

## Investigation Narrative

### Plant Industry Division

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#### Memorandum

To: Bret Allen, Environmental Scientist IV, NDA  
From: Vanze Lum, Agriculturalist III, NDA  
Date: August 3, 2021  
Subject: Private Citizen Complaint Investigation: Salisha Odum

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On July 6, 2021, I received a call from Salisha Odum at 5862 Macpherson Lane, Fallon NV 89406. Ms. Odum, who owns Salisha's Delicious Organic Produce, stated that a plane owned by Frey Spray of Fallon NV, had flew directly over her property and sprayed her. I forwarded this information to you. I then requested that Ms. Odum send us an official complaint form and made arrangements for a site visit the following day. Ms. Odum returned the official complaint form on July 6. The complaint form also stated she had symptoms which included burning eyes, burning and swelling in her throat, dizziness, forgetfulness and confusion. Ms. Odum has previously been told to seek out medical advice if she believe she has been sprayed with chemicals. Ms. Odum also said her plants had a covering on them, burn holes and a rough, weird appearance.

I visited Ms. Odum's farm on July 7, 2021, to follow-up on the complaint and take samples. Ms. Odum said the plane flew 40 feet off the ground, close to her north property line at approximately 6:30 a.m. She also said she saw the spray coming from the plane. The plane was flying from west to east heading toward the airport. Ms. Odum provided cell phone video that showed a plane flying north of her property. Looking at the video, it appeared that the height of the plane was higher than 40 feet off the ground and I did not observe any spray being released from the aircraft. The plane also appeared to be significantly north of her property line. Ms. Odum said she also saw the plane about an hour later at 7:30 a.m. I could not clearly see a plane in the video at that time, but I could hear what sounded like an airplane.

Since Ms. Odum said she observed the spray coming from the plane that flew north of her property, I took a gradient sample across her field from south to north which consisted of 3 plant samples from her field while following NDA sampling guidelines. Gradient samples may show from which direction drift occurred. I took the samples from the south side first and progressed toward the north side. This would be from area of low concentration to area of high concentration. The highest concentration should be on the north side of the field if the spray was performed to the north. I also changed my personal protective equipment and used clean bags and aluminum foil between each sample to prevent any possible cross contamination. Once the samples were taken, they were immediately placed in a cooler with ice to prevent any degradation of the sample. I also filled out a chain of custody form for the lab samples. The samples were brought to the lab the same day and placed in a freezer to await testing. While sampling, I did not smell any pesticides in or around her property.

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I then contacted Jerry Frey, Owner of Frey Spray, to follow-up on this complaint. He said he only had one job in the Fallon area that day, and it was a glyphosate application to corn fields near Lahontan reservoir. He said he did have a plane flying on the morning Ms. Odum made her observation. The distance from Ms. Odum's property to the nearest pivot of corn Mr. Frey applied pesticides to was 5.6 miles away. The pesticide that Frey Spray was applying to the corn was GlyStar Plus, EPA # 42750-61 (active ingredient: Glyphosate). The dilution being used was 1.5 pints/acre. Mr. Frey said the plane Ms. Odum observed was going to the airport to load for the application, so it was not spraying when she observed it and had empty spray tanks. I asked Mr. Frey if he had another plane in the area around 7:30, and he said he did not. The only application being performed by Frey Spray was the corn fields near Lahontan reservoir. I asked Mr. Frey to send me the application record for the corn, and a map of where his plane was in relation to Ms. Odum's property. The map provided did show Frey's plane in the area of Ms. Odum's property at 6:30am on July 6.

I was able to check weather conditions using the MesoWest website (<http://mesowest.utah.edu>). This site is used to access past and current weather data. According to MesoWest, the wind during the pesticide application was from the north at the time Ms. Odum saw the plane. The wind ranged from 0 to 9.6 mph between the hours of 6:00am and 7:00am. The wind was blowing towards the SSE, which would have favored deposition of pesticides on Ms. Odum's field if the plane was spraying. The application site was 5.6 miles to the W-SW of Ms. Odum's property; blowing away from Ms. Odum's property. The "Fallon Naval Air Station" is the closest weather station to the location of the incident; approximately twelve miles.

### Findings and Recommendations:

On July 29, 2021, the NDA chemistry laboratory reported that the samples tested negative for glyphosate. It does not appear that drift or a direct application of glyphosate occurred onto Ms. Odem's property. As Mr. Frey's records indicate, Glystar Plus was applied to a corn field approximately 5.6 miles away. It appears that this was the only application his company preformed that day; no drift from this pesticide application was detected. Frey Spray did not have any other pesticides listed in records as being used, and conversations with Mr. Frey did not reveal any addition pesticides used that day. The plane flying by at 6:30 a.m. was owned by Frey Spray, but there are no indications that it was spraying anything at that time. Drift toward Ms. Odum's field would have been favored by the SSE winds at the time of the flyby, but glyphosate was not detected by the NDA chemistry laboratory.

Ms. Odum noted physical symptoms she believes is consistent with pesticide exposure on her plants. However, the laboratory did not detect the presence of any herbicide active ingredients which would physically affect her plants. It is possible Ms. Odum smelled pesticides that day since she lives in an agricultural community. There are no current state or federal laws that



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prohibit pesticide applications based on the smell produced by the product. Information on pesticide odors can be found at this link:

<http://agri.nv.gov/uploadedFiles/agrinvgov/Content/Resources/Forms/Plant/Environmental/Pesticide%20Odor.pdf>

As no drift appears to have occurred, I recommend no further actions at this time. I would also recommend that Frey Spray continues to plan its flights to stay well away from the area where Ms. Odum lives, as she does have an organic farm and a direct hit from any pesticides may result in a loss of her organic certification. I also recommend that any applications by Frey Spray in the area make sure that conditions favor drift away from Ms. Odum's farm.

cc: Salisha Odum  
Jerry Frey, Primary Principal of Frey Spray



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

**REPORT OF ANALYSIS**

1. SAMPLE NO. 070821673050102	2. DATE COLLECTED 07/08/21
3. REGION 09/NV	4. EPA REG. NO.
5. ESTABLISHMENT NO.	

6. DESCRIPTION OF SAMPLE  
Veg sample 1 south field

7. NAME AND ADDRESS OF ESTABLISHMENT WHERE SAMPLE COLLECTED (Include Zip Code)  Frey spray	8. PRODUCT NAME
	9. LOT OR CODE NUMBER(s)

10. NAME AND ADDRESS OF PRODUCER (If different from 7 above)(Include Zip Code)

11. RESULTS OF ANALYSIS

**Analyst:** R. Hunsberger **Date of Analysis:** 07/29/2021

<u>Analyte</u>	<u>Method of Analysis</u>	<u>Result (ng/g)</u>
Glyphosate	LC/MSMS QTRAP 5500	ND

This sample has been analyzed and no glyphosate was detected  
ND= none detected. For glyphosate this is less than 1ppb or 1ng/g

Screen Type: Screen Results:

Sec 9(a) of the Federal Insecticide, Fungicide, and Rodenticide Act, as ammended (7 U.S.C. 136g) requires that if an analysis is made of any sample collected in connection with the enforcement of the Act, a copy of the results of such analysis must be furnished promptly to the owner, operator or agent in charge of the establishment where the sample was collected. This section of the Act is quoted on the reverse of this form.

The information contained in this report should not be used in the labeling, advertising, or other promortion of the product analyzed.

Additional information regarding results of analysis may be obtained from the individual listed below.

12. NAME AND TITLE OF EPA OFFICIAL Dr. Jian Zhang Ph.D. <i>Jian Zhang</i>		15. ADDRESS OF REGIONAL OFFICE Nevada State Department of Agriculutre 405 S. 21st Street Sparks, Nevada 89431	
13. PHONE NUMBER (775) 353-3778	14. DATE 07/29/2021		



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

**REPORT OF ANALYSIS**

1. SAMPLE NO. 070821673050103	2. DATE COLLECTED 07/08/21
3. REGION 09/NV	4. EPA REG. NO.
5. ESTABLISHMENT NO.	

6. DESCRIPTION OF SAMPLE  
Veg sample 2 mid-field

7. NAME AND ADDRESS OF ESTABLISHMENT WHERE SAMPLE COLLECTED (Include Zip Code)  Frey spray	8. PRODUCT NAME
	9. LOT OR CODE NUMBER(s)

10. NAME AND ADDRESS OF PRODUCER (If different from 7 above)(Include Zip Code)

11. RESULTS OF ANALYSIS

**Analyst:** R. Hunsberger **Date of Analysis:** 07/29/2021

<u>Analyte</u>	<u>Method of Analysis</u>	<u>Result (ng/g)</u>
Glyphosate	LC/MSMS QTRAP 5500	ND

This sample has been analyzed and no glyphosate was detected.  
ND= none detected. For glyphosate this is less than 1ppb or 1ng/g

Screen Type: Screen Results:

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ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

**REPORT OF ANALYSIS**

1. SAMPLE NO. 070821673050104	2. DATE COLLECTED 07/08/21
3. REGION 09/NV	4. EPA REG. NO.
5. ESTABLISHMENT NO.	

6. DESCRIPTION OF SAMPLE  
Veg sample 3 North field

7. NAME AND ADDRESS OF ESTABLISHMENT WHERE SAMPLE COLLECTED (Include Zip Code)

Frey spray

8. PRODUCT NAME

9. LOT OR CODE NUMBER(s)

10. NAME AND ADDRESS OF PRODUCER (If different from 7 above)(Include Zip Code)

11. RESULTS OF ANALYSIS

**Analyst:** R. Hunsberger

**Date of Analysis:** 07/29/2021

Analyte

Glyphosate

Method of Analysis

LC/MSMS QTRAP 5500

Result (ng/g)

ND

This sample has been analyzed and no glyphosate was detected.  
ND= none detected. For glyphosate this is less than 1ppb or 1ng/g

Screen Type:

Screen Results:

Sec 9(a) of the Federal Insecticide, Fungicide, and Rodenticide Act, as ammended (7 U.S.C. 136g) requires that if an analysis is made of any sample collected in connection with the enforcement of the Act, a copy of the results of such analysis must be furnished promptly to the owner, operator or agent in charge of the establishment where the sample was collected. This section of the Act is quoted on the reverse of this form.

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13. PHONE NUMBER (775) 353-3778	14. DATE 07/29/2021		

HISTORY OF OFFICIAL SAMPLE		SAMPLE NUMBER	REGISTRATION NUMBER
		07082167305002	
		PRODUCT Glyphosate	
1. SAMPLED BY:	Vance Lynn	DATE: 7-8-21	
2. RECEIVED BY:		DATE:	VIA:
3. RELINQUISHED BY:		DATE:	
4. LABORATORY	MDA		
5. DATE RECEIVED	7/9/21		
6. RECEIVED BY	RWH		
7. RECEIVED FROM	VL		
8. SENT VIA	Hand		
9. SAMPLE CONDITION	Good		
10. CONDITION OF SEALS	Good		
11. SEALED BY	VL		
12. DATE SEALED	7/8/21		
13. PIECES RECEIVED	1		
14. PLACE STORED	Freezer #1		
15. ASSIGNED BY	JZ		
16. ASSIGNED TO	RWH		
17. DELIVERED BY	Hand		
18. DATE DELIVERED	7/9/21		
19. NUMBER SUBS RECD.	1		
20. SUBS ANALYZED	1		
21. DATE SEAL BROKEN	7/10/21		
22. DATE RESEALED	7/29/21		
23. RESEALED BY	J.W.		
24. PLACE STORED	Freezer #5		
25. DATE JACKET SENT OUT			
26. REMARKS	Sample 1 - south side of field - Frey Spray - possible Drift Glyphosate - 1.5 pt/Ac On Bottom L. Freezer 1		

HISTORY OF OFFICIAL SAMPLE		SAMPLE NUMBER	REGISTRATION NUMBER
		070821673050103	
		PRODUCT	
1. SAMPLED BY:	Vance Lum	DATE: 7-8-21	
2. RECEIVED BY:		DATE:	VIA:
3. RELINQUISHED BY:		DATE:	
4. LABORATORY	NDA		
5. DATE RECEIVED	7/9/21		
6. RECEIVED BY	RWH		
7. RECEIVED FROM	VL		
8. SENT VIA	Hand		
9. SAMPLE CONDITION	Good		
10. CONDITION OF SEALS	Good		
11. SEALED BY	VL		
12. DATE SEALED	7/8/21		
13. PIECES RECEIVED	1		
14. PLACE STORED	Freezer #1		
15. ASSIGNED BY	JZ		
16. ASSIGNED TO	RWH		
17. DELIVERED BY	Hand		
18. DATE DELIVERED	7/9/21		
19. NUMBER SUBS RECD.	1		
20. SUBS ANALYZED	1		
21. DATE SEAL BROKEN	7/10/21		
22. DATE RESEALED	7/29/21		
23. RESEALED BY	J.W.		
24. PLACE STORED	Freezer #5		
25. DATE JACKET SENT OUT			
26. REMARKS	Sample 2 - Mid-Field Frey Spray - possible Drift Glyphosate - 1.5 pt/Ac		



HISTORY OF OFFICIAL SAMPLE		SAMPLE NUMBER	REGISTRATION NUMBER
		07082167305004	
		PRODUCT Glyphosate	
1. SAMPLED BY:	Vance Lunn	DATE: 7-8-21	
2. RECEIVED BY:		DATE:	VIA:
3. RELINQUISHED BY:		DATE:	
4. LABORATORY	NDA		
5. DATE RECEIVED	7/9/21		
6. RECEIVED BY	RWH		
7. RECEIVED FROM	VL		
8. SENT VIA	Hand		
9. SAMPLE CONDITION	Good		
10. CONDITION OF SEALS	Good		
11. SEALED BY	VL		
12. DATE SEALED	7/8/21		
13. PIECES RECEIVED	1		
14. PLACE STORED	Freezer #1		
15. ASSIGNED BY	JZ		
16. ASSIGNED TO	RWH		
17. DELIVERED BY	Hand		
18. DATE DELIVERED	7/9/21		
19. NUMBER SUBS RECD.	1		
20. SUBS ANALYZED	1		
21. DATE SEAL BROKEN	7/10/21		
22. DATE RESEALED	7/29/21		
23. RESEALED BY	J.W.		
24. PLACE STORED	Freezer #5		
25. DATE JACKET SENT OUT			
26. REMARKS	<p>Sample 3 - Northside of field      Frey Spray - possible Drift</p> <p>Glyphosate - 1.5 pt/Ac</p>		