side of the lagoon at Site V, an area upgradient from the lagoon was observed with hog effluent that had been displaced during the removal of the lagoon cover...Ensure that foam generated in the AND system is not allowed to leave the aeration cell. Also ensure that care is taken to prevent hog effluent from being drug out of the lagoon cells while the covers are being replaced." Feed spills were observed at multiple sites. "Ensure that feed spills are removed and properly disposed when discovered."
8/18/2020	-----	Agency records indicate a DNR inspector noted, "Ensure that feed spills are removed and properly disposed when discovered."
11/2/2020	unknown	Agency records indicate a DNR inspector noted, "Ensure that leaking risers are repaired or replaced to prevent hog effluent from being released to the environment. Ensure that the pooled blood that is located near the dead haul trailer is collected and properly disposed. Feed spills were observed at a majority of the sites. Ensure that feed spills are removed and properly disposed when discovered."
3/30/2021	300,000–500,000	Referral NOV #NE210012: Agency records indicate that on March 3, 2021, an employee left a valve open that drained wastes from five lagoons at five different sites. The wastes spilled through emergency containment onto neighboring properties and into multiple tributaries of Little Medicine Creek and West Fork Medicine Creek and into Little Medicine Creek causing a fish kill. This polluted 12–15 miles of stream. Some of the wastes also spilled into a freshwater lake on company property. Multiple emergency dams were constructed to contain the spill. The spill was referred to DNR's Compliance and Enforcement Section.